Sycamore Hills Distribution Center

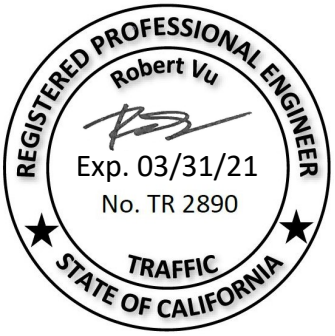
TRAFFIC OPERATIONS ANALYSIS

CITY OF RIVERSIDE

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
E+P	Existing Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
March JPA	March Joint Powers Authority
MOE	Measures of Effectiveness
MUTCD	Manual on Uniform Traffic Control Devices
NP	No Project (or Without Project)
PCE	Passenger Car Equivalents
PHF	Peak Hour Factor
Project	Sycamore Hills Distribution Center
RCALUC	Riverside County Airport Land Use Commission
RCTC	Riverside County Transportation Commission
RTA	Riverside Transit Authority
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SHS	State Highway System
sf	Square Feet
SPA	Specific Plan Update
TA	Traffic Operations Analysis
TOD	Transit-Oriented Development
TSF	Thousand Square Feet
TUMF	Transportation Uniform Mitigation Fee
v/c	Volume-to-capacity
WP	With Project
WRCOG	Western Riverside Council of Governments

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1 INTRODUCTION

This report presents the results of the traffic operations analysis (TA) prepared for the proposed Sycamore Hills Distribution Center ("Project"), which is located north of Alessandro Boulevard and east of Barton Street, within the jurisdiction of the City of Riverside as shown on Exhibit 1-1.

The purpose of this traffic operations analysis is to evaluate the potential circulation system deficiencies that could result from the development of the proposed Project, and if necessary, to recommend mitigation to achieve acceptable circulation system performance. As directed by City of Riverside staff, this traffic study has been prepared in accordance with the City of Riverside *Traffic Impact Analysis Preparation Guide* (December 2017), the California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (December 2002), and consultation with City of Riverside staff during the scoping process. (1) (2) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

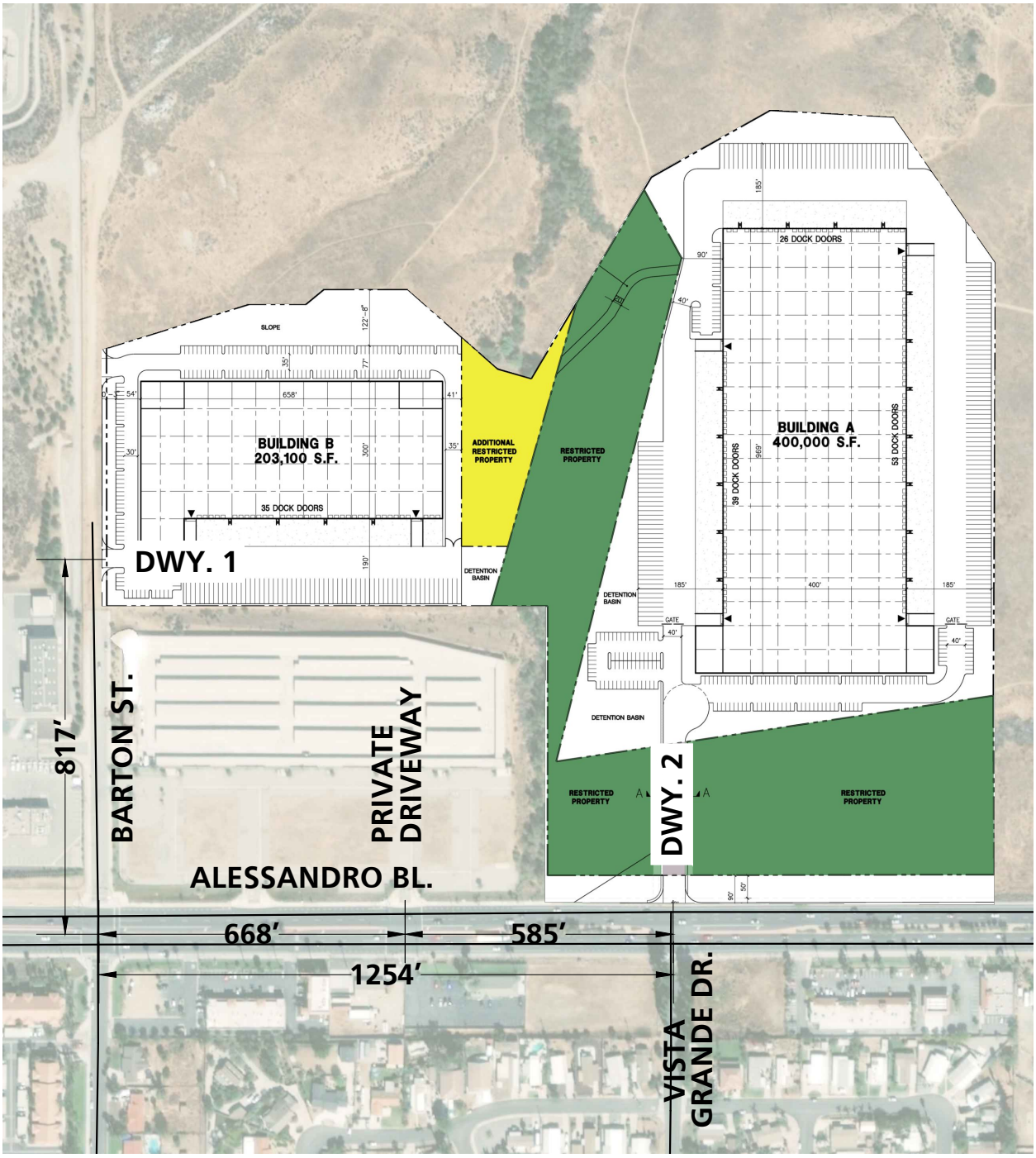
1.1 PROJECT DESCRIPTION

The project proposes subdividing the site into two parcels (Parcels 1 and 2), and three lettered parcels (Parcels A, B, and C). Each parcel is proposed to be developed with a high cube transload short-term warehouse building (Buildings A and B). Building A, a 400,000 square foot warehouse, will be constructed on Parcel 1. Building B, a 203,100 square foot warehouse, will be constructed on Parcel 2. Associated improvements include parking, fire lanes, fencing and walls (including retaining walls), landscaping, and water quality treatment areas.

Parcels A and Parcel B consist of existing Restricted Property of natural land, with a supporting jurisdictional feature, totaling approximately 11.6 acres. A 0.67-acre driveway will be constructed through the Restricted Property to provide street access from Alessandro Boulevard to Parcel 1, which would reduce the Restricted Property to 10.93 acres. However, 1.44 acres will be added to Parcel A to mitigate this loss, resulting in a total of 12.37 acres of Restricted Property (net gain of 0.77 acres). A Conservation Easement is proposed to be placed over the amended 12.37 acres of Restricted Property.

A trailhead parking lot is proposed on Parcel C, totaling 1.18 acres, for access to the Sycamore Canyon Wilderness Park. Improvements include a parking lot, sidewalk, shade structure, bike rack, drinking fountain, fencing, and a Fire Department and access gate. Parcel C will be dedicated to the City. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 10th Edition, 2017. (3) The proposed Project is anticipated to generate a total of 1,266 PCE trip-ends per day with 75 PCE AM peak hour trips and 87 PCE PM peak hour trips. For comparison, the proposed Project is anticipated to generate a total of 847 actual vehicle trip-ends per day with 51 actual vehicle AM peak hour trips and 64 actual vehicle PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in Section 4.1 *Project Trip Generation* of this report.

EXHIBIT 1-1: PRELIMINARY SITE PLAN



1.2 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 (2023) Without Project
- Opening Year Cumulative (2023) With Project
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

1.2.1 EXISTING (2019) CONDITIONS

Information for Existing (2019) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.2.2 EXISTING PLUS PROJECT CONDITIONS

Consistent with the City of Riverside traffic study guidelines, the Existing Plus Project (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 conditions. As such, E+P traffic conditions were evaluated for each phase of development to determine the project-specific traffic deficiencies associated with each phase.

1.2.3 OPENING YEAR CUMULATIVE CONDITIONS

To account for growth in traffic between Existing Conditions (2019) and the Project Opening Year Cumulative (2023), a compounded annual traffic growth rate of 2.0 percent was assumed (8.24 percent aggregate growth in background traffic for the period from 2019 through 2023). The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth. Conservatively, the TA 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 2023 Opening Year Cumulative time frame assumed for the Project. The resulting traffic growth rate used in the TA (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 2023 traffic conditions.

1.2.4 HORIZON YEAR (2040) CONDITIONS

The Horizon Year (2040) Without Project traffic conditions were derived from the Riverside County Transportation Analysis Model (RivTAM) using accepted procedures for model forecast

refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing conditions and Horizon Year conditions. The Horizon Year With Project traffic forecasts were determined by adding the Project traffic to the Horizon Year Without Project traffic forecasts from the RivTAM model. The Horizon Year traffic forecasts used in the traffic analysis were refined with existing peak hour traffic count data collected at intersection analysis locations. The initial estimate of the future peak hour turning movements have, therefore, been reviewed for reasonableness. The reasonableness checks performed include a review of traffic flow conservation in addition to a comparison with the Existing and Opening Year Cumulative traffic volumes. Where necessary, the Horizon Year volumes have been adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes.

The Horizon Year Without and With Project traffic conditions analyses will be utilized to determine if improvements funded through regional transportation mitigation fee programs, such as the Transportation Uniform Mitigation Fee (TUMF) and Development Impact Fee (DIF) programs, or other approved funding mechanism can accommodate the long-range cumulative traffic at the Level of Service (LOS) standards identified in the City of Riverside General Plan. (4) If the "funded" improvements can meet the LOS standard, then the Project's payment into TUMF and/or DIF will be considered as long-range cumulative improvements through the conditions of approval. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-TUMF facilities) are identified as such. Post-processing worksheets for Horizon Year (2040) Without Project traffic conditions are provided in Appendix 4.1.

1.3 STUDY AREA

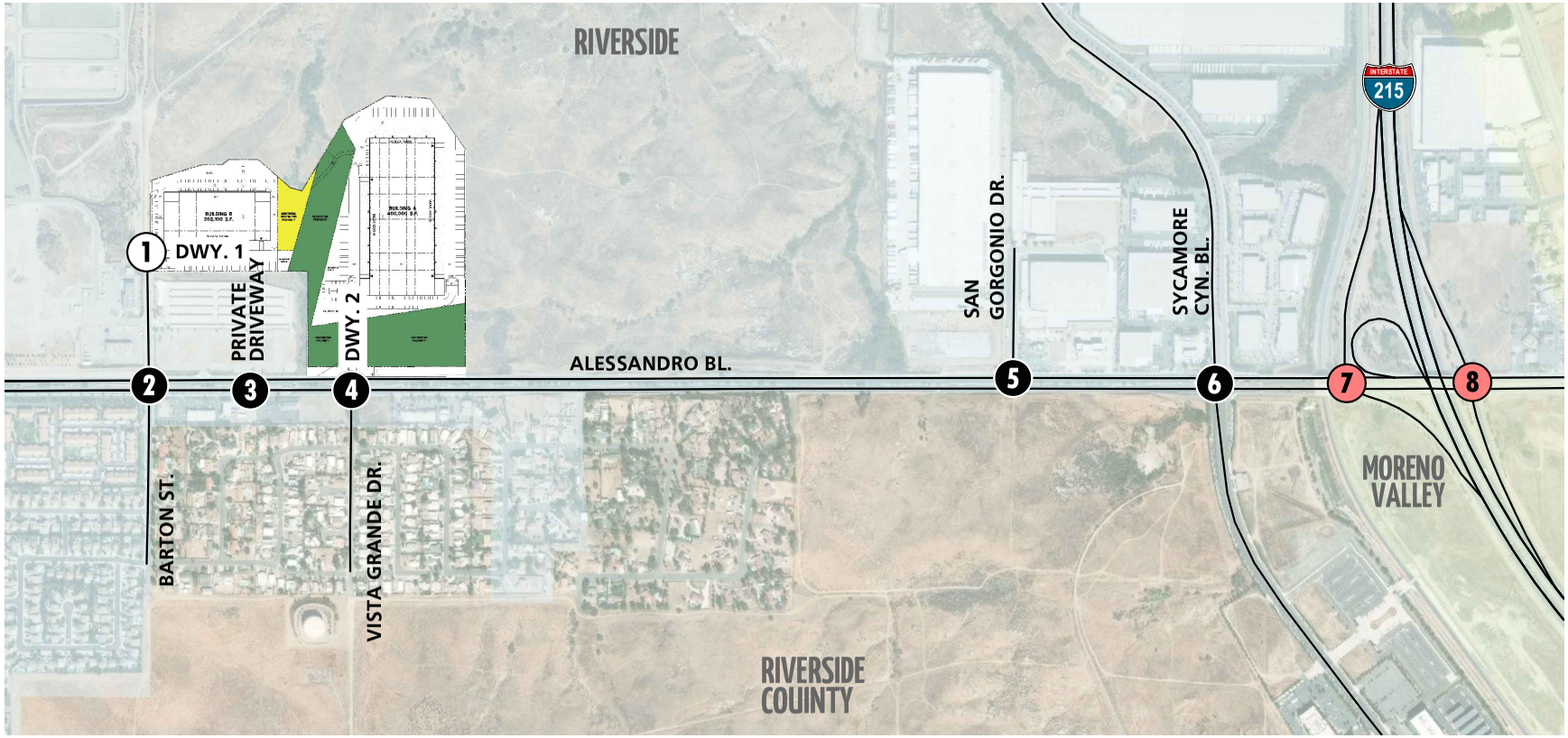
To ensure that this TA satisfies the City of Riverside's traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by City of Riverside staff and their traffic consultant prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The Agreement approved by the City of Riverside is included in Appendix 1.1.

1.3.1 INTERSECTIONS

The following 8 study area intersections listed in Table 1-1 and shown on Exhibit 1-2 were selected for this TA based on consultation with City of Riverside staff.

In general, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips.

EXHIBIT 1-2: LOCATION MAP



LEGEND:

- 0 = EXISTING INTERSECTION ANALYSIS LOCATION
- 0 = FUTURE INTERSECTION ANALYSIS LOCATION
- 0 = CMP INTERSECTION

N

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Barton St. & Driveway 1	Riverside
2	Barton St. & Alessandro Bl.	Riverside/JPA
3	Private Driveway & Alessandro Bl.	Riverside/JPA
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	Riverside/JPA
5	San Gorgonio Dr. & Alessandro Bl.	Riverside/JPA
6	Sycamore Canyon Bl. & Alessandro Bl.	Riverside/JPA
7	I-215 SB Ramps & Alessandro Bl.	Caltrans/Riverside/County
8	I-215 NB Ramps & Alessandro Bl.	Caltrans/Riverside/County

1.4 SUMMARY OF FINDINGS

This section provides a summary of the analysis results for Existing (2019), E+P, Opening Year Cumulative (2023), and Horizon Year (2040) traffic conditions.

1.4.1 EXISTING (2019) CONDITIONS

Intersection Operations Analysis

A summary of LOS results for Existing traffic conditions are presented in Exhibit 1-3. As shown, a total of 2 intersections within the study area are currently operating at a deficient LOS.

Off-Ramp Queuing Analysis

A queuing analysis was performed for the I-215 Freeway off-ramps at Alessandro Boulevard for Existing (2019) traffic conditions. The analysis indicates there are currently no queuing issues that may potentially "spill back" onto the I-215 Freeway mainline at the I-215 Alessandro Boulevard interchange.

1.4.2 E+P CONDITIONS

Intersection Operations Analysis

The addition of Project traffic is not anticipated to result in any new LOS deficiencies under E+P traffic conditions (see Exhibit 1-3), consistent with Existing (2019) traffic conditions.

Off-Ramp Queuing Analysis

A queuing analysis was performed for the I-215 Freeway off-ramps at Alessandro Boulevard for E+P traffic conditions. The analysis indicates there are no additional queuing issues that may potentially "spill back" onto the I-215 Freeway mainline at the I-215 Alessandro Boulevard interchange under E+P traffic conditions.

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

#	Intersection	Existing (2019)	E+P	Opening Year Cumulative (2023) Without Project	Opening Year Cumulative (2023) With Project	Horizon Year (2040) Without Project	Horizon Year (2040) With Project
1	Barton St. & Dwy. 1	NA		NA		NA	
2	Barton St. & Alessandro Bl.						
3	Private Driveway & Alessandro Bl.						
4	Dwy. 2 / Vista Grande Dr. & Alessandro Bl.						
5	San Gorgonio Dr. & Alessandro Bl.						
6	Sycamore Canyon Bl. & Alessandro Bl.						
7	I-215 SB Ramps & Alessandro Bl.						
8	I-215 NB Ramps & Alessandro Bl.						

LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

Deficiencies and Recommendations

Based on the applicable jurisdiction's deficiency criteria, the following study area intersections were found to be deficient for E+P traffic conditions:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)
- Sycamore Canyon Bl. & Alessandro Bl. (#6)

The following improvements are recommended to improve each deficient intersection's LOS back to pre-project conditions, or better:

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

1.4.3 OPENING YEAR CUMULATIVE (2023) CONDITIONS

Intersection Operations

As shown on Exhibit 1-3, there are 2 study area intersections that are anticipated to operate at an unacceptable LOS under Opening Year Cumulative (2023) Without Project traffic conditions during one or both peak hours. With the addition of Project traffic, there are no additional study area intersections anticipated to operate at a deficient LOS.

Off-Ramp Queuing Analysis

A queuing analysis was performed for the I-215 Freeway off-ramps at Alessandro Boulevard for Opening Year Cumulative (2023) traffic conditions. The analysis indicates there are no queuing issues that may potentially "spill back" onto the I-215 Freeway mainline at the I-215 Alessandro Boulevard interchange under Opening Year Cumulative (2023) traffic conditions.

Deficiencies and Recommendations

Cumulative traffic deficiencies are deficiencies that are not directly caused by the Project, but occur as a result of regional growth combined with that or other nearby cumulative development projects or if the project is anticipated to contribute traffic to a deficient intersection under pre-project conditions. The Project's contribution to a particular cumulative transportation deficiency is deemed cumulatively considerable if the Project adds significant traffic to the forecasted deficiency.

Based on the applicable jurisdiction's deficiency criteria, the following study area intersections were found to be deficient for Opening Year Cumulative (2023) With Project traffic conditions, consistent with E+P traffic conditions:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)
- Sycamore Canyon Bl. & Alessandro Bl. (#6)

The following improvements are recommended to improve each deficient intersection's LOS back to pre-project conditions, or better:

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

1.4.4 HORIZON YEAR (2040) CONDITIONS

Intersection Operations

As shown on Exhibit 1-3, there are 3 study area intersections that are anticipated to operate at an unacceptable LOS under Horizon Year (2040) traffic conditions during one or both peak hours.

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at a deficient LOS.

Off-Ramp Queuing Analysis

A queuing analysis was performed for the I-215 Freeway off-ramps at Alessandro Boulevard for Horizon Year (2040) traffic conditions. The analysis indicates there are no queuing issues that may potentially "spill back" onto the I-215 Freeway mainline at the I-215 Alessandro Boulevard interchange under Horizon Year (2040) traffic conditions.

Deficiencies and Recommendations

Cumulative traffic deficiencies are deficiencies that are not directly caused by the Project, but occur as a result of regional growth combined with that or other nearby cumulative development projects or if the project is anticipated to contribute traffic to a deficient intersection under pre-project conditions. The Project's contribution to a particular cumulative transportation deficiency is deemed cumulatively considerable if the Project adds significant traffic to the forecasted deficiency.

Based on the applicable jurisdiction's deficiency criteria, the following study area intersections were found to be deficient for Horizon Year (2040) With Project traffic conditions, consistent with E+P and Opening Year Cumulative (2023) With Project traffic conditions:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)
- Sycamore Canyon Bl. & Alessandro Bl. (#6)

The following improvements are recommended to improve each deficient intersection's LOS back to pre-project conditions, or better:

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

1.5 SITE ADJACENT ROADWAY AND SITE ACCESS IMPROVEMENTS

This section summarizes Project site access and on-site circulation recommendations. Vehicular and truck traffic access will be provided via the following driveways:

- Barton St. & Driveway 1 – Full access driveway (passenger cars only). Trucks will be restricted from heading westbound on Alessandro Boulevard.
- Driveway 2/Vista Grande Dr. & Alessandro Bl. – Full access driveway (passenger cars only). Trucks will be restricted from heading westbound on Alessandro Boulevard.

Regional access to the Project site is provided via the I-215 Freeway at Alessandro Boulevard interchange.

1.5.1 SITE ADJACENT ROADWAY IMPROVEMENTS

The recommended site access improvements for the Project are described below. Exhibit 1-4 illustrates the on-site and site adjacent recommended roadway lane improvements. Construction of on-site and site adjacent improvements are recommended to occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Alessandro Boulevard: The site adjacent roadway of Alessandro Boulevard is constructed to its ultimate General Plan designation. Curb-and-gutter and sidewalk improvements are in place, however, should be modified accordingly based on proposed driveway locations. Construct curb-and-gutter and sidewalk improvements along the Project's southern and western boundary.

Barton Street: Construct Barton Street between the Project's northern boundary and southern boundary at its ultimate full-section pavement width as a Local Street (66-foot right-of-way). Improvements along Barton Street would be those required by final conditions of approval for the proposed Project and applicable City of Riverside Standards.

Barton Street & Alessandro Boulevard – Construct the intersection with the following improvements:

- Construct an exclusive southbound left-turn lane and provide a minimum of 100-feet of storage.

Private Driveway & Alessandro Boulevard – Construct the intersection with the following improvements:

- Remove the existing traffic signal and restrict the driveway access on the north and south leg to right-in/right-out access only

1.5.2 SITE ACCESS IMPROVEMENTS

The recommended site access driveway improvements for the Project are described below. Exhibit 1-4 illustrates the on-site and site adjacent recommended roadway lane improvements. Construction of on-site and site adjacent improvements are recommended to occur in conjunction with adjacent Project development activity or as needed for Project access purposes.

Barton Street & Driveway 1 – Construct the intersection with the following improvements:

- Construct a north leg to facilitate ingress and egress access to the proposed Project.
- Construct an east leg to facilitate ingress and egress access to the proposed Project.

Driveway 2/Vista Grande Drive & Alessandro Boulevard – Construct the intersection with the following improvements:

- Install a traffic signal.
- Construct a north leg to facilitate ingress and egress access to the proposed Project and provide a minimum of 100-feet of storage to the southbound left-turn lane.
- Construct an exclusive eastbound left-turn lane and provide a minimum of 100-feet of storage.

1.5.3 QUEUING ANALYSIS AT THE PROJECT DRIVEWAYS

A queuing analysis was conducted for the Project driveways for Horizon Year (2040) traffic conditions to determine the turn pocket lengths necessary to accommodate near-term and long-range 95th percentile queues.

The minimum storage length for turn pockets to accommodate the 95th percentile queues at the intersections of Barton Street & Driveway 1 and Driveway 2/Vista Grande Dr. & Alessandro Boulevard were previously shown on Exhibit 1-4. Queuing worksheets are included in Appendix 1.2.

1.6 TRUCK ACCESS AND CIRCULATION

A truck turning template has been overlaid on the site plan at Driveway 1 on Barton Street and Driveway 2 on Alessandro Boulevard, which are anticipated to be utilized by heavy trucks, in order to determine the appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers. For the purposes of this evaluation, the WB-67 class truck template has been utilized. WB-67 class trucks are approximately 73.5 feet in length.

Exhibit 1-5 illustrates the proposed truck access for the site and circulation for Driveway 1 and Driveway 2. The recommended curb radii as shown on Exhibit 1-5 are anticipated to accommodate the ingress and egress of trucks. Additional width would be required on Driveway 1 or Barton Street to accommodate simultaneous northbound right and southbound left turns for WB-67 class trucks.

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

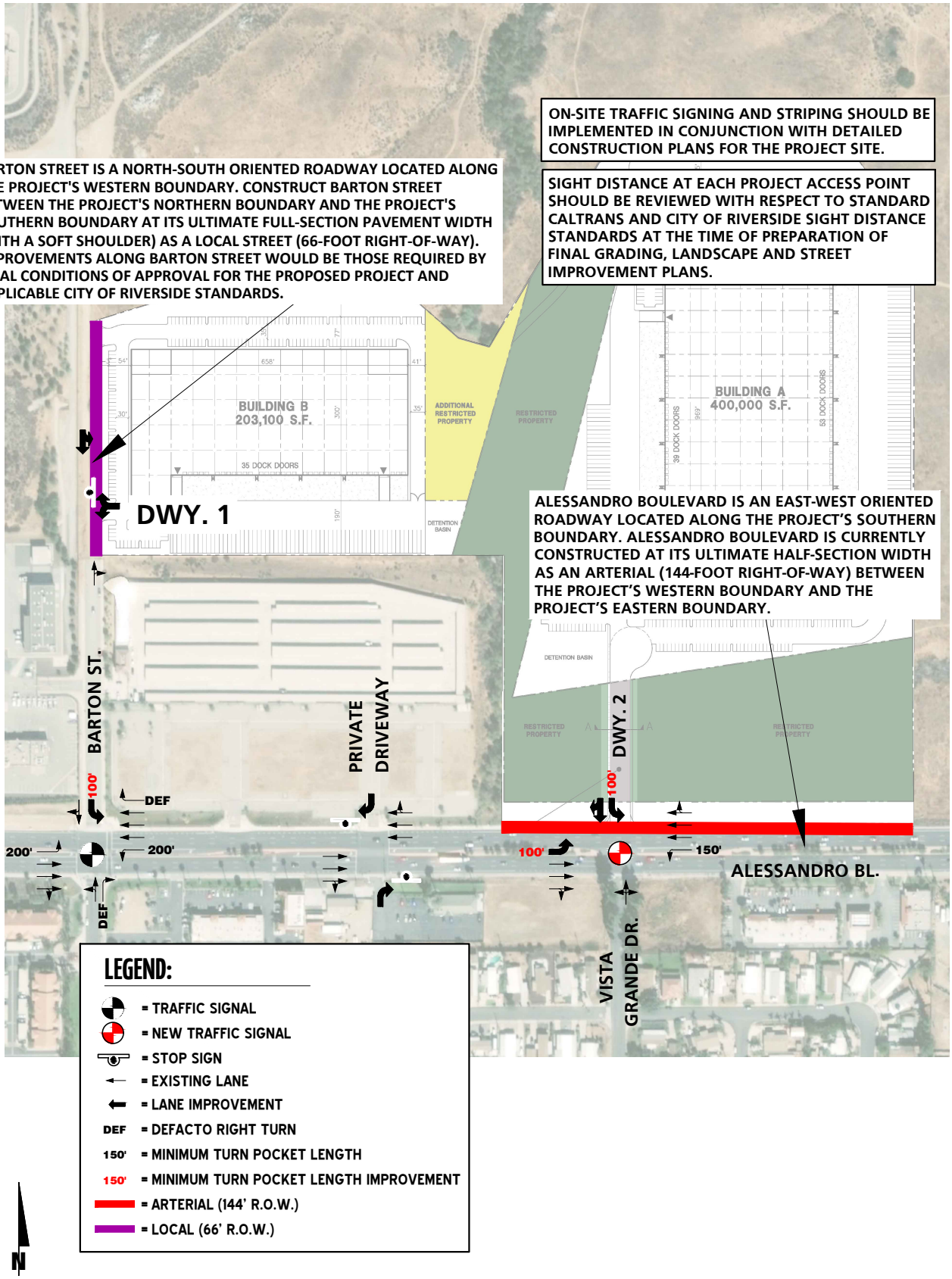
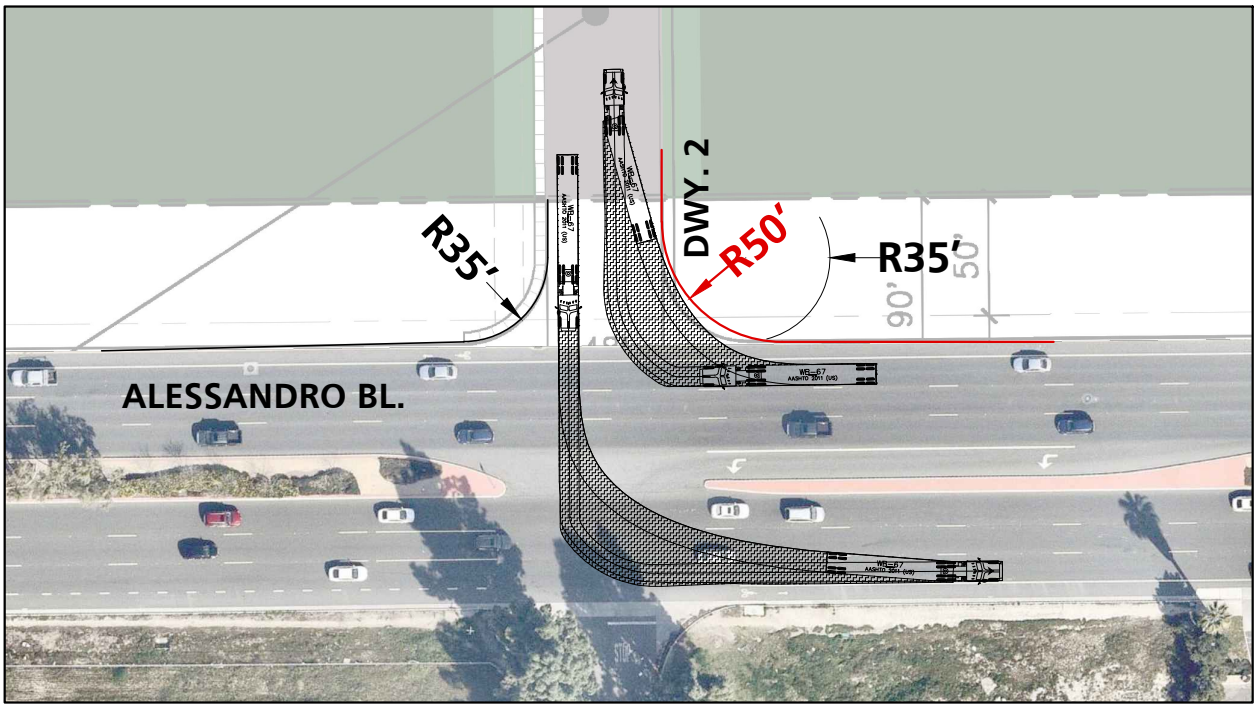
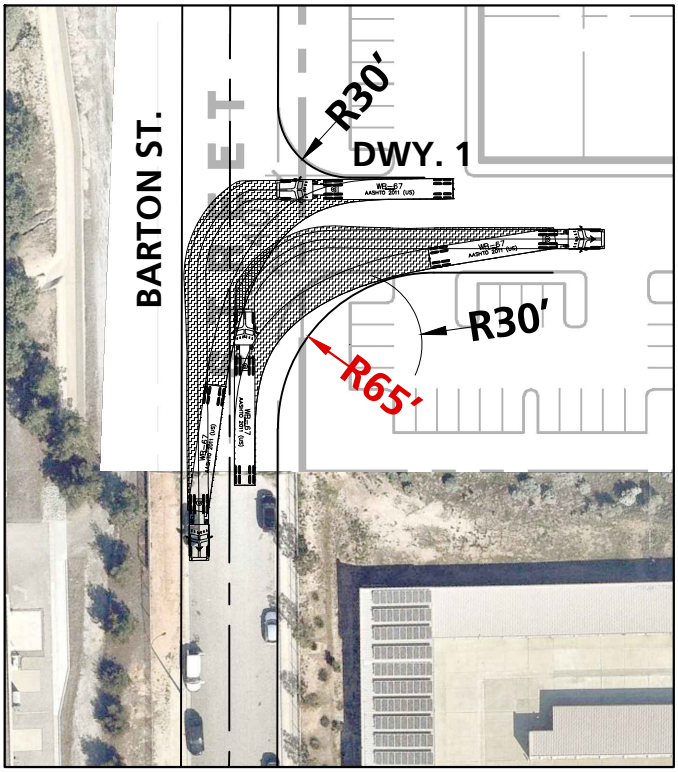
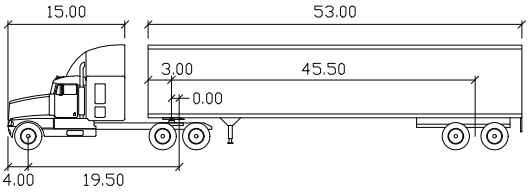


EXHIBIT 1-5: TRUCK ACCESS





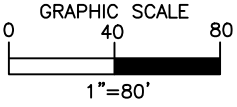
LEGEND:



WB-67

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		



N

As indicated in Exhibit 1-5, the egress of trucks is restricted to left turn out only. Driver education and physical improvements (i.e., signage, striping, truck barriers, etc.) would direct truck movements to head eastbound on Alessandro Boulevard to the I-215 Interchange. These measures would prevent trucks from exiting to westbound on Alessandro Boulevard. An example of an existing physical improvement to restrict outbound truck movement is located at the intersection of San Gorgonio Drive and Alessandro Boulevard.

1.7 SIGHT DISTANCE ANALYSIS

The intersection sight distance has been evaluated for Private Driveway and Driveway 2 on Alessandro Boulevard. Sight distance is the continuous length of highway or roadway ahead visible to the driver.

At unsignalized intersections, intersection sight distance must provide a substantially clear line of sight between the driver of the vehicle waiting on the minor road (driveway) and the driver of an approaching vehicle. For the purposes of this analysis, a 9 second criterion has been applied to the outside travel lanes in either direction to provide the most conservative sight distance (consistent with the Caltrans Highway Design Manual, 2019). The 9 second criterion allows waiting vehicles to either cross all lanes of through traffic by turning left or cross the near lanes by turning right without requiring through traffic to radically alter their speed.

1.7.1 SIGHT DISTANCE STANDARDS

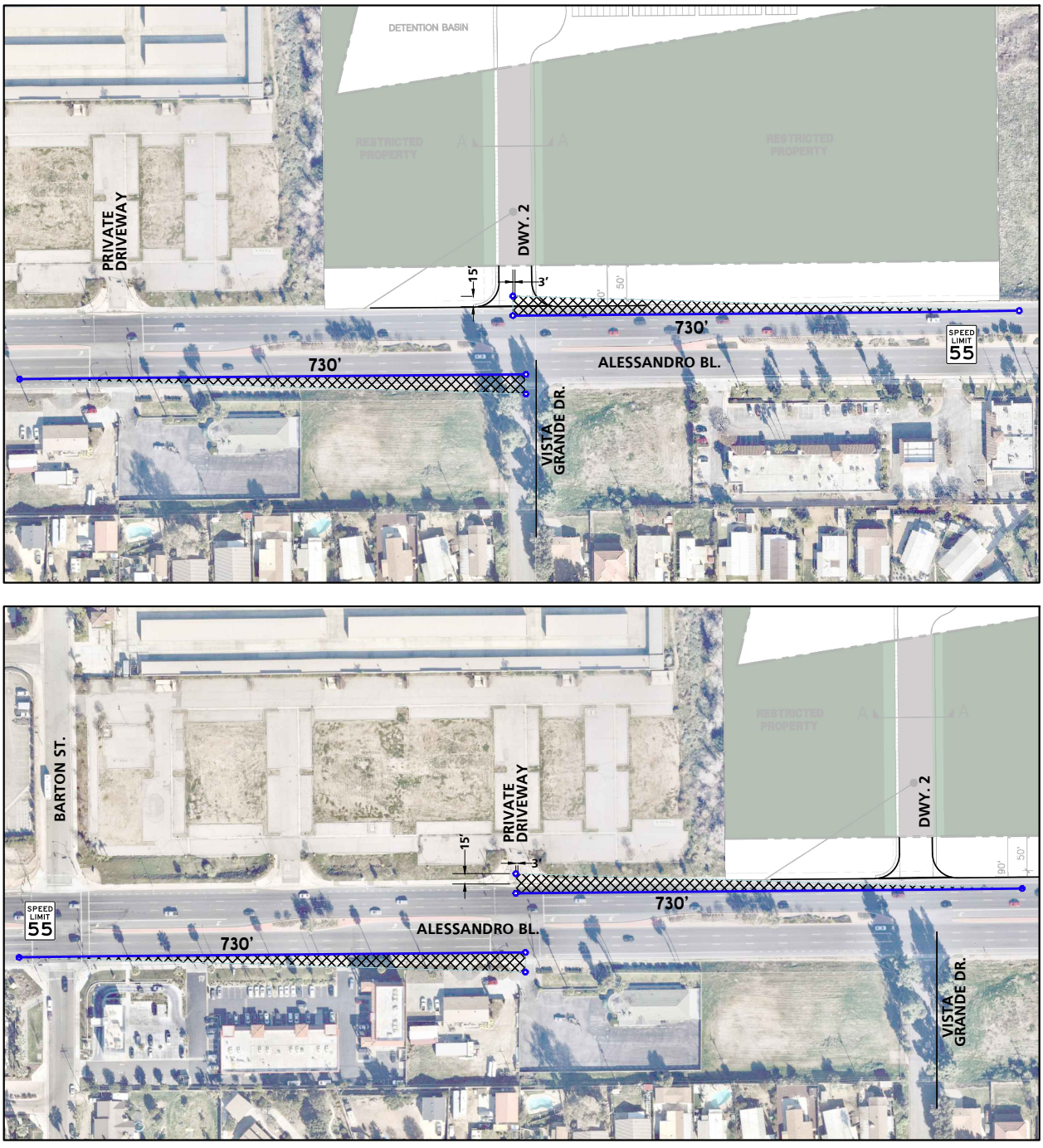
Alessandro Boulevard – Alessandro Boulevard is an existing roadway and the sight distance at Private Driveway and Driveway 2 along Alessandro Boulevard have been assessed assuming the "object" in the road is another vehicle. Alessandro Boulevard has been evaluated as a major roadway with a posted speed limit of 55 miles per hour.

Adequate visibility for vehicular and pedestrian traffic can be provided at each Project driveway by limiting sight obstructions within the limited use are. Any landscaping/hardscape within the limited use area should not exceed 30-inches (2.5-feet) in height and sloped areas should not exceed 3-feet. The limited use area should be kept clear of any landscaping or any other obstructions that may impede the visibility of the driver, including on-street parking. Minimum horizontal intersection sight distance for the aforementioned driveways is illustrated on Exhibit 1-6.

1.7.2 SIGHT DISTANCE ALONG ALESSANDRO BOULEVARD

The minimum intersection stopping sight distance on a roadway with a speed limit of 55 miles per hour and a 9 second time gap is 730-feet.

EXHIBIT 1-6: SIGHT DISTANCE



LEGEND:

= MINIMUM SIGHT DISTANCE LINES

= LIMITED USE AREA
(THERE SHALL BE NO OBSTRUCTION WITHIN THE LIMITED USE AREA. OBSTRUCTIONS INCLUDE, BUT NOT LIMITED TO, ANY SIGNS OR OBJECTS HIGHER THAN 3' MEASURED FROM PAVEMENT WITHIN THE AREA OF LIMITED USE.)

GRAPHIC SCALE
0 115 230
1"=230'

N

2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of Riverside traffic study guidelines.

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 *Highway Capacity Manual* (HCM) 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. Study area intersections located within the City of Riverside, County of Riverside, March Joint Powers Authority, and City of Moreno Valley have been analyzed using the software package Synchro (Version 10).

2.2.1 SIGNALIZED INTERSECTIONS

City of Riverside, March Joint Powers Authority, City of Moreno Valley, County of Riverside

The City of Riverside, March Joint Powers Authority, City of Moreno Valley, and County of Riverside require signalized intersection operations analysis based on the methodology described in the HCM. (5) 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.

TABLE 2-1: SIGNALIZED INTERSECTION LOS DEFINITIONS

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

Study area intersections located within the City of Riverside, March JPA, and City of Moreno Valley have been analyzed using the software package Synchro (Version 10).

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. It is unlikely that the PHF would decrease from their current values and would more likely increase. However, in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies, existing PHFs have been used for all analysis scenarios.

California Department of Transportation (Caltrans)

Per the Caltrans *Guide for the Preparation of Traffic Impact Studies*, the traffic modeling and signal timing optimization software package Synchro (Version 10) has also been utilized to analyze signalized intersections under Caltrans' jurisdiction, which include interchange to arterial ramps (i.e. I-215 Freeway ramps at Alessandro Boulevard). (2) 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. Signal timing for the freeway arterial-to-ramp intersections have been obtained from Caltrans District 8 and were utilized for the purposes of this analysis.

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Riverside, March JPA, City of Moreno Valley, and County of Riverside require the operations of unsignalized intersections be evaluated using the methodology described the HCM. (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 DEFINITIONS

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

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 ROADWAY SEGMENT CAPACITY ANALYSIS

Roadway segment operations have been evaluated using the City of Riverside Roadway Capacity provided in the City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D). (1) The City of Riverside requires LOS D capacities to be maintained on City roadways. The daily roadway segment capacities for each type of roadway are summarized in Table 2-3. These roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian bicycle traffic. As such, where the average daily traffic (ADT) based roadway segment analysis indicates a deficiency (unacceptable LOS), a review of the more detailed peak hour intersection analysis and progression analysis is undertaken. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes.

TABLE 2-3: ROADWAY SEGMENT CAPACITY LOS DEFINITIONS[1]

Facility Type	Level of Service Capacity[1]		
	C	D	E
Local	2,500-2,799	2,800-3,099	3,100+
Collector (66' or 80')	9,900-11,199	11,200-12,499	12,500+
Arterial	14,400-16,199	16,200-17,999	18,000+
Arterial (88')	16,800-19,399	19,400-21,199	22,000+
Arterial (100')	26,200-29,599	29,600-32,999	33,000+
Arterial (120')	38,700-44,099	44,10-49,499	49,500+
Arterial (144')	50,600-57,799	57,800-64,999	65,000+

[1] Source: Exhibit D of the City of Riverside Traffic Impact Analysis Preparation Guide
All capacity exhibits are based on optimum conditions and are intended as guidelines for planning purposes only.

2.4 FREEWAY OFF-RAMP QUEUING ANALYSIS

The study area for this TA includes the freeway-to-arterial interchange of the I-215 Freeway at Alessandro Boulevard off-ramps. 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 on Alessandro Boulevard . Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-215 Freeway mainline from the off-ramps.

2.5 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by the California Department of Transportation (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 TA 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 TA 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 TA because it provides specialized warrant criteria for intersections with urban characteristics (e.g. located in communities with populations of more 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 (Project driveways), 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 on Table 2-4, traffic signal warrant analyses were performed for the following unsignalized study area intersections operating at LOS E or F during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips:

TABLE 2-4: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Barton St. & Driveway 1	Riverside
3	Private Driveway & Alessandro Boulevard (*currently signalized)*	Riverside
4	Driveway 2/Vista Grande Dr. & Alessandro Boulevard	Riverside

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 (2023) 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 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.

2.6 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions.

2.6.1 CITY OF RIVERSIDE

The City of Riverside General Plan states the City will strive to maintain LOS D or better on arterial streets wherever possible. At some key locations, such as City arterial roadways, which are used as freeway bypass by regional through traffic and at heavily traveled freeway intersections, LOS E may be acceptable as determined on a case-by-case basis. Locations that may warrant the LOS E standard include portions of Arlington Avenue/Alessandro Boulevard, Van Buren Boulevard throughout the City, portions of La Sierra Avenue, and selected freeway interchanges. A higher standard, such as LOS C or better, may be adopted for Local and Collector streets in residential areas. The City recognizes that along key free-way feeder segments during peak commute hours, LOS F may be expected due to regional travel patterns. A minimum LOS utilized for the purposes of this analysis is LOS D.

2.6.2 MARCH JOINT POWERS AUTHORITY

As identified in the City of Riverside Traffic Impact Study Preparation Guide (August 3, 2011) all intersections within the City of Riverside Planning Area shall operate at LOS D or better with limiting circumstances of LOS E to occur. LOS E may also be allowed to the extent that would

support transit-oriented development (TOD) and walkable communities. (7) LOS E is also acceptable during peak hours at interchange ramp intersections where ramp metering occurs. The Project is not proposed to be a TOD and neither the Alessandro Boulevard on-ramps are currently metered; as such, the minimum LOS utilized for the purposes of this analysis is LOS D.

2.6.3 CITY OF MORENO VALLEY

The Minimum LOS for the City of Moreno Valley is LOS D for intersections that are adjacent to freeway on/off ramps, and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections. Boundary intersections are assumed to be LOS D.

2.6.4 COUNTY OF RIVERSIDE

County of Riverside General Plan Policy C 2.1 states that the following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County:

- LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non- Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.
- LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans. LOS E may be allowed by the Board of Supervisors within designated areas where transit-oriented development and walkable communities are proposed.

Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental deficiencies and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate the impacts of such approval. Any such approval must incorporate all feasible improvements, make specific findings to support the decision, and adopt a statement of overriding considerations.

2.6.5 CALTRANS

Based on recent guidance from Caltrans District 8, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway 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 MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways,

roadways segments, and intersections is D. For undeveloped or not densely developed locations, the goal may be to achieve LOS C.

2.7 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies.

2.7.1 INTERSECTIONS

Direct deficiencies are those deficiencies for which the addition of project-only trips result in an identifiable degradation in LOS to unacceptable LOS on intersections from the Existing condition thereby triggering the need for specific project-related improvement strategies through a comparison of Existing and E+P traffic conditions.

For the study area intersections that lie within the City of Riverside, 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 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) or increases to the peak hour delay as defined in Table 2-5, a deficiency is deemed to occur.

TABLE 2-5: DEFICIENCY CRITERIA

Pre-Project LOS	Project-Related Delay Increase	Improvement
A/B	10.0 Seconds or More	Achieve Pre-project delay or better
C	8.0 Seconds or More	Achieve Pre-project delay or better
D	5.0 Seconds or More	Achieve Pre-project delay or better
E	2.0 Seconds or More	Achieve Pre-project delay or better
F	1.0 Second or More	Achieve Pre-project delay or better

For the study area intersections that lie within March JPA, to determine whether the addition of project traffic (as defined through the comparison of Existing to E+P traffic conditions) at a study intersection would result in a direct project-specific traffic deficiency, both of the following conditions must occur:

- Peak hour project traffic plus existing traffic causes an intersection to operate at LOS E or F; and
- Peak hour project traffic comprises 2% or more of the total peak hour traffic on the intersection for LOS E and 2% or more for LOS F.

For the study area intersections that lie within the County of Riverside, 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 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/LOS E (i.e., unacceptable LOS), a deficiency is deemed to occur.

The City of Moreno Valley does not have its own deficiency criteria, therefore, study intersections that lie within the City of Moreno Valley are evaluated according to either March JPA or County of Riverside deficiency criteria.

However, when the pre-Project condition is already below LOS D (i.e., unacceptable LOS), the Project will be responsible for improving its 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. This is a standard protocol in many urban jurisdictions because to require a Project to improve to LOS D or better would in effect force the Project to improve beyond its Project deficiencies, which is prohibited under California law. Thus, for intersections currently operating at unacceptable LOS during either the AM and/or PM peak hour under Existing traffic conditions, improvements have been identified to improve the deficiencies of the Project to an intersection LOS that is equal to or better than pre-Project conditions.

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 improved if the Project is required to implement or fund its fair share of improvements designed to alleviate its cumulatively considerable contribution to the deficiency.

2.7.2 CALTRANS FACILITIES

To determine that the addition of project traffic to the SHS freeway segments would result in a deficiency, both of the following must be found:

- The traffic study finds that the LOS of a segment will degrade from D or better to E or F.
- The traffic study finds that the project will exacerbate an already deficient condition by contributing 50 or more peak hour trips. A segment that is operating at or near capacity is deemed to be deficient.

2.8 SB 743 REQUIREMENTS

In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. This legislation will eventually change the way that transportation studies are conducted for environmental documents. In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation deficiencies of projects in studies conducted under California Environmental Quality Act (CEQA). Instead, new performance

measures such as vehicle miles travelled (VMT) will be used. The VMT analysis will be provided under a separate cover.

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Riverside General Plan Circulation Network, and a review of existing peak hour intersection operations, roadway segment capacities, and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Riverside staff (Appendix 1.1), the study area includes a total of 8 existing and future intersections as shown previously on Exhibit 1-2. 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 GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the City of Riverside. However, the study area includes intersections that share borders with the neighboring jurisdictions of the County of Riverside, the March JPA, the City of Moreno Valley, and Caltrans.

3.2.1 CITY OF RIVERSIDE

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Riverside General Plan Circulation Element, are shown on Exhibit 3-2. Exhibit 3-3 illustrates the City of Riverside General Plan roadway cross-sections.

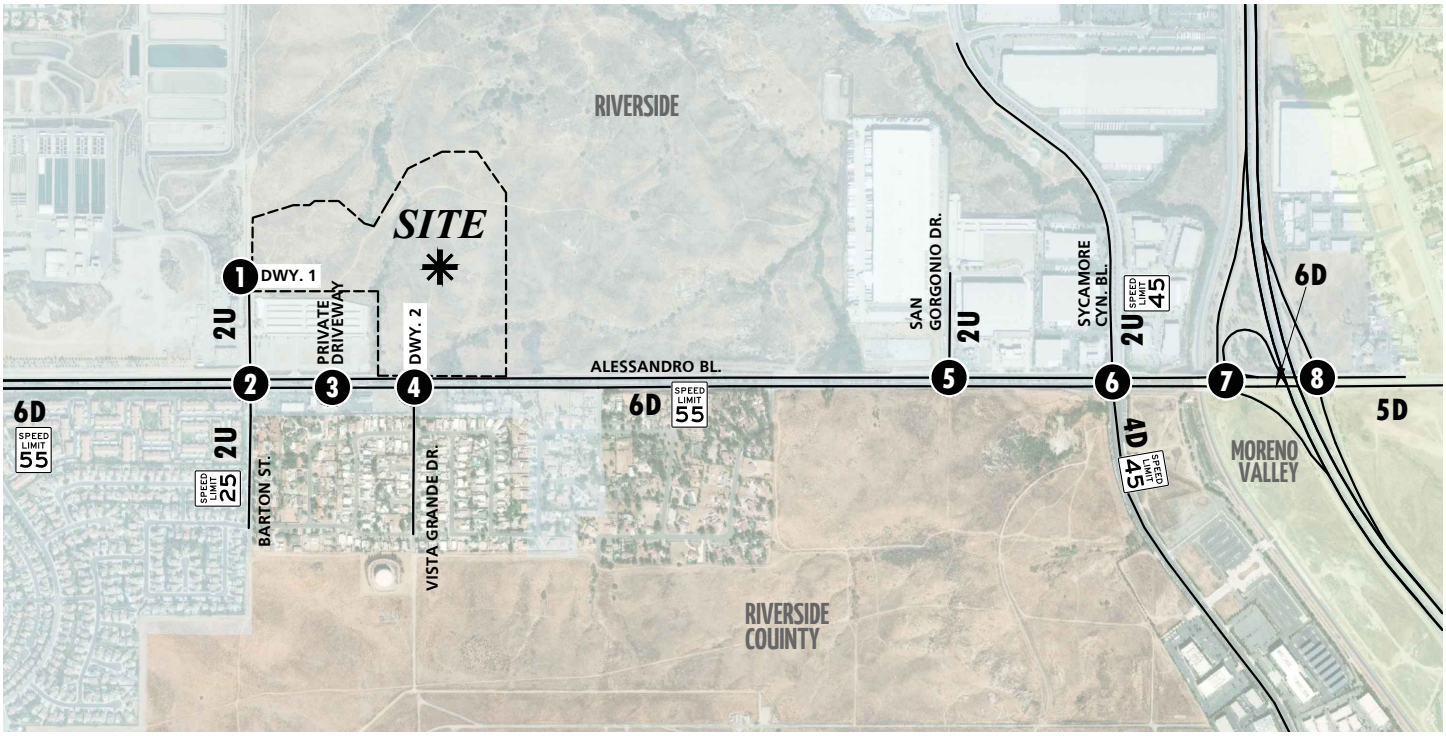
3.2.2 COUNTY OF RIVERSIDE

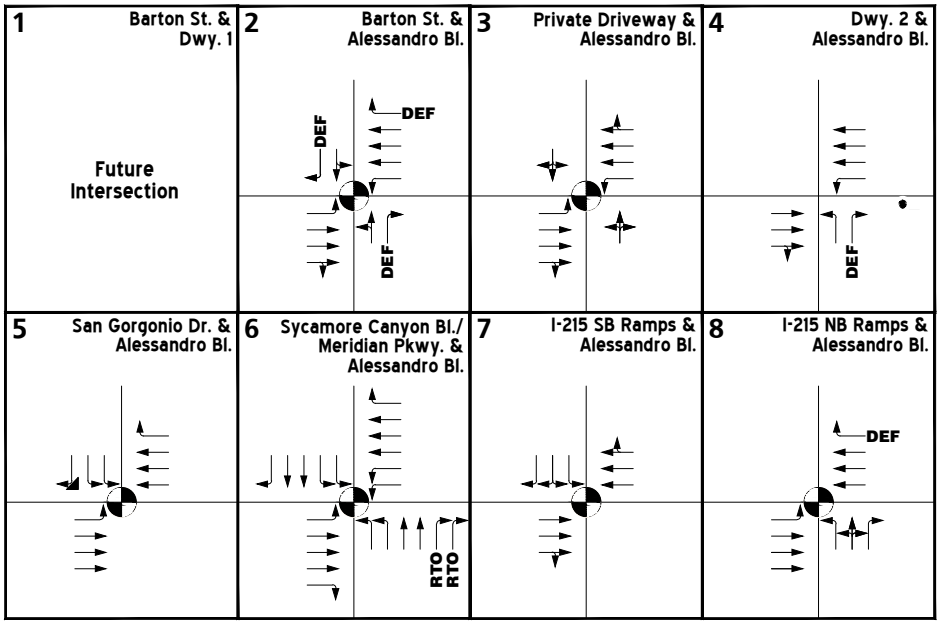
The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the County of Riverside General Plan Circulation Element, are shown on Exhibit 3-4. Exhibit 3-5 illustrates the County of Riverside General Plan roadway cross-sections.

3.2.3 MARCH JPA

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Riverside General Plan Circulation Element, are described subsequently. Exhibit 3-6 shows the City of Riverside General Plan Circulation Element, and Exhibit 3-7 illustrates the City of Riverside General Plan roadway cross-sections. It is our understanding that the City of Riverside is currently undergoing a General Plan Update, however, the work effort associated with the General Plan Update had not been completed at the time this TA was prepared. JPA Resolution 16-05 had minor amendments to General Plan Transportation Element. The roadway system and cross-sections from Meridian General Plan Amendment (JPA#16-05) are shown on Exhibit 3-7.A.

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





LEGEND:

- = TRAFFIC SIGNAL
- = STOP SIGN
- 4 = NUMBER OF LANES
- D = DIVIDED
- U = UNDIVIDED
- RTO = RIGHT TURN OVERLAP
- DEF = DEFACTO RIGHT TURN
- SPEED LIMIT 25 = SPEED LIMIT (MPH)

N

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

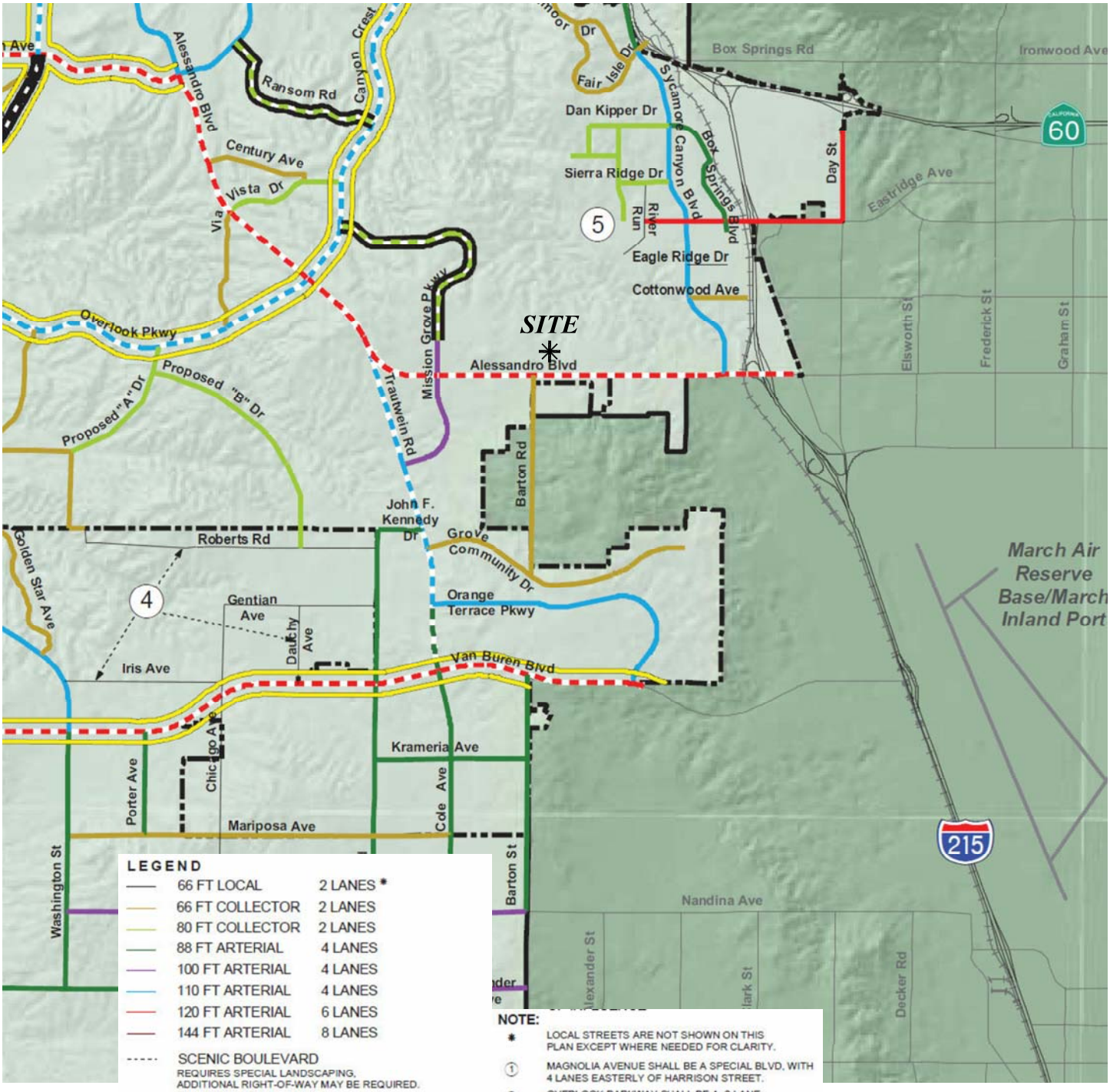
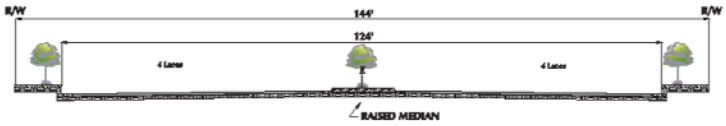
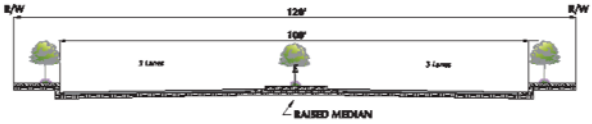


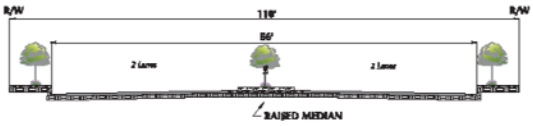
EXHIBIT 3-3: CITY OF RIVERSIDE GENERAL PLAN ROADWAY CROSS-SECTIONS



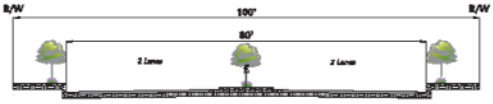
144-FOOT ARTERIAL



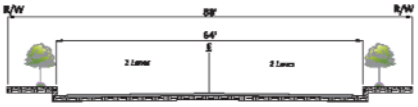
120-FOOT ARTERIAL



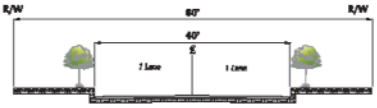
110-FOOT ARTERIAL



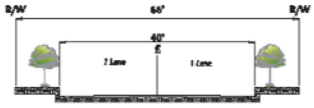
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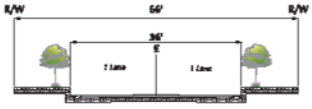
88-FOOT ARTERIAL



80-FOOT COLLECTOR



66-FOOT COLLECTOR



LOCAL STREET

SOURCE: CITY OF RIVERSIDE, 2004

EXHIBIT 3-4: COUNTY OF RIVERSIDE GENERAL PLAN CIRCULATION ELEMENT

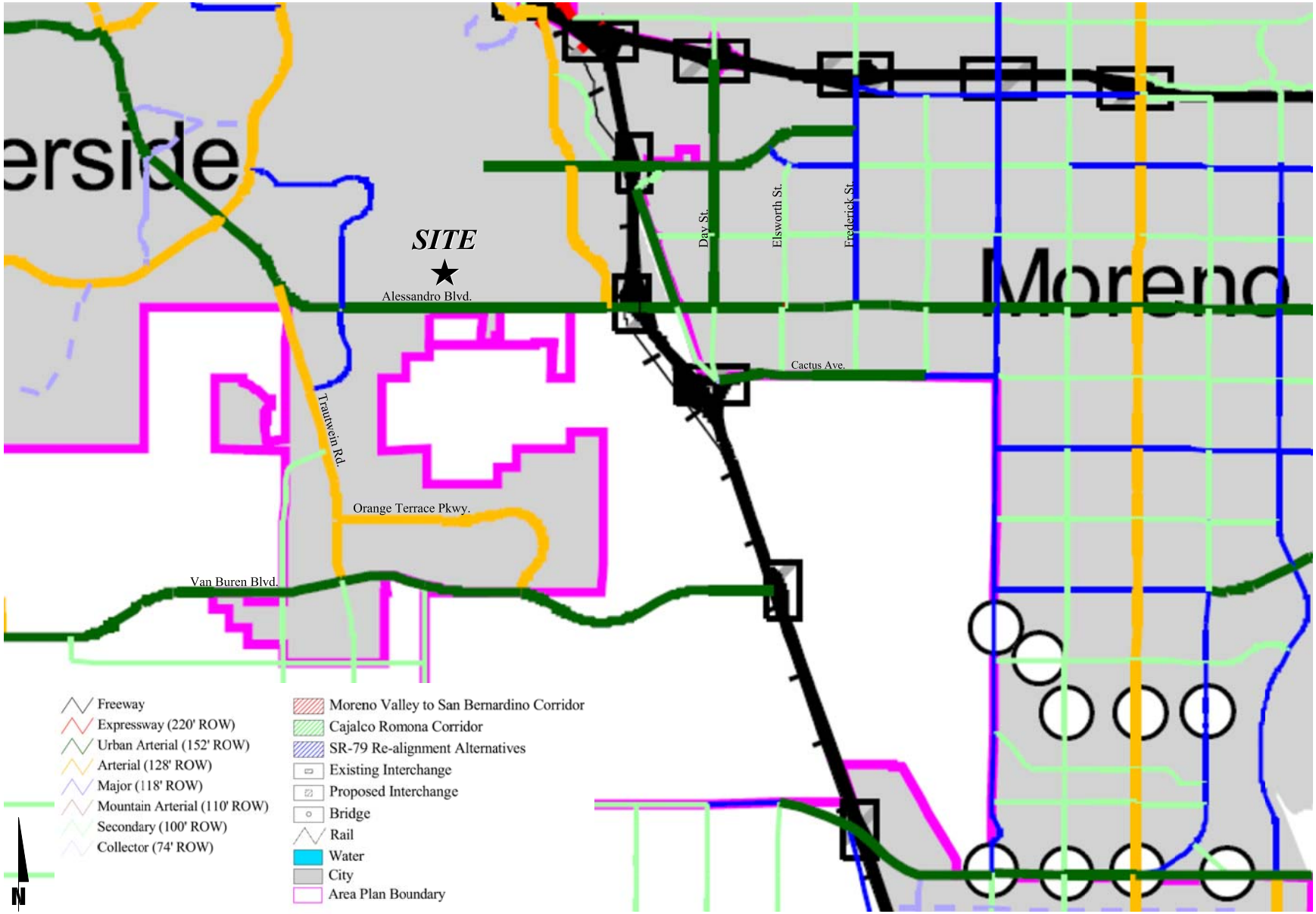
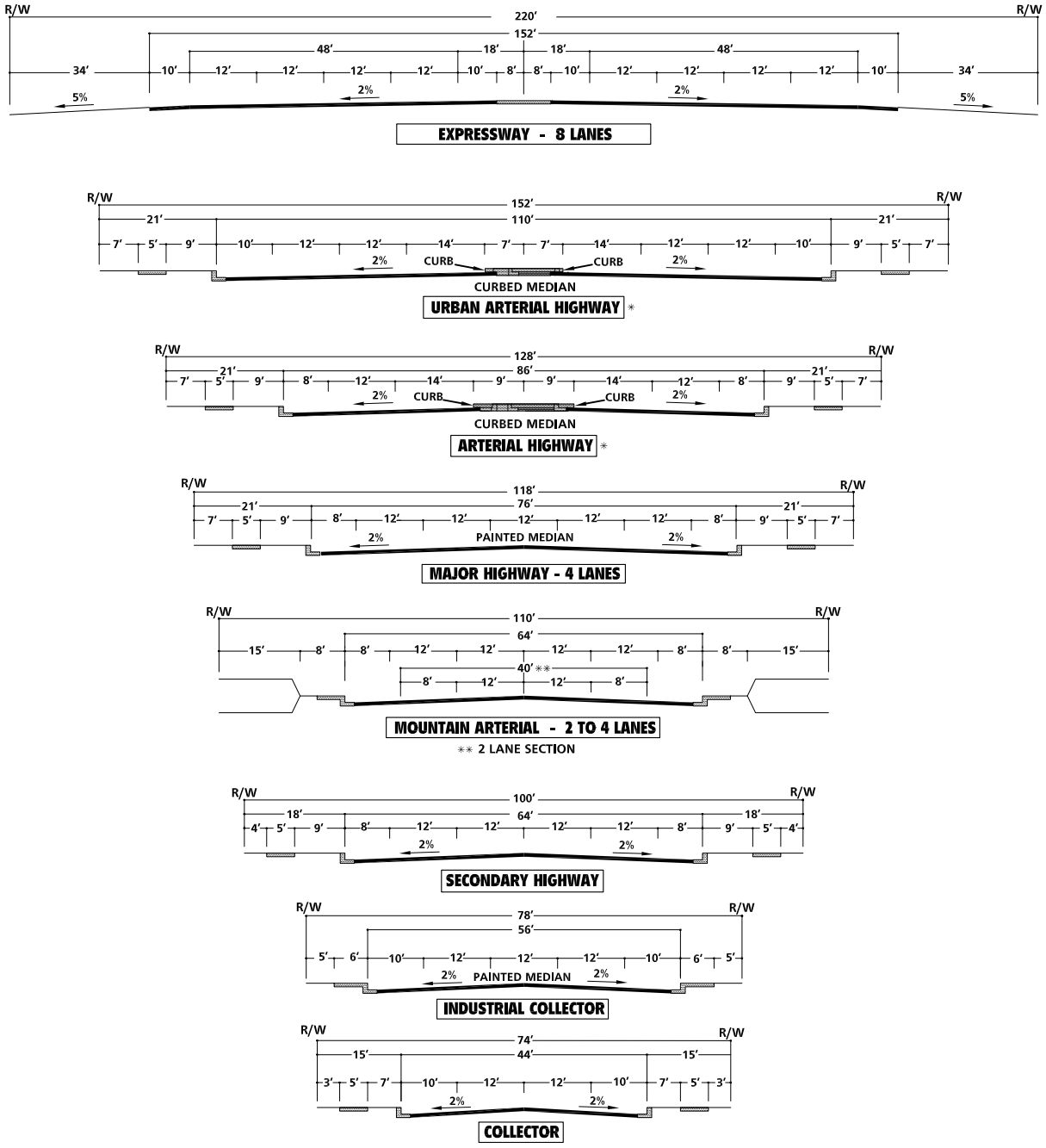


EXHIBIT 3-5: COUNTY OF RIVERSIDE GENERAL PLAN ROADWAY CROSS-SECTIONS

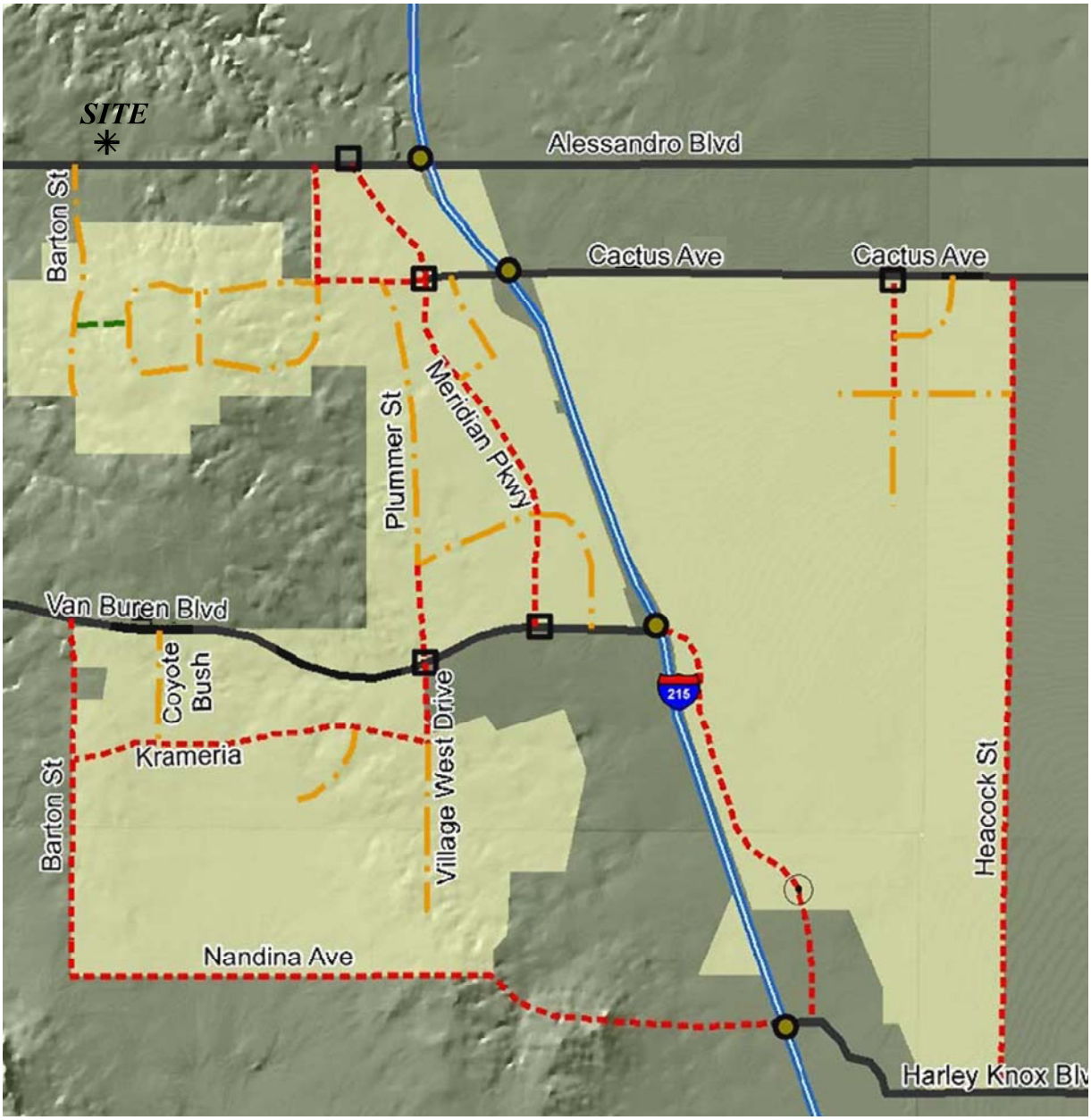


* *IMPROVEMENTS MAY BE RECONFIGURED TO ACCOMMODATE EXCLUSIVE TRANSIT LANES OR ALTERNATIVE LANE ARRANGEMENTS ADDITIONAL RIGHT OF WAY MAY BE REQUIRED AT INTERSECTIONS TO ACCOMMODATE ULTIMATE IMPROVEMENTS FOR STATE HIGHWAYS SHALL CONFORM TO CALTRANS DESIGN STANDARDS.*

NOT TO SCALE

SOURCE: COUNTY OF RIVERSIDE

EXHIBIT 3-6: MARCH JOINT POWERS AUTHORITY GENERAL PLAN CIRCULATION ELEMENT



Legend

- Arterial Highway
- Arterial/Urban Arterial Highway
- Emergency Access
- Industrial Collector
- Secondary Highway
- March JPA Planning Area
- Roundabout
- Enhanced Intersection
- Freeway Interchange

N

EXHIBIT 3-7: MARCH JOINT POWERS AUTHORITY GENERAL PLAN ROADWAY CROSS-SECTIONS

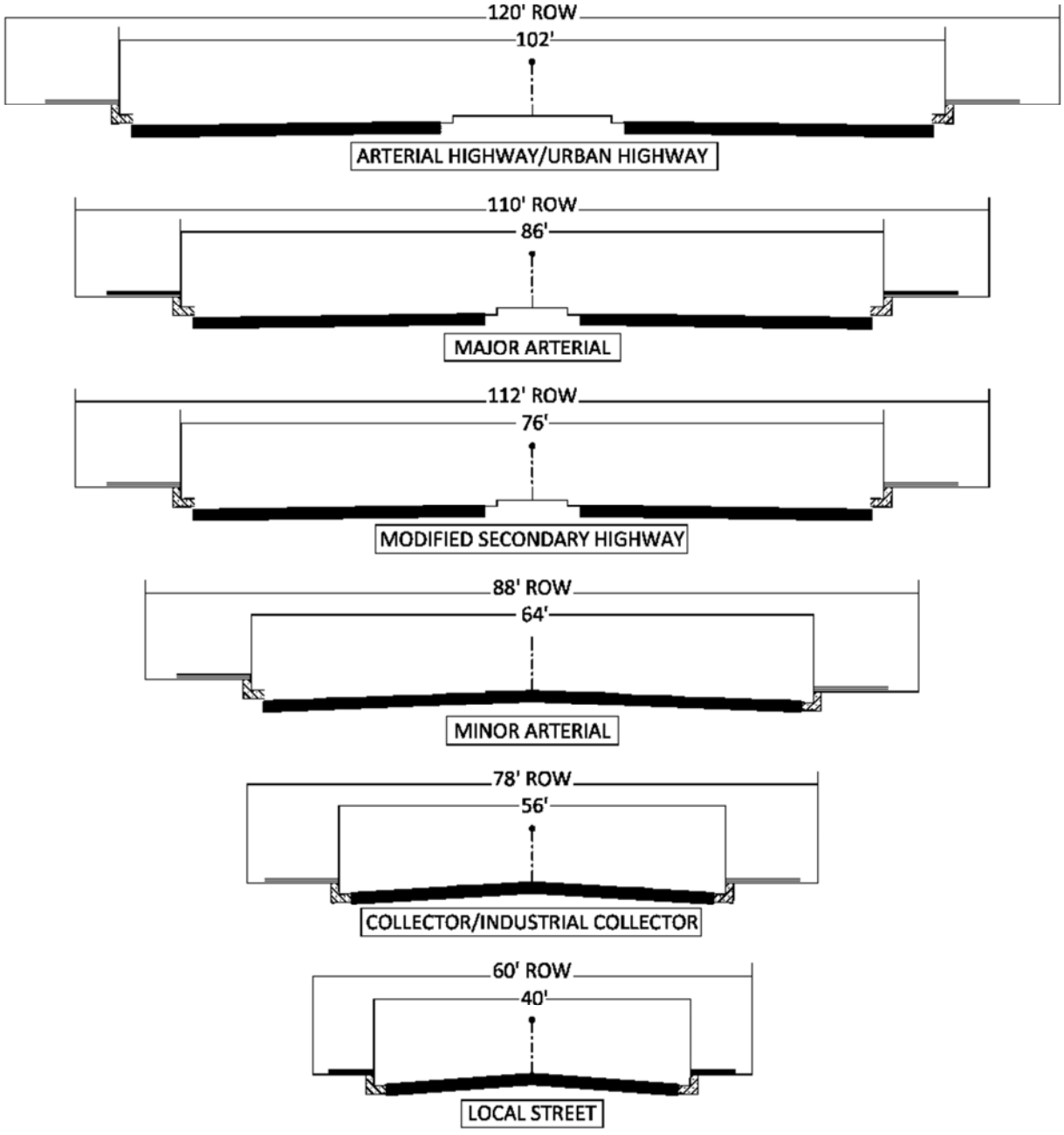
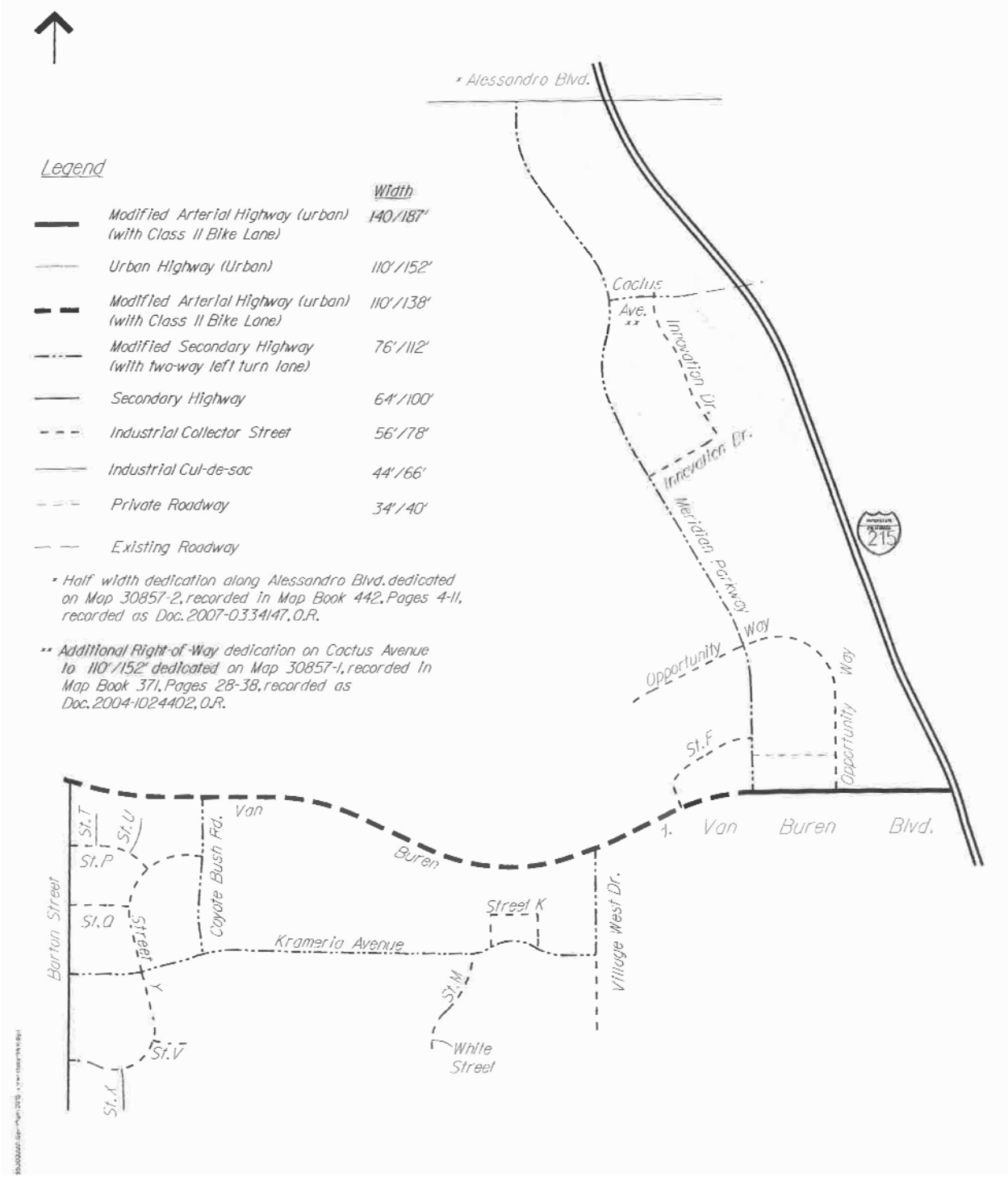


EXHIBIT 3-7.A: MERIDIAN GENERAL PLAN AMENDMENT ROADWAY SYSTEM



N

3.2.4 CITY OF MORENO VALLEY

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of Moreno Valley General Plan Circulation Element, are shown on Exhibit 3-8.Exhibit 3-9 illustrates the City of Moreno Valley General Plan roadway cross-sections.

3.3 TRUCK ROUTES

While the City of Riverside's General Plan recognizes the trucking industry and the importance of the region's role in the movement of goods, there are no truck routes defined within the City. The March JPA designated truck route map is shown on Exhibit 3-10. The I-215 Freeway, Alessandro Boulevard (west of the I-215 Freeway) is identified as designated truck routes.

3.4 TRANSIT SERVICE

The study area within the City of Riverside and the surrounding County of Riverside and City of Moreno Valley are currently served by the Riverside Transit Authority (RTA), a public transit agency serving various jurisdictions within Riverside County. The existing bus routes provided within the area by RTA are shown on Exhibit 3-11. RTA Routes 20 and 26 could potentially serve the Project as it currently operates along Alessandro Boulevard to the south of the Project site. Transit service is reviewed and updated by RTA 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.

It should also be noted that the Moreno Valley/March Field Metrolink Station is located on Meridian Parkway.

3.5 BICYCLE & PEDESTRIAN FACILITIES

Field observations conducted in October 2018 indicate nominal pedestrian and bicycle activity within the study area. Existing pedestrian facilities within the study area are shown on Exhibit 3-12. There are currently Class II bike lanes along Alessandro Boulevard and Meridian Parkway within the study area. Class II bikeways are bike lanes which are established adjacent to traffic lanes and shared the same roadway. Existing sidewalks are currently in place along the Alessandro Boulevard on the north and south side of the street.

EXHIBIT 3-8: CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

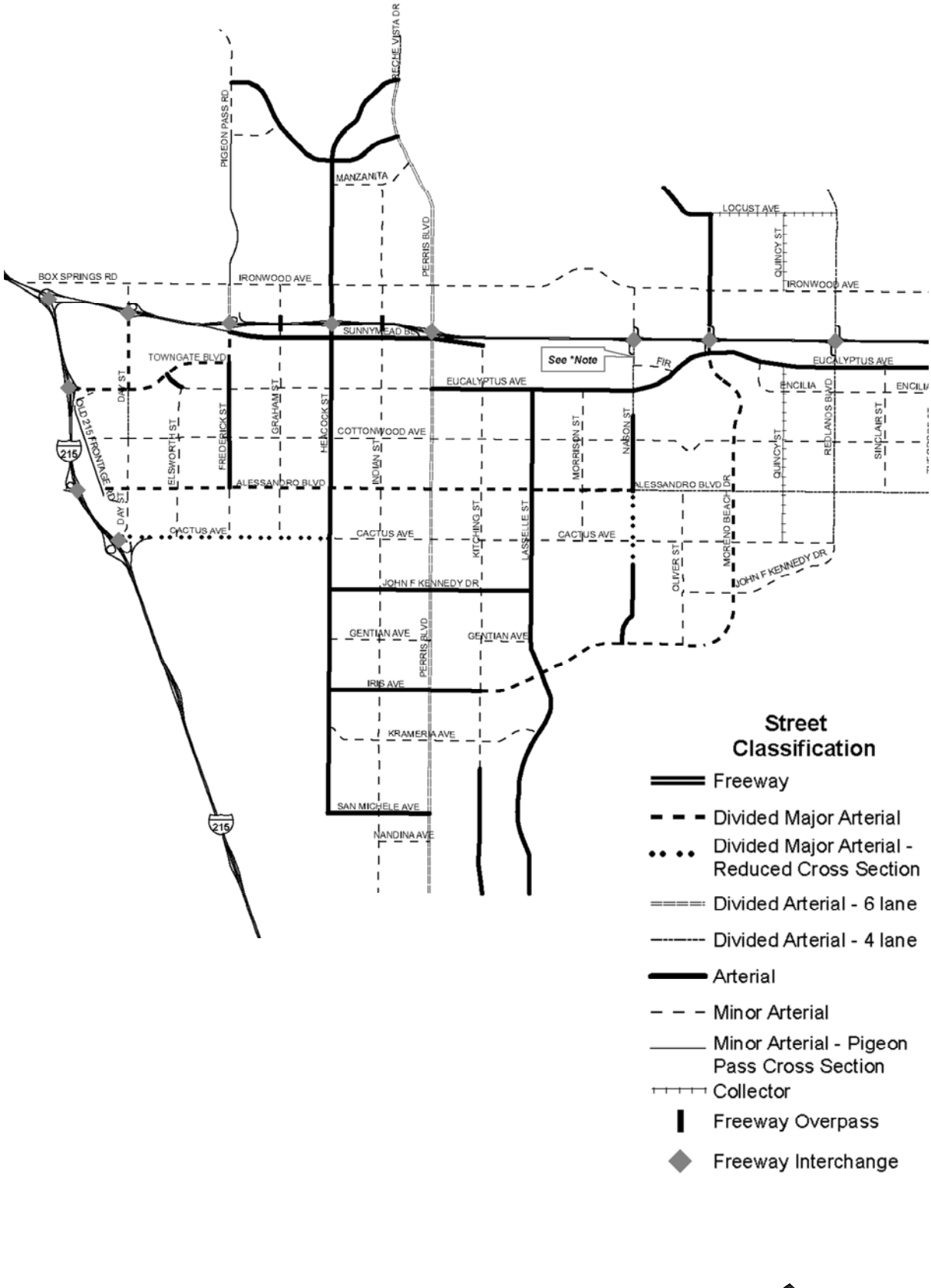


EXHIBIT 3-9: CITY OF MORENO VALLEY GENERAL PLAN ROADWAY CROSS-SECTIONS

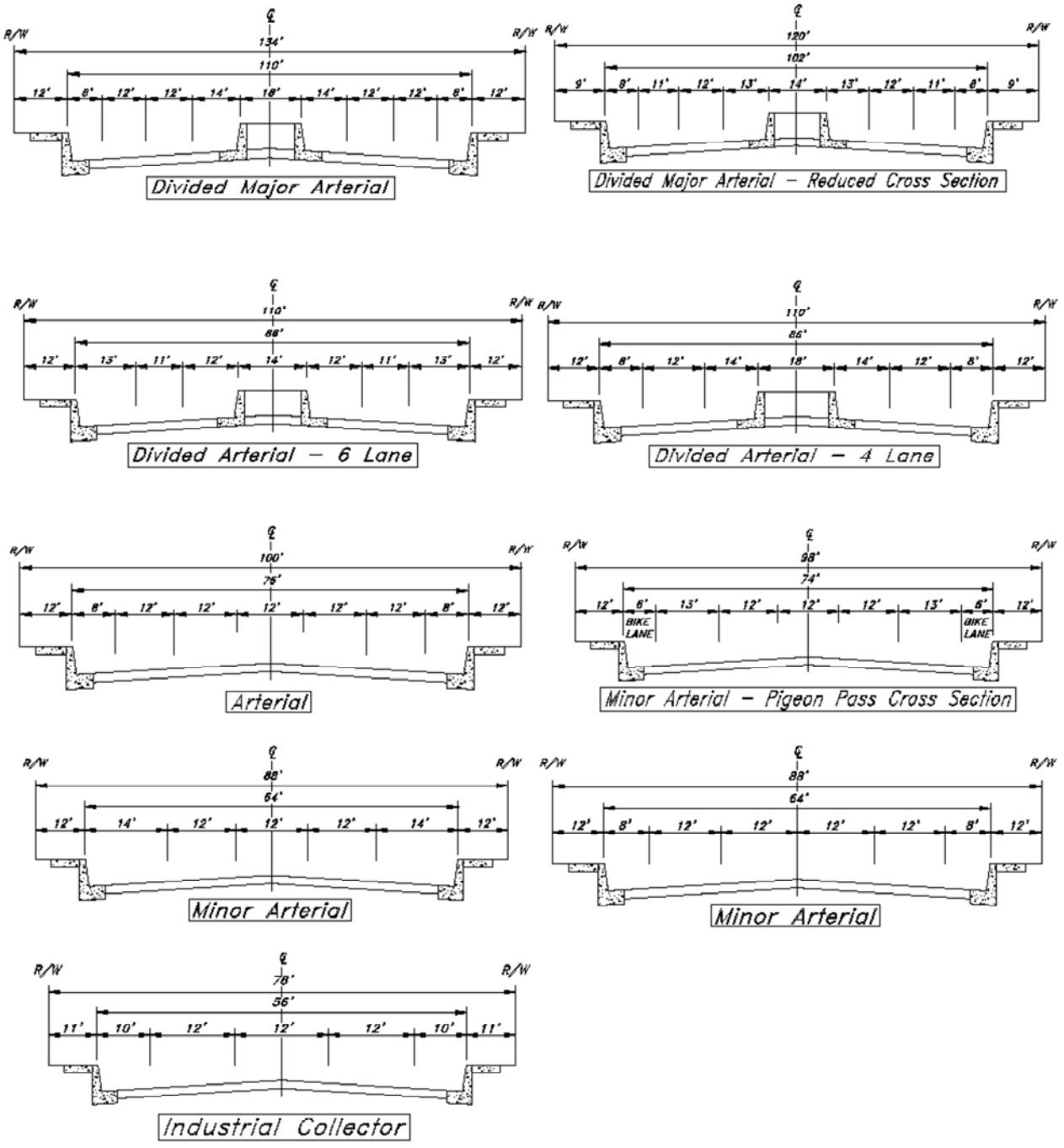


EXHIBIT 3-10: MARCH JOINT POWERS AUTHORITY TRUCK ROUTES

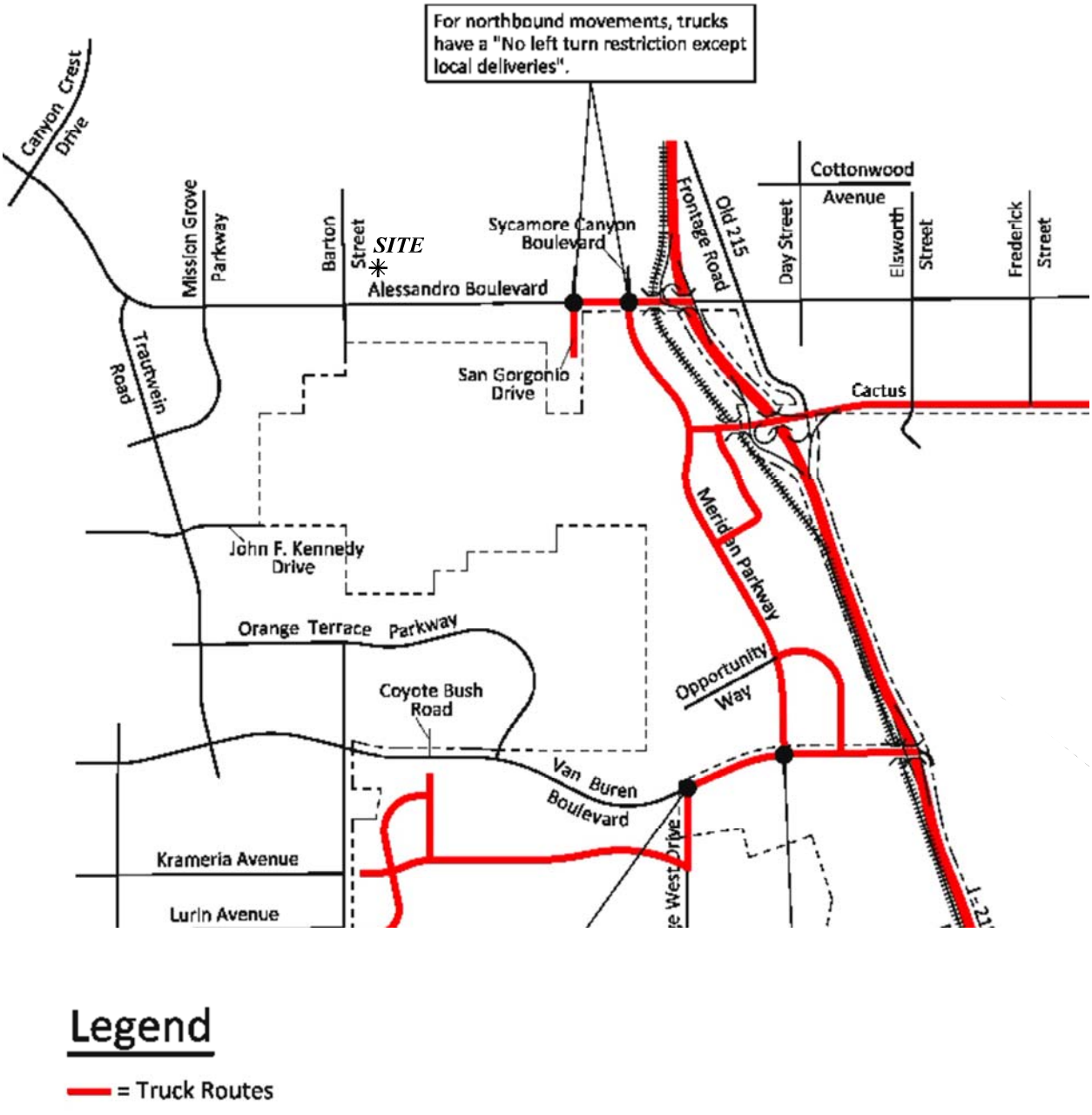
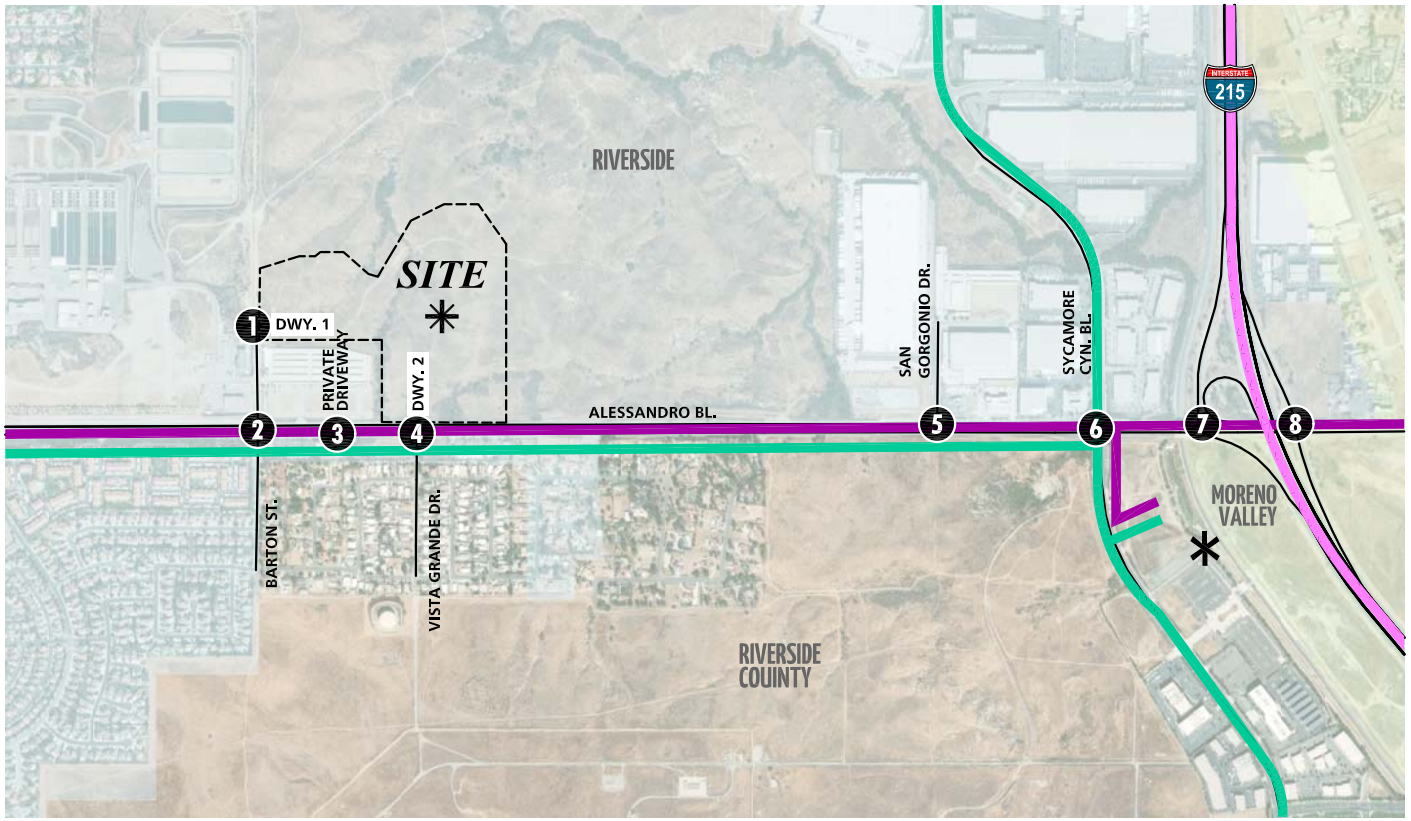


EXHIBIT 3-11: EXISTING TRANSIT ROUTES



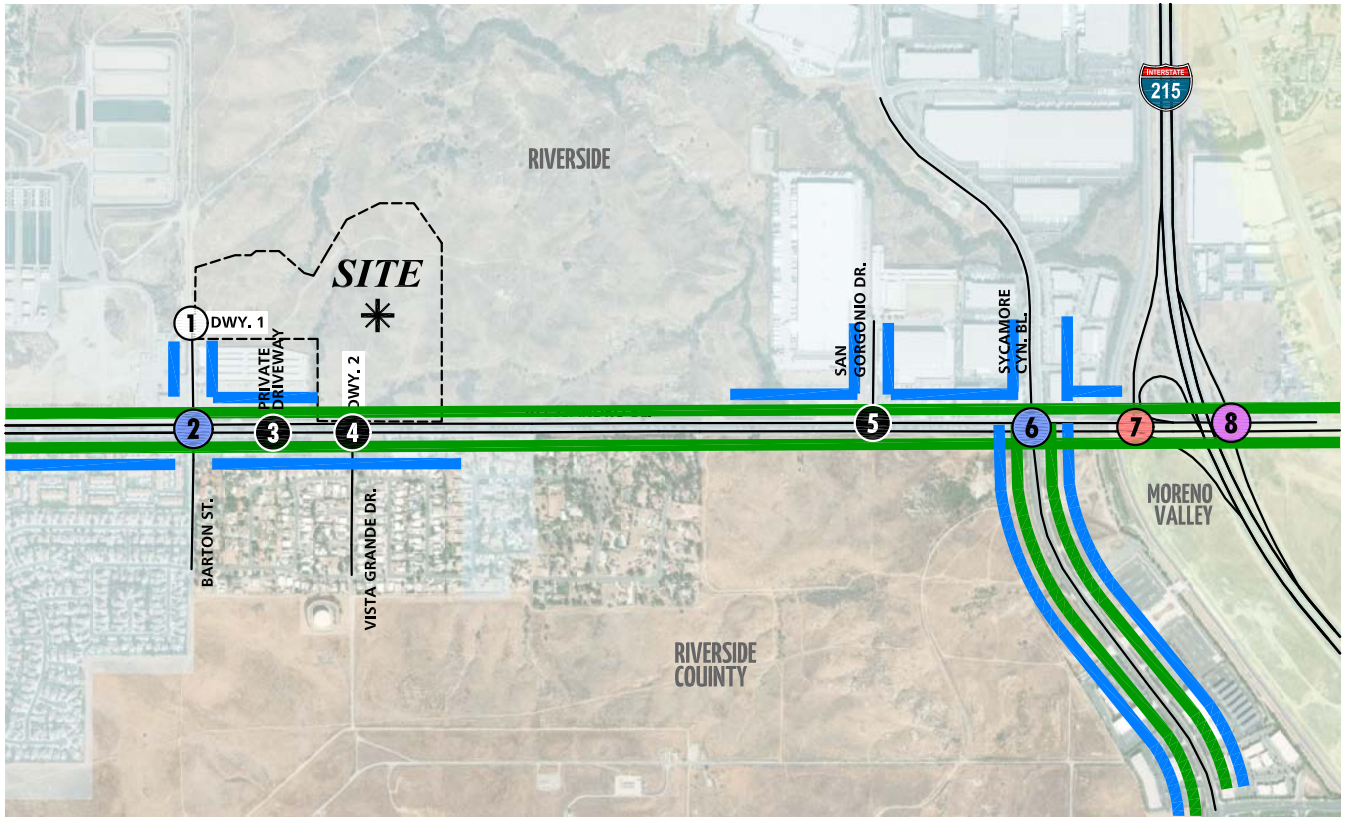
LEGEND:

= RTA ROUTE 22
= RTA ROUTE 208/212
= RTA ROUTE 20
= RTA ROUTE 26

* MORENO VALLEY/MARCH FIELD METROLINK STATION.

N

EXHIBIT 3-12: 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

3.6 EXISTING (2018) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in October 2018 plus an ambient growth rate of 2% to account for area growth. Consistent with standard traffic 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 is representative of typical weekday peak hour traffic conditions in the study area. 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 (e.g., between ramp-to-arterial intersections, etc.). The traffic counts collected in October 2018 include the vehicle classifications as shown below:

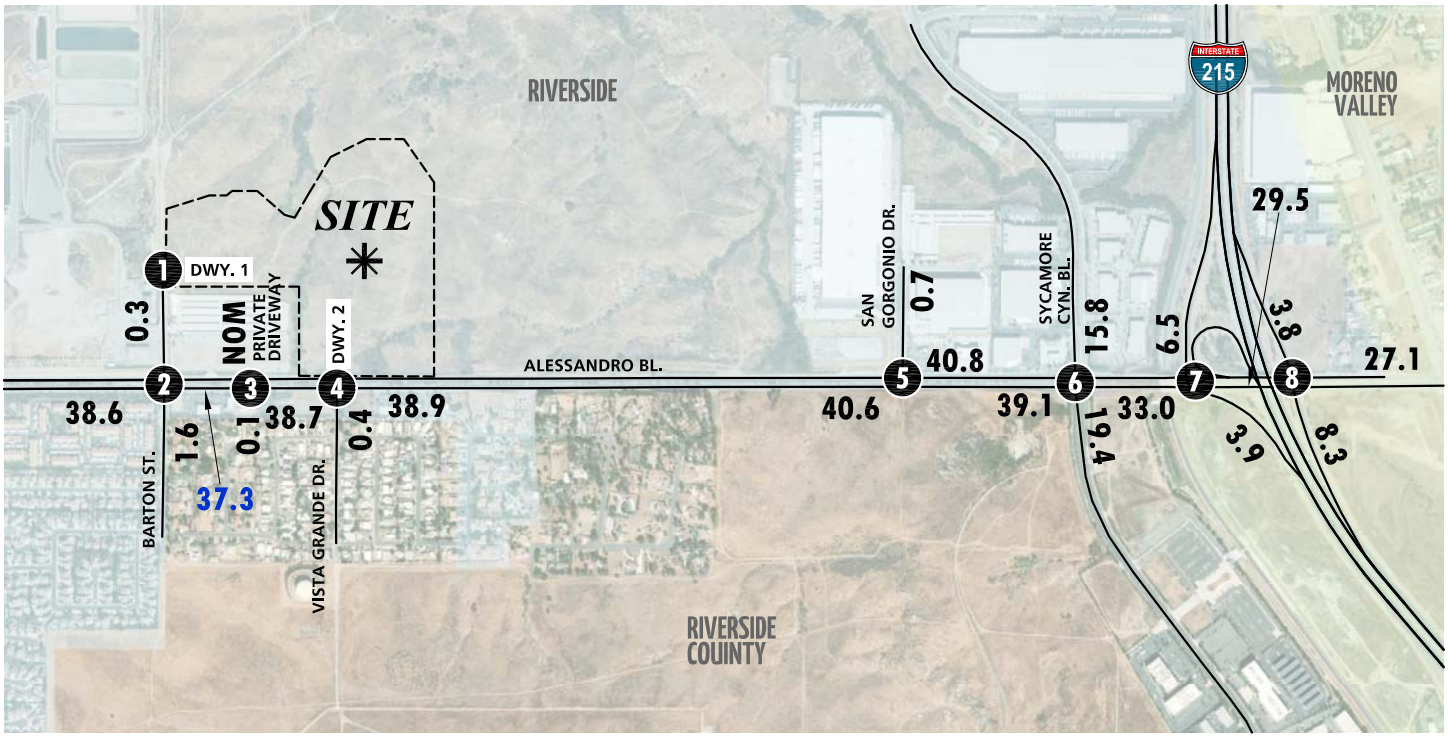
- Passenger Cars
- 2-Axle Trucks
- 3-Axle Trucks
- 4 or More Axle Trucks

To represent the impact 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 the purpose of 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 San Bernardino County CMP and are in excess of the factor recommended for use in the County of Riverside traffic study guidelines. (8)

Existing weekday average daily traffic (ADT) volumes on arterial highways throughout the study area are shown on Exhibit 3-13. 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 9.17 = Leg Volume

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



1 Barton St. & Dwy. 1 Future Intersection	**2** Barton St. & Alessandro Bl. 3(12) 3(0) 1(8) — 1(1) 2476(1814) 42(46) 9(6) 1203(2287) 23(41) — 62(55) 0(0) 36(28)	**3** Private Driveway & Alessandro Bl. 0(0) 0(0) 0(0) — 0(0) 2488(1926) 2(3) 5(3) 1217(2294) 5(1) — 3(5) 0(0) 3(2)	**4** Dwy. 2 & Alessandro Bl. 2488(1922) 12(23) 1213(2286) 7(12) — 3(2) 14(9)	**5** San Gorgonio Dr. & Alessandro Bl. 14(16) 20(27) — 35(20) 2642(1983) 11(14) 1239(2421)
6 Sycamore Canyon Bl./ Meridian Pkwy. & Alessandro Bl. 115(310) 83(654) 122(189) — 522(146) 1997(1334) 110(156) 142(148) 902(1612) 208(516) — 522(349) 678(279) 67(158)	**7** I-215 SB Ramps & Alessandro Bl. 311(357) 210(216) — 200(131) 2412(1332) 710(1536) 324(424)	**8** I-215 NB Ramps & Alessandro Bl. 140(206) 1582(945) 63(195) 891(1501) — 934(598) 0(8) 218(303)		

LEGEND:

- 10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
- 10.0 = VEHICLES PER DAY (1000'S)
- 10.0 = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)
- NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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 10.91 percent. As such, the above equation utilizing a factor of 9.17 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 10.91 percent (i.e., 1/0.01091 = 9.17) 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 are shown on Exhibit 3-13.

3.7 INTERSECTION OPERATIONS ANALYSIS

Existing (2019) 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 Existing study area intersections are all currently operating at acceptable LOS during the peak hours, with the exception of the following locations:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4) – LOS F AM and PM peak hours
- Sycamore Canyon Bl. & Alessandro Bl. (#6) – LOS F AM and PM peak hours

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

3.8 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. No study area intersections currently warrant a traffic signal for Existing traffic conditions. The traffic signal warrant analysis worksheets are included in Appendix 3.3 of this TA.

3.9 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Riverside stated roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 3-2 provides a summary of the E+P conditions roadway segment capacity analysis based on the City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) identified previously on Table 2-3. As shown on Table 3-2, all roadway segments that are anticipated to operate at an acceptable LOS under Existing (2019) traffic conditions (e.g., LOS D or better).

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		Jurisdiction
			Northbound			Southbound			Eastbound			Westbound							
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM	
1	Barton St. & Driveway 1		Future Intersection																Riverside
2	Barton St. & Alessandro Bl.	TS	0	1	d	0	1	d	1	3	0	1	3	d	40.8	36.8	D	D	Riverside
3	Private Driveway & Alessandro Bl.	TS	0	1	0	0	1	0	1	3	0	1	3	0	2.4	3.8	A	A	Riverside
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	CSS	0	1	d	0	0	0	0	3	0	1	3	0	**77.3**	**>100.0**	**F**	**F**	Riverside
5	San Gorgonio Dr. & Alessandro Bl.	TS	0	0	0	2	0	1>>	1	3	0	0	3	1	8.1	8.3	A	A	Riverside/JPA
6	Sycamore Canyon Bl. & Alessandro Bl.	TS	2	2	2>	2	2	1	1	3	1	2	3	1	**72.3**	48.5	**E**	D	Riverside/JPA
7	I-215 SB Ramps & Alessandro Bl.	TS	0	0	0	1	1	1	0	3	0	0	3	0	6.2	9.4	A	A	Caltrans/Riverside/County
8	I-215 NB Ramps & Alessandro Bl.	TS	1	1	1	0	0	0	1	3	0	0	3	d	20.2	20.4	C	C	Caltrans/Riverside/County

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

[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.

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

Table 3-2

Roadway Segment Analysis for Existing (2019) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	Existing (2019)	V/C[2]	LOS[3]	Acceptable LOS
1	Alessandro Bl.	Barton St. to Private Driveway	6D	49,500	37,331	0.75	C	D
2		Private Driveway to Vista Grande Dr.	6D	49,500	38,724	0.78	C	D
3		Vista Grande Dr. to San Gorgonio Dr.	6D	49,500	40,640	0.82	D	D
4		San Gorgonio Dr. to Sycamore Canyon Bl.	6D	49,500	40,796	0.82	D	D
5		Sycamore Canyon Bl. to I-215 SB Ramps	6D	49,500	32,950	0.67	B	D
6		I-215 SB Ramps to I-215 NB Ramps	6D	49,500	29,467	0.60	A	D

[1] These maximum roadway capacities have been extracted from the following source: City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) for each applicable roadway type. These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] V/C = Volume to Capacity ratio

[3] LOS = Level of Service

3.10 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Alessandro Boulevard 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-215 Freeway mainline. Queuing analysis findings are presented in Table 3-3. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 3-3, there are no existing queuing issues. Worksheets for Existing traffic conditions off-ramp queuing analysis are provided in Appendix 3.4.

Table 3-3

Peak Hour Freeway Off-Ramp Queuing Summary for Existing (2019) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps / Alessandro Bl.	SBL	525	166	167	Yes	Yes
	SBL/R	1,540	147	146	Yes	Yes
	SBR	525	137	138	Yes	Yes
I-215 NB Ramps / Alessandro Bl.	NBL	450	400[2]	267	Yes	Yes
	NBL/T/R	1,345	327	283	Yes	Yes
	NBR	450	88	183	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. 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 in this table, where applicable.

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

[3] Maximum queue length for the approach reported.

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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 is to consist of 603,100 square feet of High-Cube Transload Short-Term Warehouse use between two buildings.

The Project site plan proposes access along Barton Street via Driveway 1 and Alessandro Boulevard via Driveway 2. Both driveways are assumed to allow full-access turning movements. Regional access to the project site is provided via the I-215 Freeway at Alessandro Boulevard interchange.

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. Trip generation rates (actual vehicles) for the Project are shown in Table 4-1 and trip generation rates (PCE) for the Project are shown in Table 4-2 illustrating daily and peak hour trip generation estimates based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017, for High-Cube Transload and Short-Term Storage Warehouse (ITE Land Use Code 154). (3)

Data regarding the truck percentage and vehicle mix has been obtained from High Cube Warehouse Vehicle Trip Generation Analysis (October 2016). (9) The High Cube Warehouse Vehicle Trip Generation Analysis provides vehicle mix for Short-Term Storage, Transload & Non-Cold Storage, which consists of 32.2% trucks for daily trips, 30.8% trucks for AM peak hour trips and 21.7% trucks for PM peak hour trips. The South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type for high-cube warehouses has been utilized for the 2-axle, 3-axle, and 4+-axle trucks.

The trip generation rates used for this analysis are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their *Trip Generation* manual, 10th Edition, 2017. For purposes of this analysis, ITE land use code 154 (High-Cube Warehouse/Distribution Center) have been used to derive site specific trip generation estimates. As noted on Tables 4-1 and 4-2, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips by vehicle mix. Total vehicle mix percentages were also obtained from the ITE *Trip Generation* manual in conjunction with the South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type. Finally, 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. Trip generation rates with PCE factors are also shown on Table 4-2.

Table 4-1

Project Trip Generation Summary (Actual Vehicles)

Project Trip Generation Rates									
Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage[3,4,5]	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily)			0.003	0.001	0.004	0.001	0.003	0.004	0.076
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily)			0.004	0.001	0.005	0.001	0.003	0.004	0.093
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily)			0.012	0.003	0.015	0.004	0.010	0.014	0.282

Project Trip Generation									
Project	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	603.100	TSF							
Passenger Cars:			26	8	34	14	34	48	573
Truck Trips:									
2-axle:			2	1	3	1	2	3	46
3-axle:			3	1	4	1	2	3	57
4+-axle:			8	2	10	3	7	10	171
- Total Truck Trips (Actual Vehicles)			*13*	*4*	*17*	*5*	*11*	*16*	*274*
TOTAL TRIPS (Actual Vehicles) [6]			***39***	***12***	***51***	***19***	***45***	***64***	***847***

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, Third Edition (September 2017).

[4] Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

[5] Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).

Normalized % - Without Cold Storage:

16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

[6] TOTAL TRIPS (Actual Vehicles) = Passenger Cars + Truck Trips (Actual Trucks).

Table 4-2

Project Trip Generation Summary (PCE)

Project Trip Generation Rates									
Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage[3,4,5]	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily)			0.005	0.002	0.007	0.002	0.005	0.007	0.114
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily)			0.008	0.002	0.010	0.002	0.006	0.008	0.186
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily)			0.036	0.009	0.045	0.012	0.030	0.042	0.846

Project Trip Generation									
Project	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	603.100	TSF							
Passenger Cars:			26	8	34	14	34	48	573
Truck Trips[6]:									
2-axle (PCE=1.5):			4	2	6	2	4	6	69
3-axle (PCE=2.0):			5	2	7	2	4	6	113
4+-axle (PCE=3.0):			22	6	28	8	19	27	511
- Total Truck Trips (PCE)			*31*	*10*	*41*	*13*	*28*	*39*	*693*
TOTAL TRIPS (PCE)[7]			***57***	***18***	***75***	***27***	***62***	***87***	***1,266***

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, Third Edition (September 2017).

[4] Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

[5] Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage:
16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

[6] PCE rates are per San Bernardino County Transportation Authority (SBCTA).

[7] TOTAL TRIPS (PCE) = Passenger Cars + Truck Trips (PCE).

As shown on Table 4-2, the proposed Project is anticipated to generate a total of 1,266 PCE trip-ends per day with 75 PCE AM peak hour trips and 87 PCE PM peak hour trips. For comparison, the proposed Project is anticipated to generate a total of 847 actual vehicle trip-ends per day with 51 actual vehicle AM peak hour trips and 64 actual vehicle PM peak hour trips (as shown on Table 4-1).

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding land uses, and the proximity to the regional freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the City of Riverside, March JPA, City of Moreno Valley, and Caltrans. Given these differences, separate trip distributions were generated for both passenger cars and truck trips. Exhibit 4-1 illustrates the trip distribution patterns for passenger cars. Exhibits 4-2 illustrates the truck trip distribution patterns.

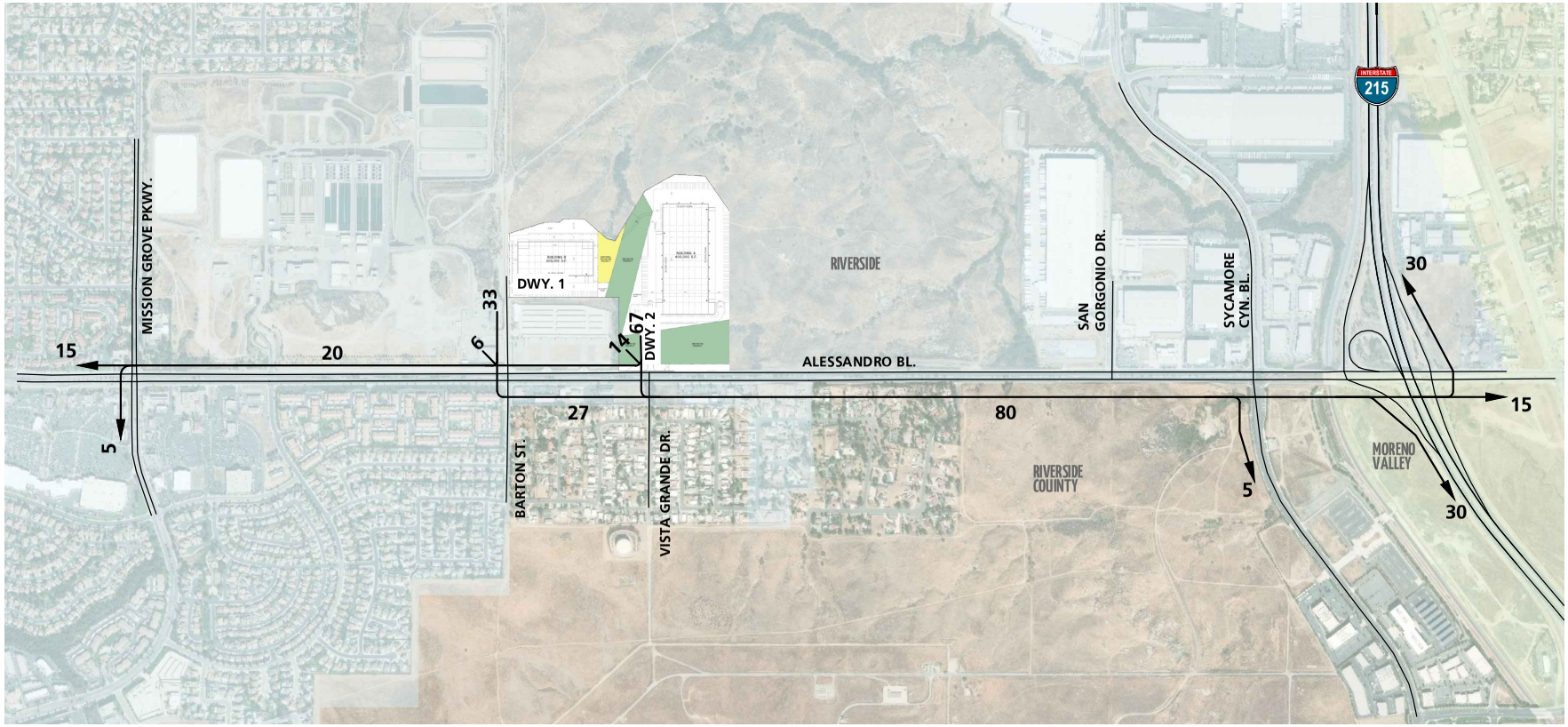
4.3 MODAL SPLIT

The potential for Project trips (non-truck) to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes (non-truck trips only or employee trips).

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 are shown on Exhibit 4-3.

EXHIBIT 4-1: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

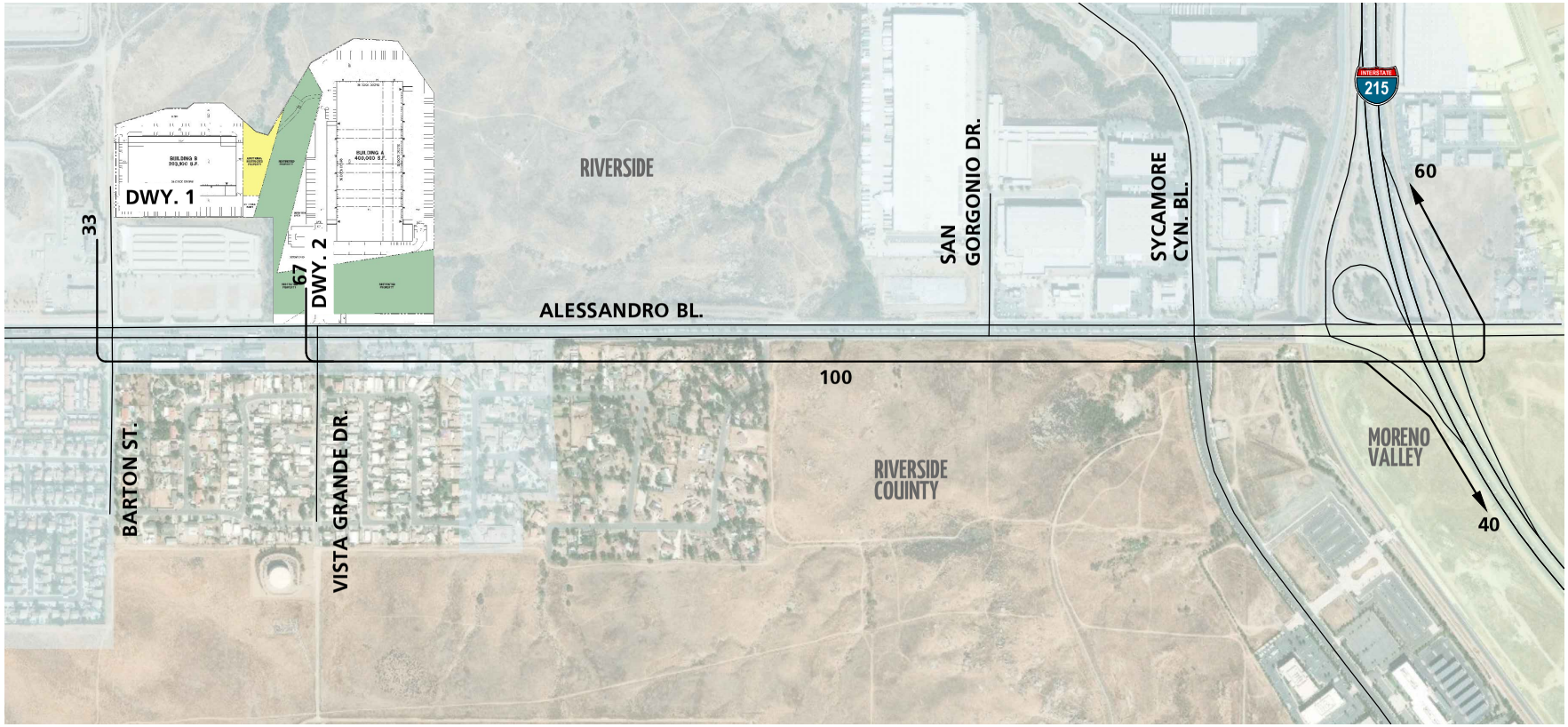


LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 4-2: PROJECT (TRUCK) TRIP DISTRIBUTION

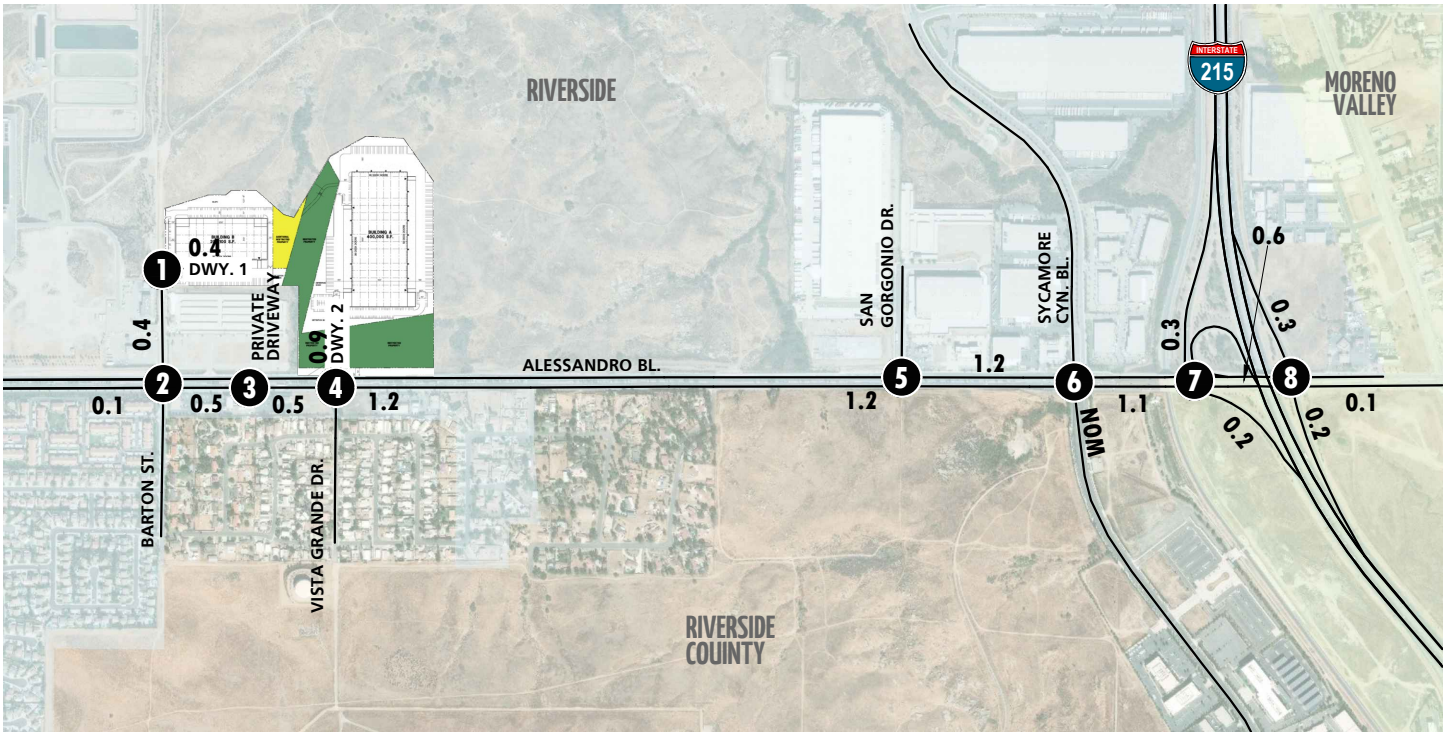


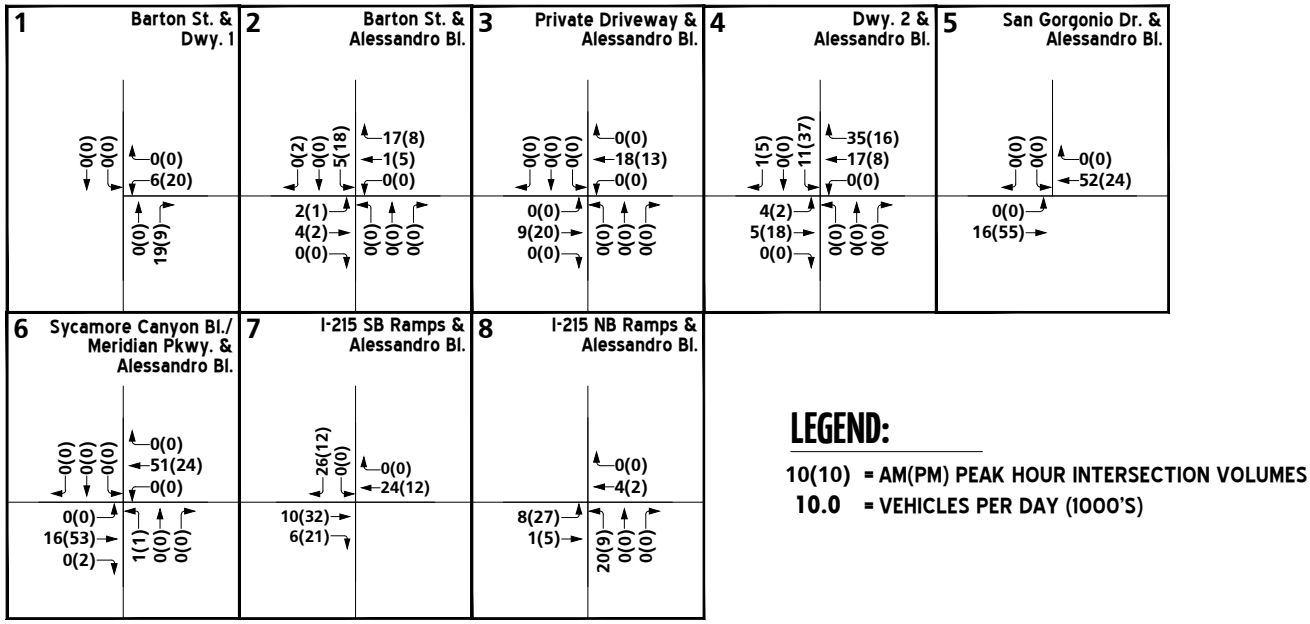
LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES (IN PCE)





LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

4.5 BACKGROUND TRAFFIC

To account for growth in traffic between Existing conditions (2019) and the Project Opening Year Cumulative (2023), a compounded annual traffic growth rate of 2.0 percent was assumed (8.24 percent aggregate growth in background traffic for the period between 2019 and 2023). The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth.

In context, the TA's assumed 2.0 percent compounded annual growth rate is considered a reasonable approximation of future traffic growth when compared to demographic projections reflected in other local and regional growth modeling efforts. More specifically, the Southern California Association of Governments (SCAG) 2016—2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the unincorporated County of Riverside assume the County population to increase from 359,000 in 2012 to 499,200 by the year 2040, or an approximate 1.18 percent growth rate compounded annually. The RTP/SCS assumed growth in households over the same 28-year period reflects an increase from 112,300 households to 162,900 households; a rate of 1.34 percent compounded annually. At the upper end of assumed RTP/SCS growth rates, employment over the same 28-year period is projected to increase from 70,500 jobs to 156,600 jobs; a rate of approximately 2.89 percent compounded annually. (10) The 2.0 percent compounded annual traffic growth rate used in the TA reflects the fact that not all persons comprising population growth, household growth, or employment growth would translate on a one-to-one basis as a new vehicle trip in the region; and establishes a judicious midrange estimate lying between the RTP/SCS assumed regional population growth rate (1.18 percent) and the RTP/SCS assumed regional employment growth rate (2.89 percent).

Conservatively, the TA estimates of area traffic growth then add traffic generated by other known or probable related projects defined in Section 4.6 *Cumulative Development Traffic*. 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 functional within the 2023 Opening Year Cumulative time frame assumed for the Project. The resulting traffic growth rate used in the TA (2.0 percent annual ambient growth plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2023 conditions.

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 Riverside. 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 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 4-4, listed on Table 4-3, and have been considered for inclusion. Based on the cumulative development traffic generation and trip distribution patterns, cumulative development ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5.

Although it is unlikely that all of these cumulative projects would be fully built and occupied by Year 2023, they have been included in an effort to conduct a conservative analysis and overstate as opposed to understate potential traffic deficiencies.

Any other cumulative projects 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*.

4.7 NEAR-TERM TRAFFIC FORECASTS

To provide a comprehensive assessment of potential transportation network deficiencies, a "buildup" analysis was performed in support of this work effort. The "buildup" method was used to approximate the Opening Year Cumulative traffic forecasts, and is intended to identify the cumulative deficiencies on both the existing and planned near-term circulation system. The Opening Year Cumulative traffic forecasts include background traffic, traffic generated by other cumulative development projects within the study area, and the traffic generated by the proposed Project.

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the near-term 2023 traffic conditions. An ambient growth factor of 8.24% (2023) accounts for background (area-wide) traffic increases that occur over time, up to the year 2023 from the year 2019 (compounded two percent per year growth over a 4-year period). Traffic volumes generated by the Project are then added to assess the Opening Year Cumulative traffic conditions. The 2023 roadway network is similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project.

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

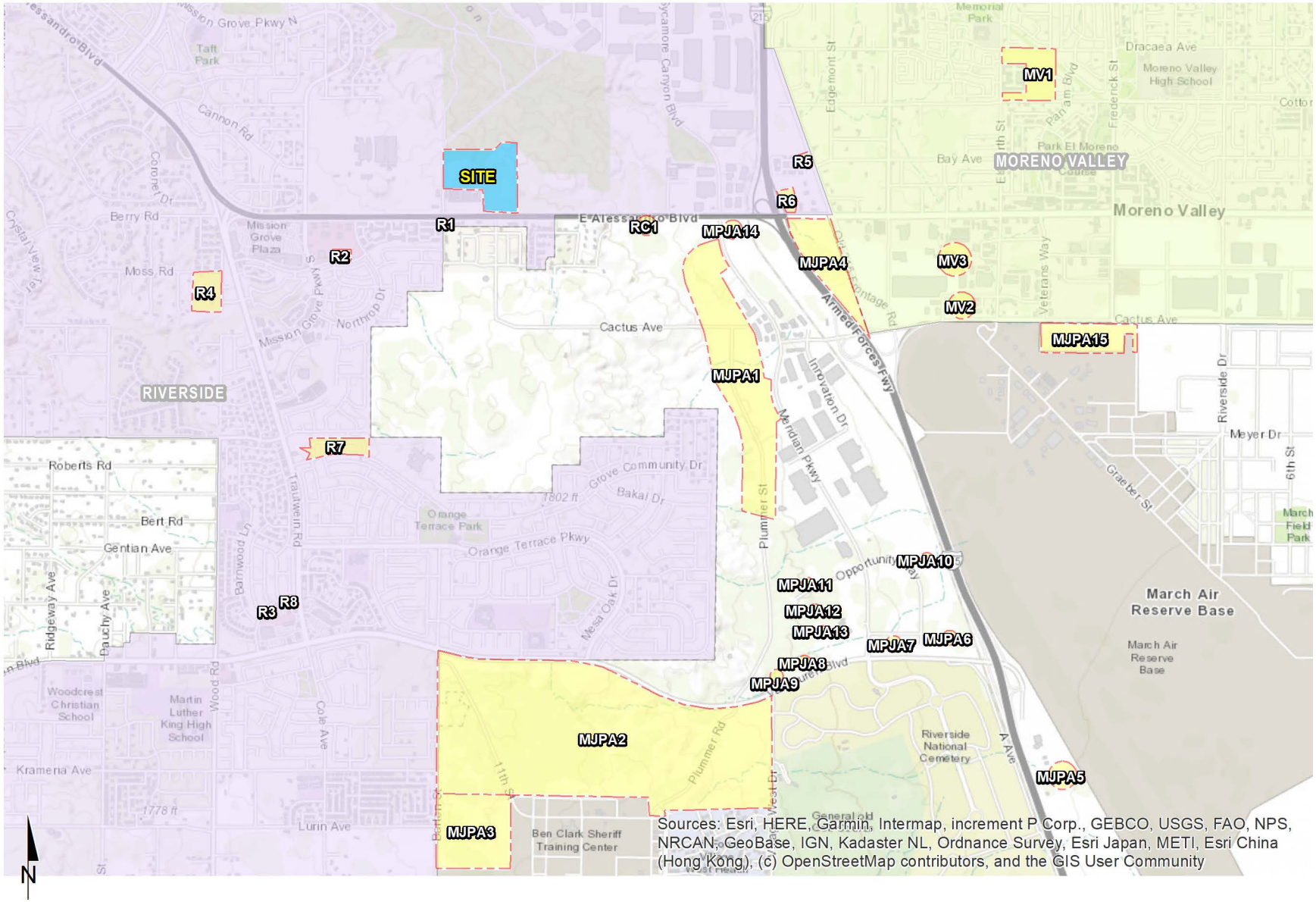
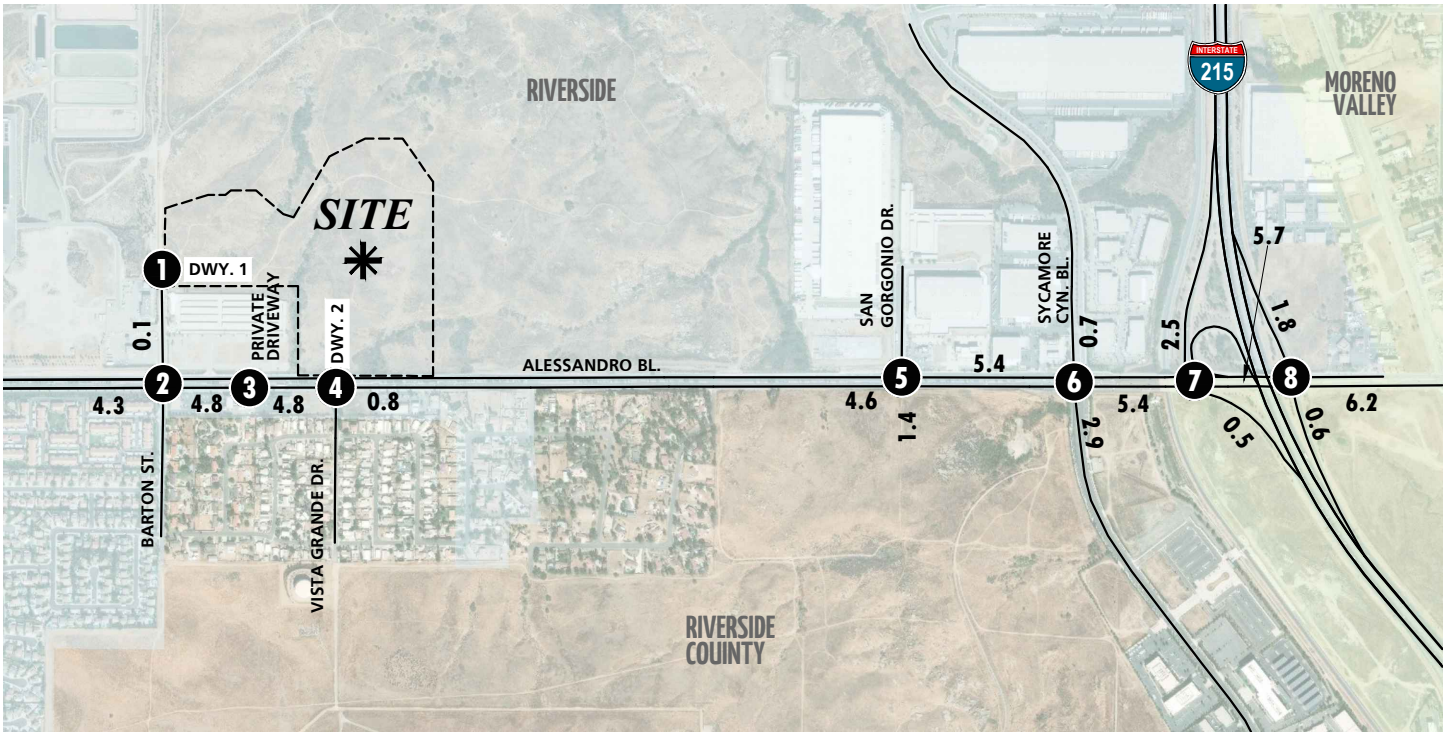


EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES (IN PCE)



1 Barton St. & Dwy. 1 Future Intersection	**2** Barton St. & Alessandro Bl. 0(0) 0(0) 6(5) → 2(14) ← 124(287) ← 15(17) 0(0) → 255(163) → 3(2) → 1(4) 0(0) 16(17) ↑	**3** Private Driveway & Alessandro Bl. 0(0) 0(0) 0(0) → 0(0) ← 141(318) ← 0(0) 0(0) → 277(185) → 0(0) → 0(0) 0(0) 0(0) ↑	**4** Dwy. 2 & Alessandro Bl. 0(0) 0(0) 0(0) → 0(0) ← 141(318) ← 0(0) 0(0) → 277(185) → 0(0) → 0(0) 0(0) 0(0) ↑	**5** San Gorgonio Dr. & Alessandro Bl. 0(0) 0(0) 0(0) → 0(0) ← 121(276) ← 116(66) 0(0) → 234(158) → 32(18) → 12(33) 0(0) 45(123) ↑
6 Sycamore Canyon Bl./ Meridian Pkwy. & Alessandro Bl. 0(0) 86(50) 0(0) → 0(0) ← 213(246) ← 124(43) 0(0) → 183(251) → 96(30) → 24(96) 37(96) 20(69) ↑	**7** I-215 SB Ramps & Alessandro Bl. 134(64) 57(47) → 4(11) ← 205(226) 162(231) → 41(90) →	**8** I-215 NB Ramps & Alessandro Bl. → 39(60) ← 128(186) 34(77) → 185(200) → 81(52) 4(3) 9(4) ↑		

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)

N

Table 4-3

Cumulative Development Land Use Summary

ID	Project Name	Land Use[1]	Quantity	Units[2]
City of Riverside				
R1	P17-0419/20/21	Fast Food w/ Drive Thru	1.857	TSF
R2	P16-0578	Warehouse	82.200	TSF
R3	P19-0151/P19-0152/P19-0153	Health and Fitness Club	21.706	TSF
R4	P13-0665	SFDR	8	DU
R5	P15-1035/P16-0556/P16-0567	Warehouse	176.149	TSF
R6	P14-0841 to P14-0848/P16-0472/P16-0474	Warehouse	73.200	TSF
		Commercial Retail	15.000	TSF
R7	P14-0472/P14-0473/P15-0321/P15-0322	SFDR	85	DU
R8	P19-0022/P19-0024/P19-0026/P19-0027/P19-0028	Fast Food w/ Drive Thru	4.319	TSF
County of Riverside				
RC1	PP 25422	Warehouse	814.000	TSF
March Joint Powers Authority				
MJPA1	Meridian Business Park (West Campus)	Industrial Park	2,278.852	TSF
MJPA2	Meridian South Campus	Warehouse	500.000	TSF
		General Office	338.800	TSF
		Commercial Retail	7.905	TSF
		Fast Food w/ Drive Thru	3.300	TSF
		Gas Station w/ Conv. Market	12	VFP
MJPA3	Meridian South Parcel Delivery	Warehouse	1,699	Employees
MJPA4	Freeway Business Center	Warehouse	709	TSF
MJPA5	Veteran's Industrial Plaza/VIP 215	Warehouse	2,000.000	TSF
MJPA6	Veteran's Plaza	Commercial Retail	198.000	TSF
MJPA7	MS Van Buren I	Warehouse	176.396	TSF
MJPA8	MS Van Buren II	Warehouse	162.041	TSF
MJPA9	MS Prime Six	General Office	74.922	TSF
MJPA10	Meridian Distribution Center II	Warehouse	510.000	TSF
MJPA11	Meridian Distribution Center III	Warehouse	262.269	TSF
MJPA12	Meridian Distribution Center IV	Warehouse	90.000	TSF
MJPA13	Economic Business Center	Warehouse	124.523	TSF
MJPA14	MS Alessandro	Industrial Park	157.513	TSF
MJPA15	K4 Parcel	Warehouse	718.000	TSF
City of Moreno Valley				
MV1	Scottish Village	Multifamily	194	DU
MV2	Moreno Valley Cactus Center (PEN16-0131)	Warehouse	36.950	TSF
		Fast Food w/ Drive Thru	7.900	TSF
		Gas Station w/ Car Wash	28	VFP
MV3	PA 08-0047-0052 (Komar Cactus Plaza)	Hotel	110	Rooms
		Fast Food w/ Drive Thru	8.000	TSF
		Commercial	42.400	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet; SP = Spaces; VFP = Vehicle Fueling Positions

As noted previously, an analysis of the proposed Project at various development tiers has been assessed for the purposes of this traffic study. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2023) Without Project
    - Existing (2019) traffic
    - Ambient growth (8.24%)
    - Cumulative Development traffic
- Opening Year Cumulative (2023) With Project
    - Existing (2019) traffic
    - Ambient growth (8.24%)
    - Cumulative Development traffic
    - Project traffic

4.8 HORIZON YEAR (2040) VOLUME DEVELOPMENT

The Horizon Year (2040) Without Project traffic conditions were derived from the RivTAM modified to represent Horizon Year conditions using accepted procedures for model forecast refinement and smoothing. The traffic forecasts reflect the area-wide growth anticipated between Existing conditions and Horizon Year conditions.

In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year Without Project peak hour forecasts were refined using the model derived long-range forecasts, along with existing peak hour traffic count data collected at each analysis location in October 2018. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year Without Project peak hour forecasts.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 255), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Long Range traffic conditions. However, review of the resulting model growth indicates negative growth for several study area intersections. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing or Opening Year Cumulative traffic conditions were not assumed as part of this analysis. Additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year forecasts. Horizon Year turning volumes were compared to Opening Year Cumulative volumes in

order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between Opening Year Cumulative and Horizon Year traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2019) and Horizon Year traffic conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year peak hour forecasts.

The future Horizon Year without Project peak hour turning movements were then reviewed by Urban Crossroads for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two freeway ramp locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

The truck component of RivTAM has data that is unusually low. As such, in an effort to conduct a conservative analysis, the presence of trucks has been accounted for based on the manual volume adjustments made to demonstrate growth above Opening Year Cumulative (2023) traffic forecasts, which are presented and evaluated in PCE (see Section 3.7 *Existing (2019) Traffic Counts* for discussion on PCE). As such, the Horizon Year (2040) forecasts are also assumed to be in PCE for the purposes of this analysis. Post-processing worksheets for Horizon Year (2040) without Project traffic conditions are provided in Appendix 4.1.

5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for E+P (Project Buildout) conditions and the resulting intersection operations, roadway segment capacities, and traffic signal warrant 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 TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project Buildout traffic. Exhibit 5-1 shows the ADT and peak hour volumes which can be expected for E+P traffic conditions.

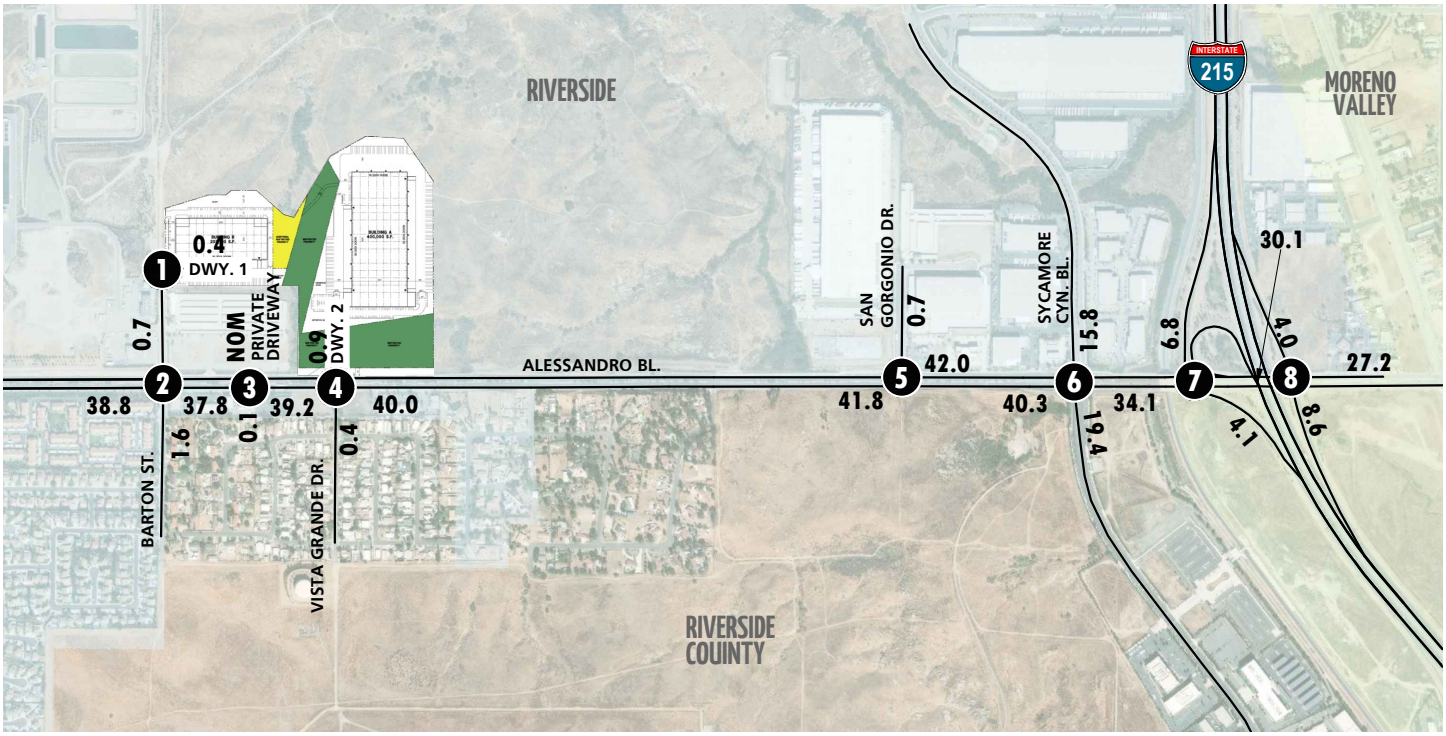
5.3 INTERSECTION OPERATIONS ANALYSIS

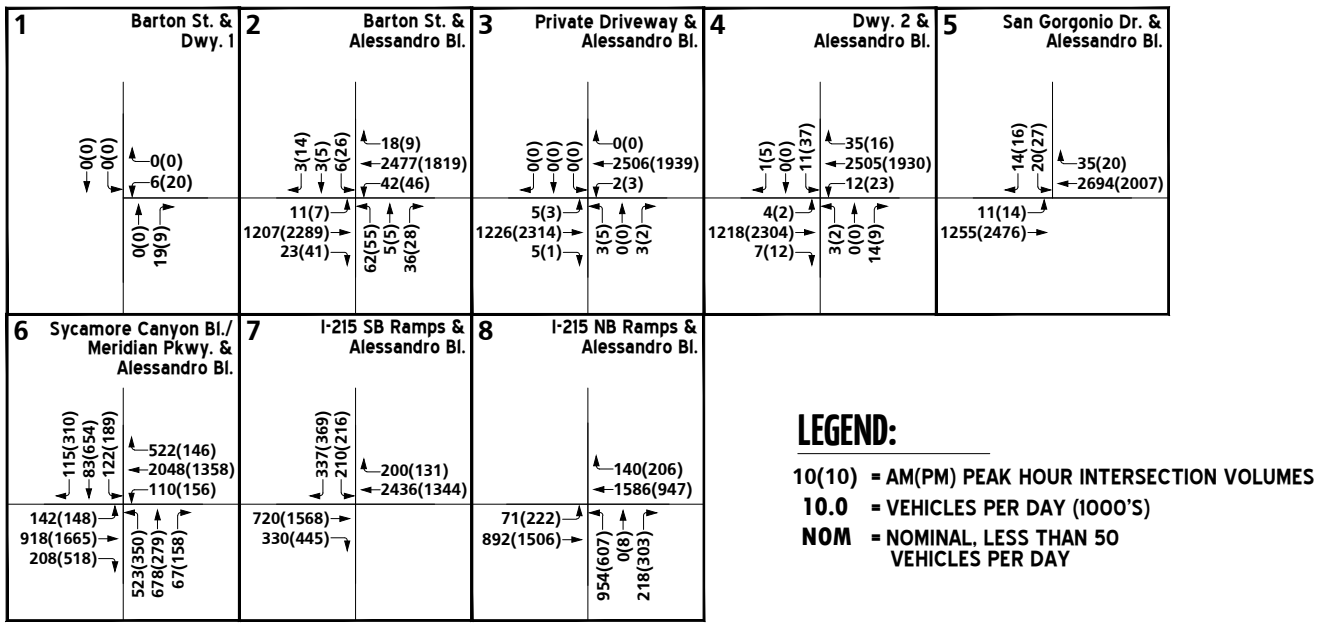
E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1, which indicates that two study area intersections are anticipated to operate at the same unacceptable LOS for E+P traffic conditions, as previously identified under Existing (2019) conditions (see Section 3.7). The deficiencies are summarized in Table 5-2, which indicates that two study area intersections are anticipated to be deficient.

Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4) – Although this intersection was found to operate at an unacceptable LOS (LOS F) during the AM and PM peak hours under Existing traffic conditions, the intersection is anticipated to continue to operate at unacceptable levels during the peak hours with the addition of Project traffic. The increase in peak hour delay is anticipated to be greater than one second. Therefore, there is a deficiency based of the City of Riverside's peak hour delay criteria for intersections operating at LOS F.

Sycamore Canyon Boulevard & Alessandro Boulevard (#6) – Although this intersection was found to operate at an unacceptable LOS (LOS E) during the AM peak hour under Existing traffic conditions, the intersection is anticipated to continue to operate at unacceptable levels (LOS E) during the peak hours with the addition of Project traffic. The increase in peak hour delay is anticipated to be less than two seconds and the project traffic is less than 2% of the total traffic for E+P conditions. However, the intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. As such, the deficiency is considered unavoidable.

EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN PCE)





LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019)				E+P				Jurisdiction	Deficiency?[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service			
			AM	PM	AM	PM	AM	PM	AM	PM		
1	Barton St. & Driveway 1	**CSS**	Future Intersection				8.6	8.6	A	A	Riverside	No
2	Barton St. & Alessandro Bl.	TS	40.8	36.8	D	D	40.9	39.4	D	D	Riverside	No
3	Private Driveway & Alessandro Bl.	TS	2.4	3.8	A	A	2.4	3.9	A	A	Riverside	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	CSS	**77.3**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	Riverside	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	TS	8.1	8.3	A	A	10.0	8.5	A	A	Riverside/JPA	No
6	Sycamore Canyon Bl. & Alessandro Bl.	TS	**72.3**	48.5	**E**	D	**72.8**	49.3	**E**	D	Riverside/JPA	**Yes**
7	I-215 SB Ramps & Alessandro Bl.	TS	6.2	9.4	A	A	6.5	9.7	A	A	Caltrans/Riverside/County	No
8	I-215 NB Ramps & Alessandro Bl.	TS	20.2	20.4	C	C	20.6	21.1	C	C	Caltrans/Riverside/County	No

* **BOLD** = 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.

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

[3] See Table 5-2 for a detailed summary of deficiencies.

Table 5-2

Deficient Intersection Summary for E+P Conditions

#	Intersection	Jurisdiction	Project % of Total Traffic		Change in Delay (secs.)		Project Trip Contribution		Deficiency? [1,2,3]
			AM	PM	AM	PM	AM	PM	
1	Barton St. & Driveway 1	Riverside	N/A	N/A	--	--	N/A	N/A	No
2	Barton St. & Alessandro Bl.	Riverside	N/A	N/A	0.1	2.6	N/A	N/A	No
3	Private Driveway & Alessandro Bl.	Riverside	N/A	N/A	0.0	0.1	N/A	N/A	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	Riverside	N/A	N/A	**>1.0**	**>1.0**	N/A	N/A	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	Riverside/JPA	N/A	N/A	1.9	0.2	N/A	N/A	No
6	Sycamore Canyon Bl. & Alessandro Bl.	Riverside/JPA	1.2%	1.3%	0.5	0.8	68	80	**Yes**[4]
7	I-215 SB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	0.3	0.3	N/A	N/A	No
8	I-215 NB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	0.4	0.7	N/A	N/A	No

* **BOLD** = Deficient Intersection

N/A = Not Applicable

[1] For intersections within the jurisdiction of the City of Riverside, a deficiency occurs at a study area intersection when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E/F) or the peak hour delay to increase as follows:
- LOS A/B = By 10.0 seconds
- LOS C = By 8.0 seconds
- LOS D = By 5.0 seconds
- LOS E = By 2.0 seconds
- LOS F = By 1.0 seconds

[2] For intersections within the jurisdiction of March JPA, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), deficiency occurs if the Project contributes more than 2% of the total traffic.

[3] For intersections within the jurisdiction of Caltrans, the County of Riverside, or City of Moreno Valley, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. A deficiency also occurs if the Project contributes 50 or more peak hour trips to an already deficient intersection.

[4] The intersection currently built out to the General Plan ultimate cross-section and exceeds the General Plan target LOS. As such, the deficiency is unavoidable.

A summary of the peak hour intersection LOS for E+P conditions are shown on Exhibit 5-2. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TA.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no intersections anticipated to meet traffic signal warrants for E+P traffic conditions (see Appendix 5.2).

5.5 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Riverside stated roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 5-3 provides a summary of the E+P conditions roadway segment capacity analysis based on the City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) identified previously on Table 2-3. As shown on Table 5-3 and consistent with Existing traffic conditions, all roadway segments are anticipated to operate at an acceptable LOS under E+P traffic conditions (e.g., LOS D or better).

5.6 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Alessandro Boulevard 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-215 Freeway mainline. Queuing analysis findings are presented in Table 5-4 for E+P traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 5-4 and consistent with Existing traffic conditions, the anticipated vehicle queues would be accommodated by the turning lane's available storage length. Worksheets for E+P traffic conditions off-ramp queuing analysis are provided in Appendix 5.3.

EXHIBIT 5-2: E+P SUMMARY OF LOS



Table 5-3

Roadway Segment Analysis for E+P Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	Existing (2019)	V/C[2]	LOS[3]	E+P	V/C[2]	LOS[3]	Acceptable LOS[3]
1	Alessandro Bl.	Barton St. to Private Driveway	6D	49,500	37,331	0.75	C	37,795	0.76	C	D
2		Private Driveway to Vista Grande Dr.	6D	49,500	38,724	0.78	C	39,188	0.79	C	D
3		Vista Grande Dr. to San Gorgonio Dr.	6D	49,500	40,640	0.82	D	41,792	0.84	D	D
4		San Gorgonio Dr. to Sycamore Canyon Bl.	6D	49,500	40,796	0.82	D	41,948	0.85	D	D
5		Sycamore Canyon Bl. to I-215 SB Ramps	6D	49,500	32,950	0.67	B	34,073	0.69	B	D
6		I-215 SB Ramps to I-215 NB Ramps	6D	49,500	29,467	0.60	A	30,072	0.61	B	D

[1] These maximum roadway capacities have been extracted from the following source: City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) for each applicable roadway type. These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] V/C = Volume to Capacity ratio

[3] LOS = Level of Service

Table 5-4

Peak Hour Freeway Off-Ramp Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps / Alessandro Bl.	SBL	525	166	167	Yes	Yes	170	167	Yes	Yes
	SBL/R	1,540	147	146	Yes	Yes	156	151	Yes	Yes
	SBR	525	137	138	Yes	Yes	147	144	Yes	Yes
I-215 NB Ramps / Alessandro Bl.	NBL	450	400[2]	267	Yes	Yes	412[2]	272	Yes	Yes
	NBL/T/R	1,345	327	283	Yes	Yes	339[2]	287	Yes	Yes
	NBR	450	88	183	Yes	Yes	88	183	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. 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 in this table, where applicable.

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

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

5.7 RECOMMENDED IMPROVEMENTS

5.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented in Table 5-5 for E+P traffic conditions. As shown on Table 5-5, the recommended improvements for each of the deficient intersections are the same for Existing and E+P traffic conditions. Based on each jurisdiction's deficiency criteria (see Table 5-2), the Project is anticipated to result in a deficiencies at the intersections of Driveway 2/Vista Grande Drive & Alessandro Boulevard and Sycamore Canyon Boulevard & Alessandro Boulevard.

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

The intersection operations analysis worksheets for E+P, with improvements, are included in Appendix 5.4.

5.7.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON ROADWAY SEGMENTS

As shown previously on Table 5-3 and consistent with Existing traffic conditions, all study area roadway segments are anticipated to operate at acceptable LOS (LOS D or better) for E+P traffic conditions. As such, no roadway widening has been recommended.

5.7.3 RECOMMENDED IMPROVEMENTS TO ADDRESS OFF-RAMP QUEUES

As shown previously on Table 5-4 and consistent with Existing traffic conditions, there are no peak hour queuing issues anticipated at the I-215 Freeway at Alessandro Boulevard interchange for E+P traffic conditions. As such, no improvements have been recommended.

Table 5-5

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
3	Private Driveway & Alessandro Bl.																	
	- Without Improvements	TS	0	1	0	0	1	0	1	3	0	1	3	0	2.4	3.9	A	A
	- With Improvements	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	**0**	3	0	**0**	3	0	10.7	14.7	B	B
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.																	
	- Without Improvements	CSS	0	1	d	0	0	0	0	3	0	1	3	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	7.2	5.5	A	A

[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; d= Defacto Right Turn Lane; **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

[4] Recommended improvement includes the elimination of the existing traffic and restricting the driveway access to right-in/right-out access only.

6 OPENING YEAR CUMULATIVE (2023) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2023) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment capacities, and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2023) 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 the cumulative development projects 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 frontage and driveways). Other connections assumed include the extension of San Gorgonio Avenue, south of Alessandro Boulevard.

6.2 OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) Without Project traffic conditions are shown on Exhibit 6-1.

6.3 OPENING YEAR CUMULATIVE (2023) WITH PROJECT TRAFFIC VOLUME FORECASTS

The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2023) With Project traffic conditions are shown on Exhibits 6-2.

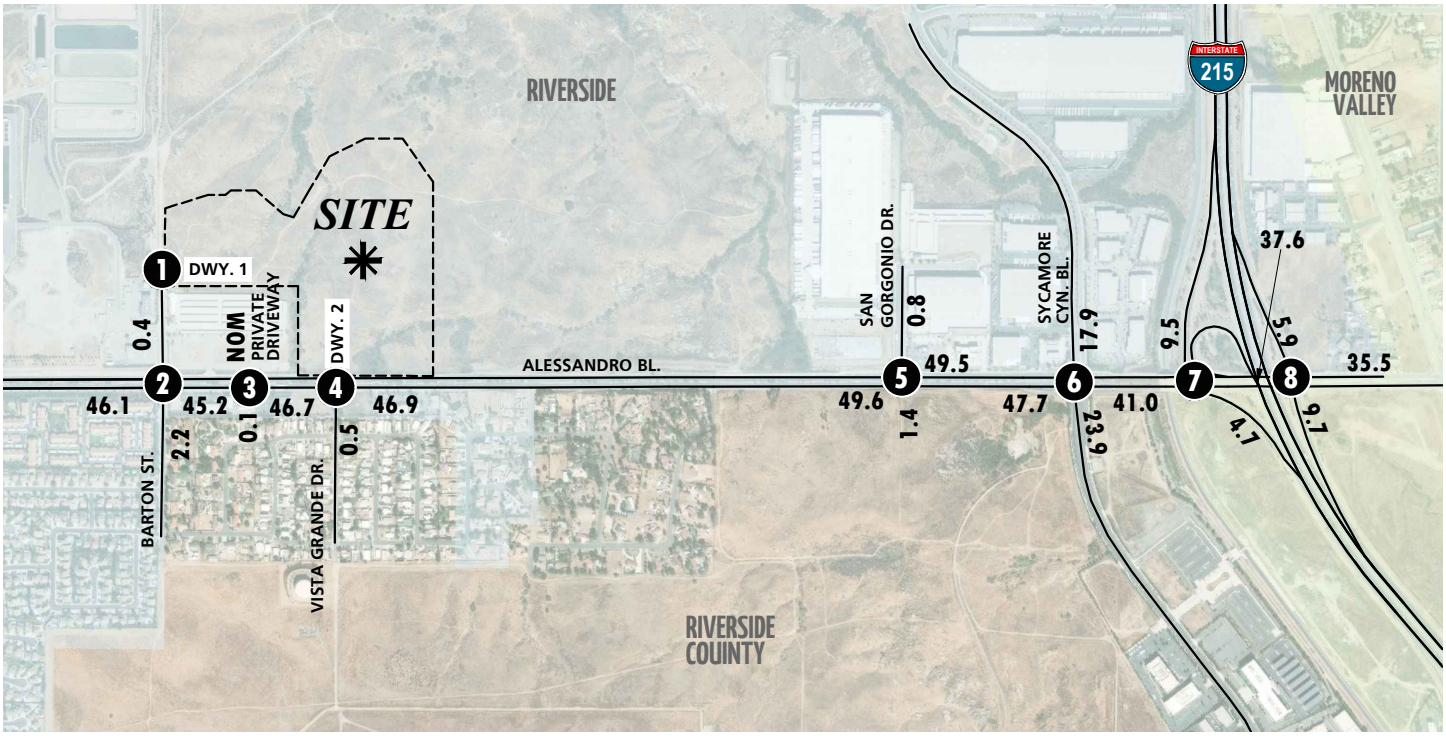
6.4 INTERSECTION OPERATIONS ANALYSIS

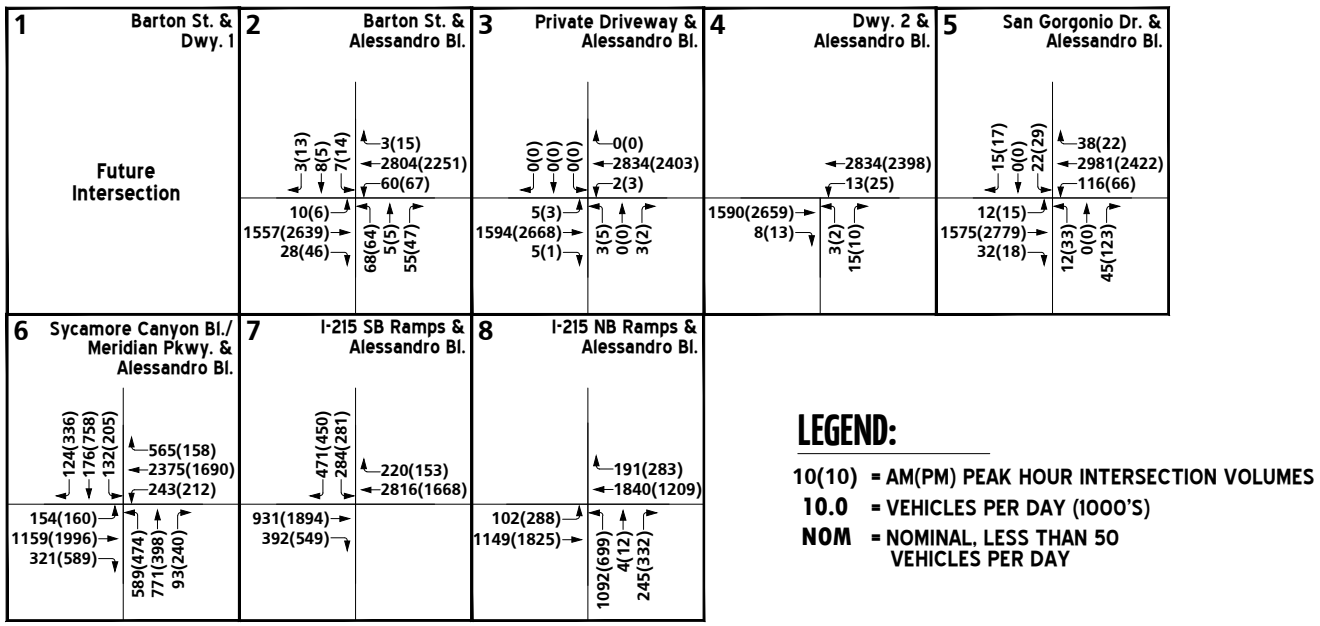
6.4.1 OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations have been conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2023) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, the following intersections were found to operate at a deficient LOS:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4) – LOS F AM and PM peak hours
- Sycamore Canyon Bl. & Alessandro Bl. (#6) – LOS F AM and PM peak hours

EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)



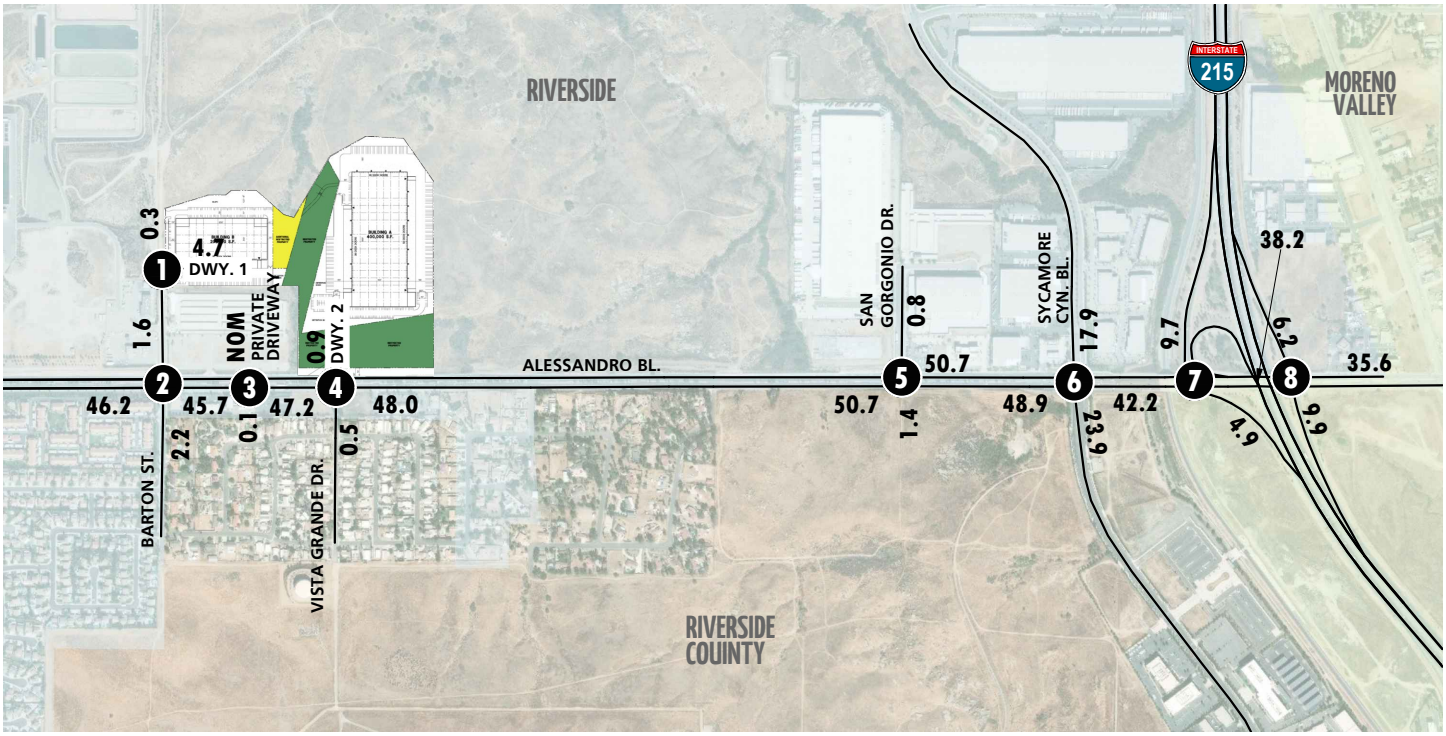


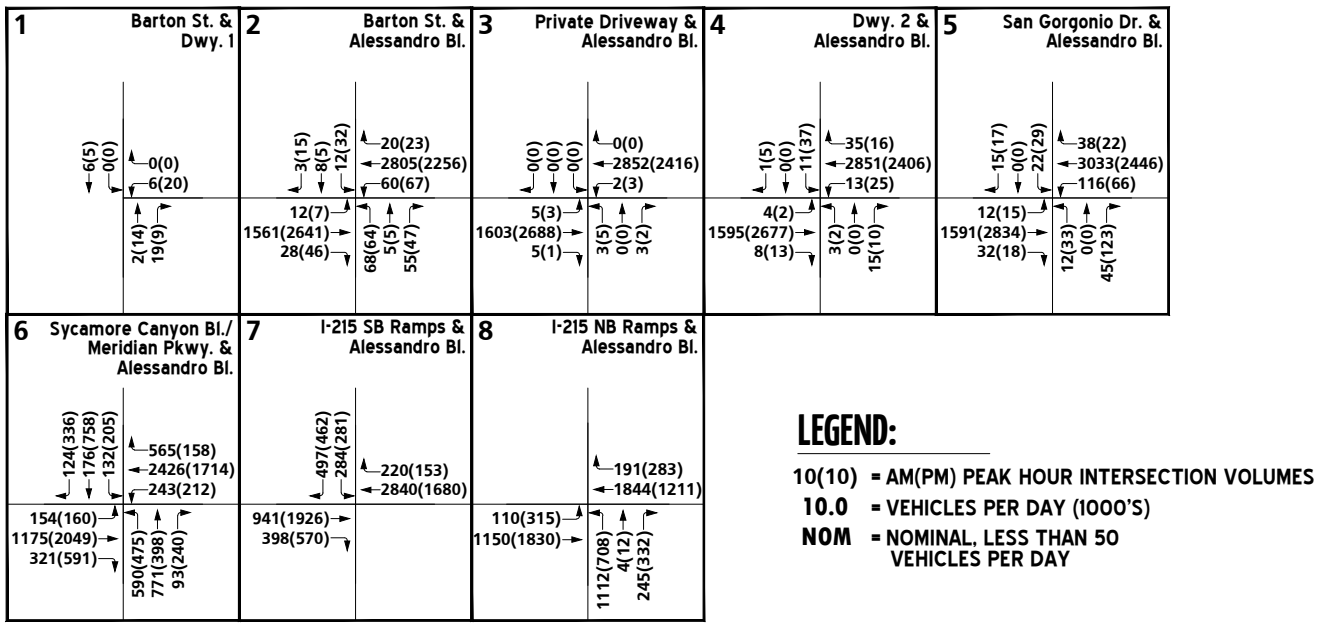
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY



EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2023) WITH PROJECT TRAFFIC VOLUMES (IN PCE)





LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

Table 6-1

Intersection Analysis for Opening Year Cumulative (2023) Conditions

#	Intersection	Traffic Control[2]	2023 Without Project				2023 With Project				Jurisdiction	Deficiency?[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service			
			AM	PM	AM	PM	AM	PM	AM	PM		
1	Barton St. & Driveway 1	**CSS**	Future Intersection				8.6	8.7	A	A	Riverside	No
2	Barton St. & Alessandro Bl.	TS	28.7	39.7	C	C	28.7	40.1	C	D	Riverside	No
3	Private Driveway & Alessandro Bl.	TS	2.8	4.6	A	A	2.8	4.7	A	A	Riverside	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	Riverside	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	TS	15.0	21.5	B	C	15.3	22.3	B	C	Riverside/JPA	No
6	Sycamore Canyon Bl. & Alessandro Bl.	TS	**120.2**	**87.6**	**F**	**F**	**120.9**	**88.2**	**F**	**F**	Riverside/JPA	**Yes**
7	I-215 SB Ramps & Alessandro Bl.	TS	8.9	12.5	A	B	9.4	13.0	A	B	Caltrans/Riverside/County	No
8	I-215 NB Ramps & Alessandro Bl.	TS	23.7	24.2	C	C	24.1	25.1	C	D	Caltrans/Riverside/County	No

* **BOLD** = 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.

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

[3] See Table 6-2 for a detailed summary of deficiencies.

A summary of the peak hour intersection LOS for Opening Year Cumulative (2023) Without Project conditions are shown on Exhibit 6-3. The intersection operations analysis worksheets for Opening Year Cumulative (2023) Without Project traffic conditions are included in Appendix 6.1 of this TA.

6.4.2 OPENING YEAR CUMULATIVE (2023) WITH PROJECT TRAFFIC CONDITIONS

As shown on Table 6-1 and illustrated on Exhibit 6-4, there are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of Project traffic during one or more peak hours, in addition to those previously identified under Opening Year Cumulative (2023) Without Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2023) With Project traffic conditions are included in Appendix 6.2 of this TA. The deficiencies are summarized in Table 6-2. Measures to address near-term deficiencies for Opening Year Cumulative traffic conditions are discussed in Section 6.10 *Opening Year Cumulative (2023) Deficiencies and Recommended Improvements.*

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

No study area intersections are anticipated to meet traffic signal warrants for Opening Year Cumulative (2021) Without and With Project traffic conditions (see Appendices 6.3 and 6.4).

6.6 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Riverside stated roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 6-3 provides a summary of the Opening Year Cumulative (2023) Without Project conditions roadway segment capacity analysis based on the City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) identified previously on Table 2-3. As shown on Table 6-3, the following roadway segments that are anticipated to operate at an unacceptable LOS under Opening Year Cumulative (2023) Without Project traffic conditions:

- Alessandro Bl., from Barton St. to Private Driveway – LOS E
- Alessandro Bl., from Private Driveway to Vista Grande Dr. – LOS E
- Alessandro Bl., from Vista Grande Dr. to San Gorgonio Dr. – LOS F
- Alessandro Bl., from San Gorgonio Dr. to Sycamore Canyon Bl. – LOS F

As shown on Table 6-3, there are no additional study area roadway segments anticipated to operate at an unacceptable LOS (LOS E or worse) with the addition of Project traffic, other than those previously identified under Opening Year Cumulative (2023) Without Project conditions.

EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT SUMMARY OF LOS



EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2023) WITH PROJECT SUMMARY OF LOS



Table 6-2

Deficient Intersection Summary for Opening Year Cumulative (2023) Conditions

#	Intersection	Jurisdiction	Project % of Total Traffic		Change in Delay (secs.)		Project Trip Contribution		Deficiency? [1,2,3]
			AM	PM	AM	PM	AM	PM	
1	Barton St. & Driveway 1	Riverside	N/A	N/A	--	--	N/A	N/A	No
2	Barton St. & Alessandro Bl.	Riverside	N/A	N/A	0.0	0.4	N/A	N/A	No
3	Private Driveway & Alessandro Bl.	Riverside	N/A	N/A	0.0	0.1	N/A	N/A	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	Riverside	N/A	N/A	**>1.0**	**>1.0**	N/A	N/A	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	Riverside/JPA	N/A	N/A	0.3	0.8	N/A	N/A	No
6	Sycamore Canyon Bl. & Alessandro Bl.	Riverside/JPA	1.0%	1.1%	0.7	0.6	68	80	**Yes**[4]
7	I-215 SB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	0.5	0.5	N/A	N/A	No
8	I-215 NB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	0.4	0.9	N/A	N/A	No

* **BOLD** = Deficient Intersection

N/A = Not Applicable

[1] For intersections within the jurisdiction of the City of Riverside, a deficiency occurs at a study area intersection when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E/F) or the peak hour delay to increase as follows:
- LOS A/B = By 10.0 seconds
- LOS C = By 8.0 seconds
- LOS D = By 5.0 seconds
- LOS E = By 2.0 seconds
- LOS F = By 1.0 seconds

[2] For intersections within the jurisdiction of March JPA, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), deficiency occurs if the Project contributes more than 2% of the total traffic.

[3] For intersections within the jurisdiction of Caltrans, the County of Riverside, or City of Moreno Valley, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. A deficiency also occurs if the Project contributes 50 or more peak hour trips to an already deficient intersection.

[4] The intersection currently built out to the General Plan ultimate cross-section and exceeds the General Plan target LOS. As such, the deficiency is unavoidable.

Table 6-3

Roadway Segment Analysis for Opening Year Cumulative (2023) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	2023 NP	V/C[2]	LOS[3]	2023 WP	V/C[2]	LOS[3]	Acceptable LOS[3]
1	Alessandro Bl.	Barton St. to Private Driveway	6D	49,500	45,205	**0.91**	**E**	45,669	**0.92**	**E**	D
2		Private Driveway to Vista Grande Dr.	6D	49,500	46,713	**0.94**	**E**	47,177	**0.95**	**E**	D
3		Vista Grande Dr. to San Gorgonio Dr.	6D	49,500	49,558	**1.00**	**F**	50,710	**1.02**	**F**	D
4		San Gorgonio Dr. to Sycamore Canyon Bl.	6D	49,500	49,529	**1.00**	**F**	50,681	**1.02**	**F**	D
5		Sycamore Canyon Bl. to I-215 SB Ramps	6D	49,500	41,035	0.83	D	42,158	0.85	D	D
6		I-215 SB Ramps to I-215 NB Ramps	6D	49,500	37,546	0.76	C	38,151	0.77	C	D

[1] These maximum roadway capacities have been extracted from the following source: City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) for each applicable roadway type. These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] V/C = Volume to Capacity ratio

[3] LOS = Level of Service

6.7 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Alessandro Boulevard 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-215 Freeway mainline. Queuing analysis findings are presented in Table 6-4 for Opening Year Cumulative (2023) Without and With Project traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 6-4, there are no queuing issues anticipated for Opening Year Cumulative (2023) Without and With Project traffic conditions.

Worksheets for Opening Year Cumulative (2023) Without Project conditions off-ramp queuing analysis are provided in Appendix 6.5. Worksheets for Opening Year Cumulative (2023) With Project conditions off-ramp queuing analysis are provided in Appendix 6.6.

6.8 OPENING YEAR CUMULATIVE (2023) DEFICIENCIES AND RECOMMENDATIONS

6.8.1 RECOMMENDATIONS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed improvements for deficient intersections (see Table 6-2) is presented in Table 6-5 for Opening Year Cumulative (2023) traffic conditions. Based on each jurisdiction's deficiency criteria, the Project is anticipated to result in deficiencies at the following intersections, as the Project would contribute to the total Opening Year Cumulative (2023) With Project traffic forecasts:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)
- Sycamore Canyon Bl. & Alessandro Bl. (#6)

The deficiencies and recommendations for Opening Year Cumulative (2023) conditions are consistent with E+P conditions.

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

Table 6-4

Peak Hour Freeway Off-Ramp Queuing Summary for Opening Year Cumulative (2023) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2023 Without Project				2023 With Project			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps / Alessandro Bl.	SBL	525	264 [2]	217	Yes	Yes	264 [2]	217	Yes	Yes
	SBL/R	1,540	264 [2]	204	Yes	Yes	283 [2]	210	Yes	Yes
	SBR	525	249 [2]	193	Yes	Yes	268 [2]	198	Yes	Yes
I-215 NB Ramps / Alessandro Bl.	NBL	450	507 [2]	325 [2]	Yes[3]	Yes	522 [2]	333 [2]	Yes[3]	Yes
	NBL/T/R	1,345	558 [2]	372 [2]	Yes	Yes	572 [2]	380 [2]	Yes	Yes
	NBR	450	105	207	Yes	Yes	105	207	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. 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 in this table, where applicable.

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

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

Table 6-5

Intersection Analysis for Opening Year Cumulative (2023) 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
3	Private Driveway & Alessandro Bl.																	
	- Without Improvements	TS	0	1	0	0	1	0	1	3	0	1	3	0	2.8	4.7	A	A
	- With Improvements	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	**0**	3	0	**0**	3	0	11.6	17.6	B	C
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.																	
	- Without Improvements	CSS	0	1	d	0	0	0	0	3	0	1	3	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	7.8	9.5	A	A

[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; d= Defacto Right Turn Lane; **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

[4] Recommended improvement includes the elimination of the existing traffic and restricting the driveway access to right-in/right-out access only.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

The intersection operations analysis worksheets for Opening Year Cumulative (2023) With Project traffic conditions, with improvements, are included in Appendix 6.7.

6.8.2 RECOMMENDED IMPROVEMENTS TO ADDRESS OFF-RAMP QUEUES

As shown previously on Table 6-4, there are no peak hour queuing issues anticipated at the I-215 Freeway at Alessandro Boulevard interchange for Opening Year Cumulative (2023) traffic conditions.

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7 HORIZON YEAR (2040) TRAFFIC CONDITIONS

This section discusses the methods used to develop Horizon Year (2040) Without and With Project traffic forecasts, and the resulting intersection operations, roadway segment capacities, and traffic signal warrant 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 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 the cumulative development projects 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 frontage and driveways). Other connections assumed include the extension of San Gorgonio Avenue, south of Alessandro Boulevard.

7.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

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 Exhibit 7-1.

7.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

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 Exhibit 7-2.

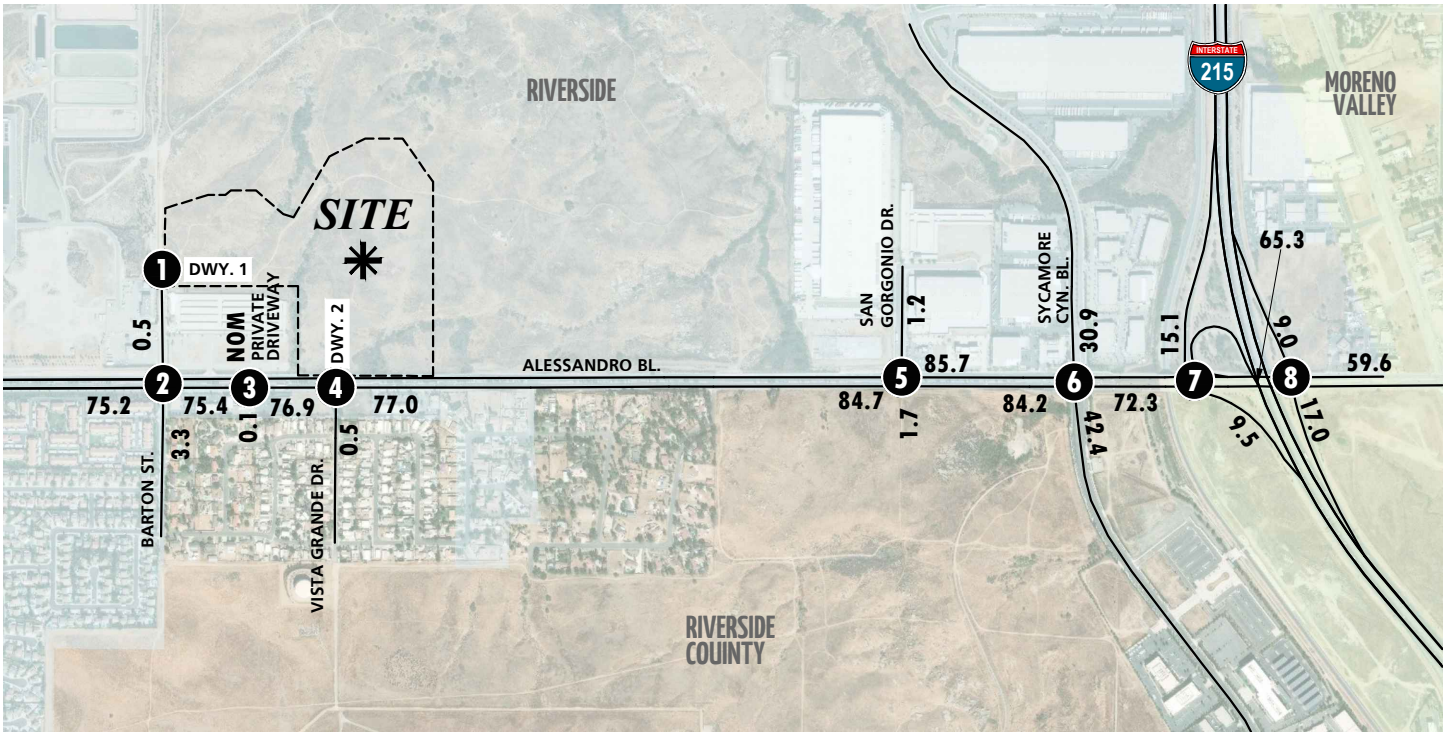
7.4 INTERSECTION OPERATIONS ANALYSIS

7.4.1 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2040) Without Project conditions with intersection geometrics consistent with Section 7.1 *Roadway Improvements*. As shown in Table 7-1, the following study area intersections are anticipated to operate at an unacceptable level of service (e.g., LOS E or worse):

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4) – LOS F AM and PM peak hours
- Sycamore Canyon Bl. & Alessandro Bl. (#6) – LOS F AM and PM peak hours
- I-215 NB Ramps & Alessandro Bl. (#8) – LOS E AM and PM peak hours

EXHIBIT 7-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)



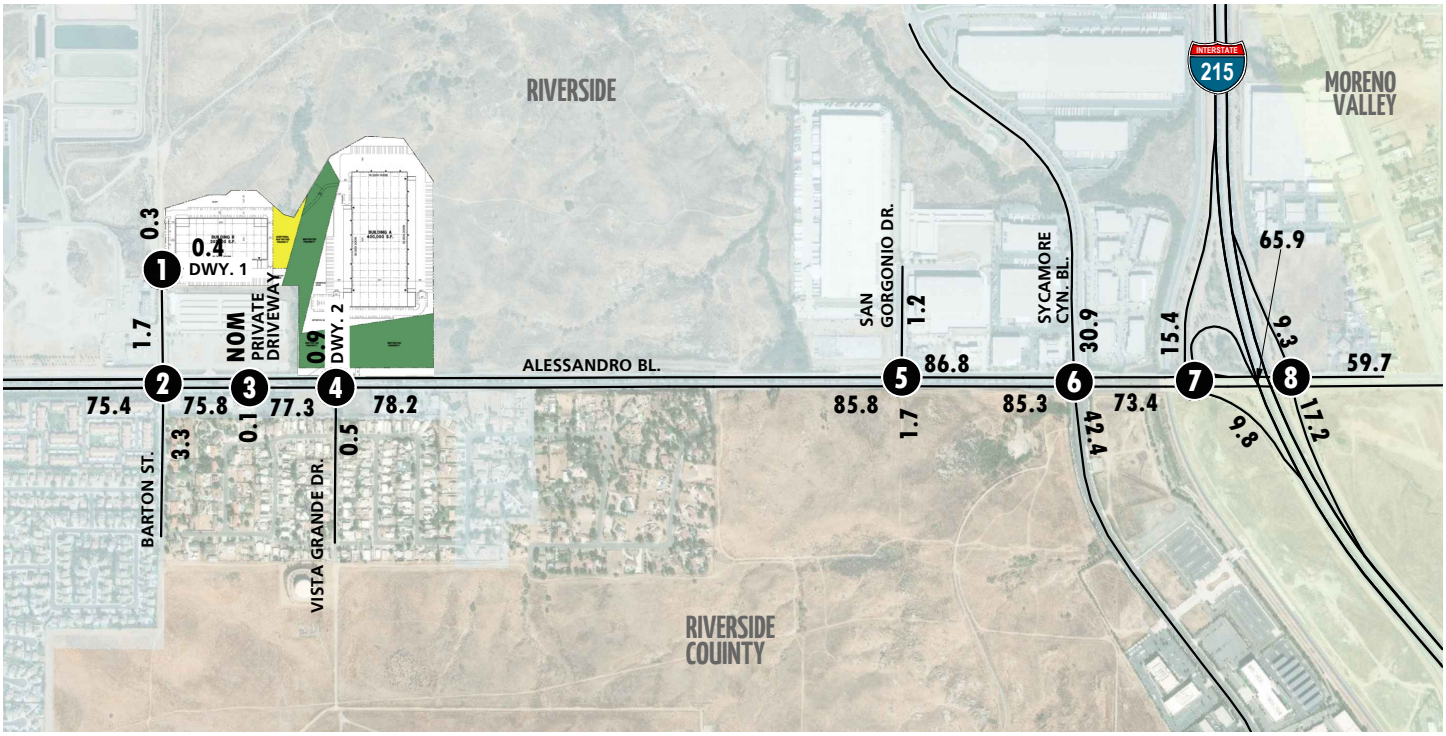
1 Barton St. & Dwy. 1	2 Barton St. & Alessandro Bl.	3 Private Driveway & Alessandro Bl.	4 Dwy. 2 & Alessandro Bl.	5 San Gorgonio Dr. & Alessandro Bl.
Future Intersection	4(9) 0(0) 7(10) → 6(19) ← 3377(2775) ← 47(72) 4(12) → 1809(3282) → 18(41) → 76(59) 0(0) 69(58)	0(0) 0(0) 0(0) → 0(0) ← 3430(2866) ← 2(4) 6(4) → 1873(3345) → 6(1) → 4(6) 0(0) 4(2)	← 3432(2870) ← 14(27) 1877(3347) → 8(14) → 4(2) 17(11)	16(21) 0(0) 25(34) → 46(25) ← 3760(2859) ← 175(101) 13(18) → 1869(3683) → 35(20) → 13(36) 0(0) 68(186)

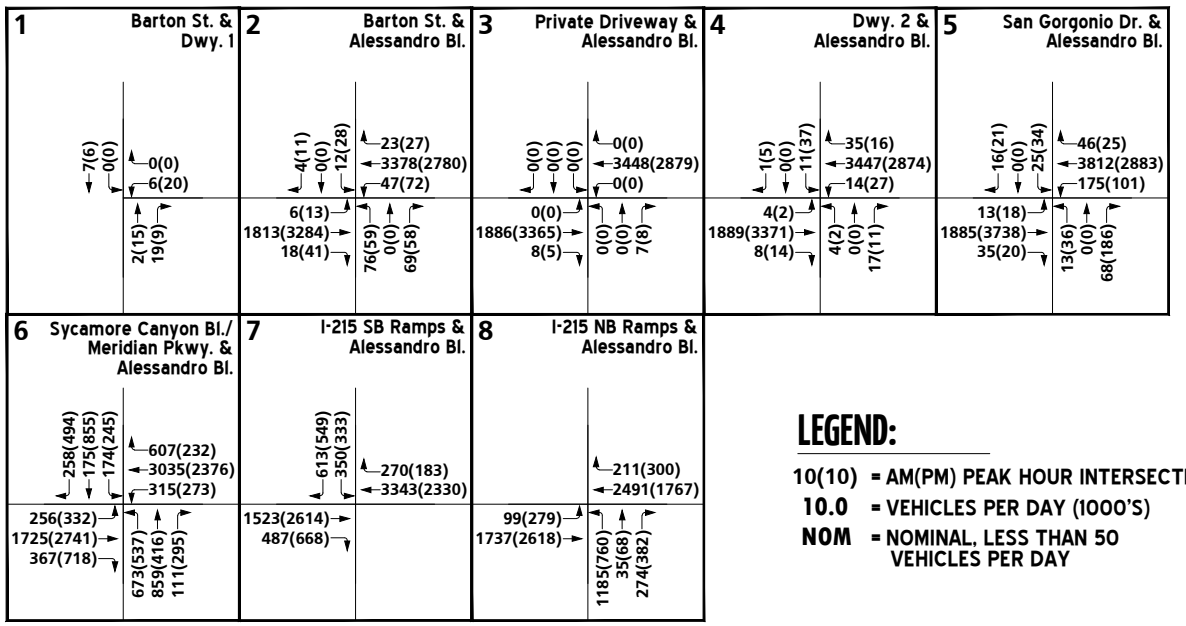
6 Sycamore Canyon Bl./ Meridian Pkwy. & Alessandro Bl.	7 I-215 SB Ramps & Alessandro Bl.	8 I-215 NB Ramps & Alessandro Bl.
258(494) 175(855) 174(245) → 607(232) ← 2984(2352) ← 315(273) 256(332) → 1709(2688) → 367(716) → 672(536) 859(416) 111(295)	587(537) 350(333) → 270(183) ← 3319(2318) 1513(2582) → 481(647) →	→ 211(300) ← 2487(1765) 91(252) → 1736(2613) → 1165(751) 35(68) 274(382)

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

EXHIBIT 7-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (IN PCE)





LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

Table 7-1

Intersection Analysis for Horizon Year (2040) Conditions

#	Intersection	Traffic Control[2]	2040 Without Project				2040 With Project				Jurisdiction	Deficiency?[3]
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service			
			AM	PM	AM	PM	AM	PM	AM	PM		
1	Barton St. & Driveway 1	**CSS**	Future Intersection				8.6	8.7	A	A	Riverside	No
2	Barton St. & Alessandro Bl.	TS	49.8	48.5	D	D	51.2	48.6	D	D	Riverside	No
3	Private Driveway & Alessandro Bl.	TS	4.9	13.2	A	B	5.0	13.4	A	B	Riverside	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	CSS	**>100.0**	**>100.0**	**F**	**F**	**>100.0**	**>100.0**	**F**	**F**	Riverside	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	TS	48.4	51.4	D	D	49.2	53.4	D	D	Riverside/JPA	No
6	Sycamore Canyon Bl. & Alessandro Bl.	TS	**213.6**	**148.5**	**F**	**F**	**213.9**	**149.0**	**F**	**F**	Riverside/JPA	**Yes**
7	I-215 SB Ramps & Alessandro Bl.	TS	23.9	27.3	C	C	27.2	30.6	C	C	Caltrans/Riverside/County	No
8	I-215 NB Ramps & Alessandro Bl.	TS	**68.7**	**58.5**	**E**	**E**	**69.5**	**59.8**	**E**	**E**	Caltrans/Riverside/County	No

* **BOLD** = 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.

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

[3] See Table 7-2 for a detailed summary of deficiencies.

A summary of the peak hour intersection LOS for Horizon Year Without Project conditions are shown on Exhibit 7-3. The intersection operations analysis worksheets for Horizon Year Without Project traffic conditions are included in Appendix 7.1 of this TA.

7.4.2 HORIZON YEAR (2040) WITH PROJECT TRAFFIC CONDITIONS

As shown on Table 7-1 and illustrated on Exhibit 7-4, there are no additional study area intersections anticipated to operate at an unacceptable LOS (LOS E or worse) with the addition of Project traffic, other than those previously identified under Horizon Year Without Project conditions. The intersection operations analysis worksheets for Horizon Year With Project traffic conditions are included in Appendix 7.2 of this TA. The deficiencies are summarized in Table 7-2. Measures to address long range deficiencies for Horizon Year traffic conditions are discussed in Section 7.10 *Horizon Year Deficiencies and Recommended Improvements.*

7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

No study area intersections are anticipated to meet traffic signal warrants for Horizon Year (2040) Without and With Project traffic conditions (see Appendices 7.3 and 7.4).

7.6 ROADWAY SEGMENT CAPACITY ANALYSIS

As noted previously, the City of Riverside stated roadway segment capacities are approximate figures only and are used at the General Plan level to assist in determining the roadway functional classification (number of through lanes) needed to meet future traffic demand.

Table 7-3 provides a summary of the Horizon Year (2040) Without Project conditions roadway segment capacity analysis based on the City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) identified previously on Table 2-3. As shown on Table 7-3, all roadway segments are anticipated to operate at an unacceptable LOS under Horizon Year (2040) Without and With Project traffic conditions.

7.7 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at Alessandro Boulevard 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-215 Freeway mainline. Queuing analysis findings are presented in Table 7-4 for Horizon Year (2040) Without and With Project traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 7-4, there are no queuing issues anticipated for Horizon Year (2040) Without and With Project traffic conditions.

Worksheets for Horizon Year (2040) Without Project conditions off-ramp queuing analysis are provided in Appendix 7.5. Worksheets for Horizon Year (2040) With Project conditions off-ramp queuing analysis are provided in Appendix 7.6.

EXHIBIT 7-3: HORIZON YEAR (2040) WITHOUT PROJECT SUMMARY OF LOS



EXHIBIT 7-4: HORIZON YEAR (2040) WITH PROJECT SUMMARY OF LOS



Table 7-2

Deficient Intersection Summary for Horizon Year (2040) Conditions

#	Intersection	Jurisdiction	Project % of Total Traffic		Change in Delay (secs.)		Project Trip Contribution		Deficiency? [1,2,3]
			AM	PM	AM	PM	AM	PM	
1	Barton St. & Driveway 1	Riverside	N/A	N/A	--	--	N/A	N/A	No
2	Barton St. & Alessandro Bl.	Riverside	N/A	N/A	1.4	0.1	N/A	N/A	No
3	Private Driveway & Alessandro Bl.	Riverside	N/A	N/A	0.1	0.2	N/A	N/A	No
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.	Riverside	N/A	N/A	**>1.0**	**>1.0**	N/A	N/A	**Yes**
5	San Gorgonio Dr. & Alessandro Bl.	Riverside/JPA	N/A	N/A	0.8	2.0	N/A	N/A	No
6	Sycamore Canyon Bl. & Alessandro Bl.	Riverside/JPA	1.0%	1.1%	0.3	0.5	68	80	**Yes**[4]
7	I-215 SB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	3.3	3.3	N/A	N/A	No
8	I-215 NB Ramps & Alessandro Bl.	Caltrans/Riverside/County	N/A	N/A	0.8	1.3	33	43	No

* **BOLD** = Deficient Intersection

N/A = Not Applicable

[1] For intersections within the jurisdiction of the City of Riverside, a deficiency occurs at a study area intersection when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A through D) to unacceptable levels (LOS E/F) or the peak hour delay to increase as follows:
- LOS A/B = By 10.0 seconds
- LOS C = By 8.0 seconds
- LOS D = By 5.0 seconds
- LOS E = By 2.0 seconds
- LOS F = By 1.0 seconds

[2] For intersections within the jurisdiction of March JPA, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. However, if the pre-project condition is already below LOS D (or acceptable LOS), deficiency occurs if the Project contributes more than 2% of the total traffic.

[3] For intersections within the jurisdiction of Caltrans, the County of Riverside, or City of Moreno Valley, if the pre-project condition is at or better than LOS D (or acceptable LOS) and the project-generated traffic causes deterioration below acceptable levels, a deficiency is deemed to occur. A deficiency also occurs if the Project contributes 50 or more peak hour trips to an already deficient intersection.

[4] The intersection currently built out to the General Plan ultimate cross-section and exceeds the General Plan target LOS. As such, the deficiency is unavoidable.

Table 7-3

Roadway Segment Analysis for Horizon Year (2040) Conditions

#	Roadway	Segment Limits	Roadway Section	LOS Capacity[1]	2040 NP	V/C[2]	LOS[3]	2040 WP	V/C[2]	LOS[3]	Acceptable LOS[3]
1	Alessandro Bl.	Barton St. to Private Driveway	6D	49,500	75,352	**1.52**	**F**	75,816	**1.53**	**F**	D
2		Private Driveway to Vista Grande Dr.	6D	49,500	76,860	**1.55**	**F**	77,324	**1.56**	**F**	D
3		Vista Grande Dr. to San Gorgonio Dr.	6D	49,500	84,666	**1.71**	**F**	85,818	**1.73**	**F**	D
4		San Gorgonio Dr. to Sycamore Canyon Bl.	6D	49,500	85,687	**1.73**	**F**	86,839	**1.75**	**F**	D
5		Sycamore Canyon Bl. to I-215 SB Ramps	6D	49,500	72,308	**1.46**	**F**	73,431	**1.48**	**F**	D
6		I-215 SB Ramps to I-215 NB Ramps	6D	49,500	65,293	**1.32**	**F**	65,898	**1.33**	**F**	D

[1] These maximum roadway capacities have been extracted from the following source: City of Riverside Traffic Impact Analysis Preparation Guide (Exhibit D) for each applicable roadway type. These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian and bicycle traffic.

[2] V/C = Volume to Capacity ratio

[3] LOS = Level of Service

Table 7-4

Peak Hour Freeway Off-Ramp Queuing Summary for Horizon Year (2040) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)[3]		Acceptable?[1]		95th Percentile Queue (Feet)[3]		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps / Alessandro Bl.	SBL	525	349 [2]	281 [2]	Yes	Yes	349 [2]	281 [2]	Yes	Yes
	SBL/R	1,540	360 [2]	279 [2]	Yes	Yes	378 [2]	287 [2]	Yes	Yes
	SBR	525	341 [2]	261 [2]	Yes	Yes	360 [2]	270 [2]	Yes	Yes
I-215 NB Ramps / Alessandro Bl.	NBL	450	588 [2]	409 [2]	Yes[3]	Yes	602 [2]	453 [2]	Yes[3]	Yes
	NBL/T/R	1,345	624 [2]	446 [2]	Yes	Yes	636 [2]	490 [2]	Yes	Yes
	NBR	450	123	244	Yes	Yes	123	257	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. 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 in this table, where applicable.

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

[3] Although the 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-215 Freeway mainline.

7.8 HORIZON YEAR (2040) DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

7.8.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed improvements for deficient intersections (see Table 7-2) is presented in Table 7-5 for Horizon Year (2040) traffic conditions. Based on each jurisdiction's deficiency criteria, the Project is anticipated to result in deficiencies at the following intersections, as the Project would contribute to the total Horizon Year (2040) With Project traffic forecasts:

- Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)
- Sycamore Canyon Bl. & Alessandro Bl. (#6)

The deficiencies and recommended improvements for Horizon Year (2040) conditions are consistent with E+P and Opening Year Cumulative (2023) conditions.

Project Design Feature 1.1 – Driveway 2/Vista Grande Dr. & Alessandro Bl. (#4)

- The intersection of Vista Grande Drive & Alessandro Boulevard is not warranted for a traffic signal (based on volume warrants). However, it is anticipated to continue to operate at a deficient LOS. The additional of a traffic signal would improve the LOS to acceptable levels. The addition of a traffic signal is not currently feasible as the intersection is in close proximity of an existing signalized intersection (Private Driveway at Alessandro Boulevard). The adjacent signalized intersection of Private Driveway at Alessandro Boulevard is not anticipated to warrant a traffic signal as the volumes on the north and south leg are nominal (significantly less than the south leg of Vista Grande Drive & Alessandro Boulevard). It would require the removal of the existing traffic signal at Private Driveway & Alessandro Boulevard for a traffic signal to be installed at Vista Grande Drive and Alessandro Boulevard. It is recommended that the existing signal at Private Driveway & Alessandro Boulevard is to be removed and that the Project will construct a new traffic signal at the intersection of Driveway 2/Vista Grande Drive & Alessandro Boulevard.

The intersection of Sycamore Canyon Boulevard & Alessandro Boulevard is currently built out to its General Plan ultimate cross-section and exceeds the General Plan target LOS. Until additional right-of-way beyond those designated in the General Plan is obtained, there are no anticipated feasible improvements. As such, the deficiency is considered unavoidable.

The intersection operations analysis worksheets for Horizon Year (2040) With Project traffic conditions, with improvements, are included in Appendix 7.7.

7.8.2 RECOMMENDED IMPROVEMENTS TO ADDRESS OFF-RAMP QUEUES

As shown previously on Table 7-2, there are no peak hour queuing issues anticipated at the I-215 Freeway at Alessandro Boulevard interchange for Horizon Year (2040) traffic conditions. As such, no improvements have been recommended.

Table 7-5

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
3	Private Driveway & Alessandro Bl.																	
	- Without Improvements	TS	0	1	0	0	1	0	1	3	0	1	3	0	5.0	13.4	A	B
	- With Improvements	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	1	3	0	1	3	0	12.5	31.6	B	D
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.																	
	- Without Improvements	CSS	0	1	d	0	0	0	0	3	0	1	3	0	**>100.0**	**>100.0**	**F**	**F**
	- With Improvements	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	12.7	20.5	B	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; d= Defacto Right Turn Lane; **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

[4] Recommended improvement includes the elimination of the existing traffic and restricting the driveway access to right-in/right-out access only.

8 SUPPLEMENTAL ANALYSIS

At the request of City staff, supplemental analysis has been provided for informational purposes only. The configurations identified in Section 1.5 *Site Adjacent Roadway and Site Access Improvements* and Project Design Feature 1.1 remains the recommendation of the TA. Exhibit 8-1 identifies the lane configurations for the three alternative configurations provided by City staff. It should be noted that the removal of the left turn pockets on Alessandro Boulevard would force vehicles to make a u-turn at the next available intersection. The overall traffic conditions of the study area would become less efficient without the left turn pockets on Alessandro Boulevard.

The supplemental intersection and queuing analysis is presented in Tables 8-1 and 8-2, respectively. The supplemental analysis worksheets for Alternatives 1, 2, and 3 are included in Appendices 8-1, 8-2, and 8-3, respectively.

EXHIBIT 8-1: ALTERNATIVE CONFIGURATIONS

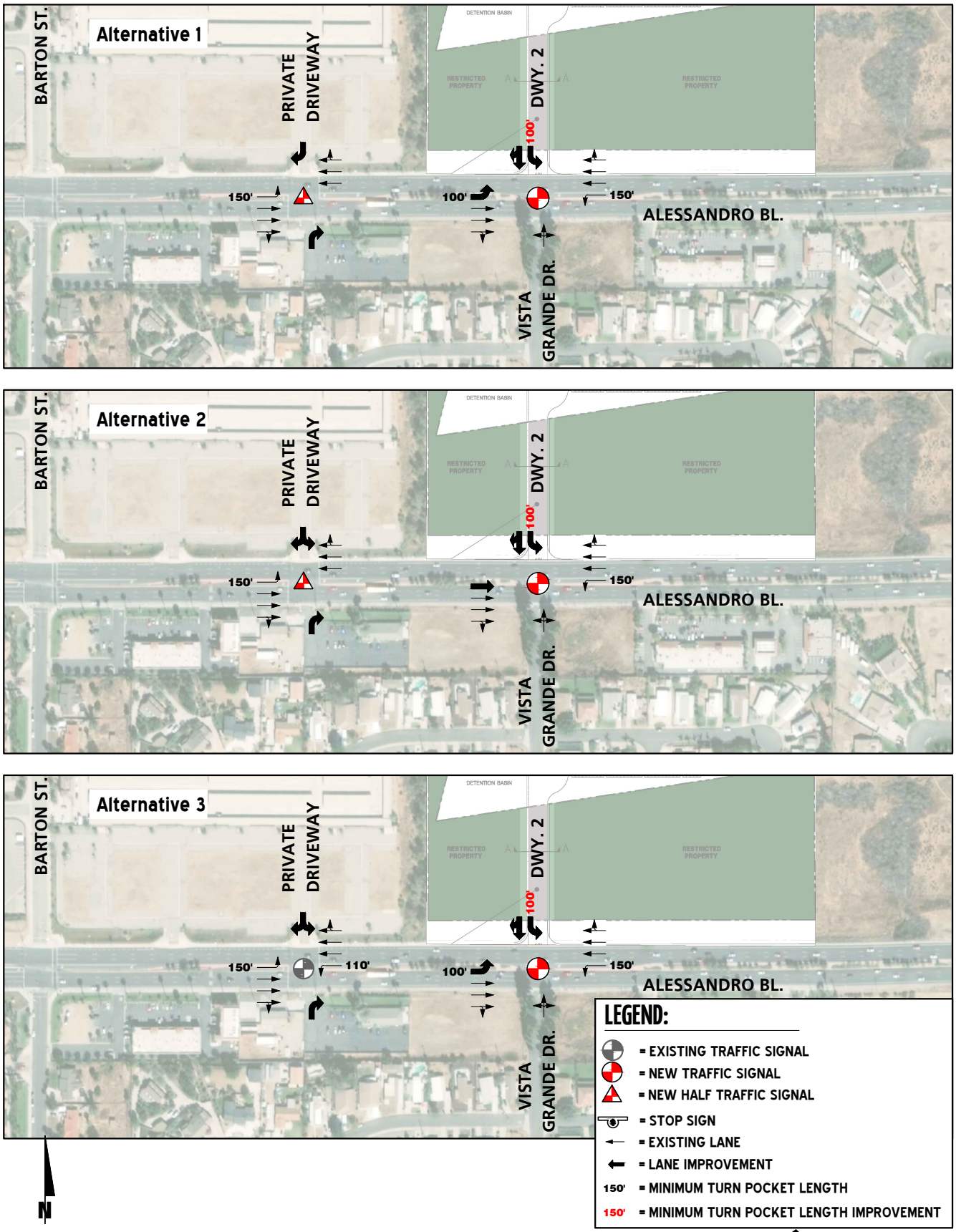


Table 8-1

Intersection Analysis for Alternative Configurations

#	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
3	Private Driveway & Alessandro Bl.																	
	E+P																	
	- Staff Preferred Alternative	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	**0**	3	0	**0**	3	0	10.7	14.7	B	B
	- Alternative 1	**TS**[5]	0	**0**	**1**	0	**0**	**1**	1	3	0	**0**	3	0	1.1	1.0	A	A
	- Alternative 2	**TS**[5]	0	**0**	**1**	0	1	0	1	3	0	**0**	3	0	1.2	1.0	A	A
	- Alternative 3	**TS**	0	**0**	**1**	0	1	0	1	3	0	1	3	0	1.2	1.0	A	A
	Opening Year Cumulative (2023)																	
	- Staff Preferred Alternative	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	**0**	3	0	**0**	3	0	11.6	17.6	B	C
	- Alternative 1	**TS**[5]	0	**0**	**1**	0	**0**	**1**	1	3	0	**0**	3	0	1.2	1.0	A	A
	- Alternative 2	**TS**[5]	0	**0**	**1**	0	1	0	1	3	0	**0**	3	0	1.2	1.0	A	A
	- Alternative 3	**TS**	0	**0**	**1**	0	1	0	1	3	0	1	3	0	1.3	1.0	A	A
	Horizon Year (2040)																	
	- Staff Preferred Alternative	**CSS**[4]	0	**0**	**1**	0	**0**	**1**	**0**	3	0	**0**	3	0	12.5	31.6	B	D
	- Alternative 1	**TS**[5]	0	**0**	**1**	0	**0**	**1**	1	3	0	**0**	3	0	2.0	1.1	A	A
	- Alternative 2	**TS**[5]	0	**0**	**1**	0	1	0	1	3	0	**0**	3	0	2.0	1.1	A	A
	- Alternative 3	**TS**	0	**0**	**1**	0	1	0	1	3	0	1	3	0	2.0	1.1	A	A
4	Driveway 2/Vista Grande Dr. & Alessandro Bl.																	
	E+P																	
	- Staff Preferred Alternative	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	7.2	5.5	A	A
	- Alternative 1	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	8.1	7.2	A	A
	- Alternative 2	**TS**	0	1	d	**1**	**1**	0	0	**4**	0	1	3	0	3.8	5.6	A	A
	- Alternative 3	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	8.1	7.1	A	A
	Opening Year Cumulative (2023)																	
	- Staff Preferred Alternative	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	7.8	9.5	A	A
	- Alternative 1	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	9.0	8.3	A	A
	- Alternative 2	**TS**	0	1	d	**1**	**1**	0	0	**4**	0	1	3	0	4.1	6.1	A	A
	- Alternative 3	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	8.1	8.1	A	A
	Horizon Year (2040)																	
	- Staff Preferred Alternative	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	12.7	20.5	B	C
	- Alternative 1	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	12.4	12.3	B	B
	- Alternative 2	**TS**	0	1	d	**1**	**1**	0	0	**4**	0	1	3	0	5.0	7.3	A	A
	- Alternative 3	**TS**	0	1	d	**1**	**1**	0	**1**	3	0	1	3	0	12.4	11.7	A	B

[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; d= Defacto Right Turn Lane; **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

[4] Recommended improvement includes the elimination of the existing traffic and restricting the driveway access to right-in/right-out only.

[5] Recommended improvement includes the modifying the existing traffic to allow no uncontrolled left turns.

Table 8-2

Peak Hour Queuing Summary for Alternative Configurations

Intersection	Movement	Available Stacking Distance (Feet)	2040 With Project			
			95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM
Private Driveway & Alessandro Bl.						
- Staff Preferred Alternative			No Applicable Turn Pockets			
- Alternative 1	EBL	150	22	21	Yes	Yes
- Alternative 2	EBL	150	42	27	Yes	Yes
- Alternative 3	EBL	150	26	10	Yes	Yes
	WBL	110	68	28		
Driveway 2/Vista Grande Dr. & Alessandro Bl.						
- Staff Preferred Alternative	EBL	100	16	24	Yes	Yes
	EBT	500	111	343	Yes	Yes
	WBL	150	56	50	Yes	Yes
- Alternative 1	EBL	100	16	16	Yes	Yes
	EBT	500	66	332	Yes	Yes
	WBL	150	44	60	Yes	Yes
- Alternative 2	EBT	500	59	189	Yes	Yes
	WBL	150	36	71	Yes	Yes
- Alternative 3	EBL	100	22	20	Yes	Yes
	EBT	500	90	333	Yes	Yes
	WBL	150	56	63	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. 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 in this table, where applicable.

9 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements throughout the City of Riverside are funded through a combination of project improvements, fair share contributions or development impact fee programs, such as Transportation Uniform Mitigation Fee (TUMF) program or the City's Development Impact Fee (DIF) program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

9.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

In 2002, the TUMF program was initiated in Western Riverside County. City of Riverside participates in the TUMF program. Under the TUMF, developers of residential, industrial and commercial property are required to pay a development fee to fund regional transportation projects, which mitigates cumulative deficiencies to the intersections included in the TUMF program. The TUMF funds both local and regional arterial projects. The applicant shall participate in the funding of off-site improvements, including traffic signals that are needed to serve cumulative traffic conditions through the payment of required Western Riverside County TUMF and other applicable fair share contributions, as directed by the City of Riverside. These fees are collected as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected vehicle trip increases.

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2017 to address major changes in right of way acquisition and improvement cost factors. (11) This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

TUMF guidelines empower a local zone committee to prioritize and arbitrate certain projects. The Project is located in the Central Zone. The zone has developed a 5-year capital improvement program to prioritize public construction of certain roads. TUMF is focused on improvements necessitated by regional growth.

9.2 CITY OF RIVERSIDE DEVELOPMENT IMPACT FEE PROGRAM

The City of Riverside 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. 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 necessary improvements. The City also uses this data to ensure that the improvements 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 standard.

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 pursuant to the City's ordinance. The Project Applicant's payment of the requisite DIF at the rates then in effect, pursuant to the City DIF Program, would satisfy the Project's proportional improvement requirements at potentially affected DIF-funded facilities.

At the time of preparation of the traffic study, the City of Riverside does not currently maintain a list of DIF covered facilities.

10 REFERENCES

1. **City of Riverside.** *Traffic Impact Analysis Preparation Guide.* City of Riverside : s.n., December 2017.

2. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.

3. **Institute of Transportation Engineers.** *Trip Generation.* 10th Edition. 2017.

4. **City of Moreno Valley.** *City of Moreno Valley General Plan.* Moreno Valley : s.n., July 11, 2006.

5. **Transportation Research Board.** *Highway Capacity Manual (HCM) 6th Edition.* s.l. : National Academy of Sciences.

6. **California Department of Transportation.** Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.

7. **VRPA Technologies, Inc.** *Final Traffic Impact Analysis Preparation Guide.* March Joint Powers Authority : s.n., August 3, 2011.

8. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino.* County of San Bernardino : s.n., Updated December 2007.

9. **Institute of Transportation Engineers.** *High Cube Warehouse Vehicle Trip Generation Analysis.* Washington, DC : Institute of Transportation Engineers, October 2016.

10. **Southern California Association of Governments.** *2016 Regional Transportation Plan/Sustainable Communities Strategy.* April 2016.

11. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

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APPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Riverside Public Works Traffic Engineering Division requirements for traffic impact analysis of the following project. The analysis must follow the City Traffic Impact Analysis Preparation Guide dated January 2016.

Case No. _____
Related Cases -
SP No. Sycamore Canyon Business Park Specific Plan (SCBPSP)
EIR No. _____
GPA No. _____
CZ No. _____
Project Name: Sycamore Hill Distribution Center
Project Location: North of Alessandro Boulevard and east of Barton Street
Project Description: 603,100 square feet of High-Cube Transload Short-Term Warehouse use within two buildings

	Consultant	Developer
Name:	Urban Crossroads, Inc.	Darrell Butler
Address:	260 E Baker Street, Suite 200	3241 Alta Laguna Boulevard
	Costa Mesa, CA 92626	Laguna Beach, CA 92651
Telephone:	Pranesh Tarikere, 949-336-5992	949-632-9892

A. Trip Generation Source: ITE *Trip Generation Manual*, most recent edition

Existing Land Use B/OP - Business/Office Park
Existing Zoning BMP - Business and Manufacturing
Total Daily Trips 1,266
Proposed Land Use I - Industrial
Proposed Zoning I - General Industrial

	In	Out	Total
AM Trips	57	18	75
PM Trips	27	62	87

Internal Trip Allowance ☐ Yes ☒ No (% Trip Discount)
Pass-By Trip Allowance ☐ Yes ☒ No (% Trip Discount)
(Attach additional sheet if this is a multi-use site with a breakdown of trips generated)

B. Trip Geographic Distribution: N 0 % S 0 % E 80 % W 20 %
(See attached exhibit for detailed assignment)

C. Background Traffic

Project Completion Year: 2023 **Annual Ambient Growth Rate:** 2 %
Other area projects to be included: City of Riverside, County of Riverside, Moreno Valley, March JPA

Please contact Planning Division or use the most recently provided data

Model/Forecast methodology if required RivTAM

D. Build-out Studies: Does this project require a Build-out Study per TIA Guidelines Section 7.2? ☒ Yes ☐ No

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

1. Barton St. / Driveway 1
2. Barton St / Alessandro Bl.
3. Private Driveway / Alessandro Bl
4. Vista Grande Dr /Driveway 2 / Alessandro Bl
5. San Gorgonio Dr / Alessandro Bl
6. Sycamore Canyon Bl / Alessandro Bl.
7. I-215 SB Ramps / Alessandro Bl.
8. I 215 NB Ramps / Alessandro Bl

F. Study Roadway Segments (For Build-out Studies):

1. Alessandro Bl. btw Barton St /Private Driveway
2. Alessandro Bl. btw Private Driveway/Vista Grande Dr.
3. Alessandro Bl. btw Vista Grande Dr./San Gorgonio Dr.
4. Alessandro Bl. btw San Gorgonio Dr./Sycamore Canyon Bl
5. Alessandro Bl. btw Sycamore Canyon Bl/I-215 SB Ramps
6. Alessandro Bl. btw I-215 SB Ramps/I-215 NB Ramps
7.
8.

G. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or one-mile radius of boundaries? ☒ Yes ☐ No

If so, name of Jurisdiction: County of Riverside, City of Moreno Valley, March JPA

H. Site Plan (please attach a legible 11'X17' copy)

I. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Public Works Traffic Department)

*Assess location of traffic signal currently west of Vista Grande & east of Barton.

Recommended by:

Consultant's Representative — Date: 5/7/2019

Scoping Agreement Submitted on — Date: 10/31/2018

Scoping Agreement Resubmitted on — Date: 5/7/2019

Approved Scoping Agreement:

City of Riverside
Traffic Engineering Division — Date: 5/8/19

cc: Planning Division

URBAN CROSSROADS

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

October 31, 2018 (revised May 7, 2019)

Mr. Nathan Mustafa
City of Riverside
3900 Main Street
Riverside, California 92522

SUBJECT: SCOPING ASSUMPTIONS FOR THE SYCAMORE HILLS DISTRIBUTION CENTER TRAFFIC IMPACT ANALYSIS

Dear Mr. Nathan Mustafa:

The firm of Urban Crossroads, Inc. is pleased to submit this letter documenting the suggested scope of study for the Sycamore Hills Distribution Center ("Project"), which is located north of Alessandro Boulevard and east of Barton Street, within the of the City of Riverside. It is our understanding that the Project is to consist of 603,100 square feet of High-Cube Transload Short-Term Warehouse use between two buildings.

Our goal is to obtain comments from City of Riverside staff, to ensure that the traffic study fully addresses the potential impacts of the proposed Project. The remainder of this letter describes the draft proposed analysis methodology, project trip generation, trip distribution, and project traffic assignment/project trips on the surrounding roadway network, which have been used to establish the draft proposed project study area and analysis locations.

Exhibit 1 depicts the location of the proposed Project in relation to the existing roadway network. For purposes of the traffic analysis it is anticipated that the Project will be evaluated in a single phase with a projected Opening Year of 2023. As indicated on Exhibit 1, access to the Project site is proposed to be provided to Barton Street via Driveway 1 and Alessandro Boulevard via Driveway 2. All driveways are proposed to provide full access.

INTERSECTIONS AND ROADWAY SEGMENTS

Exhibit 2 illustrates the proposed study area intersections and roadway segments. The study area was determined based on the City of Riverside Traffic Impact Analysis Preparation Guide (December 2017) and consultation with City staff.

FREEWAYS

- Freeway segment analysis will be conducted for segments of I-215 Freeway, north and south of Alessandro Boulevard (2 segments each direction) based on the currently accepted Highway Capacity Manual (HCM 6th Edition) Basic Freeway Segment Analysis methodology.

- Freeway merge/diverge analysis will be conducted for ramp junctions on I-215 Freeway, north and south of Alessandro Boulevard (5 ramp junctions) based on the currently accepted Highway Capacity Manual (HCM 6th Edition Freeway Ramp Merge/Diverge Analysis methodology.
- Freeway off-ramp queuing analysis will be conducted at the I-215 Freeway/Alessandro Boulevard interchange.

ANALYSIS SCENARIOS

Consistent with traffic study guidelines adopted by multiple local jurisdictions throughout the County of Riverside, peak hour operations at each of the study area intersections and site access driveways will be assessed for the following analysis scenarios:

1. Existing (2019) Conditions (Baseline)
2. Existing plus Project (E+P) Conditions
3. Opening Year Cumulative (2023) Without and With Project Conditions
4. Horizon Year (2040) Without and With Project Conditions

Analysis Scenario #1 establishes the baseline for CEQA purposes.

Consistent with recent CEQA case law, Analysis Scenario #2 identifies significant traffic impacts associated with the proposed Project.

Analysis Scenarios #3 and #4 would identify cumulative impacts for Opening Year Cumulative (near-term) and Horizon Year (long-term) traffic conditions. It is assumed that intersection improvements required to address Opening Year Cumulative and Horizon Year traffic impacts will be addressed through either an existing fee program, or through a fair-share contribution. The Opening Year Cumulative (2023) traffic volume forecasts will be derived from Existing (2019) baseline conditions plus ambient growth. Individual cumulative projects will be added, as necessary. The Horizon Year (2040) traffic volume forecasts will be derived from the Riverside County Transportation Analysis Model (RivTAM) using accepted procedures for model forecast refinement and smoothing. The 2040 forecasts will be based on the most current socio-economic data (SED) provided by County staff in December 2017. The SED was updated within the WRCOG region to be consistent with the adopted *Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan (RTP)* (April 2016).

Information for Existing (2019) conditions will be disclosed to represent the baseline traffic conditions as they existed at the time the report is prepared. Weekday AM peak hour (7 AM to 9 AM) and PM peak hour (4 PM to 6 PM) turning movement counts have been previously collected in May and October 2018 at the study area intersections shown on Exhibit 2. The counts taken in 2018 will have a 2% growth rate applied in order to represent 2019 traffic conditions. The traffic counts include the following vehicle

classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. Traffic counts were scheduled while nearby schools are in session.

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. Actual vehicle trip generation rates for the Project and the actual vehicle trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project are shown on Table 1. For comparison, passenger-car-equivalent (PCE) trip generation rates for the Project and the PCE trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project are shown on Table 2.

The trip generation rates used for this analysis are based upon information collected by the Institute of Transportation Engineers (ITE) as provided in their Trip Generation manual, 10th Edition, 2017. ITE land use code 154 (High-Cube Transload and Short-Term Storage) have been used to derive site specific trip generation estimates for the Project.

As noted on Tables 1 and 2, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips by vehicle mix. Data regarding the vehicle mix has been obtained from High Cube Warehouse Vehicle Trip Generation Analysis (October 2016). The High Cube Warehouse Vehicle Trip Generation provides vehicle mix for Short-Term Storage and Transload Warehouse uses, which consists of 32.2% trucks for daily trips, 30.8% trucks for AM peak hour trips and 21.7% trucks for PM peak hour trips. The South Coast Air Quality Management (SCAQMD) recommended truck mix for each axle type has been utilized for 2-axle, 3-axle, and 4+-axle trucks. The recommended truck mix for with for without cold storage warehouses is: 16.7% 2-axle, 20.7% 3-axle, and 62.6% 4+-axle trucks.

The trip generation summary illustrating daily and peak hour trip generation estimates for the proposed Project in actual vehicles are shown on Table 1, and Table 2 shows the trip generation summary based on PCE. As shown on Table 1, the proposed Project is anticipated to generate a net total of 847 actual vehicle trip-ends per day with 51 AM peak hour trips and 64 PM peak hour trips. In comparison, the proposed Project is anticipated to generate a net total of 1,266 PCE trip-ends per day, 75 PCE AM peak hour trips and 87 PCE PM peak hour trips (see Table 2).

For the purposes of this analysis, it is proposed that the trucks will be converted into PCE in order to most accurately reflect the effects of heavy trucks in the analysis.

TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional

freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the City of Riverside, County of Riverside, March Joint Powers Authority, the City of Moreno Valley, and the California Department of Transportation (Caltrans). Given these differences, separate trip distributions were generated for both passenger cars and truck trips.

Exhibit 3 illustrates the passenger car trip distribution patterns for the proposed Project. Exhibit 4 illustrates the truck trip distribution patterns.

INTERSECTION ANALYSIS METHODOLOGY

For the purposes of this analysis, signalized intersection operations analysis will be based on the methodology described in the *Highway Capacity Manual* (HCM 6th Edition). Intersection levels of service (LOS) operations are based on an intersection's average control delay. Unsignalized intersections will be evaluated using the methodology described in the HCM 6th Edition. At two-way or side-street stop-controlled intersections, LOS for the intersection will be the worst LOS of all the individual movements. 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.

To represent the impact large trucks, buses and recreational vehicles have on traffic flow, truck traffic will be accounted for in the analysis as a percentage of total traffic at the study area intersections. In other words, the traffic volumes utilized for intersections and roadway segment analyses will utilize the actual vehicle traffic flow and trucks will be reflected in the analysis as a percentage of the total traffic flow, not PCE.

TRAFFIC SIGNAL WARRANTS

Traffic signal warrant analysis will be conducted for unsignalized intersections. Peak Hour Volume based Warrant 3 based on 2014 California Manual on Uniform Traffic Control Devices (MUTCD) will be utilized to determine whether a signal would be warranted.

In addition, traffic signal warrant analysis will also be conducted at the existing traffic signal located east of Barton Road at the intersection of the Private Driveway and Alessandro Boulevard.

LEVEL OF SERVICE (LOS) CRITERIA

The definitions of an operational deficiency for each of the applicable jurisdictions are as follows:

CITY OF RIVERSIDE

Per City of Riverside Policy CCM-2.3, maintain LOS D or better on Arterial Streets wherever possible. At key locations, such as City Arterials that are used by regional freeway bypass traffic and at heavily traveled freeway interchanges, allow LOS E at peak hours as the acceptable standard on a case-by-case

basis. City of Riverside allows Level of Service (LOS) D to be used as the maximum acceptable threshold for the study intersections and roadways of Collector or higher classification. LOS C is to be maintained on all street intersections.

COUNTY OF RIVERSIDE

County of Riverside General Plan Policy C 2.1 states that the following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County:

- LOS C shall apply to all development proposals in any area of the Riverside County not located within the boundaries of an Area Plan, as well those areas located within the following Area Plans: REMAP, Eastern Coachella Valley, Desert Center, Palo Verde Valley, and those non- Community Development areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans.
- LOS D shall apply to all development proposals located within any of the following Area Plans: Eastvale, Jurupa, Highgrove, Reche Canyon/Badlands, Lakeview/Nuevo, Sun City/Menifee Valley, Harvest Valley/Winchester, Southwest Area, The Pass, San Jacinto Valley, Western Coachella Valley and those Community Development Areas of the Elsinore, Lake Mathews/Woodcrest, Mead Valley and Temescal Canyon Area Plans. LOS E may be allowed by the Board of Supervisors within designated areas where transit oriented development and walkable communities are proposed.

Notwithstanding the forgoing minimum LOS targets, the Board of Supervisors may, on occasion by virtue of their discretionary powers, approve a project that fails to meet these LOS targets in order to balance congestion management considerations in relation to benefits, environmental impacts and costs, provided an Environmental Impact Report, or equivalent, has been completed to fully evaluate the impacts of such approval. Any such approval must incorporate all feasible mitigation measures, make specific findings to support the decision, and adopt a statement of overriding considerations.

MARCH JOINT POWERS AUTHORITY

Based on the March Joint Powers Authority Traffic Impact Study Preparation Guide (August 3, 2011), all intersections and roadway segments within the March JPA Planning Area shall operate at LOS D or better with limiting circumstances of LOS E to occur. LOS E may also be allowed to the extent that would support transit-oriented development (TOD) and walkable communities. LOS E is also acceptable during peak hours at interchange ramp intersections where ramp metering occurs. The Project is not proposed to be a TOD and neither the Alessandro Boulevard nor Cactus Avenue on-ramps are currently metered, as such, the minimum LOS utilized for the purposes of this analysis is LOS D.

CITY OF MORENO VALLEY

The Minimum LOS for the City of Moreno Valley is LOS D for intersections and roadway segments that are adjacent to freeway on/off ramps, and/or adjacent to employment generating land uses. LOS C is applicable to all other intersections and roadway segments. Boundary intersections are assumed to be LOS D.

CALTRANS

Based on recent guidance from Caltrans District 8, the LOS for operating State highway facilities is based on Measures of Effectiveness (MOE) identified in the Highway Capacity Manual (HCM). Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway 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 MOE should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways, roadways segments, and intersections is D. For undeveloped or not densely developed locations, the goal may be to achieve LOS C.

CEQA COMPLIANCE AND DOCUMENTATION – INTERSECTIONS

CITY OF RIVERSIDE

For projects in conformance with the General Plan, a significant impact occurs at a study intersection when the peak hour LOS falls below C, or D per CCM-2.3 as noted below. For projects that propose uses or intensities above that contained in the General Plan, a significant impact at a study intersection is when the addition of project related trips causes either peak hour LOS to degrade from acceptable (LOS A thru D) to unacceptable levels (E or F) or the peak hour delay to increase as follows:

LOS A/B	=	By 10.0 seconds or more
LOS C	=	By 8.0 seconds or more
LOS D	=	By 5.0 seconds or more
LOS E	=	By 2.0 seconds or more
LOS F	=	By 1.0 second or more

MARCH JPA

For the study area intersections that lie within March JPA, to determine whether the addition of project traffic (as defined through the comparison of Existing to E+P traffic conditions) at a study intersection would result in a direct project-specific traffic impact, both of the following conditions must occur:

- Peak hour project traffic plus existing traffic causes an intersection to operate at LOS E or F; and

- Peak hour project traffic comprises 2% or more of the total peak hour traffic on the intersection for LOS E and 2% or more for LOS F.

COUNTY OF RIVERSIDE AND CITY OF MORENO VALLEY

For the study area intersections that lie within the County of Riverside and City of Moreno Valley, to determine whether the addition of project traffic (as defined through the comparison of Existing to E+P traffic conditions) at a study intersection would result in a direct project-specific traffic impact, the following conditions must occur:

- Peak hour project traffic plus existing traffic causes an intersection to operate at LOS E or F

CALTRANS

To determine that the addition of project traffic to the SHS freeway segments would result in a deficiency, both of the following must be found:

- The traffic study finds that the LOS of a segment will degrade from D or better to E or F.
- The traffic study finds that the project will exacerbate an already deficient condition by contributing 50 or more peak hour trips. A segment that is operating at or near capacity is deemed to be deficient.

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.
- Provide a queuing analysis to determine the 95th percentile queues and the minimum requirement of storage lengths for right and left-turn movements at the Project driveways and site adjacent signalized intersections based on forecasted traffic volumes of Horizon Year (2040) with Project traffic conditions.
- Evaluate the potential removal of the traffic signal at the existing private driveway between Barton Street and Vista Grande Drive, and moving the signal to the intersection of Alessandro Boulevard and Vista Grande Drive.

OPEN ITEMS - CUMULATIVE DEVELOPMENT PROJECTS

The City of Riverside cumulative projects (April 2019) will be included in the analysis. The County of Riverside, March JPA, and City of Moreno Valley will also be consulted for their input on cumulative projects within their jurisdiction.

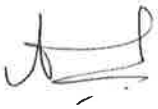
CONCLUSION

Urban Crossroads, Inc. is pleased to submit this letter documenting the Project trip generation, trip distribution, and the recommended intersection analysis locations for the Sycamore Hills Distribution Center 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) 336-5992.

Respectfully submitted,

URBAN CROSSROADS, INC.



Pranesh Tarikere, PE
Senior Engineer

Table 1

Project Trip Generation Summary (Actual Vehicles)

Project Trip Generation Rates									
Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage[3,4,5]	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily)			0.003	0.001	0.004	0.001	0.003	0.004	0.076
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily)			0.004	0.001	0.005	0.001	0.003	0.004	0.093
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily)			0.012	0.003	0.015	0.004	0.010	0.014	0.282

Project Trip Generation									
Project	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	603.100	TSF							
Passenger Cars:			26	8	34	14	34	48	573
Truck Trips:									
2-axle:			2	1	3	1	2	3	46
3-axle:			3	1	4	1	2	3	57
4+-axle:			8	2	10	3	7	10	171
- Net Truck Trips (Actual Vehicles)			*13*	*4*	*17*	*5*	*11*	*16*	*274*
Building A NET TRIPS (Actual Vehicles)[6]			***39***	***12***	***51***	***19***	***45***	***64***	***847***

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, Third Edition (September 2017).

[4] Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

[5] Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage:
16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

[6] TOTAL NET TRIPS (Actual Vehicles) = Passenger Cars + Net Truck Trips (Actual Trucks).

Table 2

Project Trip Generation Summary (PCE)

Project Trip Generation Rates									
Land Use[1]	ITE LU Code	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage[3,4,5]	154	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (69.2% AM, 78.3% PM, 67.8% Daily)			0.043	0.013	0.056	0.022	0.056	0.078	0.949
2-Axle Trucks (5.14% AM, 3.62% PM, 5.38% Daily)			0.005	0.002	0.007	0.002	0.005	0.007	0.114
3-Axle Trucks (6.38% AM, 4.49% PM, 6.66% Daily)			0.008	0.002	0.010	0.002	0.006	0.008	0.186
4-Axle+ Trucks (19.28% AM, 13.59% PM, 20.16% Daily)			0.036	0.009	0.045	0.012	0.030	0.042	0.846

Project Trip Generation									
Project	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
High-Cube Transload Short-Term Warehouse without Cold Storage	603.100	TSF							
Passenger Cars:			26	8	34	14	34	48	573
Truck Trips[6]:									
2-axle (PCE=1.5):			4	2	6	2	4	6	69
3-axle (PCE=2.0):			5	2	7	2	4	6	113
4+-axle (PCE=3.0):			22	6	28	8	19	27	511
- Net Truck Trips (PCE)			*31*	*10*	*41*	*13*	*28*	*39*	*693*
Building A NET TRIPS (PCE)[7]			***57***	***18***	***75***	***27***	***62***	***87***	***1,266***

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Handbook, Third Edition (September 2017).

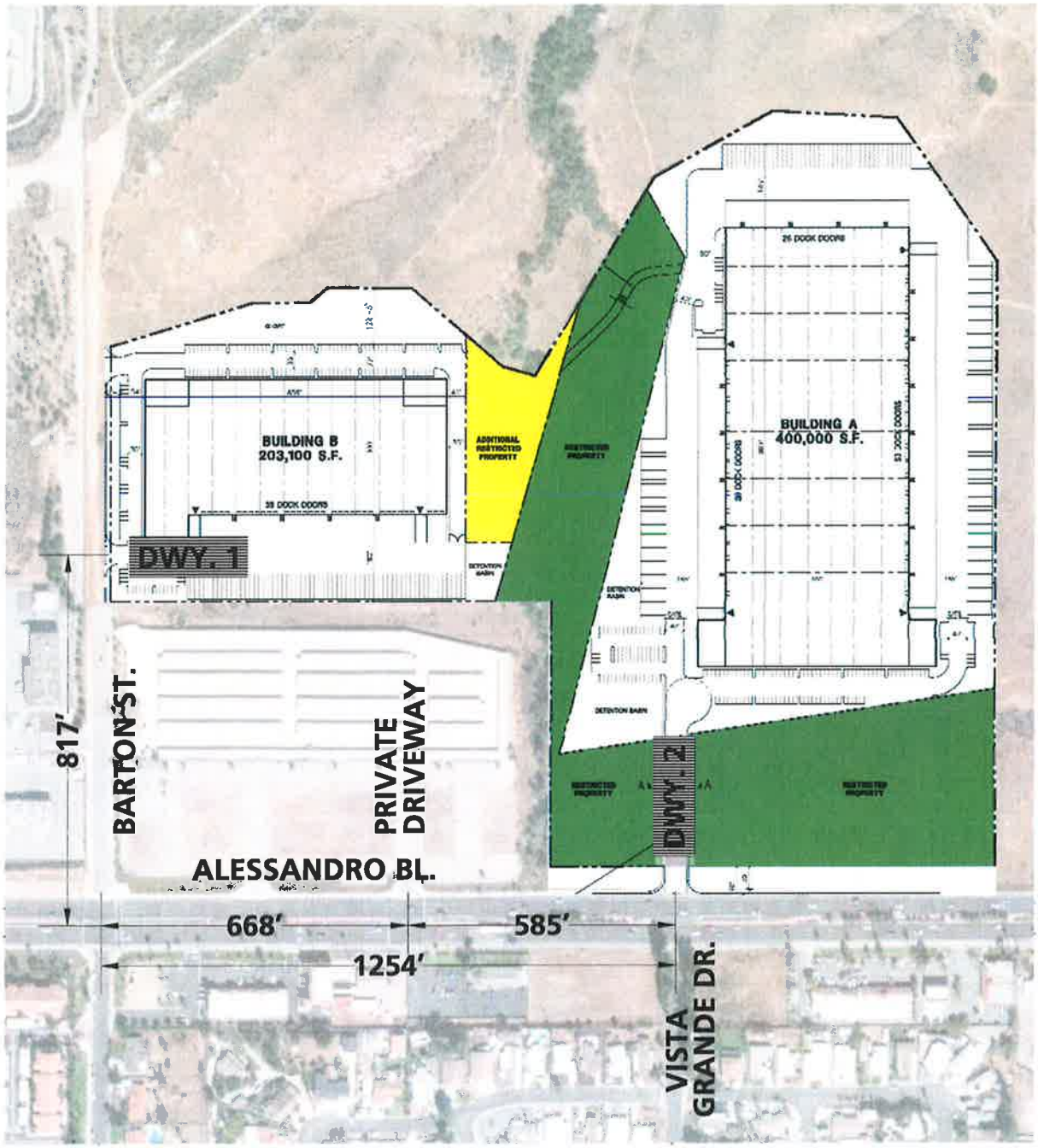
[4] Vehicle Mix Source: Institute of Transportation Engineers (ITE), High-Cube Warehouse Vehicle Trip Generation Analysis (October 2016).

[5] Truck Mix Source: SCAQMD Warehouse Truck Trip Study Data Results and Usage (2014).
Normalized % - Without Cold Storage:
16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks

[6] PCE rates are per San Bernardino County Transportation Authority (SBCTA).

[7] TOTAL NET TRIPS (PCE) = Passenger Cars + Net Truck Trips (PCE).

EXHIBIT 1: PRELIMINARY SITE PLAN



12014 - siteplan.dwg

EXHIBIT 2: LOCATION MAP



LEGEND:

- (0) = EXISTING INTERSECTION ANALYSIS LOCATION
- (0) = FUTURE INTERSECTION ANALYSIS LOCATION
- (0) = CMP INTERSECTION

N

EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

N

EXHIBIT 4: PROJECT (TRUCK) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

N

12014 - trip.dwg

URBAN CROSSROADS

1.1-16

APPENDIX 1.2:

SITE ADJACENT QUEUING ANALYSIS WORKSHEETS

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Intersection: 1: Barton St. & Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	5
95th Queue (ft)	24
Link Distance (ft)	688
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Barton St. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	T	R	LT	R	L
Maximum Queue (ft)	26	238	272	228	146	428	487	473	14	136	55	44
Average Queue (ft)	3	125	106	81	52	135	172	171	0	50	28	7
95th Queue (ft)	16	217	208	172	107	284	331	332	5	101	54	28
Link Distance (ft)		1616	1616	1616		592	592	592	592	1196	1196	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200				200							150
Storage Blk Time (%)		1				4						
Queuing Penalty (veh)		0				2						

Intersection: 2: Barton St. & Alessandro Bl.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	42
Average Queue (ft)	4
95th Queue (ft)	19
Link Distance (ft)	674
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	WB	NB
Directions Served	TR	R
Maximum Queue (ft)	42	31
Average Queue (ft)	1	8
95th Queue (ft)	14	30
Link Distance (ft)	528	346
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	28	137	140	153	72	173	187	210	52	37	31
Average Queue (ft)	3	34	47	30	19	64	67	59	19	11	2
95th Queue (ft)	16	93	111	91	56	168	180	161	45	33	12
Link Distance (ft)		528	528	528		2647	2647	2647	846		748
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	155				155					150	
Storage Blk Time (%)		0				0					
Queuing Penalty (veh)		0				0					

Zone Summary

Zone wide Queuing Penalty: 2

Intersection: 1: Barton St. & Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	13
95th Queue (ft)	39
Link Distance (ft)	588
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 2: Barton St. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	SB
Directions Served	L	T	T	TR	L	T	T	T	R	LT	R	L
Maximum Queue (ft)	53	663	640	632	129	209	240	228	13	139	96	47
Average Queue (ft)	12	344	328	306	43	93	105	109	1	39	43	15
95th Queue (ft)	38	591	590	575	95	182	206	212	6	98	71	43
Link Distance (ft)		1616	1616	1616		598	598	598	598	1196	1196	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	200				200							150
Storage Blk Time (%)		17				1						
Queuing Penalty (veh)		2				0						

Intersection: 2: Barton St. & Alessandro Bl.

Movement	SB
Directions Served	TR
Maximum Queue (ft)	21
Average Queue (ft)	5
95th Queue (ft)	19
Link Distance (ft)	694
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	NB
Directions Served	T	T	TR	R
Maximum Queue (ft)	581	603	570	32
Average Queue (ft)	38	56	19	6
95th Queue (ft)	276	337	188	27
Link Distance (ft)	598	598	598	279
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	50	316	337	322	72	325	283	276	31	94	52
Average Queue (ft)	5	207	229	232	17	97	86	81	11	32	10
95th Queue (ft)	24	311	337	343	50	205	175	189	34	75	35
Link Distance (ft)		542	542	542		2632	2632	2632	839		778
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	155				155					150	
Storage Blk Time (%)		6				2					
Queuing Penalty (veh)		0				1					

Zone Summary

Zone wide Queuing Penalty: 4

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS – OCTOBER 2018

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Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Riverside
Alessandro Boulevard
B/ Barton Road - Vista Grande
24 Hour Directional Classification Count

RIVALBAVG
Site Code: 051-18807

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/30/18	0	122	26	0	2	0	0	0	1	0	0	0	0	151
01:00	1	70	13	0	2	1	0	0	0	0	0	0	0	87
02:00	1	65	14	2	4	2	0	0	0	0	0	0	0	88
03:00	0	69	24	0	5	0	0	0	1	0	0	0	0	99
04:00	1	167	35	3	16	1	0	0	2	0	**1**	0	0	226
05:00	6	273	88	4	38	**3**	0	3	0	0	0	0	0	415
06:00	5	496	146	6	39	2	0	2	2	0	0	0	0	698
07:00	**15**	**772**	184	4	50	3	0	12	3	1	0	0	0	**1044**
08:00	11	716	209	4	46	3	**2**	**13**	2	0	0	0	0	1006
09:00	8	629	166	**7**	46	1	0	8	**4**	0	0	0	0	869
10:00	12	644	182	6	**56**	2	0	2	2	0	0	0	0	906
11:00	5	736	**228**	6	51	2	0	10	1	**2**	0	0	0	1041
12 PM	11	881	222	8	61	3	**2**	9	**4**	1	0	0	0	1202
13:00	9	900	218	**10**	50	4	2	5	2	1	0	**2**	0	1203
14:00	6	1022	268	2	62	4	0	20	0	0	**1**	0	0	1385
15:00	22	1262	309	4	81	3	0	26	1	2	1	0	0	1711
16:00	**28**	1563	**375**	3	87	**5**	0	17	0	**6**	0	1	0	2085
17:00	28	**1735**	322	3	73	4	2	**27**	0	3	1	1	0	**2199**
18:00	22	1428	329	2	**94**	4	1	7	1	0	0	0	0	1888
19:00	12	937	226	3	47	2	1	4	0	1	0	1	0	1234
20:00	3	623	189	2	36	0	0	6	0	0	0	0	0	859
21:00	11	479	97	1	20	0	0	0	1	0	0	0	0	609
22:00	2	288	70	0	5	0	0	0	0	0	0	0	0	365
23:00	3	200	39	0	6	0	0	0	1	0	0	0	0	249
Total	222	16077	3979	80	977	49	10	171	28	17	4	5	0	21619
Percent	1.0%	74.4%	18.4%	0.4%	4.5%	0.2%	0.0%	0.8%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	11:00	09:00	10:00	05:00	08:00	08:00	09:00	11:00	04:00			07:00
Vol.	15	772	228	7	56	3	2	13	4	2	1			1044
PM Peak	16:00	17:00	16:00	13:00	18:00	16:00	12:00	17:00	12:00	16:00	14:00	13:00		17:00
Vol.	28	1735	375	10	94	5	2	27	4	6	1	2		2199
Grand Total	222	16077	3979	80	977	49	10	171	28	17	4	5	0	21619
Percent	1.0%	74.4%	18.4%	0.4%	4.5%	0.2%	0.0%	0.8%	0.1%	0.1%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

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City of Riverside
Alessandro Boulevard
B/ Barton Road - Vista Grande
24 Hour Directional Classification Count

RIVALBAVG
Site Code: 051-18807

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/30/18	0	52	7	0	1	0	0	0	1	0	0	0	0	61
01:00	1	42	5	0	1	0	0	0	0	0	0	0	0	49
02:00	0	50	6	0	1	2	0	0	0	0	0	0	0	59
03:00	3	79	10	0	1	0	0	1	1	0	0	0	0	95
04:00	4	218	44	1	7	1	0	0	0	0	0	0	0	275
05:00	4	499	119	3	12	1	0	6	0	1	0	0	0	645
06:00	12	1100	**172**	4	27	**9**	1	**12**	4	**3**	0	**1**	0	1345
07:00	**21**	**1237**	170	2	**29**	9	0	4	**5**	2	**2**	1	0	**1482**
08:00	9	1153	153	**8**	28	7	**2**	5	5	1	1	0	0	1372
09:00	9	698	110	4	29	8	0	9	3	1	0	0	0	871
10:00	6	517	98	0	20	3	0	4	3	1	0	0	0	652
11:00	3	508	95	5	24	2	0	7	2	0	0	0	0	646
12 PM	2	576	76	5	14	**6**	0	8	1	0	0	0	0	688
13:00	5	675	125	**8**	27	4	0	9	**2**	1	**1**	0	0	857
14:00	5	730	130	8	**36**	3	0	9	1	0	1	0	**1**	924
15:00	2	873	**146**	7	29	5	0	**10**	1	**2**	0	0	0	**1075**
16:00	7	**877**	139	4	35	0	0	8	1	1	1	0	0	1073
17:00	5	779	109	1	29	2	**1**	5	0	0	0	0	0	931
18:00	**10**	558	79	2	14	1	0	2	0	0	0	**1**	0	667
19:00	5	351	49	3	7	0	1	1	0	0	0	0	0	417
20:00	4	248	39	2	9	0	0	0	0	0	0	0	0	302
21:00	1	207	23	2	3	0	0	0	1	0	0	0	0	237
22:00	1	125	14	1	1	1	0	0	1	0	0	0	0	144
23:00	0	105	7	0	1	0	0	0	0	0	0	0	0	113
Total	119	12257	1925	70	385	64	5	100	32	13	6	3	1	14980
Percent	0.8%	81.8%	12.9%	0.5%	2.6%	0.4%	0.0%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	06:00	08:00	07:00	06:00	08:00	06:00	07:00	06:00	07:00	06:00		07:00
Vol.	21	1237	172	8	29	9	2	12	5	3	2	1		1482
PM Peak	18:00	16:00	15:00	13:00	14:00	12:00	17:00	15:00	13:00	15:00	13:00	18:00	14:00	15:00
Vol.	10	877	146	8	36	6	1	10	2	2	1	1	1	1075
Grand Total	119	12257	1925	70	385	64	5	100	32	13	6	3	1	14980
Percent	0.8%	81.8%	12.9%	0.5%	2.6%	0.4%	0.0%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
Phone: (951) 268-6268
email: counts@countsunlimited.com

City of Riverside
Alessandro Boulevard
B/ Barton Road - Vista Grande
24 Hour Directional Classification Count

RIVALBAVG
Site Code: 051-18807

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
10/30/18	0	174	33	0	3	0	0	0	2	0	0	0	0	212
01:00	2	112	18	0	3	1	0	0	0	0	0	0	0	136
02:00	1	115	20	2	5	4	0	0	0	0	0	0	0	147
03:00	3	148	34	0	6	0	0	1	2	0	0	0	0	194
04:00	5	385	79	4	23	2	0	0	2	0	1	0	0	501
05:00	10	772	207	7	50	4	0	9	0	1	0	0	0	1060
06:00	17	1596	318	10	66	11	1	14	6	**3**	0	**1**	0	2043
07:00	**36**	**2009**	354	6	**79**	**12**	0	16	**8**	3	**2**	1	0	**2526**
08:00	20	1869	**362**	**12**	74	10	**4**	**18**	7	1	1	0	0	2378
09:00	17	1327	276	11	75	9	0	17	7	1	0	0	0	1740
10:00	18	1161	280	6	76	5	0	6	5	1	0	0	0	1558
11:00	8	1244	323	11	75	4	0	17	3	2	0	0	0	1687
12 PM	13	1457	298	13	75	**9**	2	17	**5**	1	0	0	0	1890
13:00	14	1575	343	**18**	77	8	2	14	4	2	1	**2**	0	2060
14:00	11	1752	398	10	98	7	0	29	1	0	**2**	0	**1**	2309
15:00	24	2135	455	11	110	8	0	**36**	2	4	1	0	0	2786
16:00	**35**	2440	**514**	7	**122**	5	0	25	1	**7**	1	1	0	**3158**
17:00	33	**2514**	431	4	102	6	**3**	32	0	3	1	1	0	3130
18:00	32	1986	408	4	108	5	1	9	1	0	0	1	0	2555
19:00	17	1288	275	6	54	2	2	5	0	1	0	1	0	1651
20:00	7	871	228	4	45	0	0	6	0	0	0	0	0	1161
21:00	12	686	120	3	23	0	0	0	2	0	0	0	0	846
22:00	3	413	84	1	6	1	0	0	1	0	0	0	0	509
23:00	3	305	46	0	7	0	0	0	1	0	0	0	0	362
Total	341	28334	5904	150	1362	113	15	271	60	30	10	8	1	36599
Percent	0.9%	77.4%	16.1%	0.4%	3.7%	0.3%	0.0%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	08:00	08:00	07:00	07:00	08:00	08:00	07:00	06:00	07:00	06:00		07:00
Vol.	36	2009	362	12	79	12	4	18	8	3	2	1		2526
PM Peak	16:00	17:00	16:00	13:00	16:00	12:00	17:00	15:00	12:00	16:00	14:00	13:00	14:00	16:00
Vol.	35	2514	514	18	122	9	3	36	5	7	2	2	1	3158
Grand Total	341	28334	5904	150	1362	113	15	271	60	30	10	8	1	36599
Percent	0.9%	77.4%	16.1%	0.4%	3.7%	0.3%	0.0%	0.7%	0.2%	0.1%	0.0%	0.0%	0.0%	

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

City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

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

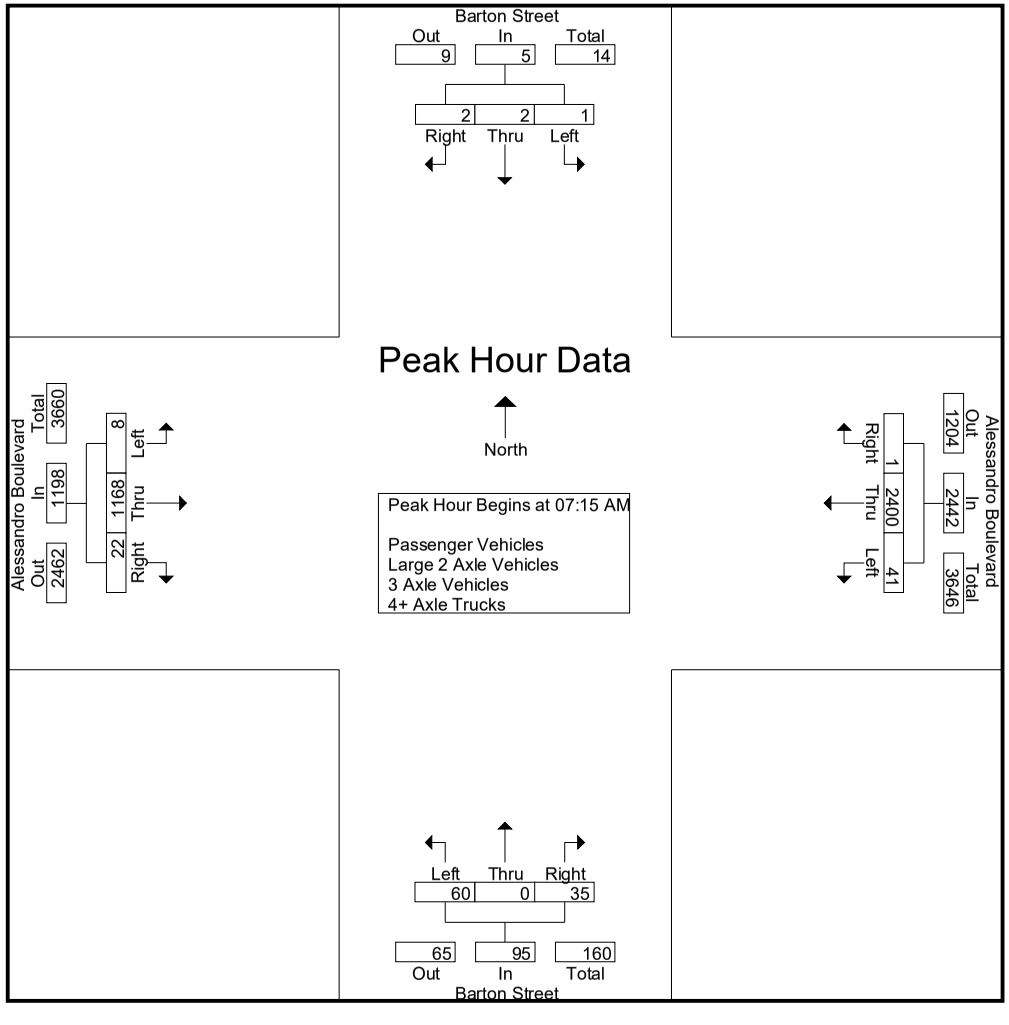
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	2	0	2	6	635	2	0	643	33	1	9	4	43	1	237	5	1	243	5	931	936
07:15 AM	0	0	0	0	0	7	683	0	0	690	17	0	10	8	27	1	270	3	0	274	8	991	999
07:30 AM	1	1	1	0	3	7	568	0	0	575	14	0	10	7	24	3	286	2	0	291	7	893	900
07:45 AM	0	0	1	0	1	9	522	1	0	532	16	0	9	9	25	3	285	8	0	296	9	854	863
Total	1	1	4	0	6	29	2408	3	0	2440	80	1	38	28	119	8	1078	18	1	1104	29	3669	3698
08:00 AM	0	1	0	0	1	18	627	0	0	645	13	0	6	5	19	1	327	9	0	337	5	1002	1007
08:15 AM	3	0	5	1	8	11	606	3	0	620	13	0	8	6	21	4	258	6	1	268	8	917	925
08:30 AM	1	0	3	2	4	8	490	3	0	501	13	0	8	7	21	2	239	5	1	246	10	772	782
08:45 AM	1	0	0	0	1	8	475	1	0	484	8	1	3	3	12	1	205	3	0	209	3	706	709
Total	5	1	8	3	14	45	2198	7	0	2250	47	1	25	21	73	8	1029	23	2	1060	26	3397	3423
Grand Total	6	2	12	3	20	74	4606	10	0	4690	127	2	63	49	192	16	2107	41	3	2164	55	7066	7121
Apprch %	30	10	60			1.6	98.2	0.2			66.1	1	32.8			0.7	97.4	1.9					
Total %	0.1	0	0.2		0.3	1	65.2	0.1		66.4	1.8	0	0.9		2.7	0.2	29.8	0.6		30.6	0.8	99.2	
Passenger Vehicles	5	1	10		19	74	4534	9		4617	124	2	62		237	15	2063	40		2121	0	0	6994
% Passenger Vehicles	83.3	50	83.3	100	82.6	100	98.4	90	0	98.4	97.6	100	98.4	100	98.3	93.8	97.9	97.6	100	97.9	0	0	98.2
Large 2 Axle Vehicles	0	1	2		3	0	47	0		47	3	0	1		4	0	39	1		40	0	0	94
% Large 2 Axle Vehicles	0	50	16.7	0	13	0	1	0	0	1	2.4	0	1.6	0	1.7	0	1.9	2.4	0	1.8	0	0	1.3
3 Axle Vehicles	1	0	0		1	0	17	0		17	0	0	0		0	1	1	0		2	0	0	20
% 3 Axle Vehicles	16.7	0	0	0	4.3	0	0.4	0	0	0.4	0	0	0	0	0	6.2	0	0	0	0.1	0	0	0.3
4+ Axle Trucks	0	0	0		0	0	8	1		9	0	0	0		0	0	4	0		4	0	0	13
% 4+ Axle Trucks	0	0	0	0	0	0	0.2	10	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0.2

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	7	**683**	0	**690**	**17**	0	**10**	**27**	1	270	3	274	991
07:30 AM	**1**	**1**	**1**	**3**	7	568	0	575	14	0	10	24	**3**	286	2	291	893
07:45 AM	0	0	1	1	9	522	**1**	532	16	0	9	25	3	285	8	296	854
08:00 AM	0	1	0	1	**18**	627	0	645	13	0	6	19	1	**327**	**9**	**337**	**1002**
Total Volume	1	2	2	5	41	2400	1	2442	60	0	35	95	8	1168	22	1198	3740
% App. Total	20	40	40		1.7	98.3	0		63.2	0	36.8		0.7	97.5	1.8		
PHF	.250	.500	.500	.417	.569	.878	.250	.885	.882	.000	.875	.880	.667	.893	.611	.889	.933

Counts Unlimited
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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Barton Street
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File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:15 AM				07:00 AM				07:15 AM				
+0 mins.	0	0	1	1	7	**683**	0	**690**	**33**	**1**	9	**43**	1	270	3	274	
+15 mins.	0	**1**	0	1	7	568	0	575	17	0	**10**	27	**3**	286	2	291	
+30 mins.	**3**	0	**5**	**8**	9	522	**1**	532	14	0	10	24	3	285	8	296	
+45 mins.	1	0	3	4	**18**	627	0	645	16	0	9	25	1	**327**	**9**	**337**	
Total Volume	4	1	9	14	41	2400	1	2442	80	1	38	119	8	1168	22	1198	
% App. Total	28.6	7.1	64.3		1.7	98.3	0		67.2	0.8	31.9		0.7	97.5	1.8		
PHF	.333	.250	.450	.438	.569	.878	.250	.885	.606	.250	.950	.692	.667	.893	.611	.889	

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City of Riverside
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Site Code : 05118807
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Page No : 1

Groups Printed- Passenger Vehicles

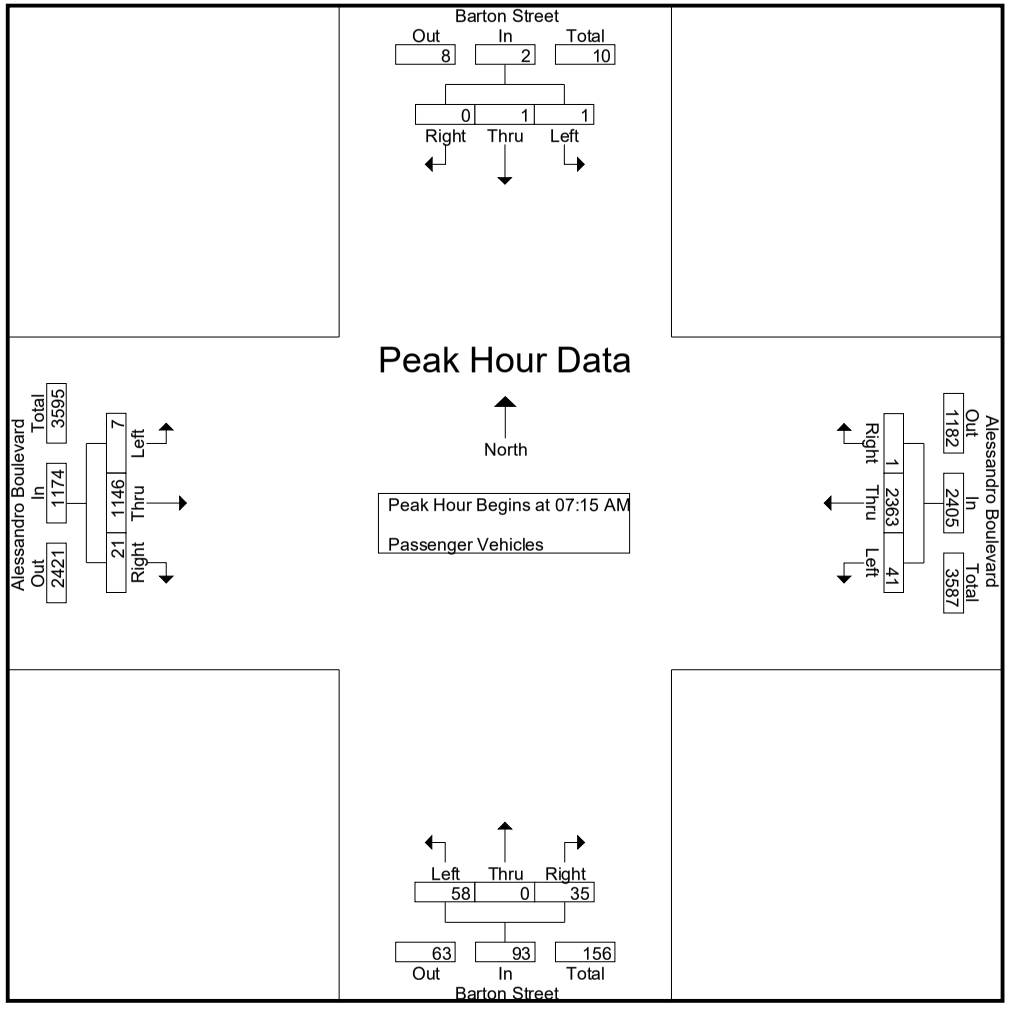
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	2	0	2	6	630	2	0	638	33	1	8	4	42	1	233	5	1	239	5	921	926
07:15 AM	0	0	0	0	0	7	675	0	0	682	15	0	10	8	25	0	267	3	0	270	8	977	985
07:30 AM	1	0	0	0	1	7	557	0	0	564	14	0	10	7	24	3	277	2	0	282	7	871	878
07:45 AM	0	0	0	0	0	9	513	1	0	523	16	0	9	9	25	3	281	8	0	292	9	840	849
Total	1	0	2	0	3	29	2375	3	0	2407	78	1	37	28	116	7	1058	18	1	1083	29	3609	3638
08:00 AM	0	1	0	0	1	18	618	0	0	636	13	0	6	5	19	1	321	8	0	330	5	986	991
08:15 AM	2	0	5	1	7	11	599	3	0	613	13	0	8	6	21	4	248	6	1	258	8	899	907
08:30 AM	1	0	3	2	4	8	479	2	0	489	13	0	8	7	21	2	237	5	1	244	10	758	768
08:45 AM	1	0	0	0	1	8	463	1	0	472	7	1	3	3	11	1	199	3	0	203	3	687	690
Total	4	1	8	3	13	45	2159	6	0	2210	46	1	25	21	72	8	1005	22	2	1035	26	3330	3356
Grand Total	5	1	10	3	16	74	4534	9	0	4617	124	2	62	49	188	15	2063	40	3	2118	55	6939	6994
Apprch %	31.2	6.2	62.5			1.6	98.2	0.2			66	1.1	33			0.7	97.4	1.9					
Total %	0.1	0	0.1		0.2	1.1	65.3	0.1		66.5	1.8	0	0.9		2.7	0.2	29.7	0.6		30.5	0.8	99.2	

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	7	**675**	0	**682**	15	0	**10**	**25**	0	267	3	270	977
07:30 AM	**1**	0	0	**1**	7	557	0	564	14	0	10	24	**3**	277	2	282	871
07:45 AM	0	0	0	0	9	513	**1**	523	**16**	0	9	25	3	281	**8**	292	840
08:00 AM	0	**1**	0	1	**18**	618	0	636	13	0	6	19	1	**321**	8	**330**	**986**
Total Volume	1	1	0	2	41	2363	1	2405	58	0	35	93	7	1146	21	1174	3674
% App. Total	50	50	0		1.7	98.3	0		62.4	0	37.6		0.6	97.6	1.8		
PHF	.250	.250	.000	.500	.569	.875	.250	.882	.906	.000	.875	.930	.583	.893	.656	.889	.932

Counts Unlimited
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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Barton Street
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File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	7	**675**	0	**682**	15	0	**10**	**25**	0	267	3	270	
+15 mins.	**1**	0	0	**1**	7	557	0	564	14	0	10	24	**3**	277	2	282	
+30 mins.	0	0	0	0	9	513	**1**	523	**16**	0	9	25	3	281	**8**	292	
+45 mins.	0	**1**	0	1	**18**	618	0	636	13	0	6	19	1	**321**	8	**330**	
Total Volume	1	1	0	2	41	2363	1	2405	58	0	35	93	7	1146	21	1174	
% App. Total	50	50	0		1.7	98.3	0		62.4	0	37.6		0.6	97.6	1.8		
PHF	.250	.250	.000	.500	.569	.875	.250	.882	.906	.000	.875	.930	.583	.893	.656	.889	

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File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard 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	1	0	1	0	4	0	0	4	0	9	9
07:15 AM	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	3	0	0	3	0	11	11
07:30 AM	0	1	1	0	2	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	0	17	17
07:45 AM	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	11	11
Total	0	1	2	0	3	0	23	0	0	23	2	0	1	0	3	0	19	0	0	19	0	48	48
08:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	6	1	0	7	0	12	12
08:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	13	13
08:30 AM	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	1	0	0	1	0	9	9
08:45 AM	0	0	0	0	0	0	7	0	0	7	1	0	0	0	1	0	4	0	0	4	0	12	12
Total	0	0	0	0	0	0	24	0	0	24	1	0	0	0	1	0	20	1	0	21	0	46	46
Grand Total	0	1	2	0	3	0	47	0	0	47	3	0	1	0	4	0	39	1	0	40	0	94	94
Apprch %	0	33.3	66.7			0	100	0			75	0	25			0	97.5	2.5					
Total %	0	1.1	2.1		3.2	0	50	0		50	3.2	0	1.1		4.3	0	41.5	1.1		42.6	0	100	

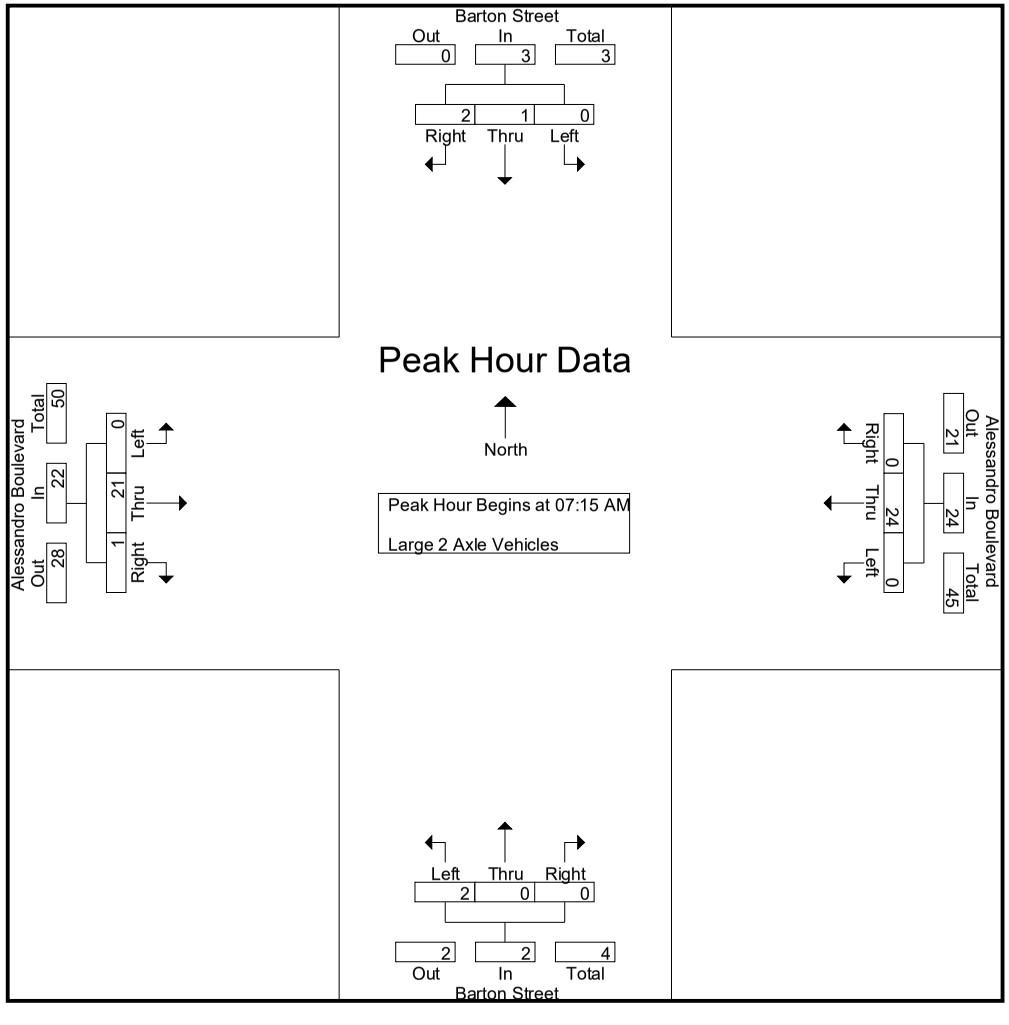
3.1-10

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	6	0	6	**2**	0	0	**2**	0	3	0	3	11
07:30 AM	0	**1**	**1**	**2**	0	**7**	0	**7**	0	0	0	0	0	**8**	0	**8**	**17**
07:45 AM	0	0	1	1	0	6	0	6	0	0	0	0	0	4	0	4	11
08:00 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	6	**1**	7	12
Total Volume	0	1	2	3	0	24	0	24	2	0	0	2	0	21	1	22	51
% App. Total	0	33.3	66.7		0	100	0		100	0	0		0	95.5	4.5		
PHF	.000	.250	.500	.375	.000	.857	.000	.857	.250	.000	.000	.250	.000	.656	.250	.688	.750

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	6	0	6	**2**	0	0	**2**	0	3	0	3	
+15 mins.	0	**1**	**1**	**2**	0	**7**	0	**7**	0	0	0	0	0	**8**	0	**8**	
+30 mins.	0	0	1	1	0	6	0	6	0	0	0	0	0	4	0	4	
+45 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	6	**1**	7	
Total Volume	0	1	2	3	0	24	0	24	2	0	0	2	0	21	1	22	
% App. Total	0	33.3	66.7		0	100	0		100	0	0		0	95.5	4.5		
PHF	.000	.250	.500	.375	.000	.857	.000	.857	.250	.000	.000	.250	.000	.656	.250	.688	

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard 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	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	0	0	1	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	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	8	0	0	8	0	0	0	0	0	1	1	0	0	2	0	10	10
08:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4
08:15 AM	1	0	0	0	1	0	1	0	0	1	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	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	1	0	0	0	1	0	9	0	0	9	0	0	0	0	0	0	0	0	0	0	0	10	10
Grand Total	1	0	0	0	1	0	17	0	0	17	0	0	0	0	0	1	1	0	0	2	0	20	20
Apprch %	100	0	0			0	100	0			0	0	0			50	50	0					
Total %	5	0	0		5	0	85	0		85	0	0	0		0	5	5	0		10	0	100	

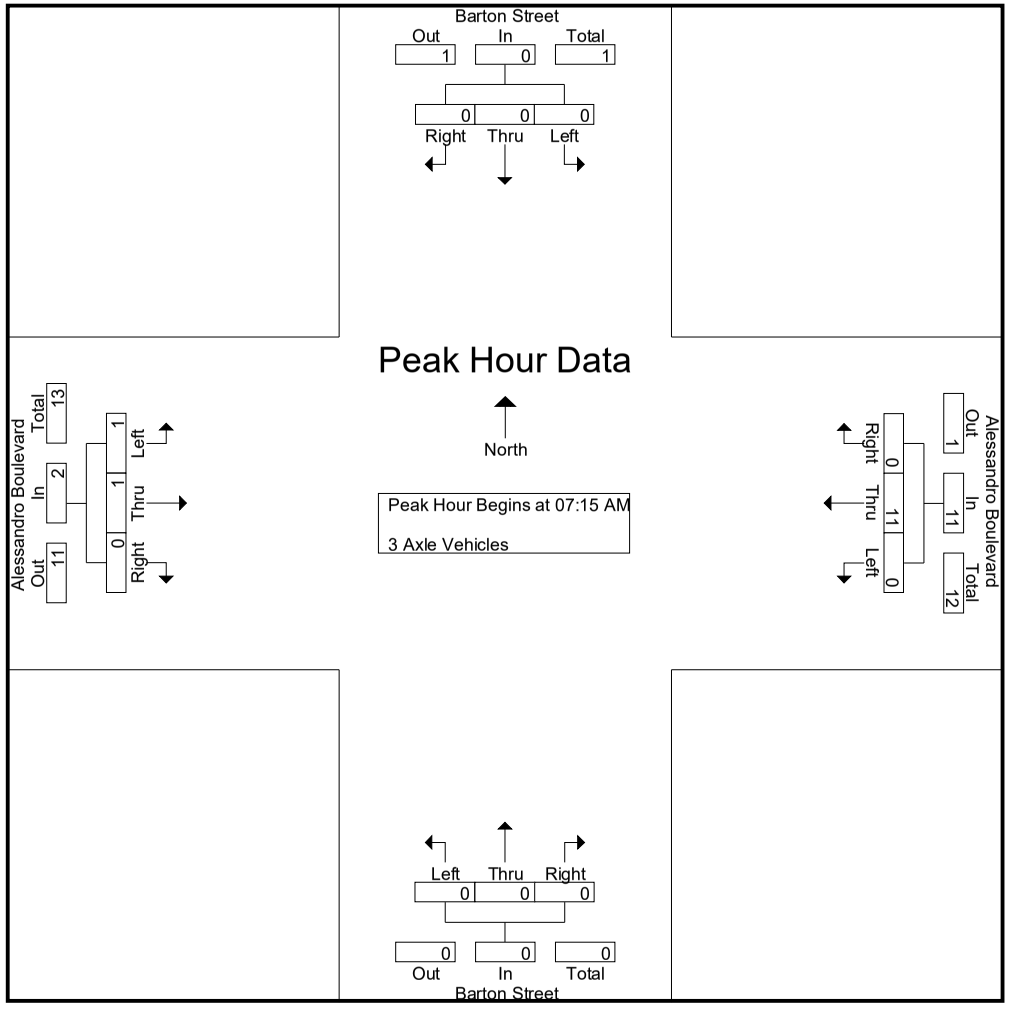
3.1-13

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	2	0	2	0	0	0	0	**1**	0	0	**1**	3
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	**1**	0	1	**4**
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:00 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	1	1	0	2	13
% App. Total	0	0	0		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.250	.250	.000	.500	.813

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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N/S: Barton Street
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Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	**1**	0	0	**1**	
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**1**	0	1	
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	11	0	11	0	0	0	0	1	1	0	2	
% App. Total	0	0	0		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.688	.000	.688	.000	.000	.000	.000	.250	.250	.000	.500	

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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Groups Printed- 4+ Axle Trucks

	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard 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	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	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	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
08:45 AM	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	1	0	7	0	0	0	0	0	0	4	0	0	4	0	11	11
Grand Total	0	0	0	0	0	0	8	1	0	9	0	0	0	0	0	0	4	0	0	4	0	13	13
Apprch %	0	0	0			0	88.9	11.1			0	0	0			0	100	0					
Total %	0	0	0		0	0	61.5	7.7		69.2	0	0	0		0	0	30.8	0		30.8	0	100	

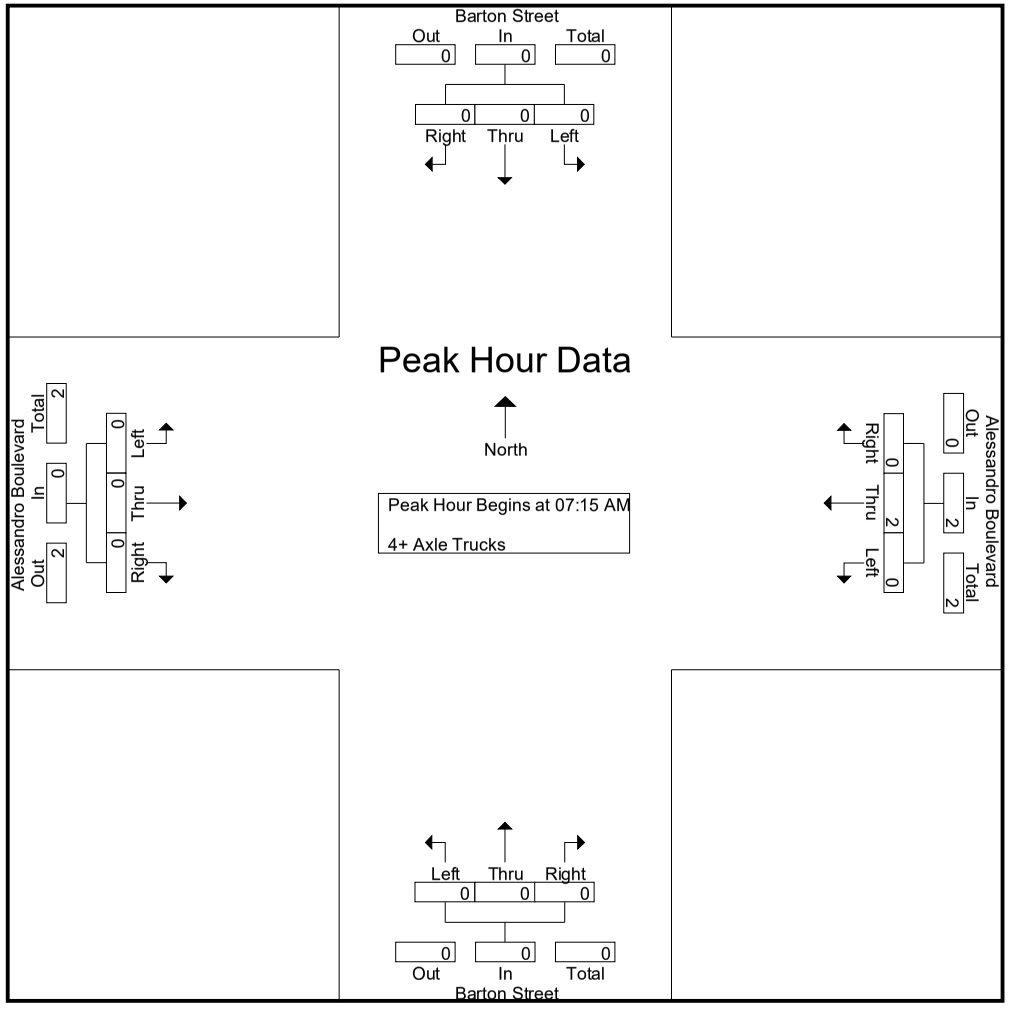
3.1-16

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	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	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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Weather: Clear

File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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City of Riverside
N/S: Barton Street
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File Name : 01_RIV_Barton St_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	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	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	

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Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

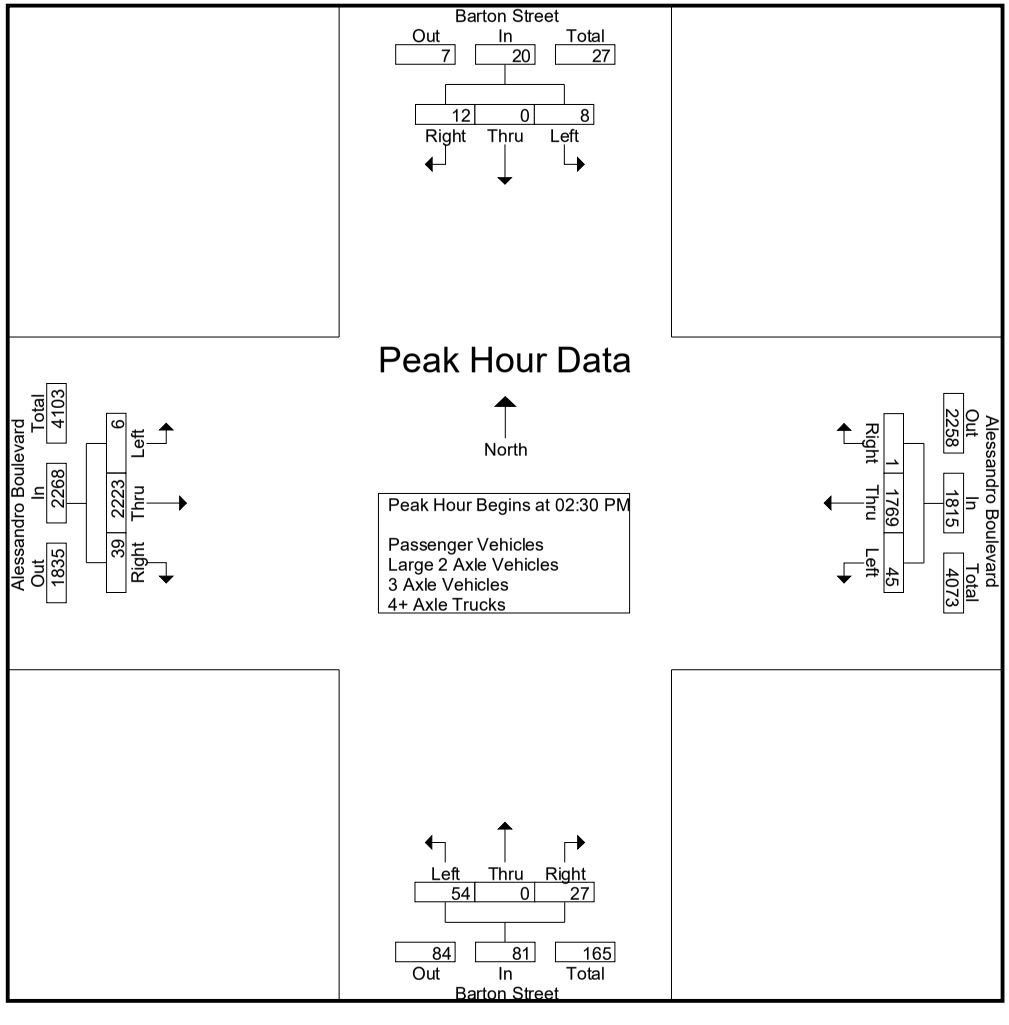
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	2	0	4	4	6	11	502	3	1	516	11	0	6	2	17	6	448	15	0	469	7	1008	1015
02:15 PM	2	0	6	5	8	12	478	3	0	493	7	0	6	6	13	1	501	9	1	511	12	1025	1037
02:30 PM	5	0	9	9	14	13	440	0	0	453	12	0	5	4	17	1	603	8	1	612	14	1096	1110
02:45 PM	2	0	2	2	4	15	428	0	0	443	21	0	12	10	33	3	492	7	0	502	12	982	994
Total	11	0	21	20	32	51	1848	6	1	1905	51	0	29	22	80	11	2044	39	2	2094	45	4111	4156
03:00 PM	1	0	1	1	2	8	469	1	0	478	13	0	5	5	18	2	564	10	0	576	6	1074	1080
03:15 PM	0	0	0	0	0	9	432	0	0	441	8	0	5	2	13	0	564	14	1	578	3	1032	1035
03:30 PM	0	0	1	1	1	10	405	1	0	416	14	0	6	4	20	3	498	14	0	515	5	952	957
03:45 PM	1	0	1	0	2	13	369	1	0	383	15	0	8	8	23	0	594	11	1	605	9	1013	1022
Total	2	0	3	2	5	40	1675	3	0	1718	50	0	24	19	74	5	2220	49	2	2274	23	4071	4094
Grand Total	13	0	24	22	37	91	3523	9	1	3623	101	0	53	41	154	16	4264	88	4	4368	68	8182	8250
Apprch %	35.1	0	64.9			2.5	97.2	0.2			65.6	0	34.4			0.4	97.6	2					
Total %	0.2	0	0.3		0.5	1.1	43.1	0.1		44.3	1.2	0	0.6		1.9	0.2	52.1	1.1		53.4	0.8	99.2	
Passenger Vehicles	13	0	23		58	90	3484	9		3584	101	0	52		193	15	4210	86		4315	0	0	8150
% Passenger Vehicles	100	0	95.8	100	98.3	98.9	98.9	100	100	98.9	100	0	98.1	97.6	99	93.8	98.7	97.7	100	98.7	0	0	98.8
Large 2 Axle Vehicles	0	0	1		1	1	29	0		30	0	0	1		2	1	42	2		45	0	0	78
% Large 2 Axle Vehicles	0	0	4.2	0	1.7	1.1	0.8	0	0	0.8	0	0	1.9	2.4	1	6.2	1	2.3	0	1	0	0	0.9
3 Axle Vehicles	0	0	0		0	0	5	0		5	0	0	0		0	0	8	0		8	0	0	13
% 3 Axle Vehicles	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0.2
4+ Axle Trucks	0	0	0		0	0	5	0		5	0	0	0		0	0	4	0		4	0	0	9
% 4+ Axle Trucks	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0.1

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	**5**	0	**9**	**14**	13	440	0	453	12	0	5	17	1	**603**	8	**612**	**1096**
02:45 PM	2	0	2	4	**15**	428	0	443	**21**	0	**12**	**33**	**3**	492	7	502	982
03:00 PM	1	0	1	2	8	**469**	**1**	**478**	13	0	5	18	2	564	10	576	1074
03:15 PM	0	0	0	0	9	432	0	441	8	0	5	13	0	564	**14**	578	1032
Total Volume	8	0	12	20	45	1769	1	1815	54	0	27	81	6	2223	39	2268	4184
% App. Total	40	0	60		2.5	97.5	0.1		66.7	0	33.3		0.3	98	1.7		
PHF	.400	.000	.333	.357	.750	.943	.250	.949	.643	.000	.563	.614	.500	.922	.696	.926	.954

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City of Riverside
N/S: Barton Street
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File Name : 01_RIV_Barton_Alessandro PM
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N/S: Barton Street
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Site Code : 05118807
Start Date : 10/25/2018

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:00 PM				02:00 PM				02:45 PM				03:00 PM				
+0 mins.	2	0	4	6	11	**502**	**3**	**516**	**21**	0	**12**	**33**	2	564	10	576	
+15 mins.	2	0	6	8	12	478	3	493	13	0	5	18	0	564	**14**	578	
+30 mins.	**5**	0	**9**	**14**	13	440	0	453	8	0	5	13	**3**	498	14	515	
+45 mins.	2	0	2	4	**15**	428	0	443	14	0	6	20	0	**594**	11	**605**	
Total Volume	11	0	21	32	51	1848	6	1905	56	0	28	84	5	2220	49	2274	
% App. Total	34.4	0	65.6		2.7	97	0.3		66.7	0	33.3		0.2	97.6	2.2		
PHF	.550	.000	.583	.571	.850	.920	.500	.923	.667	.000	.583	.636	.417	.934	.875	.940	

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City of Riverside
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File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard 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
02:00 PM	2	0	4	4	6	11	490	3	1	504	11	0	6	2	17	5	439	15	0	459	7	986	993
02:15 PM	2	0	5	5	7	12	471	3	0	486	7	0	6	6	13	1	497	9	1	507	12	1013	1025
02:30 PM	5	0	9	9	14	13	437	0	0	450	12	0	5	4	17	1	595	7	1	603	14	1084	1098
02:45 PM	2	0	2	2	4	15	425	0	0	440	21	0	12	10	33	3	485	7	0	495	12	972	984
Total	11	0	20	20	31	51	1823	6	1	1880	51	0	29	22	80	10	2016	38	2	2064	45	4055	4100
03:00 PM	1	0	1	1	2	8	465	1	0	474	13	0	4	4	17	2	564	9	0	575	5	1068	1073
03:15 PM	0	0	0	0	0	9	430	0	0	439	8	0	5	2	13	0	553	14	1	567	3	1019	1022
03:30 PM	0	0	1	1	1	10	399	1	0	410	14	0	6	4	20	3	492	14	0	509	5	940	945
03:45 PM	1	0	1	0	2	12	367	1	0	380	15	0	8	8	23	0	585	11	1	596	9	1001	1010
Total	2	0	3	2	5	39	1661	3	0	1703	50	0	23	18	73	5	2194	48	2	2247	22	4028	4050
Grand Total	13	0	23	22	36	90	3484	9	1	3583	101	0	52	40	153	15	4210	86	4	4311	67	8083	8150
Apprch %	36.1	0	63.9			2.5	97.2	0.3			66	0	34			0.3	97.7	2					
Total %	0.2	0	0.3		0.4	1.1	43.1	0.1		44.3	1.2	0	0.6		1.9	0.2	52.1	1.1		53.3	0.8	99.2	

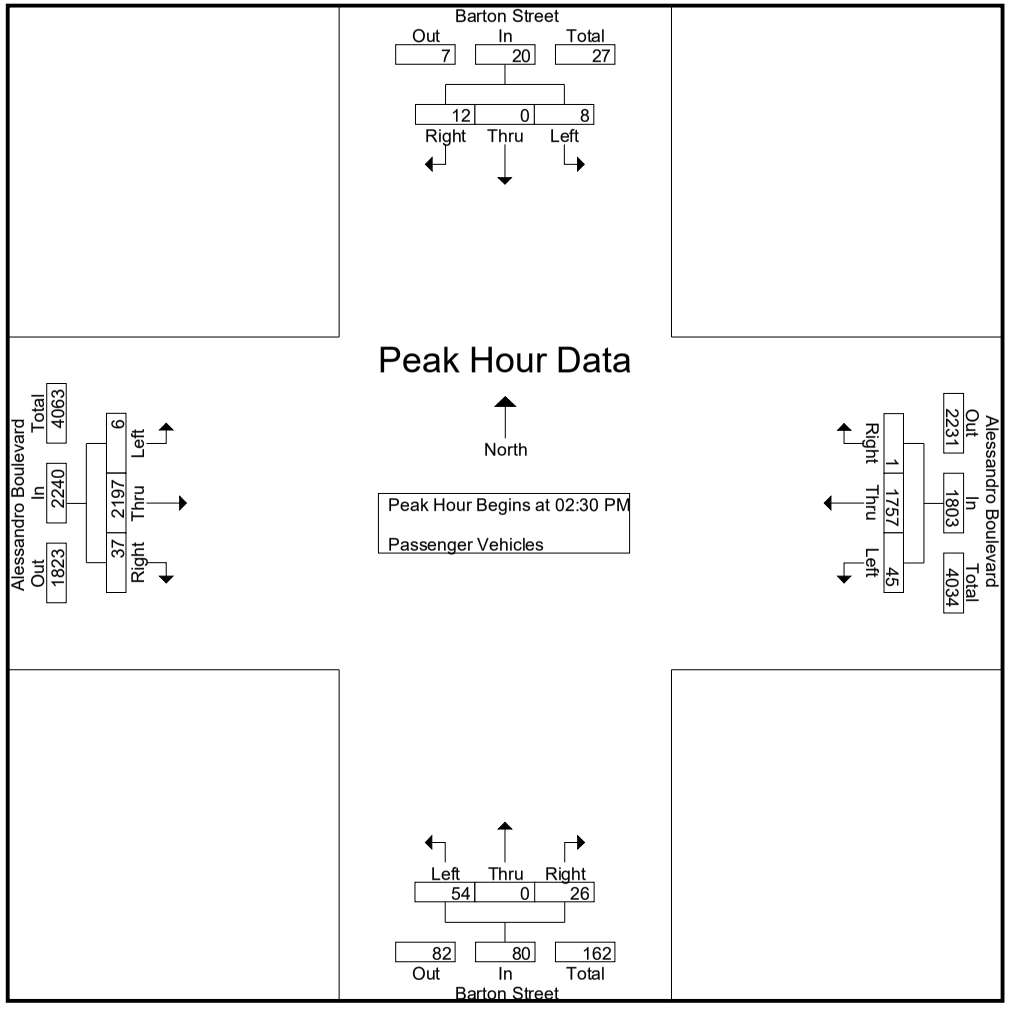
3.1-22

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	**5**	0	**9**	**14**	13	437	0	450	12	0	5	17	1	**595**	7	**603**	**1084**
02:45 PM	2	0	2	4	**15**	425	0	440	**21**	0	**12**	**33**	**3**	485	7	495	972
03:00 PM	1	0	1	2	8	**465**	**1**	**474**	13	0	4	17	2	564	9	575	1068
03:15 PM	0	0	0	0	9	430	0	439	8	0	5	13	0	553	**14**	567	1019
Total Volume	8	0	12	20	45	1757	1	1803	54	0	26	80	6	2197	37	2240	4143
% App. Total	40	0	60		2.5	97.4	0.1		67.5	0	32.5		0.3	98.1	1.7		
PHF	.400	.000	.333	.357	.750	.945	.250	.951	.643	.000	.542	.606	.500	.923	.661	.929	.955

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:30 PM				02:30 PM				02:30 PM				02:30 PM				
+0 mins.	**5**	0	**9**	**14**	13	437	0	450	12	0	5	17	1	**595**	7	**603**	
+15 mins.	2	0	2	4	**15**	425	0	440	**21**	0	**12**	**33**	**3**	485	7	495	
+30 mins.	1	0	1	2	8	**465**	**1**	**474**	13	0	4	17	2	564	9	575	
+45 mins.	0	0	0	0	9	430	0	439	8	0	5	13	0	553	**14**	567	
Total Volume	8	0	12	20	45	1757	1	1803	54	0	26	80	6	2197	37	2240	
% App. Total	40	0	60		2.5	97.4	0.1		67.5	0	32.5		0.3	98.1	1.7		
PHF	.400	.000	.333	.357	.750	.945	.250	.951	.643	.000	.542	.606	.500	.923	.661	.929	

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018

Groups Printed- Large 2 Axle Vehicles

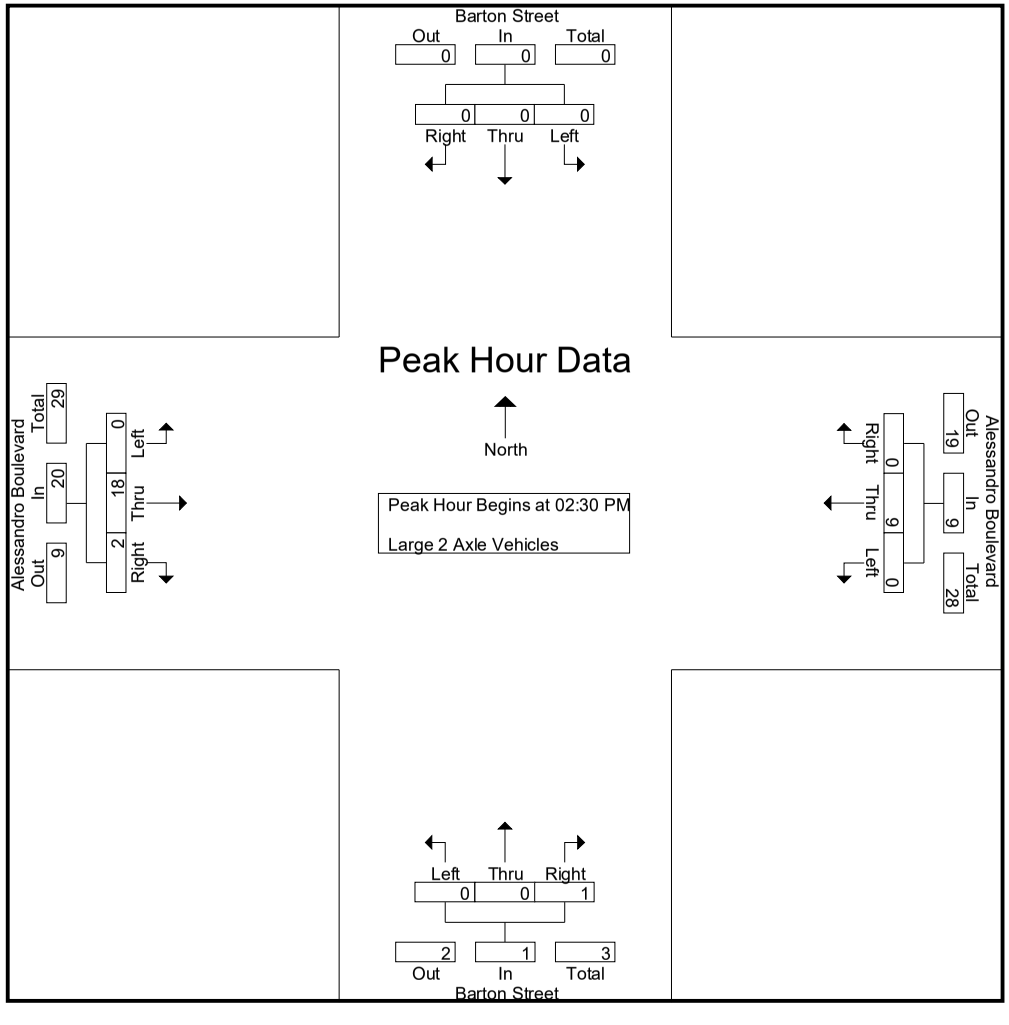
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	1	8	0	0	9	0	19	19
02:15 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	7	7
02:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	0	8	8
02:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	7	7
Total	0	0	1	0	1	0	19	0	0	19	0	0	0	0	0	1	19	1	0	21	0	41	41
03:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	0	0	1	0	1	1	4	5
03:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	11	11
03:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	5	0	0	5	0	10	10
03:45 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	9	0	0	9	0	11	11
Total	0	0	0	0	0	1	10	0	0	11	0	0	1	1	1	0	23	1	0	24	1	36	37
Grand Total	0	0	1	0	1	1	29	0	0	30	0	0	1	1	1	1	42	2	0	45	1	77	78
Apprch %	0	0	100			3.3	96.7	0			0	0	100			2.2	93.3	4.4					
Total %	0	0	1.3		1.3	1.3	37.7	0		39	0	0	1.3		1.3	1.3	54.5	2.6		58.4	1.3	98.7	

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	**1**	6	8
02:45 PM	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	4	0	4	7
03:00 PM	0	0	0	0	0	2	0	2	0	0	**1**	**1**	0	0	1	1	4
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**9**	0	**9**	**11**
Total Volume	0	0	0	0	0	9	0	9	0	0	1	1	0	18	2	20	30
% App. Total	0	0	0		0	100	0		0	0	100		0	90	10		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.500	.500	.556	.682

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:30 PM				02:30 PM				02:30 PM				02:30 PM				
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	5	**1**	6	
+15 mins.	0	0	0	0	0	**3**	0	**3**	0	0	0	0	0	4	0	4	
+30 mins.	0	0	0	0	0	2	0	2	0	0	**1**	**1**	0	0	1	1	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**9**	0	**9**	
Total Volume	0	0	0	0	0	9	0	9	0	0	1	1	0	18	2	20	
% App. Total	0	0	0		0	100	0		0	0	100		0	90	10		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.250	.250	.000	.500	.500	.556	

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

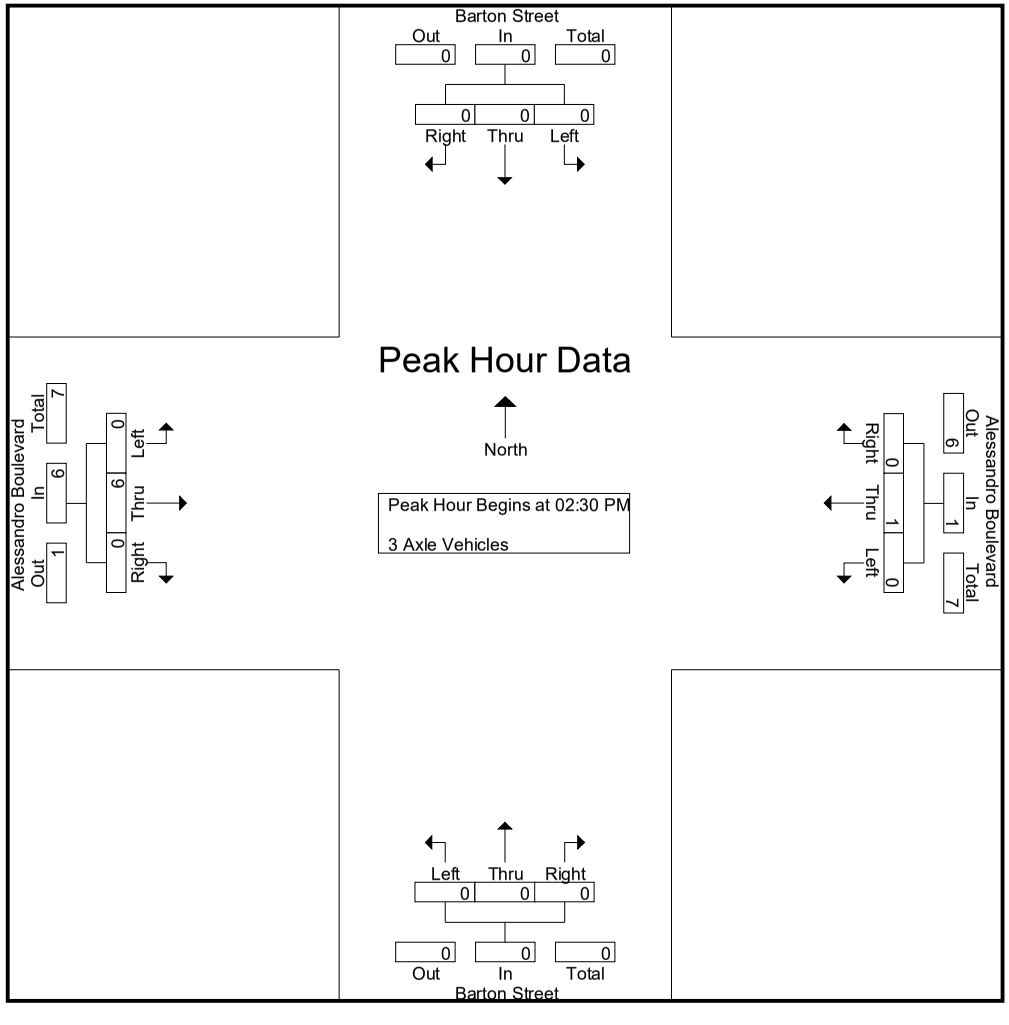
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
02:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	3
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	7	7
03:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
03:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
03:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	6	6
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	13	13
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	38.5	0		38.5	0	0	0		0	0	61.5	0		61.5	0	100	

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	**3**
03:00 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.583

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City of Riverside
N/S: Barton Street
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Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
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N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:30 PM				02:30 PM				02:30 PM				02:30 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	**3**	0	**3**	
+30 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	6	0	6	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

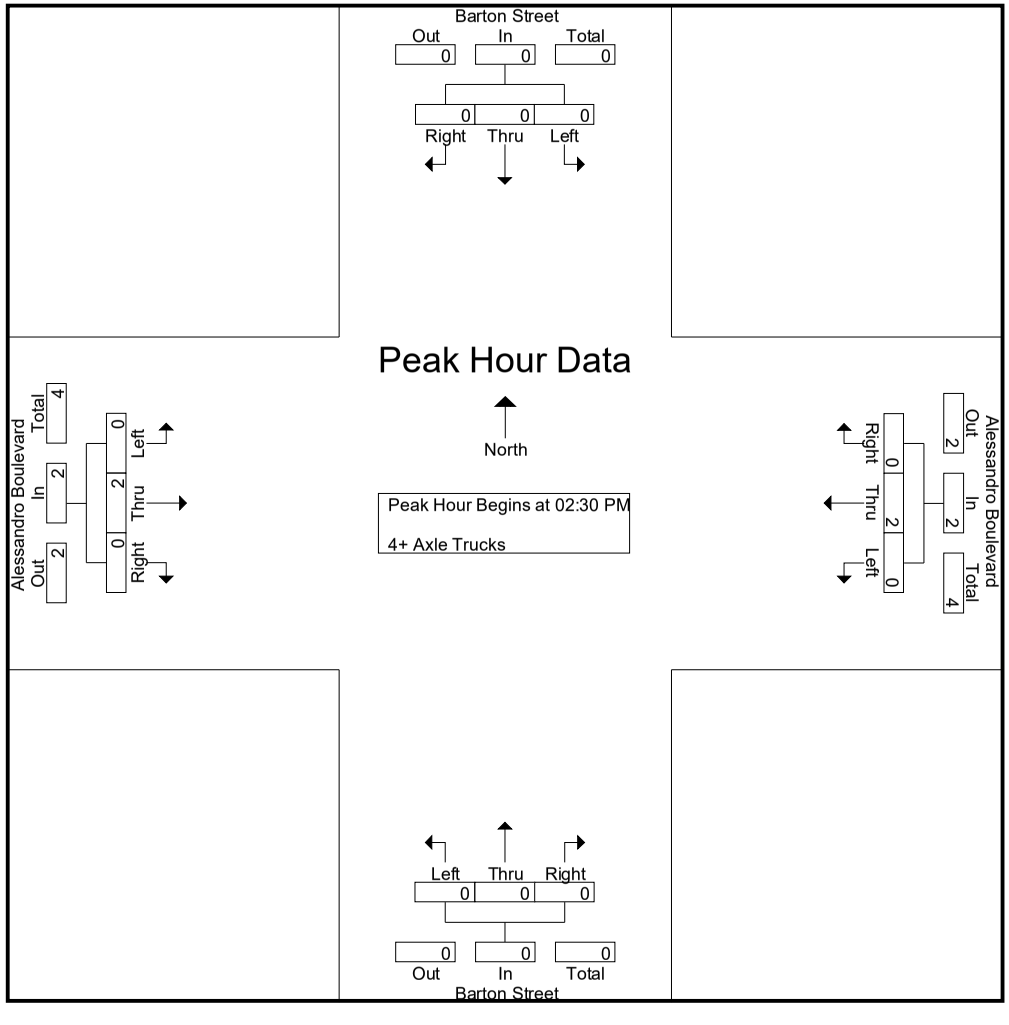
	Barton Street Southbound					Alessandro Boulevard Westbound					Barton Street Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
02:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
02:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
02:45 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	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	8	8
03:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	9	9
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	55.6	0		55.6	0	0	0		0	0	44.4	0		44.4	0	100	

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:30 PM																	
02:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	**3**
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	.333

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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
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City of Riverside
N/S: Barton Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 01_RIV_Barton_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018

	Barton Street Southbound				Alessandro Boulevard Westbound				Barton Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:30 PM to 03:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:30 PM				02:30 PM				02:30 PM				02:30 PM				
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	**2**	0	**2**	
+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	1	0	1	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.250	.000	.250	

Location: Riverside
N/S: Barton Street
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

PEDESTRIANS

	North Leg Barton Street	East Leg Alessandro Boulevard	South Leg Barton Street	West Leg Alessandro Boulevard	
	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	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg Barton Street	East Leg Alessandro Boulevard	South Leg Barton Street	West Leg Alessandro Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	1	0	0	1
2:15 PM	0	0	1	0	1
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
3:00 PM	0	2	0	0	2
3:15 PM	0	1	0	0	1
3:30 PM	0	0	0	0	0
3:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	4	1	0	5

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951-268-6268

Location: Riverside
N/S: Barton Street
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

BICYCLES

	Southbound Barton Street			Westbound Alessandro Boulevard			Northbound Barton Street			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	1	0	1	0	0	2
8:00 AM	0	7	0	0	0	0	0	0	0	0	0	0	7
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
TOTAL VOLUMES:	0	8	0	0	0	0	0	1	0	1	0	0	10

	Southbound Barton Street			Westbound Alessandro Boulevard			Northbound Barton Street			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	1	0	0	0	0	0	1	0	0	1	0	3
2:15 PM	0	4	0	0	0	0	0	0	0	0	0	0	4
2:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
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	1	0	0	1	0	2
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	6	0	0	0	0	0	2	1	0	2	0	11

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

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

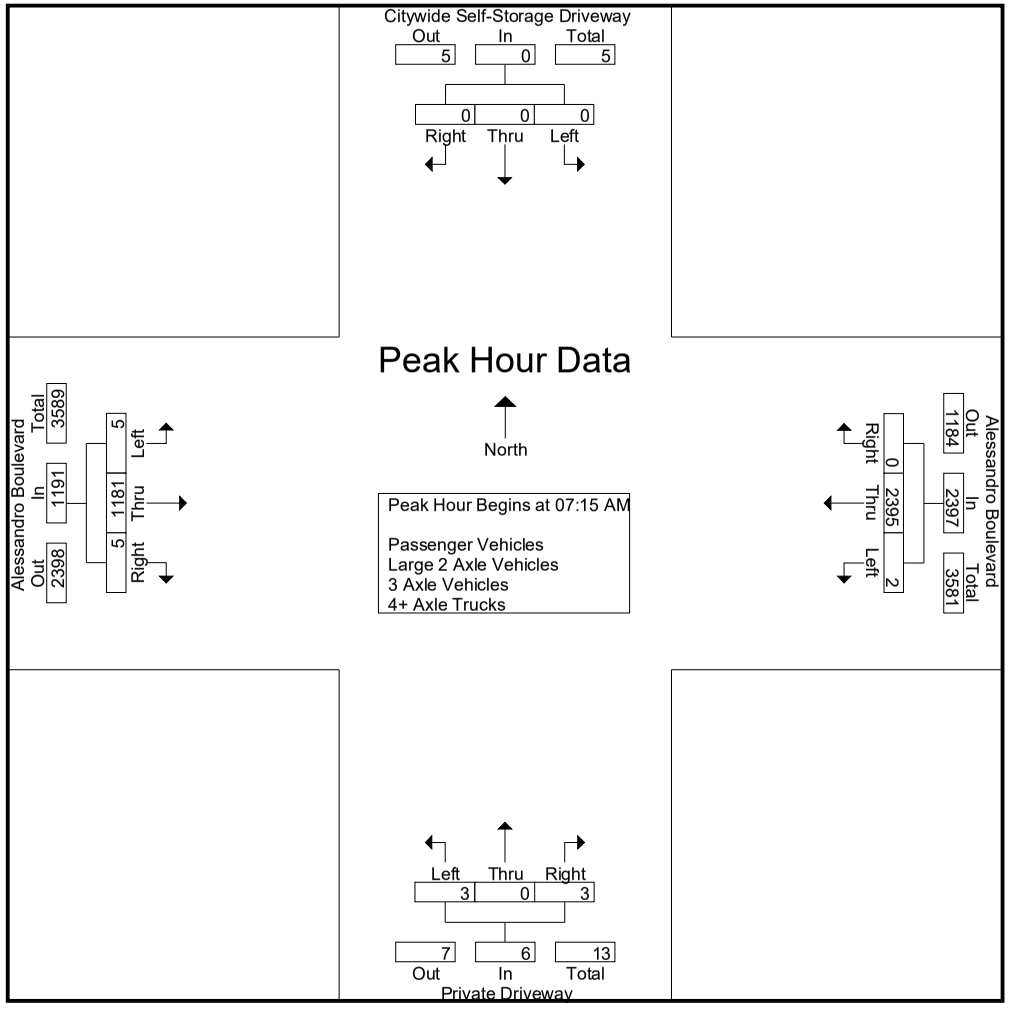
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	635	0	0	635	0	0	2	2	2	0	244	0	0	244	2	881	883
07:15 AM	0	0	0	0	0	0	681	0	0	681	1	0	1	1	2	0	280	1	0	281	1	964	965
07:30 AM	0	0	0	0	0	0	560	0	0	560	0	0	2	2	2	0	291	1	0	292	2	854	856
07:45 AM	0	0	0	0	0	1	513	0	0	514	0	0	0	0	0	2	282	1	0	285	0	799	799
Total	0	0	0	0	0	1	2389	0	0	2390	1	0	5	5	6	2	1097	3	0	1102	5	3498	3503
08:00 AM	0	0	0	0	0	1	641	0	0	642	2	0	0	0	2	3	328	2	0	333	0	977	977
08:15 AM	0	0	0	0	0	0	610	0	0	610	1	0	0	0	1	0	270	0	0	270	0	881	881
08:30 AM	0	0	0	0	0	1	480	0	0	481	1	0	0	0	1	2	239	0	0	241	0	723	723
08:45 AM	0	0	0	0	0	1	474	0	0	475	2	0	0	0	2	2	213	0	0	215	0	692	692
Total	0	0	0	0	0	3	2205	0	0	2208	6	0	0	0	6	7	1050	2	0	1059	0	3273	3273
Grand Total	0	0	0	0	0	4	4594	0	0	4598	7	0	5	5	12	9	2147	5	0	2161	5	6771	6776
Apprch %	0	0	0			0.1	99.9	0			58.3	0	41.7			0.4	99.4	0.2					
Total %	0	0	0		0	0.1	67.8	0		67.9	0.1	0	0.1		0.2	0.1	31.7	0.1		31.9	0.1	99.9	
Passenger Vehicles	0	0	0		0	4	4520	0		4524	7	0	4		15	9	2100	5		2114	0	0	6653
% Passenger Vehicles	0	0	0	0	0	100	98.4	0	0	98.4	100	0	80	80	88.2	100	97.8	100	0	97.8	0	0	98.2
Large 2 Axle Vehicles	0	0	0		0	0	47	0		47	0	0	1		2	0	41	0		41	0	0	90
% Large 2 Axle Vehicles	0	0	0	0	0	0	1	0	0	1	0	0	20	20	11.8	0	1.9	0	0	1.9	0	0	1.3
3 Axle Vehicles	0	0	0		0	0	19	0		19	0	0	0		0	0	2	0		2	0	0	21
% 3 Axle Vehicles	0	0	0	0	0	0	0.4	0	0	0.4	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0.3
4+ Axle Trucks	0	0	0		0	0	8	0		8	0	0	0		0	0	4	0		4	0	0	12
% 4+ Axle Trucks	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0.2

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	**681**	0	**681**	1	0	1	**2**	0	280	1	281	964
07:30 AM	0	0	0	0	0	560	0	560	0	0	**2**	2	0	291	1	292	854
07:45 AM	0	0	0	0	**1**	513	0	514	0	0	0	0	2	282	1	285	799
08:00 AM	0	0	0	0	1	641	0	642	**2**	0	0	2	**3**	**328**	**2**	**333**	**977**
Total Volume	0	0	0	0	2	2395	0	2397	3	0	3	6	5	1181	5	1191	3594
% App. Total	0	0	0		0.1	99.9	0		50	0	50		0.4	99.2	0.4		
PHF	.000	.000	.000	.000	.500	.879	.000	.880	.375	.000	.375	.750	.417	.900	.625	.894	.920

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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City of Riverside
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:00 AM				07:15 AM				
+0 mins.	0	0	0	0	0	**681**	0	**681**	0	0	**2**	**2**	0	280	1	281	
+15 mins.	0	0	0	0	0	560	0	560	**1**	0	1	2	0	291	1	292	
+30 mins.	0	0	0	0	**1**	513	0	514	0	0	2	2	2	282	1	285	
+45 mins.	0	0	0	0	1	641	0	642	0	0	0	0	**3**	**328**	**2**	**333**	
Total Volume	0	0	0	0	2	2395	0	2397	1	0	5	6	5	1181	5	1191	
% App. Total	0	0	0		0.1	99.9	0		16.7	0	83.3		0.4	99.2	0.4		
PHF	.000	.000	.000	.000	.500	.879	.000	.880	.250	.000	.625	.750	.417	.900	.625	.894	

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File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
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Groups Printed- Passenger Vehicles

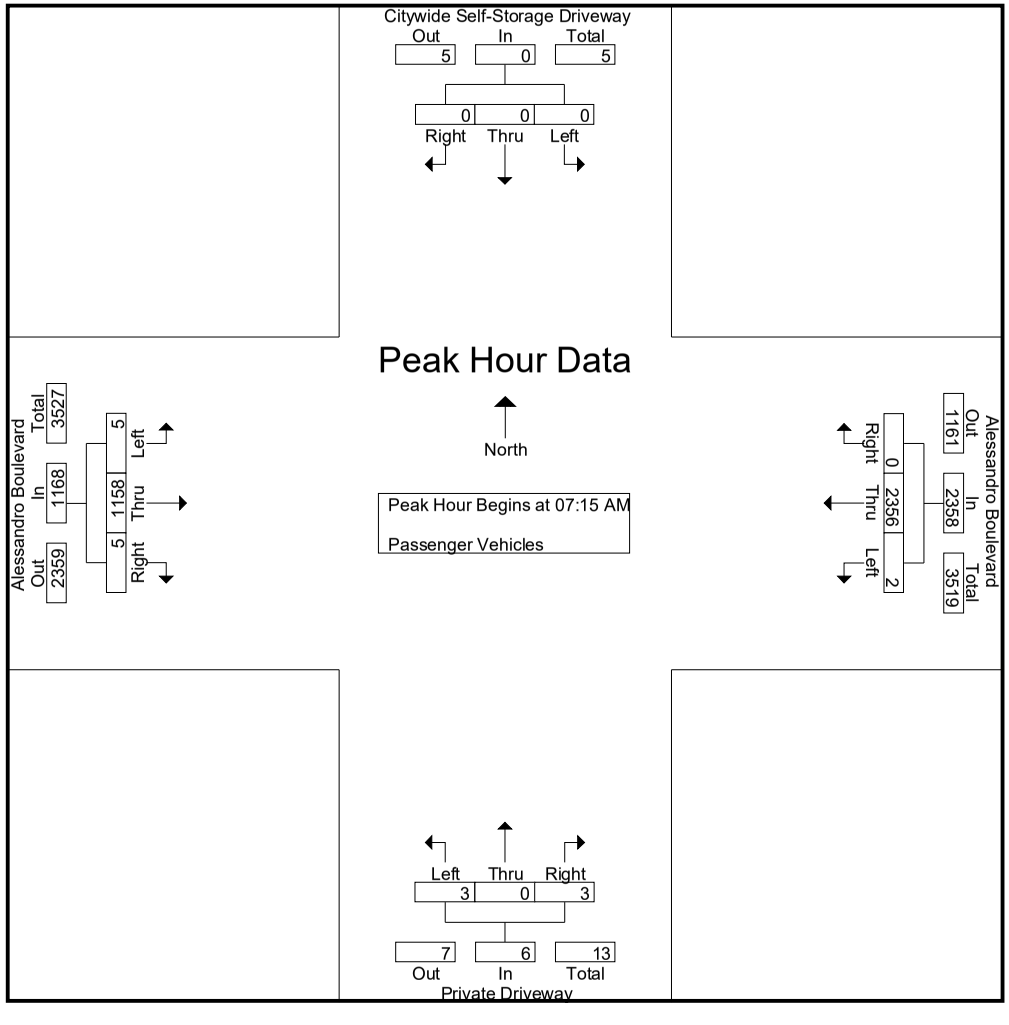
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	630	0	0	630	0	0	1	1	1	0	239	0	0	239	1	870	871
07:15 AM	0	0	0	0	0	0	673	0	0	673	1	0	1	1	2	0	277	1	0	278	1	953	954
07:30 AM	0	0	0	0	0	0	549	0	0	549	0	0	2	2	2	0	282	1	0	283	2	834	836
07:45 AM	0	0	0	0	0	1	504	0	0	505	0	0	0	0	0	2	279	1	0	282	0	787	787
Total	0	0	0	0	0	1	2356	0	0	2357	1	0	4	4	5	2	1077	3	0	1082	4	3444	3448
08:00 AM	0	0	0	0	0	1	630	0	0	631	2	0	0	0	2	3	320	2	0	325	0	958	958
08:15 AM	0	0	0	0	0	0	604	0	0	604	1	0	0	0	1	0	259	0	0	259	0	864	864
08:30 AM	0	0	0	0	0	1	468	0	0	469	1	0	0	0	1	2	237	0	0	239	0	709	709
08:45 AM	0	0	0	0	0	1	462	0	0	463	2	0	0	0	2	2	207	0	0	209	0	674	674
Total	0	0	0	0	0	3	2164	0	0	2167	6	0	0	0	6	7	1023	2	0	1032	0	3205	3205
Grand Total	0	0	0	0	0	4	4520	0	0	4524	7	0	4	4	11	9	2100	5	0	2114	4	6649	6653
Apprch %	0	0	0			0.1	99.9	0			63.6	0	36.4			0.4	99.3	0.2					
Total %	0	0	0		0	0.1	68	0		68	0.1	0	0.1		0.2	0.1	31.6	0.1		31.8	0.1	99.9	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	**673**	0	**673**	1	0	1	**2**	0	277	1	278	953
07:30 AM	0	0	0	0	0	549	0	549	0	0	**2**	2	0	282	1	283	834
07:45 AM	0	0	0	0	**1**	504	0	505	0	0	0	0	2	279	1	282	787
08:00 AM	0	0	0	0	1	630	0	631	**2**	0	0	2	**3**	**320**	**2**	**325**	**958**
Total Volume	0	0	0	0	2	2356	0	2358	3	0	3	6	5	1158	5	1168	3532
% App. Total	0	0	0		0.1	99.9	0		50	0	50		0.4	99.1	0.4		
PHF	.000	.000	.000	.000	.500	.875	.000	.876	.375	.000	.375	.750	.417	.905	.625	.898	.922

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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File Name : 02_RIV_Private DW_Alessandro AM
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	**673**	0	**673**	1	0	1	**2**	0	277	1	278	
+15 mins.	0	0	0	0	0	549	0	549	0	0	**2**	2	0	282	1	283	
+30 mins.	0	0	0	0	**1**	504	0	505	0	0	0	0	2	279	1	282	
+45 mins.	0	0	0	0	1	630	0	631	**2**	0	0	2	**3**	**320**	**2**	**325**	
Total Volume	0	0	0	0	2	2356	0	2358	3	0	3	6	5	1158	5	1168	
% App. Total	0	0	0		0.1	99.9	0		50	0	50		0.4	99.1	0.4		
PHF	.000	.000	.000	.000	.500	.875	.000	.876	.375	.000	.375	.750	.417	.905	.625	.898	

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File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

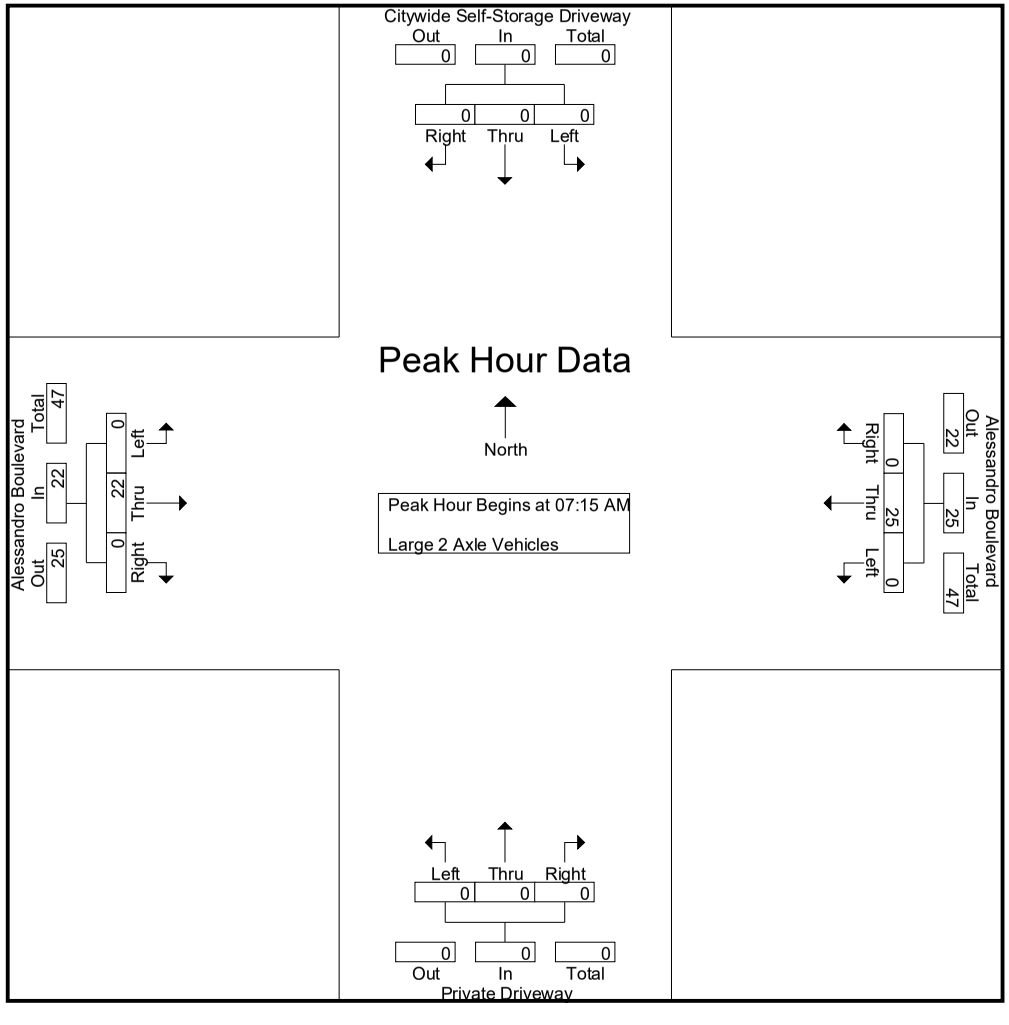
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	1	1	1	0	5	0	0	5	1	10	11
07:15 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	9	9
07:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	8	0	0	8	0	15	15
07:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	0	9	9
Total	0	0	0	0	0	0	23	0	0	23	0	0	1	1	1	0	19	0	0	19	1	43	44
08:00 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	8	0	0	8	0	14	14
08:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	13	13
08:30 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	1	0	0	1	0	8	8
08:45 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	0	11	11
Total	0	0	0	0	0	0	24	0	0	24	0	0	0	0	0	0	22	0	0	22	0	46	46
Grand Total	0	0	0	0	0	0	47	0	0	47	0	0	1	1	1	0	41	0	0	41	1	89	90
Apprch %	0	0	0			0	100	0			0	0	100			0	100	0					
Total %	0	0	0		0	0	52.8	0		52.8	0	0	1.1		1.1	0	46.1	0		46.1	1.1	98.9	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	6	0	6	0	0	0	0	0	3	0	3	9
07:30 AM	0	0	0	0	0	**7**	0	**7**	0	0	0	0	0	**8**	0	**8**	**15**
07:45 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	9
08:00 AM	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	14
Total Volume	0	0	0	0	0	25	0	25	0	0	0	0	0	22	0	22	47
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.893	.000	.893	.000	.000	.000	.000	.000	.688	.000	.688	.783

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	
+15 mins.	0	0	0	0	0	**7**	0	**7**	0	0	0	0	0	**8**	0	**8**	
+30 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	3	0	3	
+45 mins.	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	
Total Volume	0	0	0	0	0	25	0	25	0	0	0	0	0	22	0	22	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.893	.000	.893	.000	.000	.000	.000	.000	.688	.000	.688	

Counts Unlimited
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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

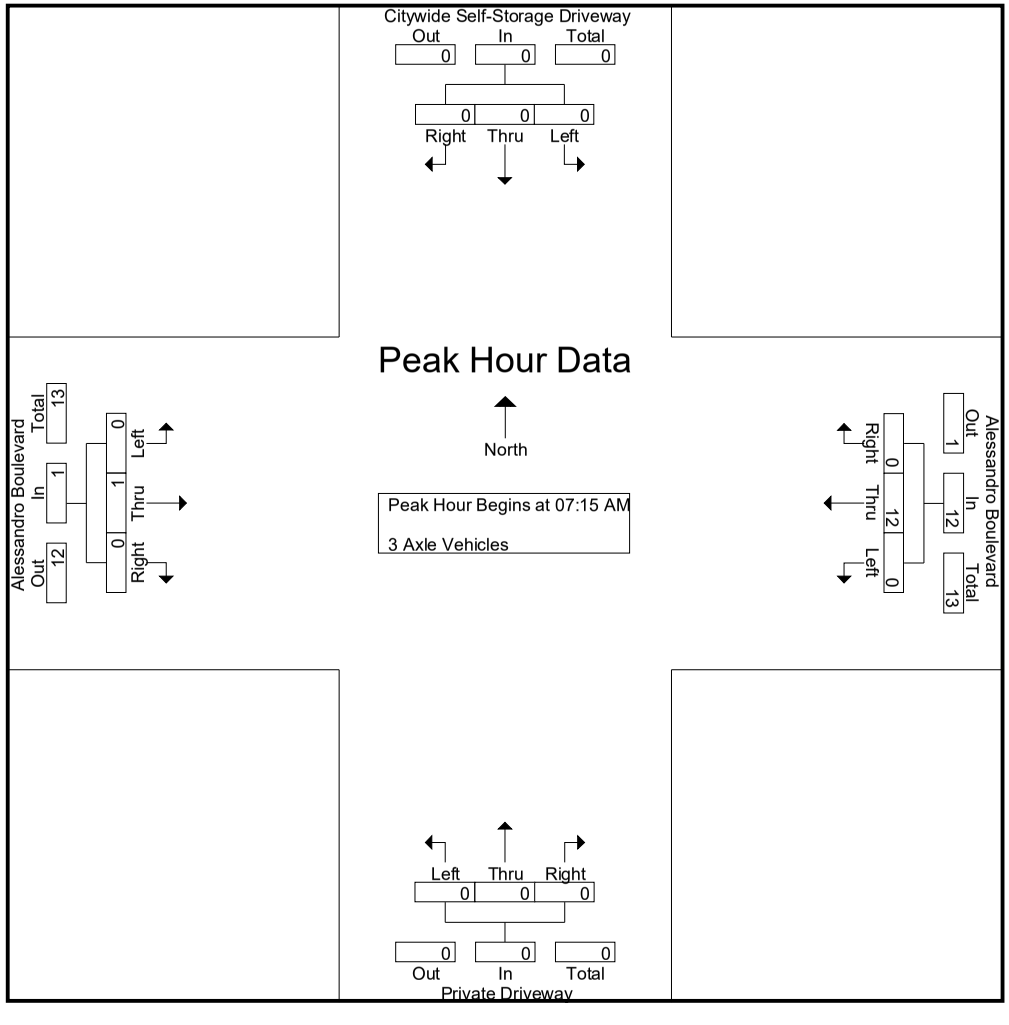
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
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	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	1	0	0	1	0	10	10
08:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
08:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
08:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	1	0	0	1	0	11	11
Grand Total	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	2	0	0	2	0	21	21
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	90.5	0		90.5	0	0	0		0	0	9.5	0		9.5	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 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	2	0	2	0	0	0	0	0	0	0	0	2
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	**1**	0	**1**	**4**
07:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
08:00 AM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0	4
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	0	1	0	1	13
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	.813

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Private Driveway
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File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	**1**	0	**1**	
+30 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	0	1	0	1	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.000	.250	.000	.250	

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

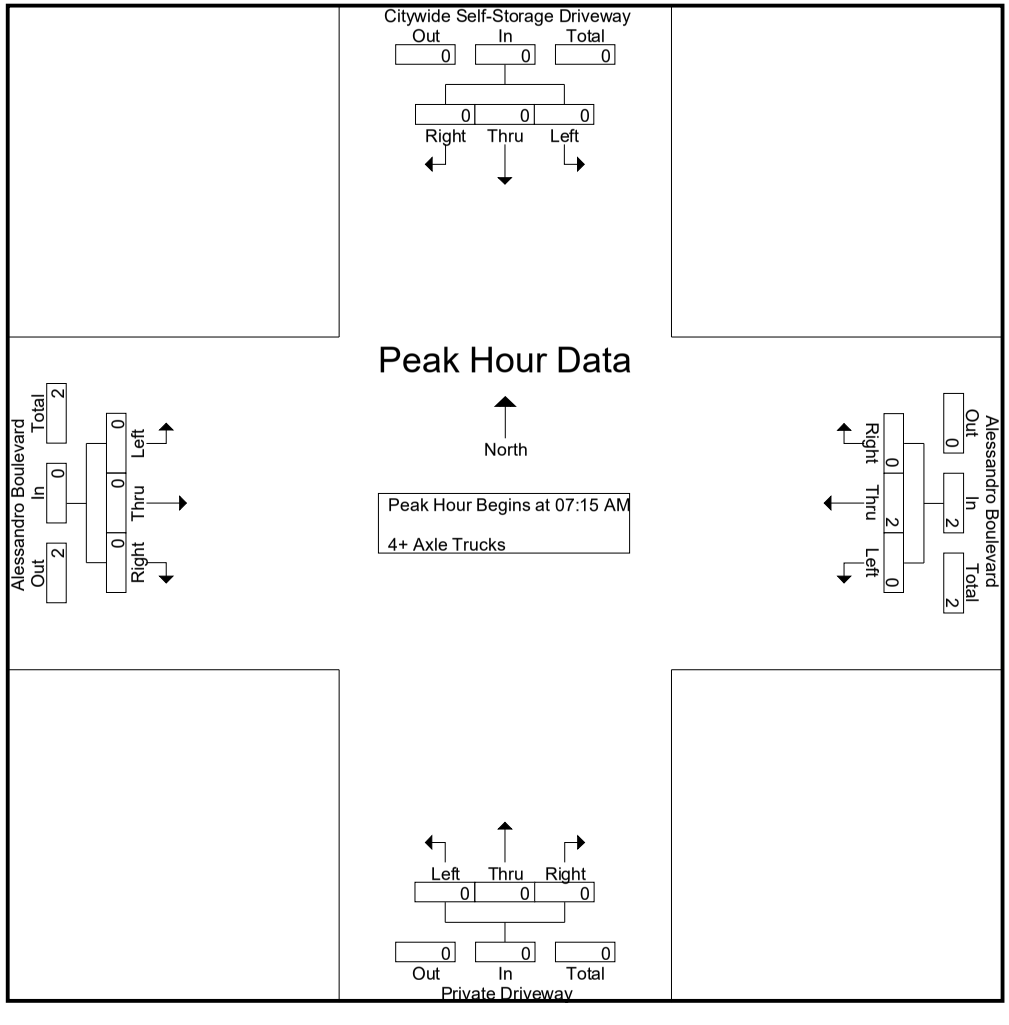
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
08:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	4	4
08:45 AM	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	7	0	0	7	0	0	0	0	0	0	4	0	0	4	0	11	11
Grand Total	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	4	0	0	4	0	12	12
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	66.7	0		66.7	0	0	0		0	0	33.3	0		33.3	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
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	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
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File Name : 02_RIV_Private DW_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	1	0	1	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	.500	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

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

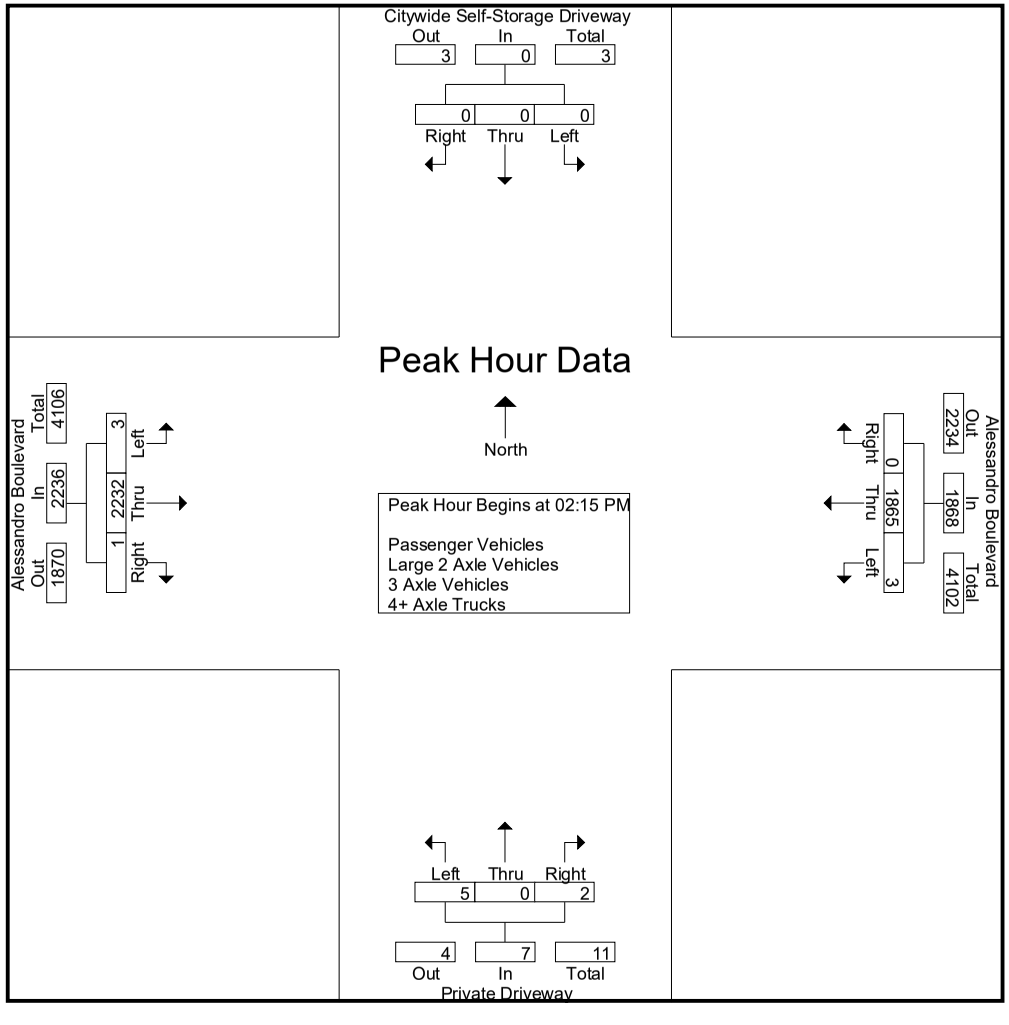
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	512	0	0	512	1	0	0	0	1	1	439	0	0	440	0	953	953
02:15 PM	0	0	0	0	0	2	499	0	0	501	0	0	1	1	1	1	524	1	0	526	1	1028	1029
02:30 PM	0	0	0	0	0	0	456	0	0	456	1	0	1	1	2	2	619	0	0	621	1	1079	1080
02:45 PM	0	0	0	0	0	0	424	0	0	424	2	0	0	0	2	0	500	0	0	500	0	926	926
Total	0	0	0	0	0	2	1891	0	0	1893	4	0	2	2	6	4	2082	1	0	2087	2	3986	3988
03:00 PM	0	0	0	0	0	1	486	0	0	487	2	0	0	0	2	0	589	0	0	589	0	1078	1078
03:15 PM	0	0	0	0	0	1	452	0	0	453	0	0	0	0	0	0	573	0	0	573	0	1026	1026
03:30 PM	0	0	0	0	0	0	417	0	0	417	0	0	0	0	0	0	502	0	0	502	0	919	919
03:45 PM	0	0	0	0	0	1	377	0	0	378	0	0	0	0	0	0	617	2	0	619	0	997	997
Total	0	0	0	0	0	3	1732	0	0	1735	2	0	0	0	2	0	2281	2	0	2283	0	4020	4020
Grand Total	0	0	0	0	0	5	3623	0	0	3628	6	0	2	2	8	4	4363	3	0	4370	2	8006	8008
Apprch %	0	0	0			0.1	99.9	0			75	0	25			0.1	99.8	0.1					
Total %	0	0	0		0	0.1	45.3	0		45.3	0.1	0	0		0.1	0	54.5	0		54.6	0	100	
Passenger Vehicles	0	0	0		0	5	3583	0		3588	6	0	2		10	4	4307	3		4314	0	0	7912
% Passenger Vehicles	0	0	0	0	0	100	98.9	0	0	98.9	100	0	100	100	100	100	98.7	100	0	98.7	0	0	98.8
Large 2 Axle Vehicles	0	0	0		0	0	30	0		30	0	0	0		0	0	44	0		44	0	0	74
% Large 2 Axle Vehicles	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0	1	0	0	1	0	0	0.9
3 Axle Vehicles	0	0	0		0	0	5	0		5	0	0	0		0	0	8	0		8	0	0	13
% 3 Axle Vehicles	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.2	0	0	0.2	0	0	0.2
4+ Axle Trucks	0	0	0		0	0	5	0		5	0	0	0		0	0	4	0		4	0	0	9
% 4+ Axle Trucks	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0	0	0	0	0.1	0	0	0.1	0	0	0.1

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	0	0	**2**	**499**	0	**501**	0	0	**1**	1	1	524	**1**	526	1028
02:30 PM	0	0	0	0	0	456	0	456	1	0	1	**2**	**2**	**619**	0	**621**	**1079**
02:45 PM	0	0	0	0	0	424	0	424	**2**	0	0	2	0	500	0	500	926
03:00 PM	0	0	0	0	1	486	0	487	2	0	0	2	0	589	0	589	1078
Total Volume	0	0	0	0	3	1865	0	1868	5	0	2	7	3	2232	1	2236	4111
% App. Total	0	0	0		0.2	99.8	0		71.4	0	28.6		0.1	99.8	0		
PHF	.000	.000	.000	.000	.375	.934	.000	.932	.625	.000	.500	.875	.375	.901	.250	.900	.953

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City of Riverside
N/S: Private Driveway
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File Name : 02_RIV_Private DW_Alessandro PM
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	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:00 PM				02:00 PM				02:15 PM				02:30 PM				
+0 mins.	0	0	0	0	0	**512**	0	**512**	0	0	**1**	1	**2**	**619**	0	**621**	
+15 mins.	0	0	0	0	**2**	499	0	501	1	0	1	**2**	0	500	0	500	
+30 mins.	0	0	0	0	0	456	0	456	**2**	0	0	2	0	589	0	589	
+45 mins.	0	0	0	0	0	424	0	424	2	0	0	2	0	573	0	573	
Total Volume	0	0	0	0	2	1891	0	1893	5	0	2	7	2	2281	0	2283	
% App. Total	0	0	0		0.1	99.9	0		71.4	0	28.6		0.1	99.9	0		
PHF	.000	.000	.000	.000	.250	.923	.000	.924	.625	.000	.500	.875	.250	.921	.000	.919	

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Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Passenger Vehicles

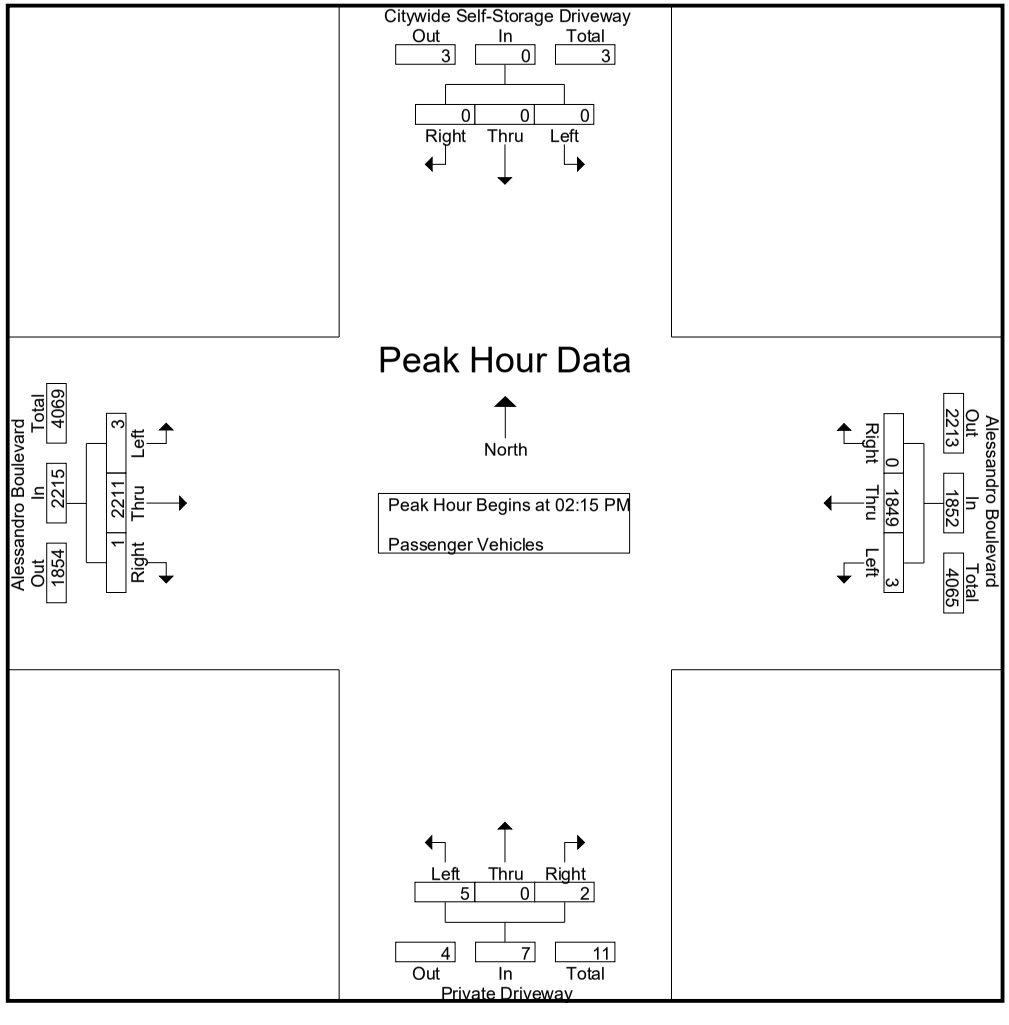
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	499	0	0	499	1	0	0	0	1	1	430	0	0	431	0	931	931
02:15 PM	0	0	0	0	0	2	492	0	0	494	0	0	1	1	1	1	520	1	0	522	1	1017	1018
02:30 PM	0	0	0	0	0	0	453	0	0	453	1	0	1	1	2	2	610	0	0	612	1	1067	1068
02:45 PM	0	0	0	0	0	0	422	0	0	422	2	0	0	0	2	0	494	0	0	494	0	918	918
Total	0	0	0	0	0	2	1866	0	0	1868	4	0	2	2	6	4	2054	1	0	2059	2	3933	3935
03:00 PM	0	0	0	0	0	1	482	0	0	483	2	0	0	0	2	0	587	0	0	587	0	1072	1072
03:15 PM	0	0	0	0	0	1	449	0	0	450	0	0	0	0	0	0	562	0	0	562	0	1012	1012
03:30 PM	0	0	0	0	0	0	412	0	0	412	0	0	0	0	0	0	496	0	0	496	0	908	908
03:45 PM	0	0	0	0	0	1	374	0	0	375	0	0	0	0	0	0	608	2	0	610	0	985	985
Total	0	0	0	0	0	3	1717	0	0	1720	2	0	0	0	2	0	2253	2	0	2255	0	3977	3977
Grand Total	0	0	0	0	0	5	3583	0	0	3588	6	0	2	2	8	4	4307	3	0	4314	2	7910	7912
Apprch %	0	0	0			0.1	99.9	0			75	0	25			0.1	99.8	0.1					
Total %	0	0	0		0	0.1	45.3	0		45.4	0.1	0	0		0.1	0.1	54.5	0		54.5	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	0	0	**2**	**492**	0	**494**	0	0	**1**	1	1	520	**1**	522	1017
02:30 PM	0	0	0	0	0	453	0	453	1	0	1	**2**	**2**	**610**	0	**612**	1067
02:45 PM	0	0	0	0	0	422	0	422	**2**	0	0	2	0	494	0	494	918
03:00 PM	0	0	0	0	1	482	0	483	2	0	0	2	0	587	0	587	**1072**
Total Volume	0	0	0	0	3	1849	0	1852	5	0	2	7	3	2211	1	2215	4074
% App. Total	0	0	0		0.2	99.8	0		71.4	0	28.6		0.1	99.8	0		
PHF	.000	.000	.000	.000	.375	.940	.000	.937	.625	.000	.500	.875	.375	.906	.250	.905	.950

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

City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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(951) 268-6268

City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:15 PM				02:15 PM				02:15 PM				02:15 PM				
+0 mins.	0	0	0	0	**2**	**492**	0	**494**	0	0	**1**	1	1	520	**1**	522	
+15 mins.	0	0	0	0	0	453	0	453	1	0	1	**2**	**2**	**610**	0	**612**	
+30 mins.	0	0	0	0	0	422	0	422	**2**	0	0	2	0	494	0	494	
+45 mins.	0	0	0	0	1	482	0	483	2	0	0	2	0	587	0	587	
Total Volume	0	0	0	0	3	1849	0	1852	5	0	2	7	3	2211	1	2215	
% App. Total	0	0	0		0.2	99.8	0		71.4	0	28.6		0.1	99.8	0		
PHF	.000	.000	.000	.000	.375	.940	.000	.937	.625	.000	.500	.875	.375	.906	.250	.905	

Counts Unlimited
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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

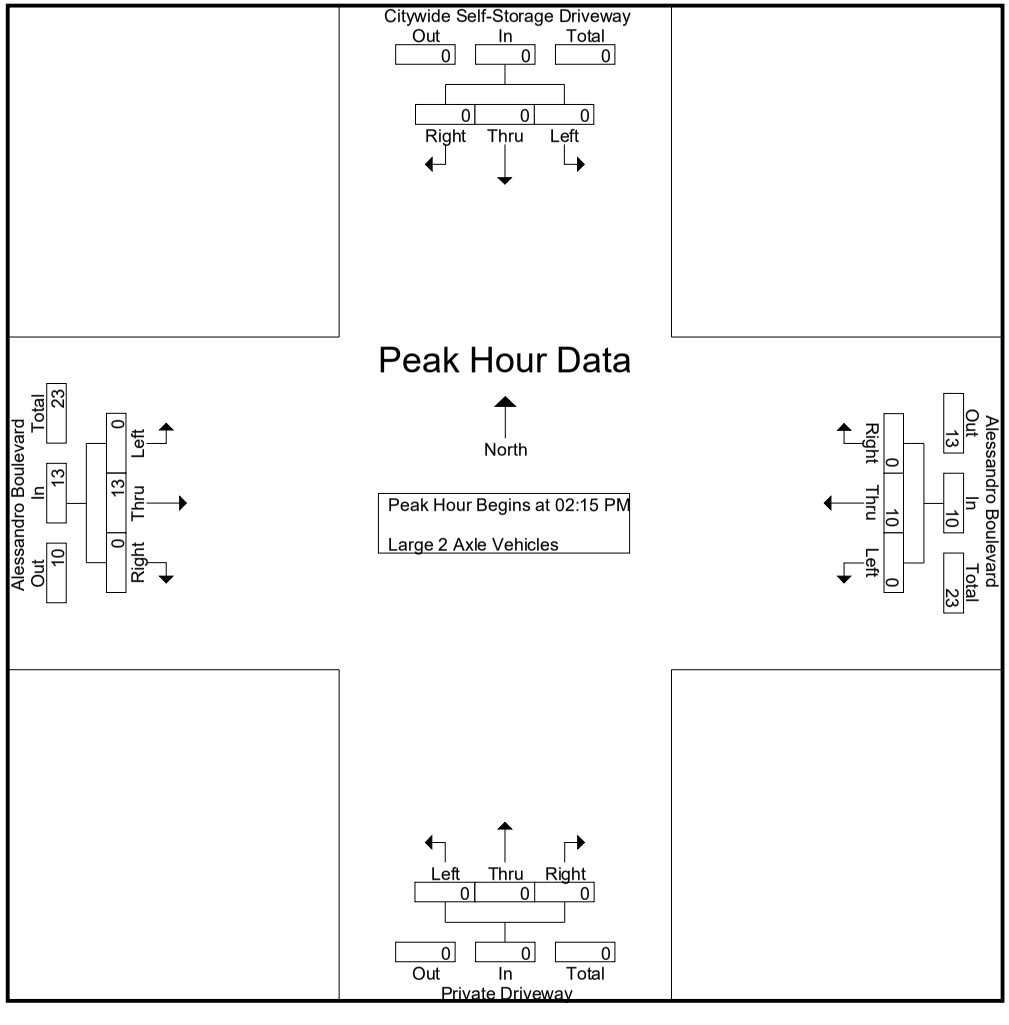
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	8	0	0	8	0	19	19
02:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	6	6
02:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	0	8	8
02:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5
Total	0	0	0	0	0	0	19	0	0	19	0	0	0	0	0	0	19	0	0	19	0	38	38
03:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	4	4
03:15 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	9	0	0	9	0	12	12
03:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	9	9
03:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	9	0	0	9	0	11	11
Total	0	0	0	0	0	0	11	0	0	11	0	0	0	0	0	0	25	0	0	25	0	36	36
Grand Total	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	0	44	0	0	44	0	74	74
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	40.5	0		40.5	0	0	0		0	0	59.5	0		59.5	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	2	0	2	6
02:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	**6**	0	**6**	**8**
02:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
03:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	13	0	13	23
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.542	.000	.542	.719

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

City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:15 PM				02:15 PM				02:15 PM				02:15 PM				
+0 mins.	0	0	0	0	0	**4**	0	**4**	0	0	0	0	0	2	0	2	
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	**6**	0	**6**	
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	13	0	13	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.542	.000	.542	

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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

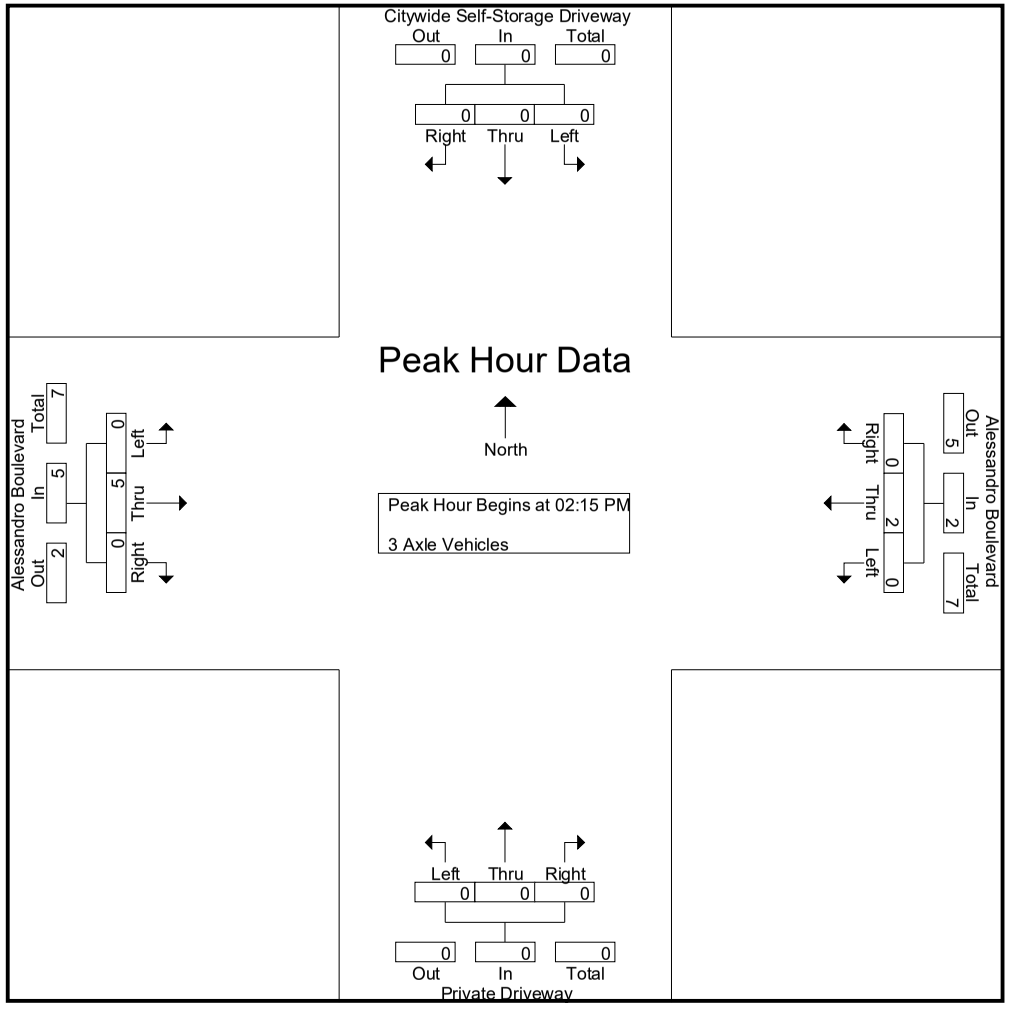
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
02:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	3
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	7	7
03:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
03:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
03:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	6	6
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	8	0	0	8	0	13	13
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	38.5	0		38.5	0	0	0		0	0	61.5	0		61.5	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	1	0	1	2
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	**3**
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.000	.417	.583

Counts Unlimited
PO Box 1178
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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:15 PM				02:15 PM				02:15 PM				02:15 PM				
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.417	.000	.417	

Counts Unlimited
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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

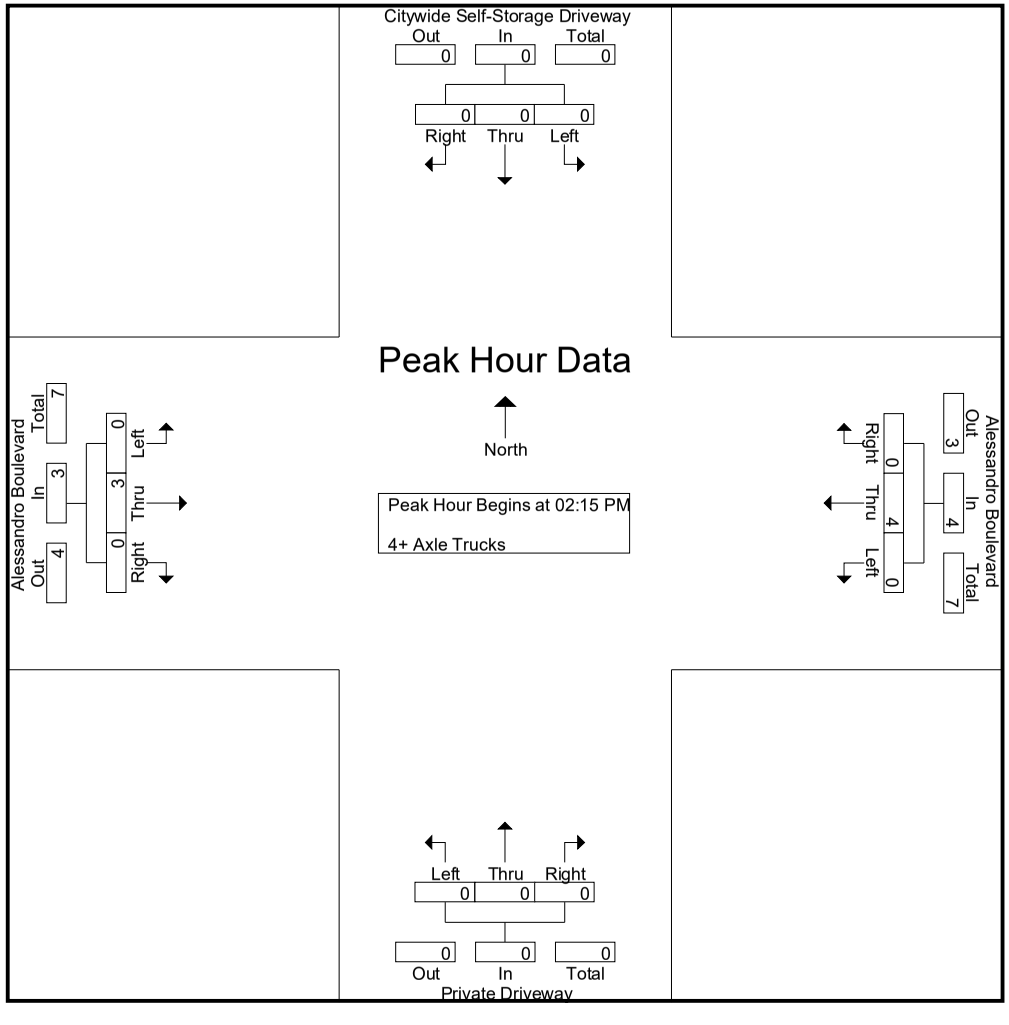
	Citywide Self-Storage Driveway Southbound					Alessandro Boulevard Westbound					Private Driveway Northbound					Alessandro Boulevard Eastbound							
Start Time	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Exclu. Total	Inclu. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
02:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	0	3	3
02:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	3	3
02:45 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	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	8	8
03:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 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	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	4	0	9	9
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0					
Total %	0	0	0		0	0	55.6	0		55.6	0	0	0		0	0	44.4	0		44.4	0	100	

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:15 PM																	
02:15 PM	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	**3**
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**	3
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	.583

Counts Unlimited
PO Box 1178
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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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City of Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard
Weather: Clear

File Name : 02_RIV_Private DW_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 3

	Citywide Self-Storage Driveway Southbound				Alessandro Boulevard Westbound				Private Driveway Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	02:15 PM				02:15 PM				02:15 PM				02:15 PM				
+0 mins.	0	0	0	0	0	**2**	0	**2**	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	**2**	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.000	.375	.000	.375	

Location: Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

PEDESTRIANS

	North Leg Blocked Driveway	East Leg Alessandro Boulevard	South Leg Citywide Self-Storage DW	West Leg Alessandro Boulevard	
	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 Blocked Driveway	East Leg Alessandro Boulevard	South Leg Citywide Self-Storage DW	West Leg Alessandro Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	0	0	0	0
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
TOTAL VOLUMES:	0	0	0	0	0

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
951-268-6268

Location: Riverside
N/S: Private Driveway
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

BICYCLES

	Southbound Blocked Driveway			Westbound Alessandro Boulevard			Northbound Citywide Self-Storage DW			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	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	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Blocked Driveway			Westbound Alessandro Boulevard			Northbound Citywide Self-Storage DW			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	1	0	0	0	0	0	2	0	3
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
3:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	1	0	1	0	0	0	0	0	4	0	6

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

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

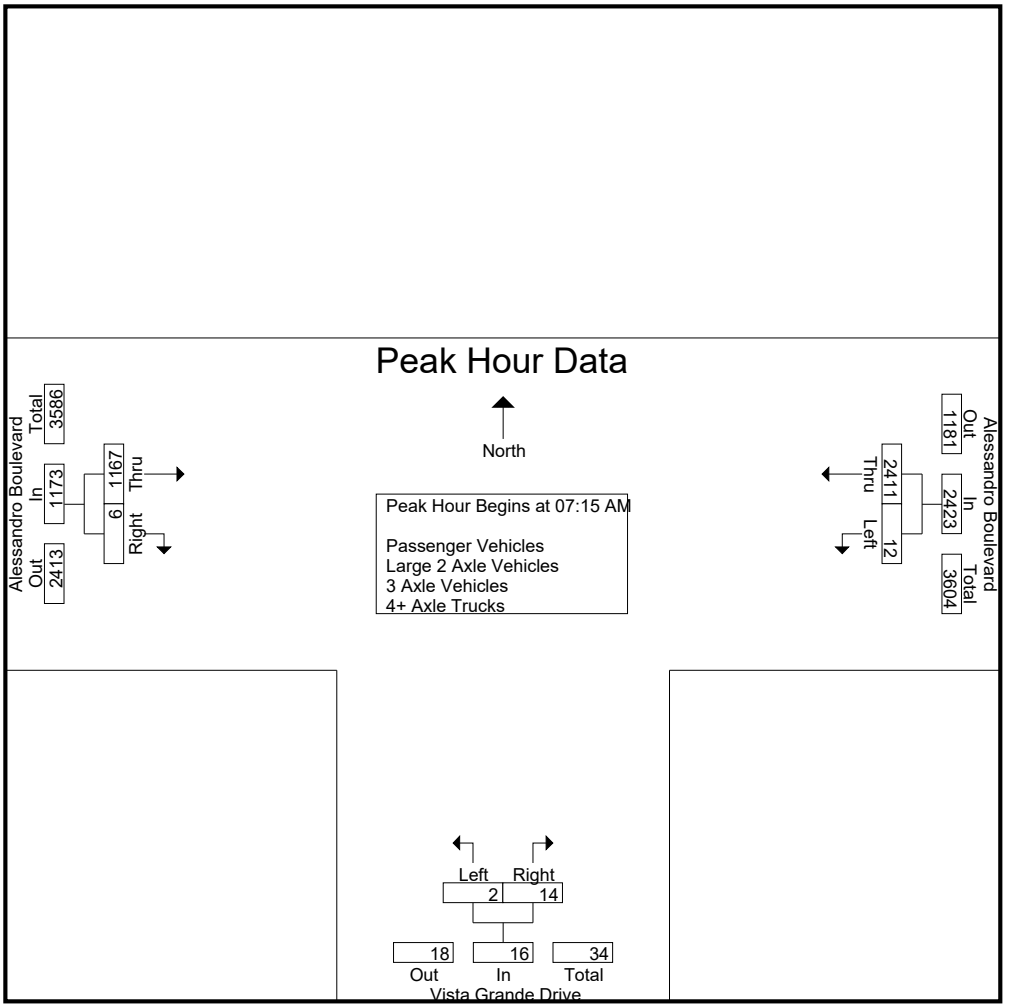
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	638	640	6	8	14	253	0	253	907
07:15 AM	3	687	690	0	3	3	277	1	278	971
07:30 AM	3	568	571	0	3	3	287	1	288	862
07:45 AM	1	510	511	2	5	7	277	2	279	797
Total	9	2403	2412	8	19	27	1094	4	1098	3537
08:00 AM	5	646	651	0	3	3	326	2	328	982
08:15 AM	1	599	600	0	3	3	265	2	267	870
08:30 AM	2	493	495	0	5	5	235	0	235	735
08:45 AM	4	484	488	1	2	3	217	2	219	710
Total	12	2222	2234	1	13	14	1043	6	1049	3297
Grand Total	21	4625	4646	9	32	41	2137	10	2147	6834
Apprch %	0.5	99.5		22	78		99.5	0.5		
Total %	0.3	67.7	68	0.1	0.5	0.6	31.3	0.1	31.4	
Passenger Vehicles	21	4553	4574	8	32	40	2091	9	2100	6714
% Passenger Vehicles	100	98.4	98.5	88.9	100	97.6	97.8	90	97.8	98.2
Large 2 Axle Vehicles	0	47	47	0	0	0	40	1	41	88
% Large 2 Axle Vehicles	0	1	1	0	0	0	1.9	10	1.9	1.3
3 Axle Vehicles	0	16	16	1	0	1	2	0	2	19
% 3 Axle Vehicles	0	0.3	0.3	11.1	0	2.4	0.1	0	0.1	0.3
4+ Axle Trucks	0	9	9	0	0	0	4	0	4	13
% 4+ Axle Trucks	0	0.2	0.2	0	0	0	0.2	0	0.2	0.2

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard 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	3	**687**	**690**	0	3	3	277	1	278	971
07:30 AM	3	568	571	0	3	3	287	1	288	862
07:45 AM	1	510	511	**2**	**5**	**7**	277	**2**	279	797
08:00 AM	**5**	646	651	0	3	3	**326**	2	**328**	**982**
Total Volume	12	2411	2423	2	14	16	1167	6	1173	3612
% App. Total	0.5	99.5		12.5	87.5		99.5	0.5		
PHF	.600	.877	.878	.250	.700	.571	.895	.750	.894	.920

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018



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

	07:15 AM			07:00 AM			07:15 AM		
+0 mins.	3	**687**	**690**	**6**	**8**	**14**	277	1	278
+15 mins.	3	568	571	0	3	3	287	1	288
+30 mins.	1	510	511	0	3	3	277	**2**	279
+45 mins.	**5**	646	651	2	5	7	**326**	2	**328**
Total Volume	12	2411	2423	8	19	27	1167	6	1173
% App. Total	0.5	99.5		29.6	70.4		99.5	0.5	
PHF	.600	.877	.878	.333	.594	.482	.895	.750	.894

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Passenger Vehicles

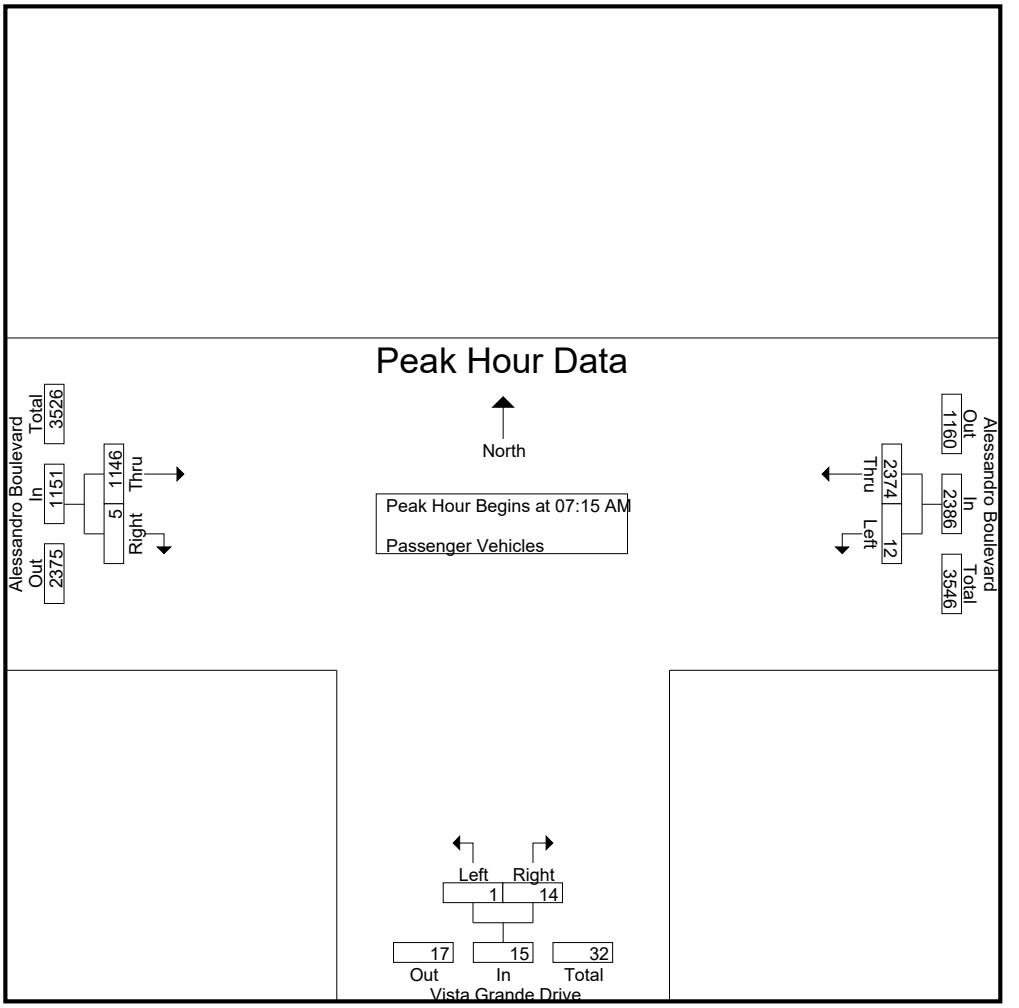
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	2	633	635	6	8	14	247	0	247	896
07:15 AM	3	679	682	0	3	3	275	0	275	960
07:30 AM	3	557	560	0	3	3	278	1	279	842
07:45 AM	1	503	504	1	5	6	274	2	276	786
Total	9	2372	2381	7	19	26	1074	3	1077	3484
08:00 AM	5	635	640	0	3	3	319	2	321	964
08:15 AM	1	593	594	0	3	3	255	2	257	854
08:30 AM	2	481	483	0	5	5	232	0	232	720
08:45 AM	4	472	476	1	2	3	211	2	213	692
Total	12	2181	2193	1	13	14	1017	6	1023	3230
Grand Total	21	4553	4574	8	32	40	2091	9	2100	6714
Apprch %	0.5	99.5		20	80		99.6	0.4		
Total %	0.3	67.8	68.1	0.1	0.5	0.6	31.1	0.1	31.3	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard 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	3	**679**	**682**	0	3	3	275	0	275	960
07:30 AM	3	557	560	0	3	3	278	1	279	842
07:45 AM	1	503	504	**1**	**5**	**6**	274	**2**	276	786
08:00 AM	**5**	635	640	0	3	3	**319**	2	**321**	**964**
Total Volume	12	2374	2386	1	14	15	1146	5	1151	3552
% App. Total	0.5	99.5		6.7	93.3		99.6	0.4		
PHF	.600	.874	.875	.250	.700	.625	.898	.625	.896	.921

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File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018



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.	3	**679**	**682**	0	3	3	275	0	275
+15 mins.	3	557	560	0	3	3	278	1	279
+30 mins.	1	503	504	**1**	**5**	**6**	274	**2**	276
+45 mins.	**5**	635	640	0	3	3	**319**	2	**321**
Total Volume	12	2374	2386	1	14	15	1146	5	1151
% App. Total	0.5	99.5		6.7	93.3		99.6	0.4	
PHF	.600	.874	.875	.250	.700	.625	.898	.625	.896

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Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

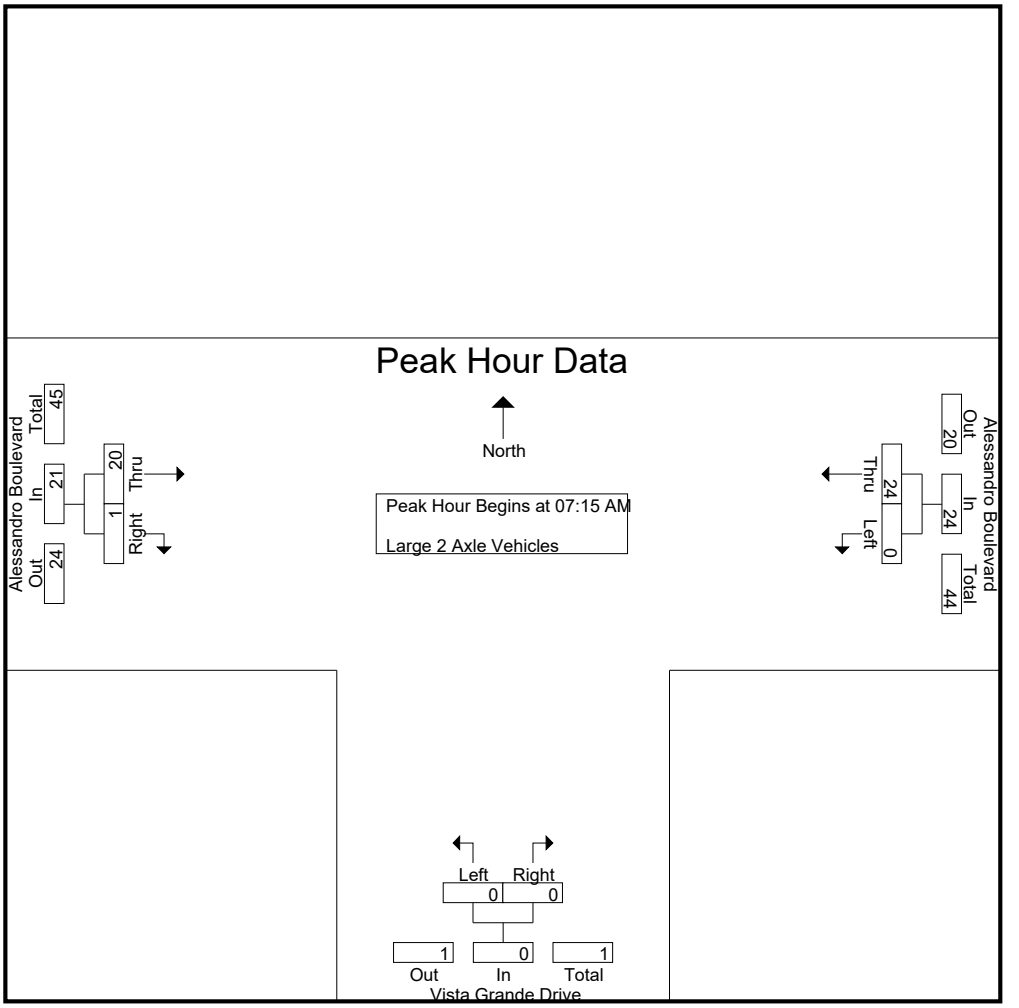
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	4	4	0	0	0	6	0	6	10
07:15 AM	0	6	6	0	0	0	2	1	3	9
07:30 AM	0	7	7	0	0	0	8	0	8	15
07:45 AM	0	5	5	0	0	0	3	0	3	8
Total	0	22	22	0	0	0	19	1	20	42
08:00 AM	0	6	6	0	0	0	7	0	7	13
08:15 AM	0	4	4	0	0	0	8	0	8	12
08:30 AM	0	8	8	0	0	0	2	0	2	10
08:45 AM	0	7	7	0	0	0	4	0	4	11
Total	0	25	25	0	0	0	21	0	21	46
Grand Total	0	47	47	0	0	0	40	1	41	88
Apprch %	0	100		0	0		97.6	2.4		
Total %	0	53.4	53.4	0	0	0	45.5	1.1	46.6	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard 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	6	6	0	0	0	2	**1**	3	9
07:30 AM	0	**7**	**7**	0	0	0	**8**	0	**8**	**15**
07:45 AM	0	5	5	0	0	0	3	0	3	8
08:00 AM	0	6	6	0	0	0	7	0	7	13
Total Volume	0	24	24	0	0	0	20	1	21	45
% App. Total	0	100		0	0		95.2	4.8		
PHF	.000	.857	.857	.000	.000	.000	.625	.250	.656	.750

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Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	6	6	0	0	0	2	**1**	3
+15 mins.	0	**7**	**7**	0	0	0	**8**	0	**8**
+30 mins.	0	5	5	0	0	0	3	0	3
+45 mins.	0	6	6	0	0	0	7	0	7
Total Volume	0	24	24	0	0	0	20	1	21
% App. Total	0	100		0	0		95.2	4.8	
PHF	.000	.857	.857	.000	.000	.000	.625	.250	.656

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City of Riverside
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Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

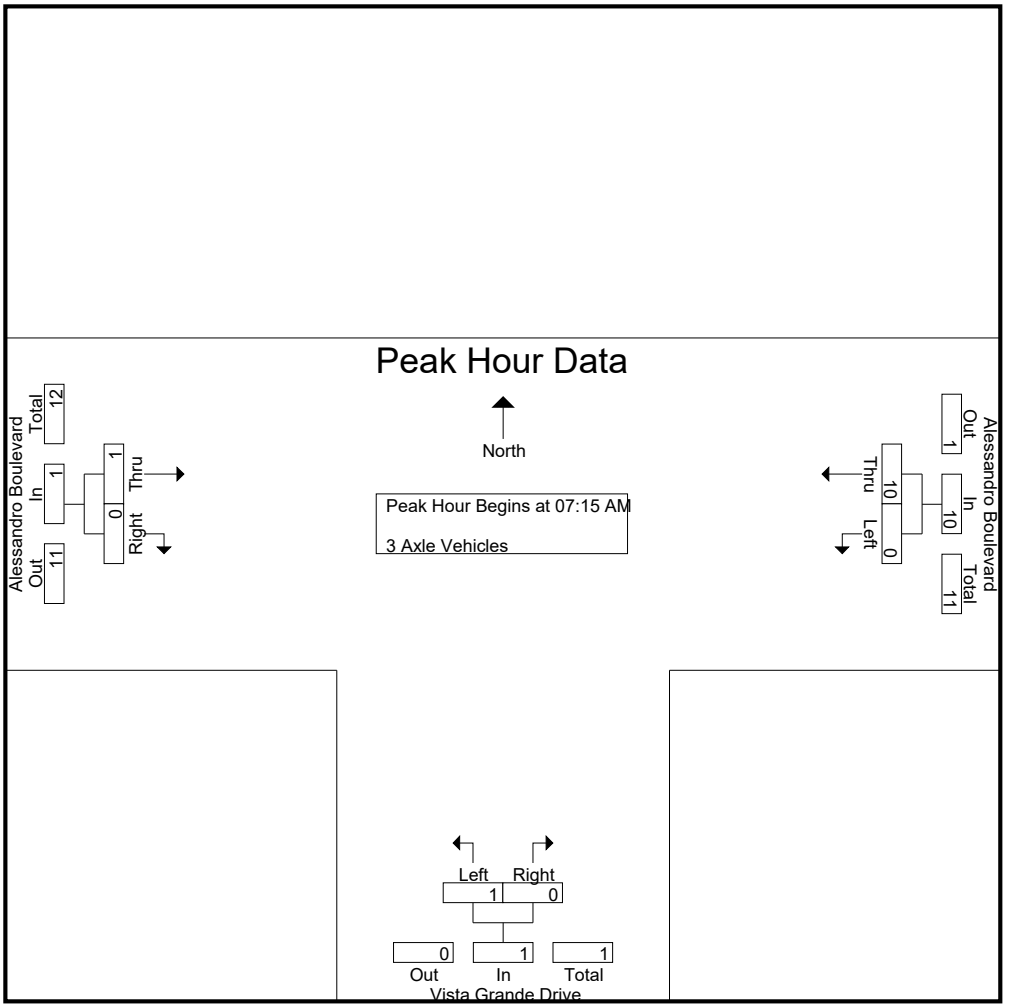
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	0	0	0	0	0	0	1
07:15 AM	0	2	2	0	0	0	0	0	0	2
07:30 AM	0	3	3	0	0	0	1	0	1	4
07:45 AM	0	1	1	1	0	1	0	0	0	2
Total	0	7	7	1	0	1	1	0	1	9
08:00 AM	0	4	4	0	0	0	0	0	0	4
08:15 AM	0	1	1	0	0	0	1	0	1	2
08:30 AM	0	1	1	0	0	0	0	0	0	1
08:45 AM	0	3	3	0	0	0	0	0	0	3
Total	0	9	9	0	0	0	1	0	1	10
Grand Total	0	16	16	1	0	1	2	0	2	19
Apprch %	0	100		100	0		100	0		
Total %	0	84.2	84.2	5.3	0	5.3	10.5	0	10.5	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard 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	0	0	0	2
07:30 AM	0	3	3	0	0	0	**1**	0	**1**	**4**
07:45 AM	0	1	1	**1**	0	**1**	0	0	0	2
08:00 AM	0	**4**	**4**	0	0	0	0	0	0	4
Total Volume	0	10	10	1	0	1	1	0	1	12
% App. Total	0	100		100	0		100	0		
PHF	.000	.625	.625	.250	.000	.250	.250	.000	.250	.750

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City of Riverside
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File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018



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	0	0	0
+15 mins.	0	3	3	0	0	0	**1**	0	**1**
+30 mins.	0	1	1	**1**	0	**1**	0	0	0
+45 mins.	0	**4**	**4**	0	0	0	0	0	0
Total Volume	0	10	10	1	0	1	1	0	1
% App. Total	0	100		100	0		100	0	
PHF	.000	.625	.625	.250	.000	.250	.250	.000	.250

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Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

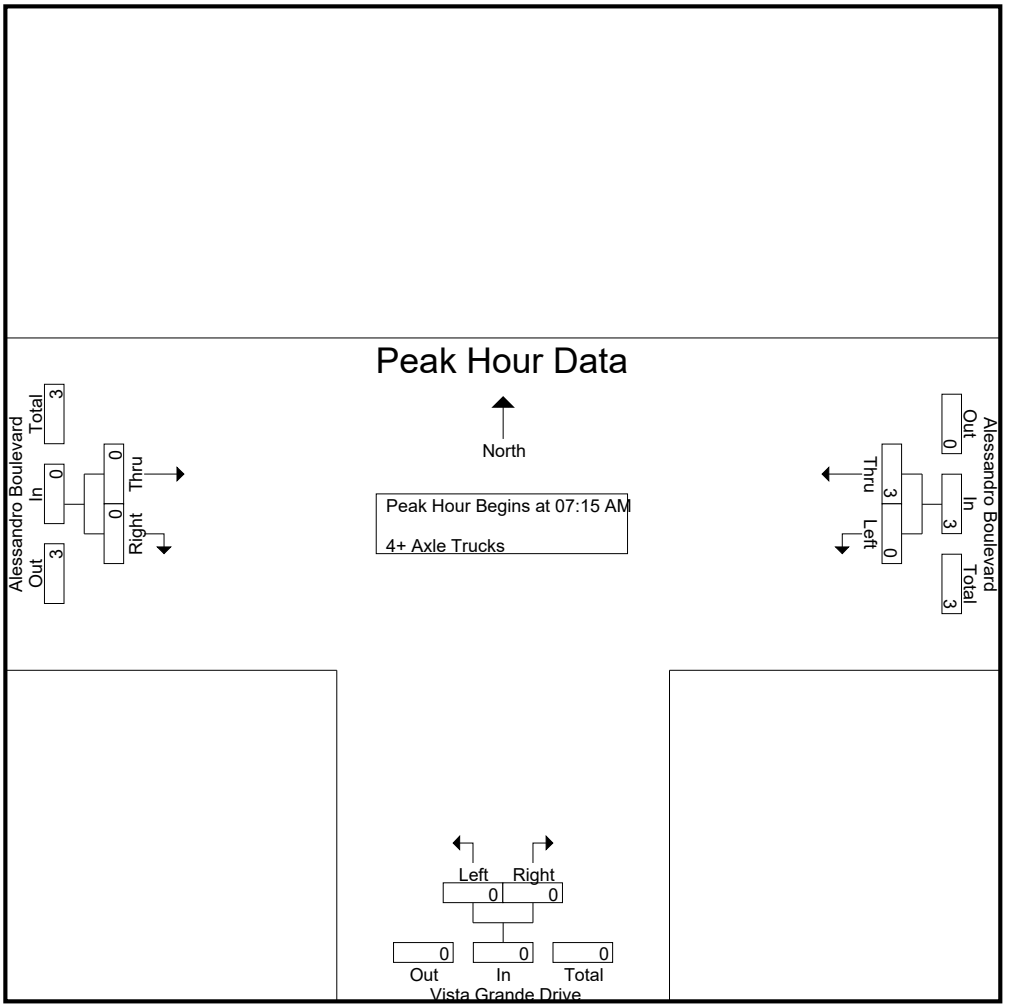
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	0	0	0	0	0	0	1
07:45 AM	0	1	1	0	0	0	0	0	0	1
Total	0	2	2	0	0	0	0	0	0	2
08:00 AM	0	1	1	0	0	0	0	0	0	1
08:15 AM	0	1	1	0	0	0	1	0	1	2
08:30 AM	0	3	3	0	0	0	1	0	1	4
08:45 AM	0	2	2	0	0	0	2	0	2	4
Total	0	7	7	0	0	0	4	0	4	11
Grand Total	0	9	9	0	0	0	4	0	4	13
Apprch %	0	100		0	0		100	0		
Total %	0	69.2	69.2	0	0	0	30.8	0	30.8	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard 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	0	0	0	0
07:30 AM	0	**1**	**1**	0	0	0	0	0	0	**1**
07:45 AM	0	1	1	0	0	0	0	0	0	1
08:00 AM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	0	0	0	3
% App. Total	0	100		0	0		0	0		
PHF	.000	.750	.750	.000	.000	.000	.000	.000	.000	.750

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Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro AM
Site Code : 05118807
Start Date : 10/25/2018



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	0	0	0
+15 mins.	0	**1**	**1**	0	0	0	0	0	0
+30 mins.	0	1	1	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	0	0	0
% App. Total	0	100		0	0		0	0	
PHF	.000	.750	.750	.000	.000	.000	.000	.000	.000

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City of Riverside
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Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

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

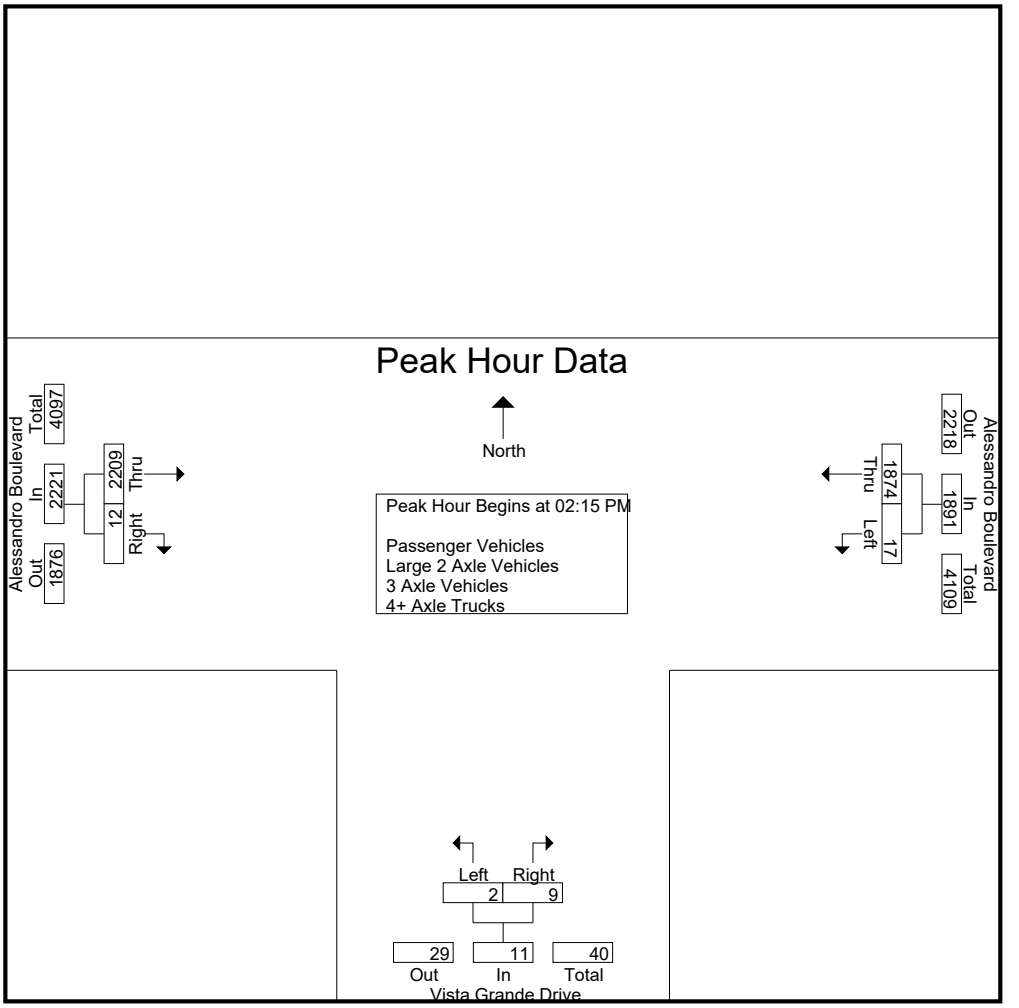
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	10	513	523	0	3	3	429	1	430	956
02:15 PM	5	494	499	0	3	3	532	4	536	1038
02:30 PM	4	466	470	1	2	3	611	2	613	1086
02:45 PM	2	439	441	1	2	3	486	2	488	932
Total	21	1912	1933	2	10	12	2058	9	2067	4012
03:00 PM	6	475	481	0	2	2	580	4	584	1067
03:15 PM	9	457	466	0	0	0	559	5	564	1030
03:30 PM	2	424	426	0	1	1	487	7	494	921
03:45 PM	6	387	393	0	0	0	615	2	617	1010
Total	23	1743	1766	0	3	3	2241	18	2259	4028
Grand Total	44	3655	3699	2	13	15	4299	27	4326	8040
Apprch %	1.2	98.8		13.3	86.7		99.4	0.6		
Total %	0.5	45.5	46	0	0.2	0.2	53.5	0.3	53.8	
Passenger Vehicles	44	3615	3659	2	13	15	4244	25	4269	7943
% Passenger Vehicles	100	98.9	98.9	100	100	100	98.7	92.6	98.7	98.8
Large 2 Axle Vehicles	0	30	30	0	0	0	43	2	45	75
% Large 2 Axle Vehicles	0	0.8	0.8	0	0	0	1	7.4	1	0.9
3 Axle Vehicles	0	6	6	0	0	0	8	0	8	14
% 3 Axle Vehicles	0	0.2	0.2	0	0	0	0.2	0	0.2	0.2
4+ Axle Trucks	0	4	4	0	0	0	4	0	4	8
% 4+ Axle Trucks	0	0.1	0.1	0	0	0	0.1	0	0.1	0.1

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	5	**494**	**499**	0	**3**	**3**	532	**4**	536	1038
02:30 PM	4	466	470	**1**	2	3	**611**	2	**613**	**1086**
02:45 PM	2	439	441	1	2	3	486	2	488	932
03:00 PM	**6**	475	481	0	2	2	580	4	584	1067
Total Volume	17	1874	1891	2	9	11	2209	12	2221	4123
% App. Total	0.9	99.1		18.2	81.8		99.5	0.5		
PHF	.708	.948	.947	.500	.750	.917	.904	.750	.906	.949

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018



Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:00 PM			02:00 PM			03:00 PM		
+0 mins.	**10**	**513**	**523**	0	**3**	**3**	580	4	584
+15 mins.	5	494	499	0	3	3	559	5	564
+30 mins.	4	466	470	**1**	2	3	487	**7**	494
+45 mins.	2	439	441	1	2	3	**615**	2	**617**
Total Volume	21	1912	1933	2	10	12	2241	18	2259
% App. Total	1.1	98.9		16.7	83.3		99.2	0.8	
PHF	.525	.932	.924	.500	.833	1.000	.911	.643	.915

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Passenger Vehicles

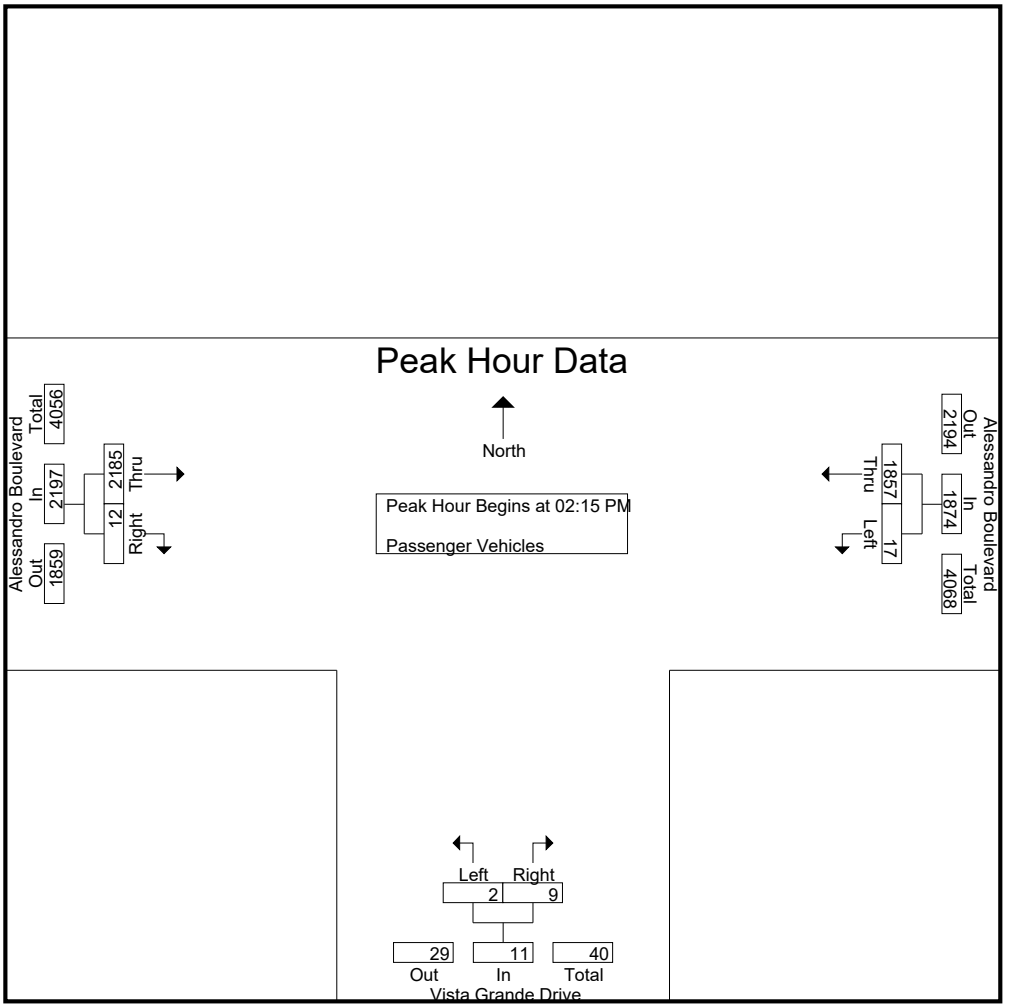
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	10	503	513	0	3	3	422	0	422	938
02:15 PM	5	487	492	0	3	3	527	4	531	1026
02:30 PM	4	462	466	1	2	3	601	2	603	1072
02:45 PM	2	437	439	1	2	3	480	2	482	924
Total	21	1889	1910	2	10	12	2030	8	2038	3960
03:00 PM	6	471	477	0	2	2	577	4	581	1060
03:15 PM	9	454	463	0	0	0	548	5	553	1016
03:30 PM	2	418	420	0	1	1	481	7	488	909
03:45 PM	6	383	389	0	0	0	608	1	609	998
Total	23	1726	1749	0	3	3	2214	17	2231	3983
Grand Total	44	3615	3659	2	13	15	4244	25	4269	7943
Apprch %	1.2	98.8		13.3	86.7		99.4	0.6		
Total %	0.6	45.5	46.1	0	0.2	0.2	53.4	0.3	53.7	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	5	**487**	**492**	0	**3**	**3**	527	**4**	531	1026
02:30 PM	4	462	466	**1**	2	3	**601**	2	**603**	**1072**
02:45 PM	2	437	439	1	2	3	480	2	482	924
03:00 PM	**6**	471	477	0	2	2	577	4	581	1060
Total Volume	17	1857	1874	2	9	11	2185	12	2197	4082
% App. Total	0.9	99.1		18.2	81.8		99.5	0.5		
PHF	.708	.953	.952	.500	.750	.917	.909	.750	.911	.952

Counts Unlimited
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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018



Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM			02:15 PM			02:15 PM		
+0 mins.	5	**487**	**492**	0	**3**	**3**	527	**4**	531
+15 mins.	4	462	466	**1**	2	3	**601**	2	**603**
+30 mins.	2	437	439	1	2	3	480	2	482
+45 mins.	**6**	471	477	0	2	2	577	4	581
Total Volume	17	1857	1874	2	9	11	2185	12	2197
% App. Total	0.9	99.1		18.2	81.8		99.5	0.5	
PHF	.708	.953	.952	.500	.750	.917	.909	.750	.911

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

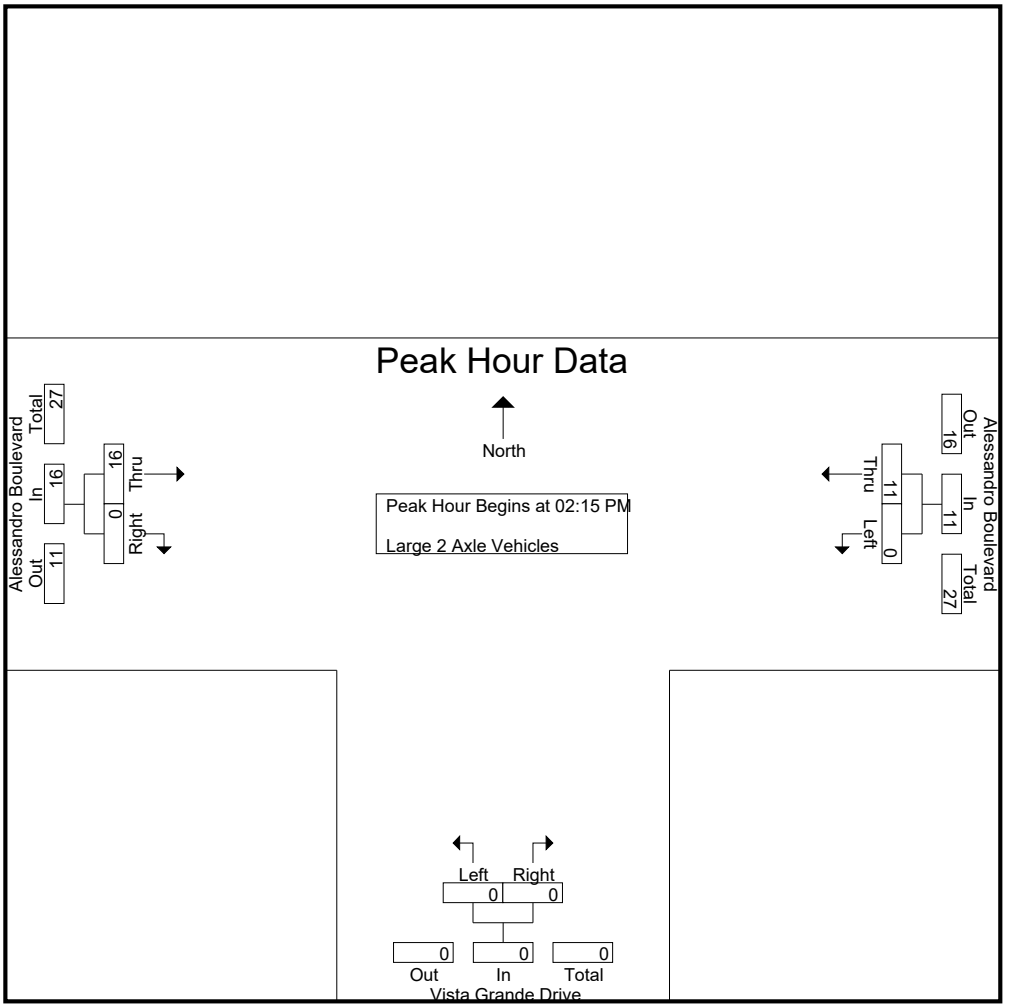
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	0	8	8	0	0	0	6	1	7	15
02:15 PM	0	4	4	0	0	0	3	0	3	7
02:30 PM	0	3	3	0	0	0	7	0	7	10
02:45 PM	0	2	2	0	0	0	3	0	3	5
Total	0	17	17	0	0	0	19	1	20	37
03:00 PM	0	2	2	0	0	0	3	0	3	5
03:15 PM	0	3	3	0	0	0	9	0	9	12
03:30 PM	0	5	5	0	0	0	5	0	5	10
03:45 PM	0	3	3	0	0	0	7	1	8	11
Total	0	13	13	0	0	0	24	1	25	38
Grand Total	0	30	30	0	0	0	43	2	45	75
Apprch %	0	100		0	0		95.6	4.4		
Total %	0	40	40	0	0	0	57.3	2.7	60	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	0	**4**	**4**	0	0	0	3	0	3	7
02:30 PM	0	3	3	0	0	0	**7**	0	**7**	**10**
02:45 PM	0	2	2	0	0	0	3	0	3	5
03:00 PM	0	2	2	0	0	0	3	0	3	5
Total Volume	0	11	11	0	0	0	16	0	16	27
% App. Total	0	100		0	0		100	0		
PHF	.000	.688	.688	.000	.000	.000	.571	.000	.571	.675

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 2



Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM			02:15 PM			02:15 PM		
+0 mins.	0	**4**	**4**	0	0	0	3	0	3
+15 mins.	0	3	3	0	0	0	**7**	0	**7**
+30 mins.	0	2	2	0	0	0	3	0	3
+45 mins.	0	2	2	0	0	0	3	0	3
Total Volume	0	11	11	0	0	0	16	0	16
% App. Total	0	100		0	0		100	0	
PHF	.000	.688	.688	.000	.000	.000	.571	.000	.571

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

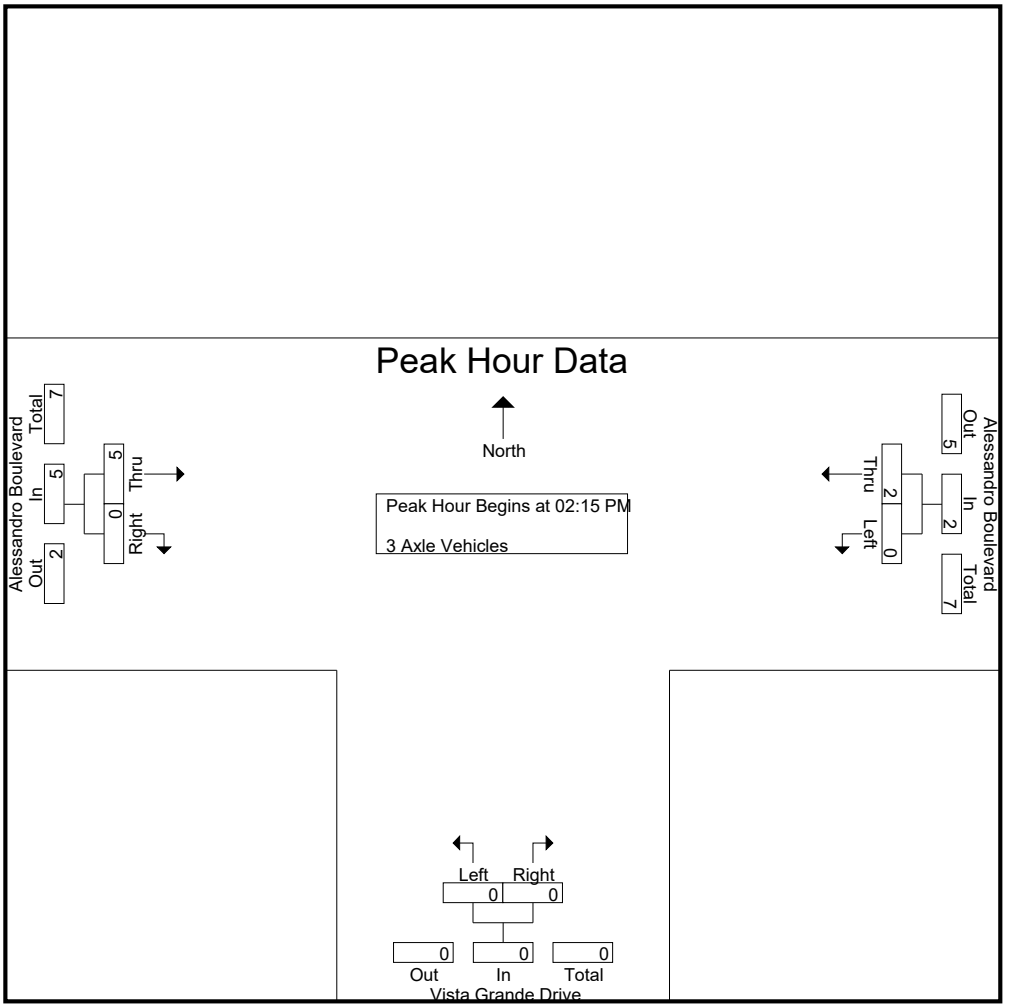
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	0	2	2	0	0	0	0	0	0	2
02:15 PM	0	1	1	0	0	0	1	0	1	2
02:30 PM	0	0	0	0	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	3	0	3	3
Total	0	3	3	0	0	0	5	0	5	8
03:00 PM	0	1	1	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	2	0	2	2
03:30 PM	0	1	1	0	0	0	1	0	1	2
03:45 PM	0	1	1	0	0	0	0	0	0	1
Total	0	3	3	0	0	0	3	0	3	6
Grand Total	0	6	6	0	0	0	8	0	8	14
Apprch %	0	100		0	0		100	0		
Total %	0	42.9	42.9	0	0	0	57.1	0	57.1	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	0	**1**	**1**	0	0	0	1	0	1	2
02:30 PM	0	0	0	0	0	0	1	0	1	1
02:45 PM	0	0	0	0	0	0	**3**	0	**3**	**3**
03:00 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	2	2	0	0	0	5	0	5	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.417	.000	.417	.583

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018



Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM			02:15 PM			02:15 PM		
+0 mins.	0	**1**	**1**	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	**3**	0	**3**
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	2	2	0	0	0	5	0	5
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.417	.000	.417

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

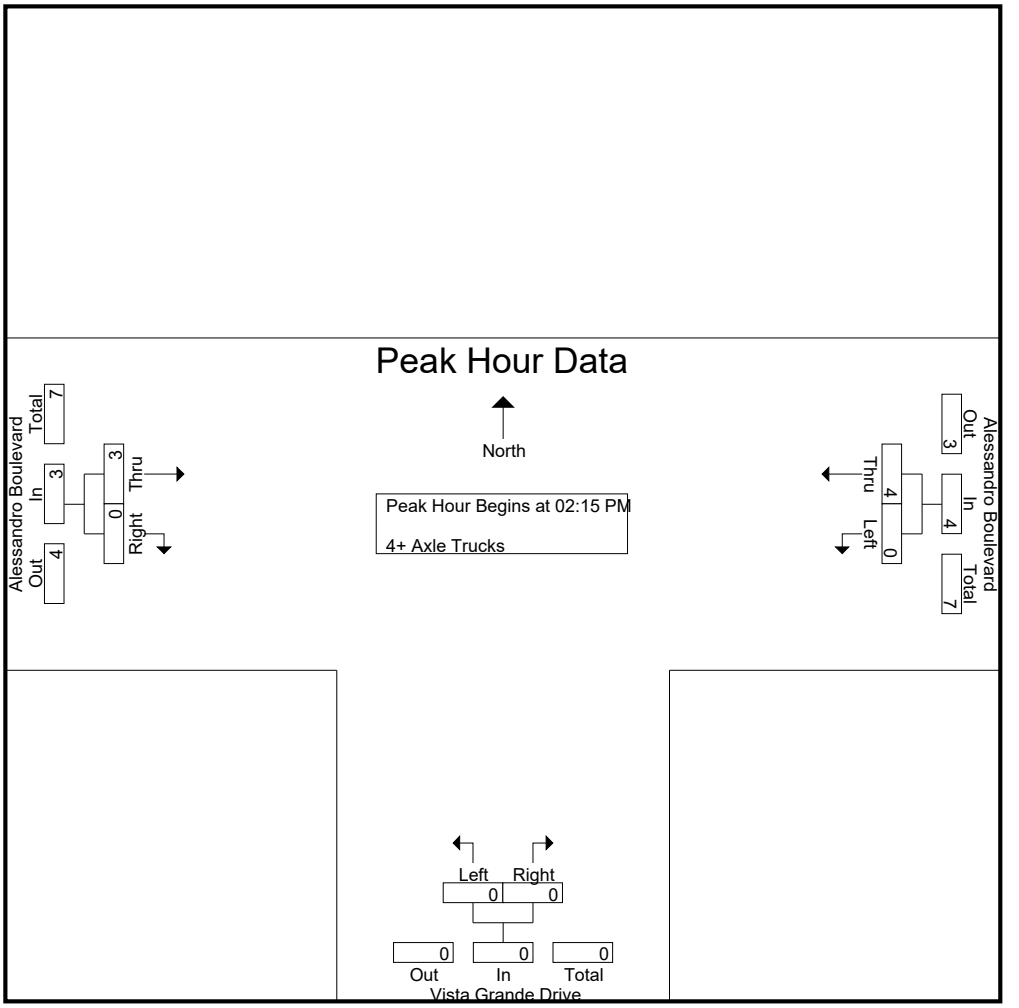
	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
02:00 PM	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	2	2	0	0	0	1	0	1	3
02:30 PM	0	1	1	0	0	0	2	0	2	3
02:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	3	3	0	0	0	4	0	4	7
03:00 PM	0	1	1	0	0	0	0	0	0	1
03:15 PM	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	0	0	0	0	0	0	1
Grand Total	0	4	4	0	0	0	4	0	4	8
Apprch %	0	100		0	0		100	0		
Total %	0	50	50	0	0	0	50	0	50	

	Alessandro Boulevard Westbound			Vista Grande Drive Northbound			Alessandro Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 02:15 PM										
02:15 PM	0	**2**	**2**	0	0	0	1	0	1	**3**
02:30 PM	0	1	1	0	0	0	**2**	0	**2**	3
02:45 PM	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	4	4	0	0	0	3	0	3	7
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.375	.000	.375	.583

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City of Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03_RIV_Vista Grande_Alessandro PM
Site Code : 05118807
Start Date : 10/25/2018



Peak Hour Analysis From 02:15 PM to 03:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	02:15 PM			02:15 PM			02:15 PM		
+0 mins.	0	**2**	**2**	0	0	0	1	0	1
+15 mins.	0	1	1	0	0	0	**2**	0	**2**
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	4	4	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.375	.000	.375

Location: Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

PEDESTRIANS

	North Leg Dead End	East Leg Alessandro Boulevard	South Leg Vista Grande Drive	West Leg Alessandro Boulevard	
	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 Alessandro Boulevard	South Leg Vista Grande Drive	West Leg Alessandro Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
2:00 PM	0	0	0	0	0
2:15 PM	0	0	0	0	0
2:30 PM	0	0	0	0	0
2:45 PM	0	1	0	0	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
TOTAL VOLUMES:	0	1	0	0	1

Location: Riverside
N/S: Vista Grande Drive
E/W: Alessandro Boulevard

Date: 10/25/2018
Day: Thursday

BICYCLES

	Southbound Dead End			Westbound Alessandro Boulevard			Northbound Vista Grande Drive			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	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	1	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Dead End			Westbound Alessandro Boulevard			Northbound Vista Grande Drive			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
2:00 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 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	1	0	1
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	1	0	0	0	3	1	5

INTERSECTION TURNING MOVEMENT COUNTS

T816

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

DATE: Wed, May 23, 18

LOCATION: Moreno Valley
NORTH & SOUTH: San Gorgonio
EAST & WEST: Alessandro

PROJECT #: SC1761
LOCATION #: 5
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

☐ Add U-Turns to Left Turns

		NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
	LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL 1	ET 3	ER X	WL X	WT 3	WR 1	TOTAL
AM	7:00 AM	0	0	0	2	0	2	2	224	0	0	667	7	904
	7:15 AM	0	0	0	2	0	5	1	277	0	0	713	6	1,004
	7:30 AM	0	0	0	5	0	2	4	306	0	0	525	10	852
	7:45 AM	0	0	0	3	0	5	4	351	0	0	586	3	952
	8:00 AM	0	0	0	6	0	1	4	260	0	0	591	5	867
	8:15 AM	0	0	0	6	0	5	6	272	0	0	493	1	783
	8:30 AM	0	0	0	1	0	4	3	255	0	0	431	7	701
	8:45 AM	0	0	0	5	0	3	9	234	0	0	353	4	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	0	0	0	30	0	27	33	2,179	0	0	4,359	43	6,675
	APPROACH %	0%	0%	0%	53%	0%	47%	1%	98%	0%	0%	99%	1%	
	APP/DEPART	0	/	76	57	/	0	2,216	/	2,209	4,402	/	4,390	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	12	0	14	11	1,158	0	0	2,491	26	3,715
	APPROACH %	0%	0%	0%	46%	0%	54%	1%	99%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.813			0.823			0.875		0.924
	APP/DEPART	0	/	37	26	/	0	1,172	/	1,170	2,517	/	2,508	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	27	0	13	6	495	0	0	423	7	971
	4:15 PM	0	0	0	14	0	5	2	486	0	0	473	3	983
	4:30 PM	0	0	0	7	0	1	1	514	0	0	501	2	1,026
	4:45 PM	0	0	0	8	0	6	1	522	0	0	431	4	972
	5:00 PM	0	0	0	2	0	3	2	555	0	0	534	3	1,099
	5:15 PM	0	0	0	3	0	3	5	568	0	0	444	1	1,024
	5:30 PM	0	0	0	7	0	3	6	675	0	0	484	5	1,180
	5:45 PM	0	0	0	5	0	2	13	471	0	0	405	3	899
	VOLUMES	0	0	0	73	0	36	36	4,286	0	0	3,695	28	8,168
	APPROACH %	0%	0%	0%	67%	0%	33%	1%	99%	0%	0%	99%	1%	
	APP/DEPART	0	/	64	109	/	0	4,335	/	4,360	3,724	/	3,744	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	20	0	15	14	2,320	0	0	1,893	13	4,278
	APPROACH %	0%	0%	0%	57%	0%	43%	1%	99%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.625			0.856			0.888		0.906
	APP/DEPART	0	/	27	35	/	0	2,336	/	2,341	1,907	/	1,910	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	1	0	1
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	4	0	4
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	1	0	1
0	0	0	1	1
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	13	1	14
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	1	1
0	0	0	0	0
0	0	1	3	4

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
0	1	0	3
0	2	0	0
0	0	0	0
0	1	0	0
0	0	0	1
0	0	0	0
0	0	0	1
0	1	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	5	0	6
0	4	0	3
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	1
0	0	0	0
0	0	0	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	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

San Gorgonio
NORTH SIDE

Alessandro WEST SIDE — EAST SIDE **Alessandro**

SOUTH SIDE
San Gorgonio

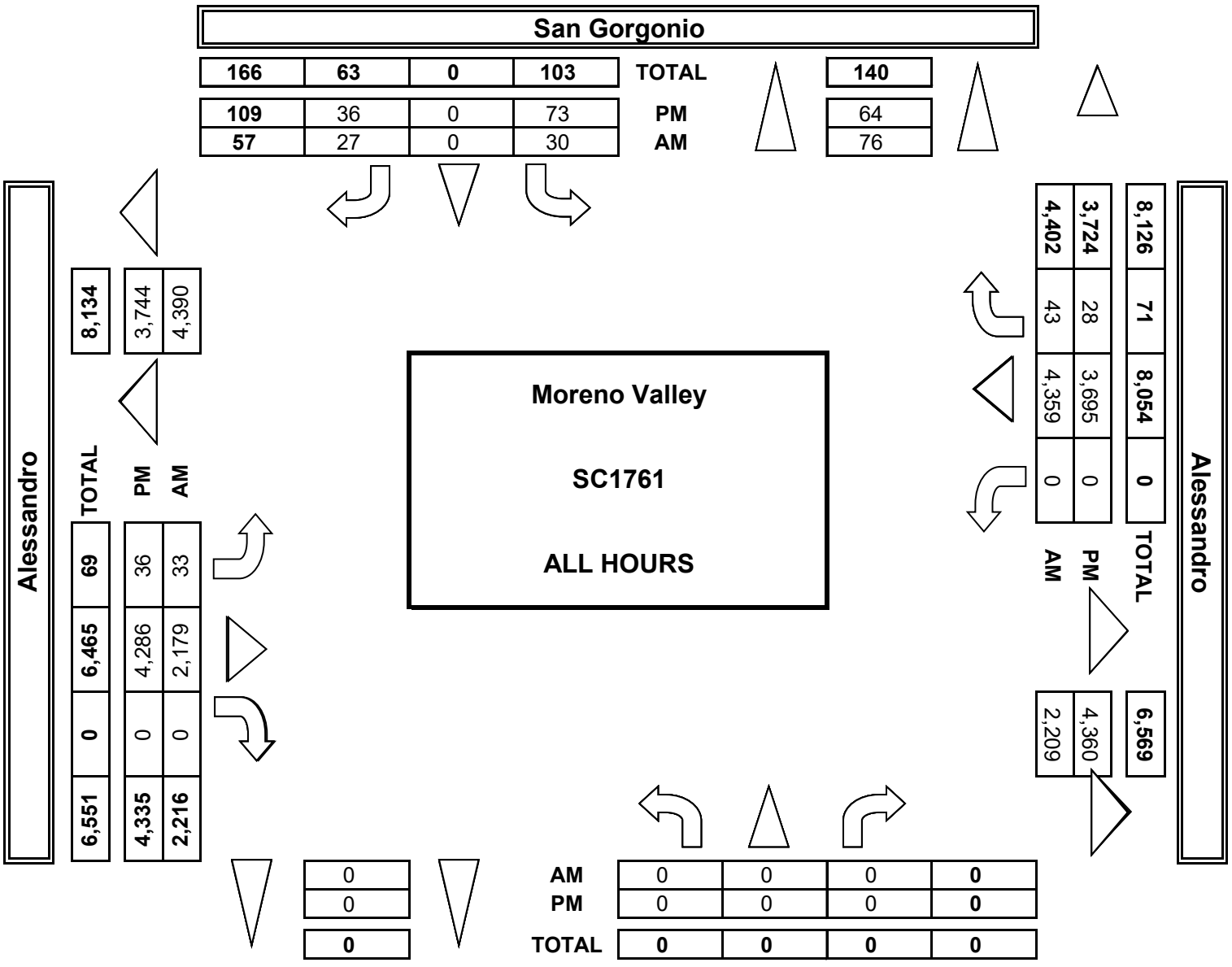
		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	1	1
	7:30 AM	0	1	0	0	1
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	1	0	1
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	2	0	2
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	0	1	3	1	5
PM	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	0	1	1
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	1	0	1
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	1	1
	5:30 PM	0	0	0	1	1
	5:45 PM	0	0	0	0	0
	TOTAL	0	0	1	3	4

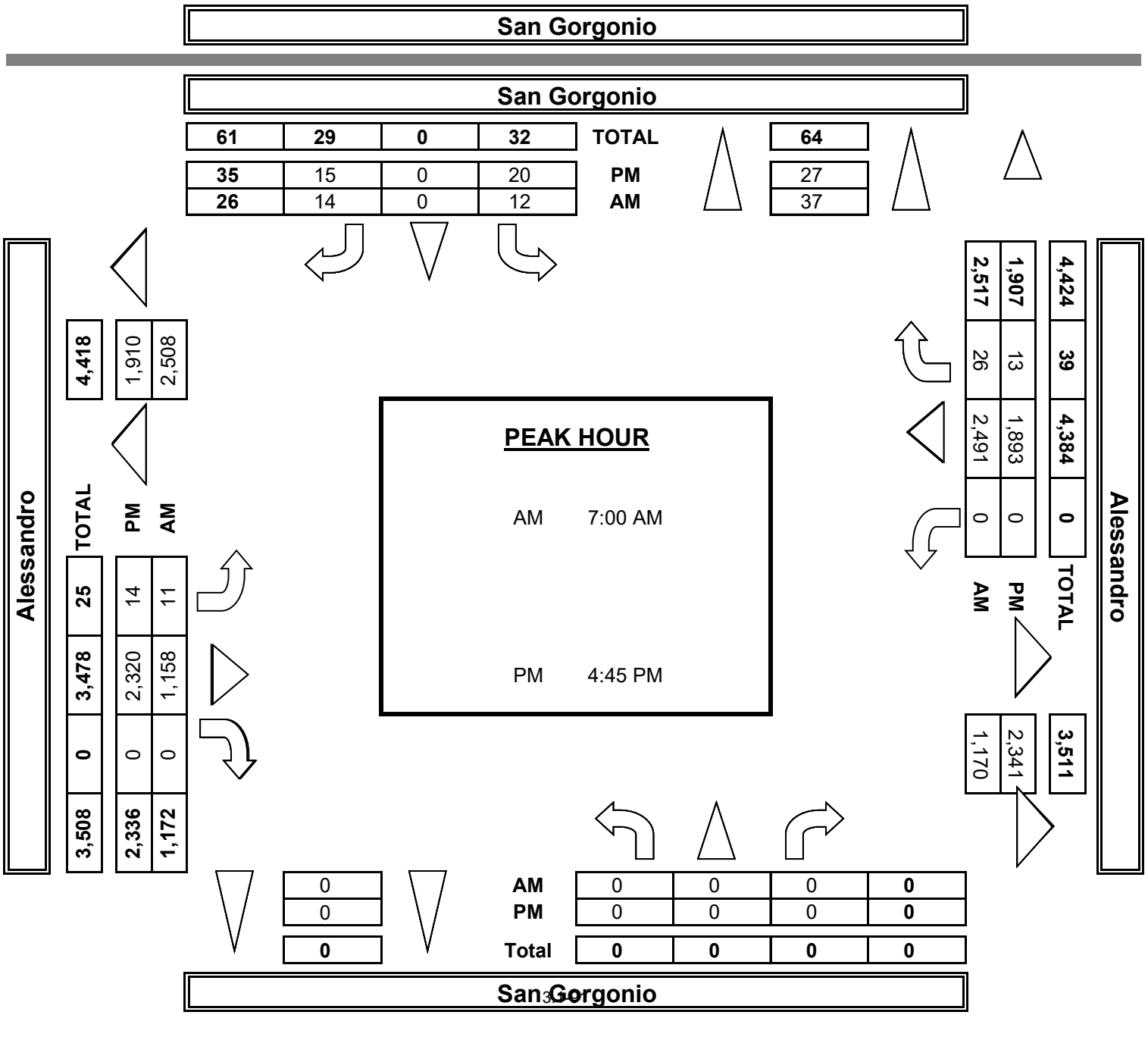
		PEDESTRIAN CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	0	0	0	0	0
PM	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	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	0	0	0	0	0

		BICYCLE CROSSINGS				
		ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	1	1
	7:30 AM	0	1	0	0	1
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	1	0	1
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	2	0	2
	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	3	1	5
PM	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	0	1	1
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	1	0	1
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	1	1
	5:30 PM	0	0	0	1	1
	5:45 PM	0	0	0	0	0
	TOTAL	0	0	1	3	4

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	2	X	1	1	3	X	X	3	1	
AM	7:00 AM	0	0	0	0	0	2	2	204	0	0	640	4	852
	7:15 AM	0	0	0	2	0	5	1	254	0	0	673	4	939
	7:30 AM	0	0	0	2	0	2	4	282	0	0	486	9	785
	7:45 AM	0	0	0	2	0	5	4	333	0	0	549	1	894
	8:00 AM	0	0	0	6	0	1	4	244	0	0	565	2	822
	8:15 AM	0	0	0	4	0	4	6	250	0	0	470	1	735
	8:30 AM	0	0	0	1	0	4	3	229	0	0	403	4	644
	8:45 AM	0	0	0	3	0	2	8	207	0	0	322	2	544
	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	20	0	25	32	2,003	0	0	4,108	27	6,218
	APPROACH %	0%	0%	0%	44%	0%	56%	2%	98%	0%	0%	99%	1%	
	APP/DEPART	0	/	59	45	/	0	2,038	/	2,023	4,135	/	4,136	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	6	0	14	11	1,073	0	0	2,348	18	3,472
	APPROACH %	0%	0%	0%	30%	0%	70%	1%	99%	0%	0%	99%	1%	
	PEAK HR FACTOR		0.000			0.714			0.803			0.874		0.923
	APP/DEPART	0	/	29	20	/	0	1,086	/	1,079	2,366	/	2,364	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	23	0	12	6	459	0	0	403	4	907
	4:15 PM	0	0	0	13	0	4	1	466	0	0	452	3	939
	4:30 PM	0	0	0	6	0	1	1	489	0	0	483	1	981
	4:45 PM	0	0	0	6	0	6	1	501	0	0	411	1	926
	5:00 PM	0	0	0	1	0	2	2	540	0	0	510	1	1,056
	5:15 PM	0	0	0	3	0	2	5	544	0	0	429	1	984
	5:30 PM	0	0	0	4	0	3	6	655	0	0	471	5	1,144
	5:45 PM	0	0	0	5	0	2	13	455	0	0	388	2	865
	VOLUMES	0	0	0	61	0	32	35	4,109	0	0	3,547	18	7,816
	APPROACH %	0%	0%	0%	66%	0%	34%	1%	99%	0%	0%	99%	1%	
	APP/DEPART	0	/	53	93	/	0	4,157	/	4,171	3,566	/	3,592	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	0	0	0	14	0	13	14	2,240	0	0	1,821	8	4,113
	APPROACH %	0%	0%	0%	52%	0%	48%	1%	99%	0%	0%	100%	0%	
	PEAK HR FACTOR		0.000			0.563			0.852			0.895		0.898
	APP/DEPART	0	/	22	27	/	0	2,256	/	2,255	1,830	/	1,836	0

		U-TURNS					RTOR			
		NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
							0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	1	0	1
	7:15 AM	0	0	1	0	1	0	2	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	1	0	1	0	1	0	0
	8:00 AM	0	0	1	0	1	0	0	0	1
	8:15 AM	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	1	0	1
	9:00 AM	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	3	0	3	0	5	0	3
	PEAK HR VOLUMES						0	4	0	1
PM	03:00 PM	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	3	0	3	0	0	0	1
	4:15 PM	0	0	6	0	6	0	0	0	0
	4:30 PM	0	0	1	0	1	0	0	0	0
	4:45 PM	0	0	0	1	1	0	0	0	0
	5:00 PM	0	0	1	0	1	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	1	0	1	0	0	0	1
	5:45 PM	0	0	1	0	1	0	0	0	0
	VOLUMES	0	0	13	1	14	0	0	0	2
	PEAK HR VOLUMES						0	0	0	1

San Gorgonio

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

San Gorgonio

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◀ W E ▶ S ▼

		NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	2	X	1	1	3	X	X	3	1	
AM	7:00 AM	0	0	0	0	0	0	0	16	0	0	19	1	36
	7:15 AM	0	0	0	0	0	0	0	14	0	0	29	0	43
	7:30 AM	0	0	0	1	0	0	0	19	0	0	27	0	47
	7:45 AM	0	0	0	1	0	0	0	13	0	0	26	2	42
	8:00 AM	0	0	0	0	0	0	0	12	0	0	19	1	32
	8:15 AM	0	0	0	1	0	1	0	18	0	0	12	0	32
	8:30 AM	0	0	0	0	0	0	0	23	0	0	17	2	42
	8:45 AM	0	0	0	2	0	1	1	20	0	0	24	0	48
	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	5	0	2	1	135	0	0	173	6	322
	APPROACH %	0%	0%	0%	71%	0%	29%	1%	99%	0%	0%	97%	3%	
	APP/DEPART	0	/	7	7	/	0	136	/	140	179	/	175	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	2	0	0	0	62	0	0	101	3	168
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	97%	3%	
	PEAK HR FACTOR		0.000			0.500			0.816			0.897		0.894
	APP/DEPART	0	/	3	2	/	0	62	/	64	104	/	101	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	2	0	1	0	24	0	0	14	1	42
	4:15 PM	0	0	0	0	0	1	1	18	0	0	17	0	37
	4:30 PM	0	0	0	1	0	0	0	17	0	0	13	1	32
	4:45 PM	0	0	0	2	0	0	0	14	0	0	16	2	34
	5:00 PM	0	0	0	0	0	1	0	12	0	0	18	0	31
	5:15 PM	0	0	0	0	0	1	0	22	0	0	11	0	34
	5:30 PM	0	0	0	1	0	0	0	17	0	0	9	0	27
	5:45 PM	0	0	0	0	0	0	0	11	0	0	14	0	25
	VOLUMES	0	0	0	6	0	4	1	135	0	0	112	4	262
	APPROACH %	0%	0%	0%	60%	0%	40%	1%	99%	0%	0%	97%	3%	
	APP/DEPART	0	/	5	10	/	0	136	/	141	116	/	116	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	5	0	2	1	73	0	0	60	4	145
	APPROACH %	0%	0%	0%	71%	0%	29%	1%	99%	0%	0%	94%	6%	
	PEAK HR FACTOR		0.000			0.583			0.771			0.889		0.863
	APP/DEPART	0	/	5	7	/	0	74	/	78	64	/	62	0

U-TURNS

		NB	SB	EB	WB	TTL
AM	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
	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
	VOLUMES	0	0	0	0	0
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	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
	VOLUMES	0	0	0	0	0

RTOR

		NRR	SRR	ERR	WRR
	LANES:	0	0	0	0
AM	7:00 AM	0	0	0	0
	7:15 AM	0	0	0	0
	7:30 AM	0	0	0	0
	7:45 AM	0	0	0	0
	8:00 AM	0	0	0	0
	8:15 AM	0	0	0	0
	8:30 AM	0	0	0	0
	8:45 AM	0	0	0	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
	VOLUMES	0	0	0	0
	PEAK HR VOLUMES	0	0	0	0
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	0	0	0	0
	4:15 PM	0	0	0	0
	4:30 PM	0	0	0	0
	4:45 PM	0	0	0	0
	5:00 PM	0	0	0	0
	5:15 PM	0	0	0	0
	5:30 PM	0	0	0	0
	5:45 PM	0	0	0	0
	VOLUMES	0	0	0	0
	PEAK HR VOLUMES	0	0	0	0

San Gorgonio

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

San Gorgonio

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

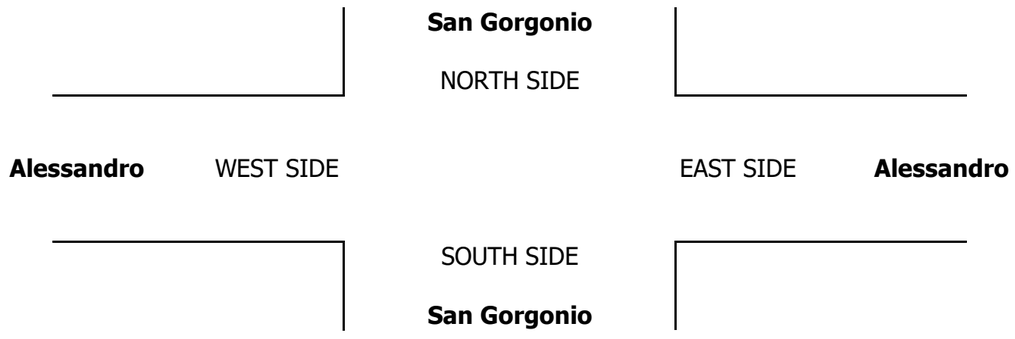
AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL 1	ET 3	ER X	WL X	WT 3	WR 1	TOTAL

U-TURNS					RTOR			
NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
					0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	1	0	0	0	2	0	0	3	2	8	0	0	0	0	0	0	0	0	2
	7:15 AM	0	0	0	0	0	0	0	4	0	0	4	0	8	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	3	1	5	0	0	1	0	1	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	3	0	0	5	0	8	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	0	0	3	0	4	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	1	0	0	5	0	6	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	3	0	0	3	1	7	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	0	0	1	0	0	0	17	0	0	27	4	50	0	0	1	0	1	0	0	0	2
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	94%	0%	0%	87%	13%										
	APP/DEPART	0	/	4	1	/	0	18	/	18	31	/	28	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	0	0	1	0	0	0	10	0	0	15	3	30						0	0	0	2
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	91%	0%	0%	83%	17%										
	PEAK HR FACTOR		0.000			0.250			0.688			0.900		0.938									
	APP/DEPART	0	/	3	1	/	0	11	/	11	18	/	16	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	1	0	0	0	5	0	0	2	0	8	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	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	4	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	3	0	0	1	0	4	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	1	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	2	0	0	0	13	0	0	10	0	25	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%										
	APP/DEPART	0	/	0	2	/	0	13	/	15	10	/	10	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	0	0	1	0	0	0	10	0	0	5	0	16						0	0	0	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR		0.000			0.250			0.500			0.625		0.500									
	APP/DEPART	0	/	0	1	/	0	10	/	11	5	/	5	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
LANES:	NL X	NT X	NR X	SL 2	ST X	SR 1	EL 1	ET 3	ER X	WL X	WT 3	WR 1	TOTAL

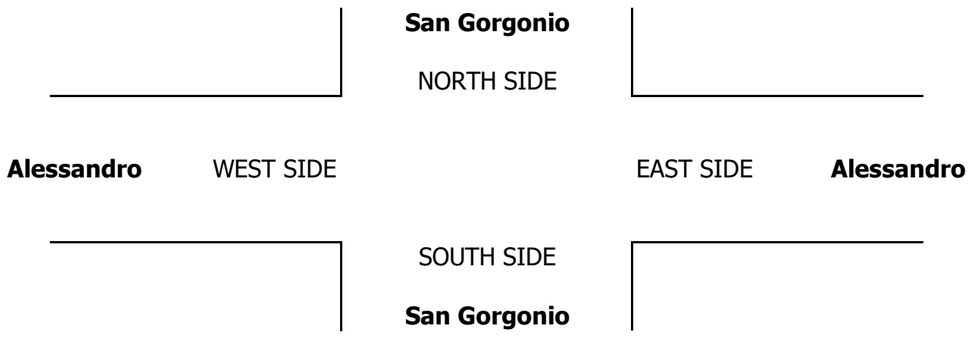
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	1	0	0	0	2	0	0	3	0	6	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	3	0	0	4	2	9	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	2	0	0	0	2	0	0	6	0	10	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	2	0	0	3	2	7	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	1	0	0	0	1	0	0	5	0	7	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	7	1	9	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	3	0	0	4	1	8	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	0	0	4	0	0	0	15	0	0	36	6	61	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	86%	14%										
	APP/DEPART	0	/	6	4	/	0	15	/	19	42	/	36	0									
	BEGIN PEAK HR	7:15 AM																					
	VOLUMES	0	0	0	1	0	0	0	7	0	0	19	4	31						0	0	0	1
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	83%	17%										
	PEAK HR FACTOR	0.000			0.125			0.583			0.719			0.775									
	APP/DEPART	0	/	4	1	/	0	7	/	8	23	/	19	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	1	0	0	0	6	0	0	2	1	10	0	0	0	0	0	0	0	0	1
	4:15 PM	0	0	0	1	0	0	0	2	0	0	3	0	6	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	5	0	0	2	0	7	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	4	0	0	1	1	6	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	4	2	7	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	3	0	4	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	2	0	0	0	2	0	0	2	0	6	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	1	3	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	4	0	0	0	22	0	0	18	5	49	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	78%	22%										
	APP/DEPART	0	/	5	4	/	0	22	/	26	23	/	18	0									
	BEGIN PEAK HR	4:00 PM																					
	VOLUMES	0	0	0	2	0	0	0	17	0	0	8	2	29						0	0	0	1
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	80%	20%										
	PEAK HR FACTOR	0.000			0.500			0.708			0.833			0.725									
	APP/DEPART	0	/	2	2	/	0	17	/	19	10	/	8	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	2	X	1	1	3	X	X	3	1	

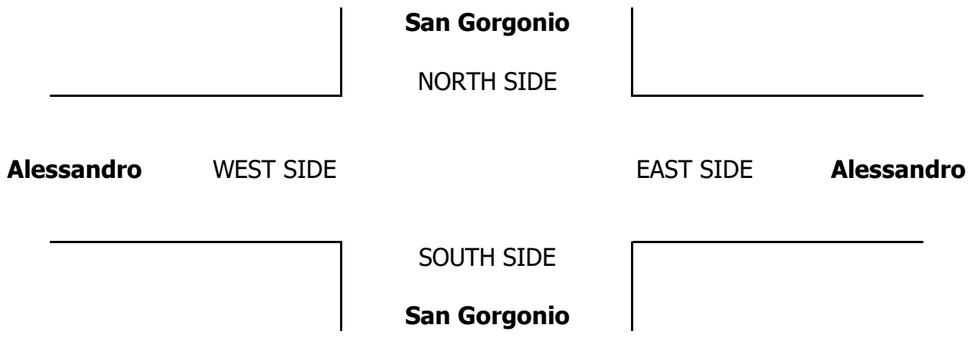
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0 0 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 1 0	0 1 0	1	0	0	0	0
	7:30 AM	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
	8:00 AM	0 0 0	0 0 0	0 0 0	0 1 0	0	0	0	0	0
	8:15 AM	0 0 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	0	0
	8:45 AM	0 0 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	0	0
	9:15 AM	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
	9:45 AM	0 0 0	0 0 0	0 0 0	0 0 0	0	0	0	0	0
	VOLUMES	0 0 0	0 0 0	0 1 0	0 1 0	2	0	0	0	0
	APPROACH %	0% 0% 0%	0% 0% 0%	0% 100% 0%	0% 100% 0%					
	APP/DEPART	0 / 0	0 / 0	1 / 1	1 / 1	0				
	BEGIN PEAK HR	7:15 AM								
	VOLUMES	0 0 0	0 0 0	0 1 0	0 1 0	2	0	0	0	0
	APPROACH %	0% 0% 0%	0% 0% 0%	0% 100% 0%	0% 100% 0%					
	PEAK HR FACTOR	0.000	0.000	0.250	0.250	0.500				
	APP/DEPART	0 / 0	0 / 0	1 / 1	1 / 1	0				
PM	03:00 PM	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
	3:30 PM	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
	4:00 PM	0 0 0	0 0 0	0 0 0	0 1 1	2	0	0	0	0
	4:15 PM	0 0 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	0	0
	4:45 PM	0 0 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	0	0
	5:15 PM	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
	5:45 PM	0 0 0	0 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 1	2	0	0	0	0
	APPROACH %	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 50% 50%					
	APP/DEPART	0 / 1	0 / 0	0 / 0	2 / 1	0				
	BEGIN PEAK HR	3:15 PM								
	VOLUMES	0 0 0	0 0 0	0 0 0	0 1 1	2	0	0	0	0
	APPROACH %	0% 0% 0%	0% 0% 0%	0% 0% 0%	0% 50% 50%					
	PEAK HR FACTOR	0.000	0.000	0.000	0.250	0.250				
	APP/DEPART	0 / 1	0 / 0	0 / 0	2 / 1	0				



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	San Gorgonio	LOCATION #:	5
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 6:	NOTES:	
BUSES		AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND San Gorgonio			SOUTHBOUND San Gorgonio			EASTBOUND Alessandro			WESTBOUND Alessandro			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	X	X	X	2	X	1	1	3	X	X	3	1	
AM 7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:15 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
7:30 AM	0	0	0	0	0	0	0	2	0	0	3	0	5
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	2	0	0	1	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
8:45 AM	0	0	0	0	0	0	0	1	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	0	0	0	0	0	0	8	0	0	14	0	22
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	8	/	8	14	/	14	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	4	0	0	10	0	14
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.500			0.833		0.700
APP/DEPART	0	/	0	0	/	0	4	/	4	10	/	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	0	0	0	0	0	0	0	1	0	1
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	2	0	2
5:00 PM	0	0	0	0	0	0	0	2	0	0	1	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	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	3	0	0	0	0	3
VOLUMES	0	0	0	0	0	0	0	7	0	0	7	0	14
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	7	/	7	7	/	7	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	0	0	0	0	0	0	0	3	0	0	5	0	8
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.375			0.625		0.667
APP/DEPART	0	/	0	0	/	0	3	/	3	5	/	5	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

San Gorgonio

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

San Gorgonio

INTERSECTION TURNING MOVEMENT COUNTS

T816

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

DATE: Wed, May 23, 18

LOCATION: Moreno Valley
NORTH & SOUTH: Meridian
EAST & WEST: Alessandro

PROJECT #: SC1761
LOCATION #: 6
CONTROL: SIGNAL

NOTES:

AM / PM / MD / OTHER / OTHER

◄ W E ► ▲ N S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	LANES:	NL 2	NT 2	NR 2	SL 2	ST 2	SR 1	EL 1	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
AM	7:00 AM	139	154	8	20	27	17	22	164	57	14	488	95	1,205
	7:15 AM	149	170	12	16	22	30	29	197	48	20	521	107	1,321
	7:30 AM	113	156	16	21	12	19	31	216	51	24	423	127	1,209
	7:45 AM	93	143	8	30	20	30	38	217	51	30	455	124	1,239
	8:00 AM	137	157	22	30	16	23	32	206	51	23	464	111	1,272
	8:15 AM	98	121	9	15	19	20	33	204	33	22	409	104	1,087
	8:30 AM	102	90	9	19	11	23	36	209	30	20	348	111	1,008
	8:45 AM	107	72	10	17	12	18	29	188	28	12	268	81	842
	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	938	1,063	94	168	139	180	250	1,601	349	165	3,376	860	9,183
	APPROACH %	45%	51%	4%	34%	29%	37%	11%	73%	16%	4%	77%	20%	
	APP/DEPART	2,095	/	2,188	487	/	650	2,200	/	1,836	4,401	/	4,509	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	492	626	58	97	70	102	130	836	201	97	1,863	469	5,041
	APPROACH %	42%	53%	5%	36%	26%	38%	11%	72%	17%	4%	77%	19%	
	PEAK HR FACTOR		0.888			0.841			0.953			0.937		0.954
	APP/DEPART	1,176	/	1,234	269	/	365	1,167	/	978	2,429	/	2,464	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	84	73	26	33	64	53	47	377	93	29	324	88	1,291
	4:15 PM	68	51	31	39	111	64	39	393	100	50	340	57	1,343
	4:30 PM	87	75	31	45	142	70	44	363	110	49	330	47	1,393
	4:45 PM	63	50	28	33	144	50	29	354	116	32	297	25	1,221
	5:00 PM	89	75	60	50	163	95	28	431	142	31	340	30	1,534
	5:15 PM	98	63	33	45	156	78	31	394	130	31	306	27	1,392
	5:30 PM	69	55	28	27	122	49	21	398	135	27	315	31	1,277
	5:45 PM	50	28	19	24	83	45	28	435	123	38	305	25	1,203
	VOLUMES	608	470	256	296	985	504	267	3,145	949	287	2,557	330	10,654
	APPROACH %	46%	35%	19%	17%	55%	28%	6%	72%	22%	9%	81%	10%	
	APP/DEPART	1,334	/	1,074	1,785	/	2,223	4,361	/	3,673	3,174	/	3,684	0
	BEGIN PEAK HR		4:30 PM											
	VOLUMES	337	263	152	173	605	293	132	1,542	498	143	1,273	129	5,540
	APPROACH %	45%	35%	20%	16%	56%	27%	6%	71%	23%	9%	82%	8%	
	PEAK HR FACTOR		0.839			0.869			0.903			0.907		0.903
	APP/DEPART	752	/	528	1,071	/	1,248	2,172	/	1,856	1,545	/	1,908	0

U-TURNS

NB	SB	EB	WB	TTL
0	0	0	0	
0	1	5	0	6
0	2	1	0	3
0	4	1	2	7
0	4	3	0	7
0	6	2	1	9
0	6	3	0	9
0	3	0	0	3
0	4	0	0	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	30	15	3	48
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	5	4	0	9
0	1	0	0	1
1	5	2	0	8
0	0	1	0	1
0	1	1	0	2
1	5	3	0	9
0	4	1	0	5
0	3	5	0	8
2	24	17	0	43

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
7	11	28	19
7	12	25	21
7	14	22	25
1	12	18	30
11	5	23	35
7	12	15	22
3	11	7	32
7	11	11	27
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
50	88	149	211
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
18	27	27	26
22	28	9	28
16	26	15	25
21	22	38	8
21	39	17	12
13	27	23	10
12	20	33	12
10	27	16	11
133	216	178	132
26	43	88	111
71	114	93	55

Meridian

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

Meridian

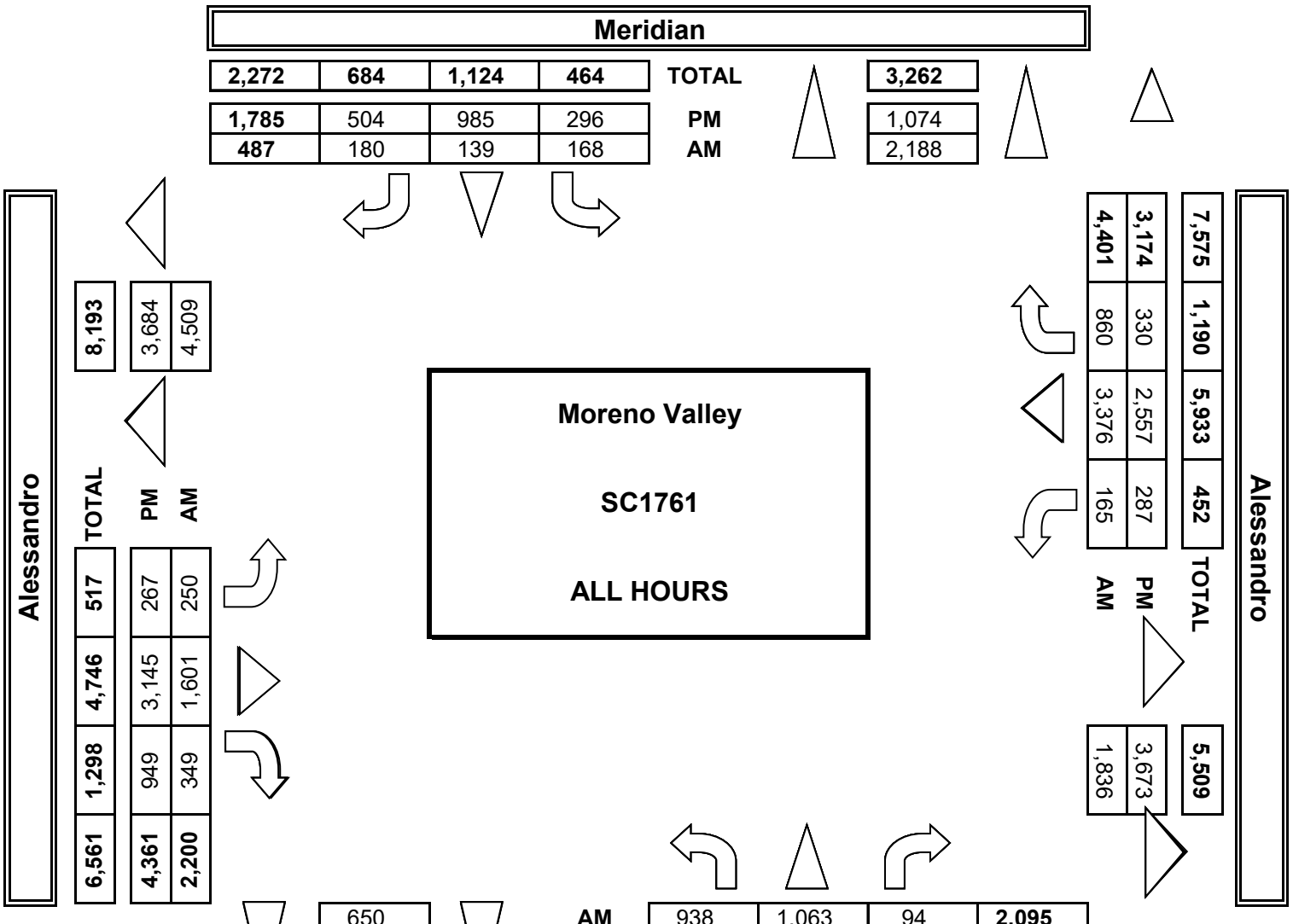
		ALL PED AND BIKE				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	1	1
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	1	0	1
	8:30 AM	1	0	0	0	1
	8:45 AM	0	0	2	0	2
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	1	0	3	1	5
PM	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	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	1	0	1
	4:45 PM	0	1	0	1	2
	5:00 PM	1	0	0	0	1
	5:15 PM	1	2	2	0	5
	5:30 PM	0	9	0	1	10
	5:45 PM	0	2	0	0	2
	TOTAL	2	14	3	2	21

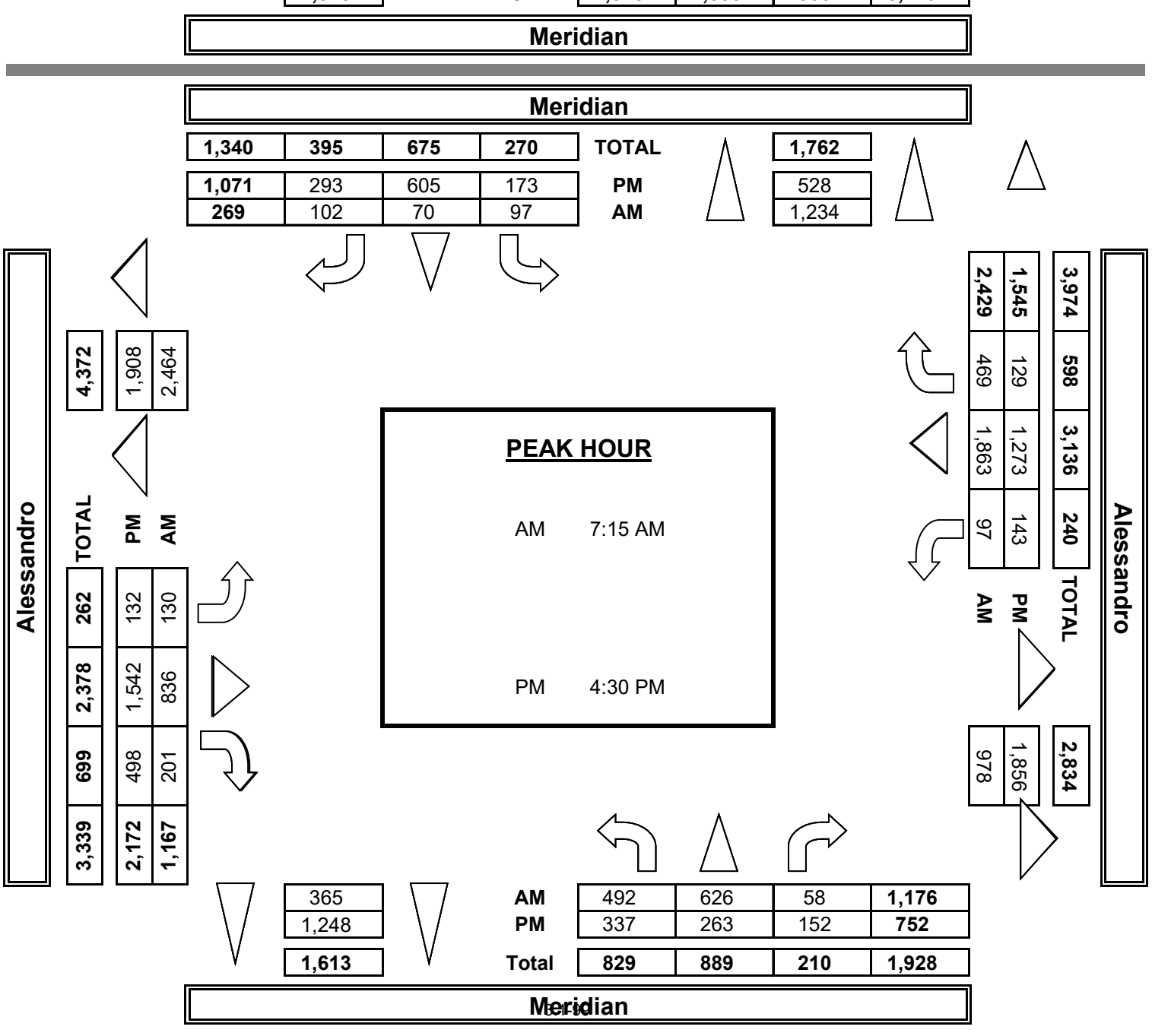
		PEDESTRIAN CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
AM	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	1	1
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	9:00 AM	0	0	0	0	0
	9:15 AM	0	0	0	0	0
	9:30 AM	0	0	0	0	0
	9:45 AM	0	0	0	0	0
	TOTAL	0	0	0	1	1
PM	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	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	0	0	0	0	0

		BICYCLE CROSSINGS				
		ES	WS	SS	NS	TOTAL
AM	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	1	0	1
	8:30 AM	1	0	0	0	1
	8:45 AM	0	0	2	0	2
	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	1	0	3	0	4
PM	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	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	1	0	1
	4:45 PM	0	1	0	1	2
	5:00 PM	1	0	0	0	1
	5:15 PM	1	2	2	0	5
	5:30 PM	0	9	0	1	10
	5:45 PM	0	2	0	0	2
	TOTAL	2	14	3	2	21

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	Meridian	LOCATION #:	6
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ▼ S ◄ W E ►

	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
LANES:	NL 2	NT 2	NR 2	SL 2	ST 2	SR 1	EL 1	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
7:00 AM	133	146	4	18	25	16	16	148	52	12	471	80	1,121
7:15 AM	140	166	10	14	20	27	24	179	48	16	494	102	1,240
7:30 AM	104	142	15	17	9	17	27	197	49	23	388	115	1,103
7:45 AM	88	135	6	24	17	27	37	203	49	27	425	114	1,152
8:00 AM	127	149	20	27	15	20	29	188	49	21	437	100	1,182
8:15 AM	94	116	8	12	16	16	31	189	27	20	387	91	1,007
8:30 AM	96	81	7	14	10	17	28	194	27	20	325	103	922
8:45 AM	100	61	9	14	9	16	24	169	26	11	248	74	761
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	882	996	79	140	121	156	216	1,467	327	150	3,175	779	8,488
APPROACH %	45%	51%	4%	34%	29%	37%	11%	73%	16%	4%	77%	19%	
APP/DEPART	1,957	/	2,004	417	/	596	2,010	/	1,662	4,104	/	4,226	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	459	592	51	68	61	91	110	767	195	85	1,744	431	4,677
APPROACH %	42%	54%	5%	29%	26%	39%	10%	71%	18%	4%	77%	19%	
PEAK HR FACTOR		0.872			0.860			0.933			0.924		0.943
APP/DEPART	1,102	/	1,147	234	/	341	1,079	/	888	2,262	/	2,301	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	79	65	25	30	62	51	40	357	83	28	301	79	1,200
4:15 PM	65	47	29	34	100	63	37	380	92	45	328	53	1,273
4:30 PM	86	70	31	43	133	66	39	346	104	42	319	43	1,322
4:45 PM	61	48	27	32	137	48	25	337	114	29	290	20	1,168
5:00 PM	87	74	58	43	155	91	26	424	138	30	318	25	1,469
5:15 PM	96	61	32	39	138	76	29	381	124	27	297	24	1,324
5:30 PM	66	53	27	25	112	48	18	383	130	26	305	29	1,222
5:45 PM	48	27	18	23	81	42	26	425	117	37	298	22	1,164
VOLUMES	588	445	247	269	918	485	240	3,033	902	264	2,456	295	10,142
APPROACH %	46%	35%	19%	16%	55%	29%	6%	73%	22%	9%	81%	10%	
APP/DEPART	1,280	/	984	1,672	/	2,086	4,175	/	3,529	3,015	/	3,543	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	328	253	148	149	563	281	113	1,488	480	128	1,224	112	5,283
APPROACH %	45%	35%	20%	15%	56%	28%	5%	71%	23%	9%	84%	8%	
PEAK HR FACTOR		0.834			0.866			0.887			0.906		0.899
APP/DEPART	731	/	486	1,001	/	1,173	2,087	/	1,785	1,464	/	1,839	0

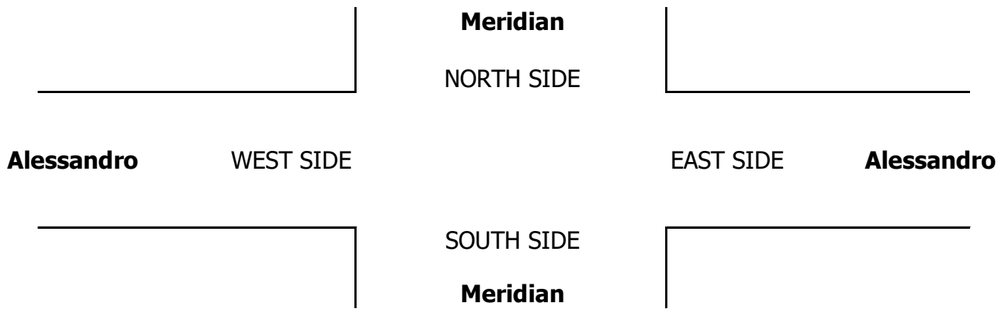
U-TURNS

NB	SB	EB	WB	TTL
0	1	3	0	4
0	2	1	0	3
0	3	1	2	6
0	3	3	0	6
0	6	2	0	8
0	5	3	0	8
0	2	0	0	2
0	4	0	0	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	26	13	2	41
0	0	0	0	0
0	4	4	0	8
0	1	0	0	1
1	4	2	0	7
0	0	1	0	1
0	0	1	0	1
1	4	2	0	7
0	4	1	0	5
0	3	5	0	8
2	20	16	0	38

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
4	11	26	16
6	12	25	20
7	13	22	21
1	10	18	27
10	5	21	34
7	11	14	20
2	8	7	28
6	9	10	26
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
43	79	143	192
0	0	0	0
18	27	24	24
21	27	9	27
16	26	15	23
20	22	38	7
21	38	16	10
13	27	22	9
12	20	32	11
10	26	16	10
131	213	172	121

24	40	86	102
70	113	91	49



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	Meridian	LOCATION #:	6
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

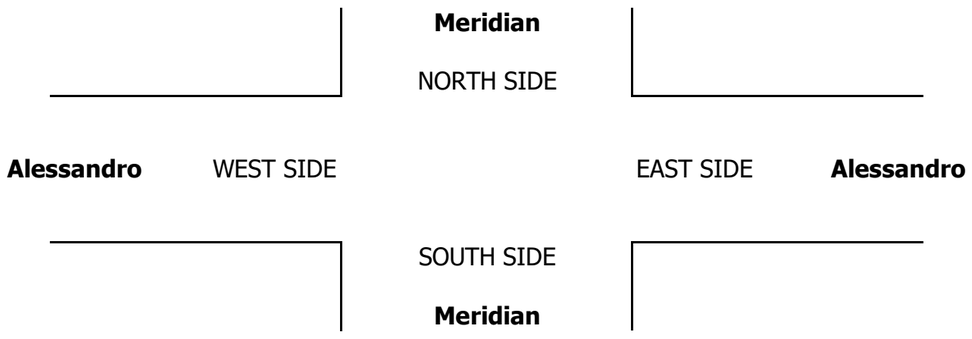
	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	2	2	2	1	1	3	1	2	3	1	
7:00 AM	4	6	1	1	1	0	4	13	5	0	11	8	54
7:15 AM	7	4	0	1	2	1	2	12	0	2	17	1	49
7:30 AM	7	5	0	1	1	1	2	16	0	0	22	5	60
7:45 AM	4	4	1	2	0	0	1	10	1	1	21	7	52
8:00 AM	8	3	0	1	0	2	3	13	2	2	19	6	59
8:15 AM	3	3	1	1	0	2	2	13	4	2	14	3	48
8:30 AM	3	7	0	2	0	3	6	11	2	0	16	5	55
8:45 AM	6	4	0	2	2	2	5	15	2	1	12	3	54
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	42	36	3	11	6	11	25	103	16	8	132	38	431
APPROACH %	52%	44%	4%	39%	21%	39%	17%	72%	11%	4%	74%	21%	
APP/DEPART	81	/	100	28	/	29	144	/	116	178	/	186	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	26	16	1	5	3	4	8	51	3	4	79	19	220
APPROACH %	60%	37%	2%	42%	25%	33%	13%	82%	5%	4%	77%	18%	
PEAK HR FACTOR		0.896			0.750			0.861			0.888		0.917
APP/DEPART	43	/	43	12	/	10	62	/	58	103	/	109	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	5	4	1	2	1	0	5	14	7	1	19	5	64
4:15 PM	2	2	1	5	8	0	1	10	6	5	9	2	51
4:30 PM	0	3	0	2	8	1	2	12	4	5	10	1	48
4:45 PM	1	0	1	1	4	2	3	13	2	1	5	4	37
5:00 PM	1	1	1	5	5	3	1	5	3	1	17	4	47
5:15 PM	0	1	0	3	9	2	2	11	5	3	6	3	45
5:30 PM	2	1	1	1	9	1	1	13	4	1	7	0	41
5:45 PM	1	0	0	1	2	3	1	9	5	0	5	0	27
VOLUMES	12	12	5	20	46	12	16	87	36	17	78	19	360
APPROACH %	41%	41%	17%	26%	59%	15%	12%	63%	26%	15%	68%	17%	
APP/DEPART	29	/	50	78	/	99	139	/	108	114	/	103	0
BEGIN PEAK HR		4:00 PM											
VOLUMES	8	9	3	8	21	3	11	49	19	12	43	12	200
APPROACH %	40%	45%	15%	24%	62%	9%	14%	62%	24%	18%	64%	18%	
PEAK HR FACTOR		0.500			0.654			0.760			0.670		0.781
APP/DEPART	20	/	34	34	/	52	79	/	60	67	/	54	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	0	0
0	0	0	1	1
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	2	1	1	4
0	1	2	3	
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	0	0	1
0	1	1	0	2
0	0	0	0	0
0	0	0	0	0
0	4	1	0	5
2	0	3	3	

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
1	0	2	1
0	0	0	0
0	1	0	1
0	0	0	1
0	0	2	1
0	0	0	0
0	2	0	4
0	2	1	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	5	5	9
0	1	2	3
0	0	0	0
0	0	0	0
0	0	0	0
0	0	3	2
1	0	0	0
0	0	0	0
1	0	0	1
0	1	1	1
0	0	1	1
0	0	1	0
0	1	0	0
2	2	6	5
2	0	3	3



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	Meridian	LOCATION #:	6
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

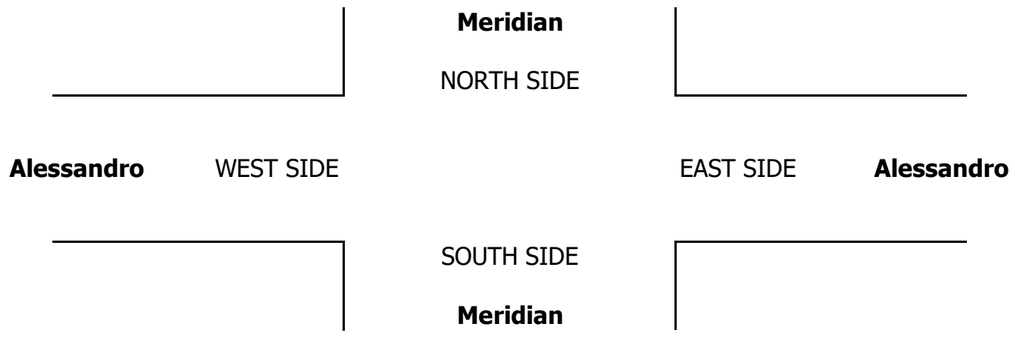
NOTES:

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

	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	2	2	2	1	1	3	1	2	3	1	

U-TURNS					RTOR			
NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
					0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	1	0	0	2	0	0	1	2	1	7	0	0	1	0	1	0	0	0	0
	7:15 AM	1	0	1	0	0	2	2	3	0	0	3	2	14	0	0	0	0	0	0	0	0	0
	7:30 AM	1	2	0	0	0	1	1	0	0	0	4	2	11	0	0	0	0	0	0	0	0	1
	7:45 AM	0	1	0	0	0	2	0	1	1	1	2	1	9	0	0	0	0	0	0	1	0	1
	8:00 AM	1	0	2	0	0	0	0	1	0	0	2	0	6	0	0	0	0	0	1	0	0	0
	8:15 AM	0	1	0	0	0	1	0	0	0	0	4	2	8	0	0	0	0	0	0	1	0	0
	8:30 AM	0	0	0	1	0	0	2	3	1	0	2	0	9	0	0	0	0	0	0	0	0	0
	8:45 AM	0	1	0	0	0	0	0	1	0	0	2	0	4	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	3	5	3	2	0	6	7	9	2	2	21	8	68	0	0	1	0	1	1	2	0	2
	APPROACH %	27%	45%	27%	25%	0%	75%	39%	50%	11%	6%	68%	26%										
	APP/DEPART	11	/	19	8	/	4	18	/	14	31	/	31	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	2	3	1	1	0	5	4	4	1	2	11	6	41						0	1	0	2
	APPROACH %	33%	50%	17%	17%	0%	83%	40%	40%	10%	11%	58%	32%										
	PEAK HR FACTOR		0.500			0.750			0.500			0.792		0.732									
	APP/DEPART	6	/	13	6	/	3	10	/	6	19	/	19	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	1	0	0	0	0	1	1	2	0	1	1	7	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	2	0	0	1	0	4	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	1	1	0	2	1	0	0	1	6	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	1	0	0	1	0	0	0	1	1	4	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	2	4	0	0	1	0	0	1	0	8	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	1	1	0	1	1	0	0	2	0	6	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	4	7	1	3	8	3	1	7	4	39	0	0	0	0	0	0	0	0	1
	APPROACH %	0%	100%	0%	33%	58%	8%	21%	57%	21%	8%	58%	33%										
	APP/DEPART	1	/	8	12	/	11	14	/	12	12	/	8	0									
	BEGIN PEAK HR		4:30 PM																				
	VOLUMES	0	0	0	4	5	0	2	2	0	0	5	2	20						0	0	0	1
	APPROACH %	0%	0%	0%	44%	56%	0%	50%	50%	0%	0%	71%	29%										
	PEAK HR FACTOR		0.000			0.375			0.333			0.875		0.625									
	APP/DEPART	0	/	4	9	/	5	4	/	6	7	/	5	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	Meridian	LOCATION #:	6
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	2	2	2	1	1	3	1	2	3	1	

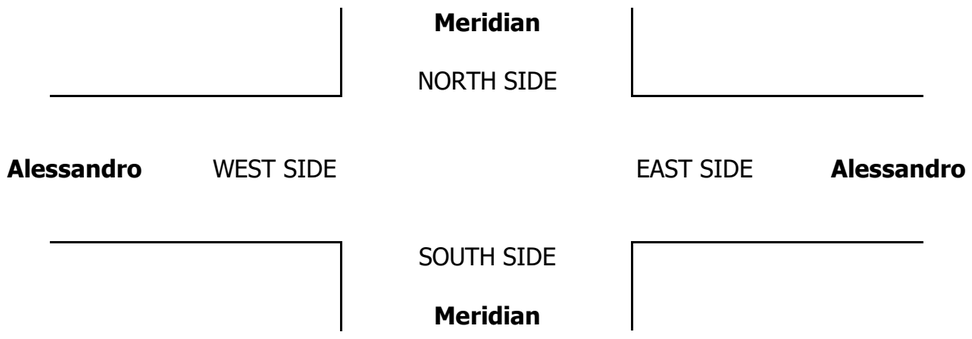
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	1	3	0	1	1	0	3	0	0	4	4	17	0	0	0	0	0	2	0	0	1
	7:15 AM	0	0	1	1	0	0	0	3	0	2	5	2	14	0	0	0	0	0	1	0	0	1
	7:30 AM	1	7	1	3	2	0	1	2	0	1	7	5	30	0	1	0	0	1	0	0	0	2
	7:45 AM	0	2	0	4	2	1	0	2	0	1	5	2	19	0	1	0	0	1	0	1	0	1
	8:00 AM	1	5	0	2	1	1	0	2	0	0	5	5	22	0	0	0	0	0	0	0	0	0
	8:15 AM	1	1	0	2	2	1	0	2	0	0	3	7	19	0	0	0	0	0	0	0	0	2
	8:30 AM	0	1	1	2	1	3	0	1	0	0	5	3	17	0	0	0	0	0	1	1	0	0
	8:45 AM	1	6	1	1	1	0	0	3	0	0	6	4	23	0	0	0	0	0	1	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	4	23	7	15	10	7	1	18	0	4	40	32	161	0	2	0	0	2	5	2	0	7
	APPROACH %	12%	68%	21%	47%	31%	22%	5%	95%	0%	5%	53%	42%										
	APP/DEPART	34	/	58	32	/	14	19	/	38	76	/	51	0									
	BEGIN PEAK HR		7:30 AM																				
	VOLUMES	3	15	1	9	7	3	1	8	0	2	20	19	90						0	1	0	5
	APPROACH %	16%	79%	5%	43%	33%	14%	11%	89%	0%	5%	49%	46%										
	PEAK HR FACTOR		0.528			0.750			0.750			0.788		0.750									
	APP/DEPART	19	/	37	21	/	9	9	/	18	41	/	26	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	2	0	1	0	0	1	5	1	0	2	3	15	0	0	0	0	0	0	0	0	0
	4:15 PM	0	2	0	0	2	1	1	1	1	0	2	1	11	0	0	0	0	0	0	1	0	0
	4:30 PM	0	2	0	0	0	2	3	2	0	1	1	2	13	0	0	0	0	0	0	0	0	2
	4:45 PM	0	1	0	0	2	0	1	3	0	1	1	1	10	0	0	0	0	0	0	0	0	0
	5:00 PM	1	0	1	1	3	1	0	1	0	0	3	0	11	0	0	0	0	0	0	0	0	0
	5:15 PM	1	1	0	1	4	0	0	1	0	0	2	0	10	0	0	0	0	0	0	0	0	0
	5:30 PM	1	0	0	0	0	0	1	1	1	0	1	2	7	0	0	0	0	0	0	0	0	1
	5:45 PM	1	1	0	0	0	0	1	1	0	1	1	2	8	0	0	0	0	0	0	0	0	1
	VOLUMES	4	9	1	3	11	4	8	15	3	3	13	11	85	0	0	0	0	0	0	1	0	4
	APPROACH %	29%	64%	7%	17%	61%	22%	31%	58%	12%	11%	48%	41%										
	APP/DEPART	14	/	28	18	/	17	26	/	19	27	/	21	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	0	7	0	1	4	3	6	11	2	2	6	7	49						0	1	0	2
	APPROACH %	0%	100%	0%	13%	50%	38%	32%	58%	11%	13%	40%	47%										
	PEAK HR FACTOR		0.875			0.667			0.679			0.750		0.817									
	APP/DEPART	7	/	20	8	/	8	19	/	12	15	/	9	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	Meridian	LOCATION #:	6
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 5:	NOTES:	AM / PM / MD / OTHER / OTHER	▲ N ◄ W E ► S ▼
RV			

	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	2	2	2	1	1	3	1	2	3	1	
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	1	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	1	0	1
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	1	0	0	1	0	2
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.000			0.250			0.250		0.500
APP/DEPART	0	/	0	0	/	0	1	/	1	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	1	0	0	0	0	1	0	2
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	1	0	0	0	0	1	0	2
APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	
APP/DEPART	0	/	0	1	/	0	0	/	0	1	/	2	0
BEGIN PEAK HR		3:15 PM											
VOLUMES	0	0	0	0	0	1	0	0	0	0	1	0	2
APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	
PEAK HR FACTOR		0.000			0.250			0.000			0.250		0.250
APP/DEPART	0	/	0	1	/	0	0	/	0	1	/	2	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

Meridian

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

Meridian

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	Meridian	LOCATION #:	6
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 6: BUSES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND Meridian			SOUTHBOUND Meridian			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	2	2	2	2	2	1	1	3	1	2	3	1	
AM													
7:00 AM	2	1	0	0	0	0	0	0	0	1	0	2	6
7:15 AM	1	0	0	0	0	0	1	0	0	0	2	0	4
7:30 AM	0	0	0	0	0	0	0	0	2	0	2	0	4
7:45 AM	1	1	1	0	1	0	0	1	0	0	2	0	7
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
8:15 AM	0	0	0	0	1	0	0	0	2	0	1	1	5
8:30 AM	3	1	1	0	0	0	0	0	0	0	0	0	5
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	7	3	2	0	2	0	1	3	4	1	7	3	33
APPROACH %	58%	25%	17%	0%	100%	0%	13%	38%	50%	9%	64%	27%	
APP/DEPART	12	/	7	2	/	7	8	/	5	11	/	14	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	4	2	1	0	1	0	1	1	2	1	6	2	21
APPROACH %	57%	29%	14%	0%	100%	0%	25%	25%	50%	11%	67%	22%	
PEAK HR FACTOR		0.583			0.250			0.500			0.750		0.750
APP/DEPART	7	/	5	1	/	4	4	/	2	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	1	0	0	1	1	0	0	0	0	0	0	3
4:15 PM	1	0	1	0	0	0	0	0	1	0	0	1	4
4:30 PM	1	0	0	0	0	0	0	1	1	1	0	0	4
4:45 PM	1	1	0	0	1	0	0	0	0	0	1	0	4
5:00 PM	0	0	0	0	0	0	0	1	1	0	1	0	3
5:15 PM	1	0	1	0	1	0	0	0	1	1	0	0	5
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	1	0	0	0	0	0	1	0	0	0	2
VOLUMES	4	3	3	0	3	1	0	2	5	2	2	1	26
APPROACH %	40%	30%	30%	0%	75%	25%	0%	29%	71%	40%	40%	20%	
APP/DEPART	10	/	4	4	/	10	7	/	5	5	/	7	0
BEGIN PEAK HR		4:30 PM											
VOLUMES	3	1	1	0	2	0	0	2	3	2	2	0	16
APPROACH %	60%	20%	20%	0%	100%	0%	0%	40%	60%	50%	50%	0%	
PEAK HR FACTOR		0.625			0.500			0.625			1.000		0.800
APP/DEPART	5	/	1	2	/	7	5	/	3	4	/	5	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	1
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	1	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	1	1
PEAK HR VOLUMES	0	0	0	1
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	0	0	0	0
4:15 PM	0	0	0	1
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	1
PEAK HR VOLUMES	0	0	0	0

Meridian

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

Meridian

T816

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
Wed, May 23, 18	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

NOTES:

Queue WB AM

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

☑ Add U-Turns to Left Turns

		NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	
AM	7:00 AM	0	0	0	34	0	53	0	127	59	0	592	43	908
	7:15 AM	0	0	0	30	0	64	0	145	70	0	602	42	953
	7:30 AM	0	0	0	44	0	59	0	175	98	0	553	44	973
	7:45 AM	0	0	0	38	0	86	0	186	77	0	516	48	951
	8:00 AM	0	0	0	36	0	64	0	185	70	0	514	26	895
	8:15 AM	0	0	0	45	0	68	0	180	51	0	440	26	810
	8:30 AM	0	0	0	44	0	59	0	160	59	0	402	31	755
	8:45 AM	0	0	0	2	0	2	0	153	46	0	331	20	554
	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	273	0	455	0	1,311	530	0	3,950	280	6,799
	APPROACH %	0%	0%	0%	38%	0%	63%	0%	71%	29%	0%	93%	7%	
	APP/DEPART	0	/	280	728	/	530	1,841	/	1,584	4,230	/	4,405	0
	BEGIN PEAK HR		7:00 AM											
	VOLUMES	0	0	0	146	0	262	0	633	304	0	2,263	177	3,785
	APPROACH %	0%	0%	0%	36%	0%	64%	0%	68%	32%	0%	93%	7%	
	PEAK HR FACTOR		0.000			0.823			0.858			0.947		0.973
	APP/DEPART	0	/	177	408	/	304	937	/	779	2,440	/	2,525	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	80	0	82	0	309	106	0	386	25	988
	4:15 PM	0	0	0	39	0	91	0	394	86	0	328	24	962
	4:30 PM	0	0	0	46	0	85	0	327	117	0	342	28	945
	4:45 PM	0	0	0	50	0	51	0	352	83	0	297	27	860
	5:00 PM	0	0	0	50	0	100	0	391	114	0	298	47	1,000
	5:15 PM	0	0	0	55	0	74	0	365	106	0	285	31	916
	5:30 PM	0	0	0	54	0	106	0	364	113	0	300	20	957
	5:45 PM	0	0	0	81	0	86	0	341	96	0	258	24	886
	VOLUMES	0	0	0	455	0	675	0	2,843	821	0	2,494	226	7,514
	APPROACH %	0%	0%	0%	40%	0%	60%	0%	78%	22%	0%	92%	8%	
	APP/DEPART	0	/	226	1,130	/	821	3,664	/	3,298	2,720	/	3,169	0
	BEGIN PEAK HR		4:15 PM											
	VOLUMES	0	0	0	185	0	327	0	1,464	400	0	1,265	126	3,767
	APPROACH %	0%	0%	0%	36%	0%	64%	0%	79%	21%	0%	91%	9%	
	PEAK HR FACTOR		0.000			0.853			0.923			0.940		0.942
	APP/DEPART	0	/	126	512	/	400	1,864	/	1,649	1,391	/	1,592	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES	0	0	0	0		0	0	0	0
7:00 AM	0	0	0	0	0	0	11	9	0
7:15 AM	0	0	0	0	0	0	4	4	0
7:30 AM	0	0	0	0	0	0	6	10	0
7:45 AM	0	0	0	0	0	0	22	5	0
8:00 AM	0	0	0	0	0	0	8	4	0
8:15 AM	0	0	0	0	0	0	16	5	0
8:30 AM	0	0	0	0	0	0	13	3	0
8:45 AM	0	0	0	0	0	0	1	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	81	40	0
AM PEAK HR VOLUMES						0	43	28	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	35	4	0
4:15 PM	0	0	0	0	0	0	26	12	1
4:30 PM	0	0	0	0	0	0	23	7	0
4:45 PM	0	0	0	0	0	0	22	5	1
5:00 PM	0	0	0	0	0	0	27	11	0
5:15 PM	0	0	0	0	0	0	18	4	0
5:30 PM	0	0	0	0	0	0	39	3	0
5:45 PM	0	0	0	0	0	0	13	4	0
VOLUMES	0	0	0	0	0	0	203	50	2
PM PEAK HR VOLUMES						0	98	35	2

I-215 SB Ramps

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

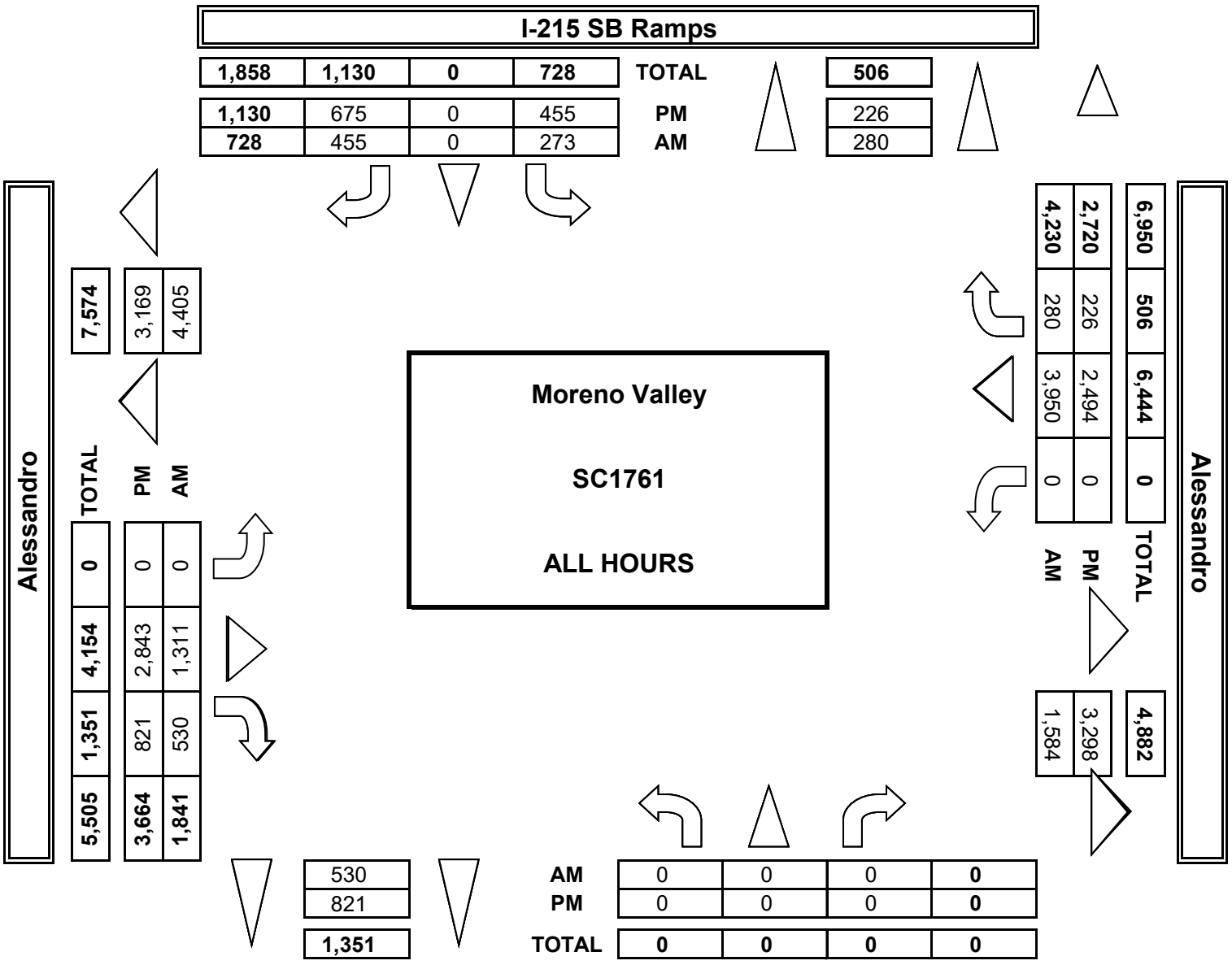
SOUTH SIDE

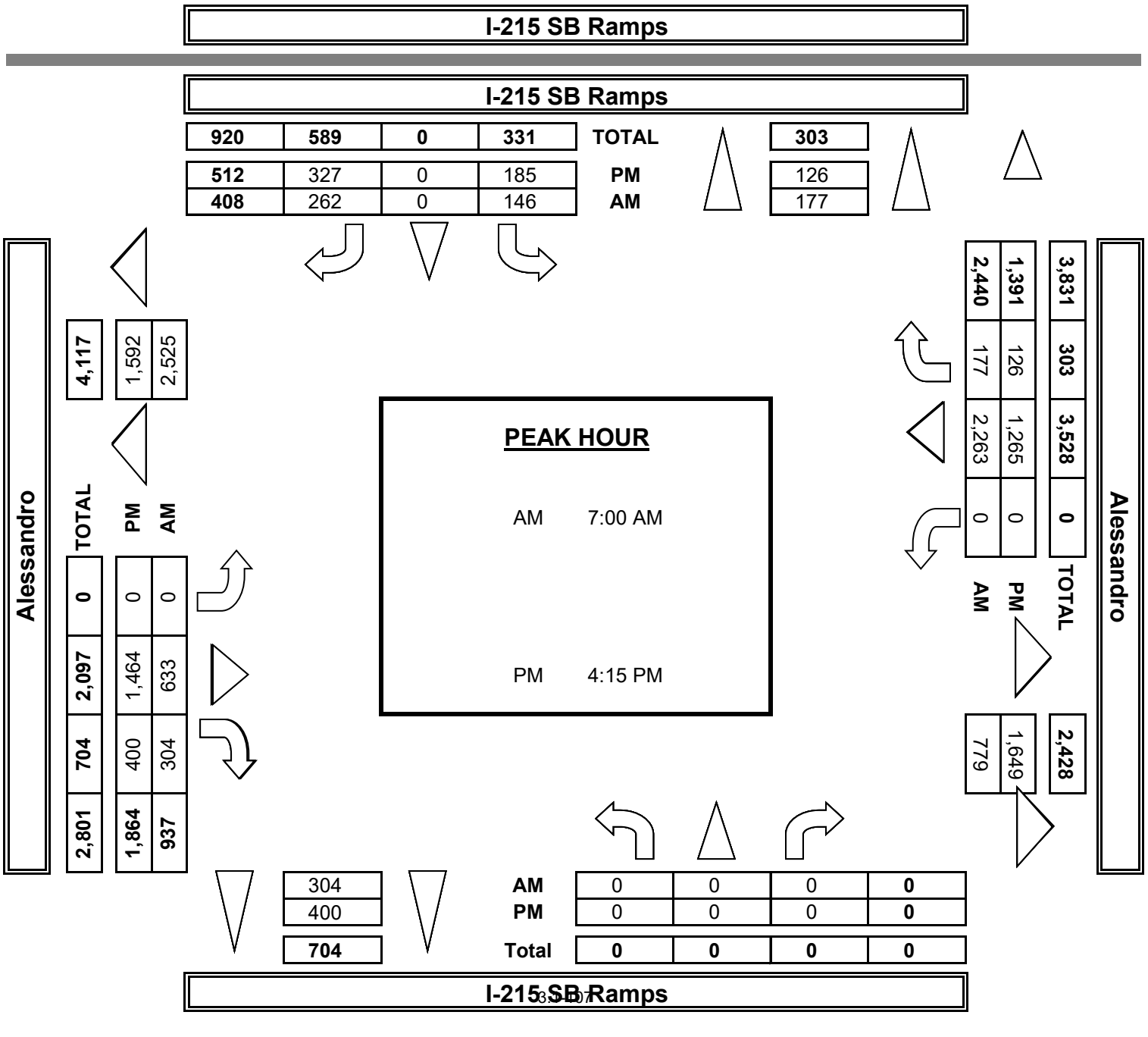
I-215 SB Ramps

		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	1	1	0	0	0	1	1	0	0	0	0	0
	7:45 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	2	1	3	0	0	0	1	1	0	0	2	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	0	0	3	3	6	0	0	0	2	2	0	0	3	1	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	1	0	0	1	0	1	0	0	1	0	0	0	0	0
	4:30 PM	1	0	2	1	4	0	0	0	0	0	1	0	2	1	4
	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	1	1	2	0	0	0	0	0	0	0	1	1	2
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	1	1	4	2	8	0	1	0	0	1	1	0	4	2	7

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
LANES:	NL X	NT X	NR X	SL 1.5	ST X	SR 1.5	EL X	ET 3	ER 1	WL X	WT 3	WR 1	TOTAL

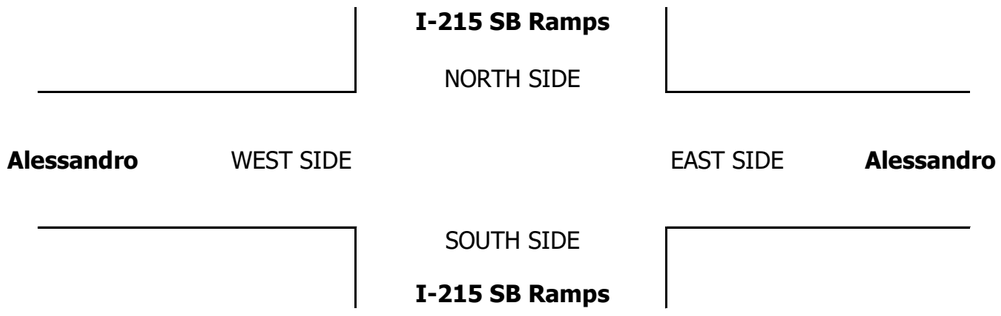
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	18	0	44	0	110	58	0	560	39	829	0	0	0	0	0	0	10	9	0
	7:15 AM	0	0	0	22	0	55	0	126	68	0	569	38	878	0	0	0	0	0	0	3	4	0
	7:30 AM	0	0	0	33	0	53	0	155	92	0	516	36	885	0	0	0	0	0	0	5	10	0
	7:45 AM	0	0	0	32	0	73	0	169	68	0	488	36	866	0	0	0	0	0	0	18	4	0
	8:00 AM	0	0	0	27	0	53	0	169	59	0	490	22	820	0	0	0	0	0	0	7	4	0
	8:15 AM	0	0	0	32	0	59	0	167	46	0	415	20	739	0	0	0	0	0	0	13	5	0
	8:30 AM	0	0	0	35	0	54	0	149	53	0	381	24	696	0	0	0	0	0	0	10	2	0
	8:45 AM	0	0	0	0	0	1	0	139	39	0	302	17	498	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	0	0	199	0	392	0	1,184	483	0	3,721	232	6,211	0	0	0	0	0	0	66	38	0
	APPROACH %	0%	0%	0%	34%	0%	66%	0%	71%	29%	0%	94%	6%										
	APP/DEPART	0	/	232	591	/	483	1,667	/	1,383	3,953	/	4,113	0									
	BEGIN PEAK HR		7:00 AM																				
	VOLUMES	0	0	0	105	0	225	0	560	286	0	2,133	149	3,458						0	36	27	0
	APPROACH %	0%	0%	0%	32%	0%	68%	0%	66%	34%	0%	93%	7%										
	PEAK HR FACTOR		0.000			0.786			0.856			0.940		0.977									
	APP/DEPART	0	/	149	330	/	286	846	/	665	2,282	/	2,358	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	69	0	80	0	293	102	0	364	22	930	0	0	0	0	0	0	34	4	0
	4:15 PM	0	0	0	36	0	81	0	369	84	0	311	22	903	0	0	0	0	0	0	24	12	1
	4:30 PM	0	0	0	41	0	76	0	318	111	0	328	28	902	0	0	0	0	0	0	21	6	0
	4:45 PM	0	0	0	43	0	49	0	336	79	0	284	26	817	0	0	0	0	0	0	22	5	1
	5:00 PM	0	0	0	44	0	94	0	386	109	0	278	47	958	0	0	0	0	0	0	26	11	0
	5:15 PM	0	0	0	50	0	73	0	352	101	0	272	30	878	0	0	0	0	0	0	17	3	0
	5:30 PM	0	0	0	45	0	99	0	348	106	0	293	19	910	0	0	0	0	0	0	37	3	0
	5:45 PM	0	0	0	74	0	81	0	334	94	0	245	24	852	0	0	0	0	0	0	11	4	0
	VOLUMES	0	0	0	402	0	633	0	2,736	786	0	2,375	218	7,150	0	0	0	0	0	0	192	48	2
	APPROACH %	0%	0%	0%	39%	0%	61%	0%	78%	22%	0%	92%	8%										
	APP/DEPART	0	/	218	1,035	/	786	3,522	/	3,138	2,593	/	3,008	0									
	BEGIN PEAK HR		5:00 PM																				
	VOLUMES	0	0	0	213	0	347	0	1,420	410	0	1,088	120	3,598						0	91	21	0
	APPROACH %	0%	0%	0%	38%	0%	62%	0%	78%	22%	0%	90%	10%										
	PEAK HR FACTOR		0.000			0.903			0.924			0.929		0.939									
	APP/DEPART	0	/	120	560	/	410	1,830	/	1,633	1,208	/	1,435	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	
AM	7:00 AM	0	0	0	2	0	5	0	10	1	0	22	3	43
	7:15 AM	0	0	0	2	0	1	0	12	2	0	21	1	39
	7:30 AM	0	0	0	6	0	2	0	16	3	0	22	6	55
	7:45 AM	0	0	0	3	0	8	0	11	8	0	21	11	62
	8:00 AM	0	0	0	5	0	5	0	10	8	0	14	4	46
	8:15 AM	0	0	0	5	0	7	0	10	2	0	11	5	40
	8:30 AM	0	0	0	6	0	4	0	5	4	0	14	7	40
	8:45 AM	0	0	0	1	0	1	0	9	6	0	17	2	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	0	0	30	0	33	0	83	34	0	142	39	361
	APPROACH %	0%	0%	0%	48%	0%	52%	0%	71%	29%	0%	78%	22%	
	APP/DEPART	0	/	39	63	/	34	117	/	113	181	/	175	0
	BEGIN PEAK HR		7:30 AM											
	VOLUMES	0	0	0	19	0	22	0	47	21	0	68	26	203
	APPROACH %	0%	0%	0%	46%	0%	54%	0%	69%	31%	0%	72%	28%	
	PEAK HR FACTOR		0.000			0.854			0.895			0.734		0.819
	APP/DEPART	0	/	26	41	/	21	68	/	66	94	/	90	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	3	0	1	0	15	2	0	14	3	38
	4:15 PM	0	0	0	1	0	10	0	16	2	0	13	1	43
	4:30 PM	0	0	0	3	0	5	0	8	2	0	10	0	28
	4:45 PM	0	0	0	3	0	1	0	15	3	0	10	1	33
	5:00 PM	0	0	0	2	0	4	0	1	4	0	15	0	26
	5:15 PM	0	0	0	4	0	1	0	8	4	0	10	1	28
	5:30 PM	0	0	0	4	0	5	0	15	6	0	3	1	34
	5:45 PM	0	0	0	3	0	2	0	6	1	0	11	0	23
	VOLUMES	0	0	0	23	0	29	0	84	24	0	86	7	253
	APPROACH %	0%	0%	0%	44%	0%	56%	0%	78%	22%	0%	92%	8%	
	APP/DEPART	0	/	7	52	/	24	108	/	107	93	/	115	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	0	0	0	10	0	17	0	54	9	0	47	5	142
	APPROACH %	0%	0%	0%	37%	0%	63%	0%	86%	14%	0%	90%	10%	
	PEAK HR FACTOR		0.000			0.614			0.875			0.765		0.826
	APP/DEPART	0	/	5	27	/	9	63	/	64	52	/	64	0

	U-TURNS					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	1	0	0
7:45 AM	0	0	0	0	0	0	4	1	0
8:00 AM	0	0	0	0	0	0	1	0	0
8:15 AM	0	0	0	0	0	0	3	0	0
8:30 AM	0	0	0	0	0	0	3	0	0
8:45 AM	0	0	0	0	0	0	1	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	13	1	0
PEAK HR VOLUMES						0	9	1	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	2	0	0
4:30 PM	0	0	0	0	0	0	2	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	1	0	0
5:30 PM	0	0	0	0	0	0	1	0	0
5:45 PM	0	0	0	0	0	0	2	0	0
VOLUMES	0	0	0	0	0	0	8	0	0
PEAK HR VOLUMES						0	4	0	0

I-215 SB Ramps

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

I-215 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

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

	NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	

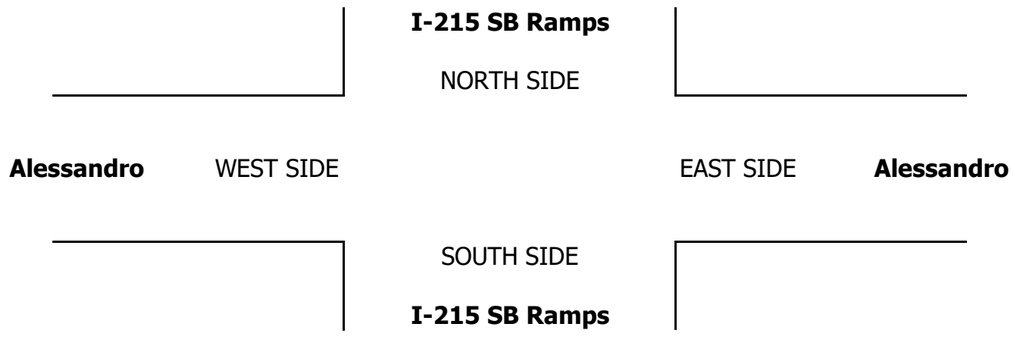
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	1	0	1	0	0	3	0	5	0	0	0	0	0	0	1	0	0
	7:15 AM	0	0	0	1	0	2	0	2	0	0	5	1	11	0	0	0	0	0	0	1	0	0
	7:30 AM	0	0	0	1	0	2	0	0	1	0	3	1	8	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	1	0	1	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	1	0	1	0	2	1	0	2	0	7	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	1	0	1	0	0	1	0	5	1	9	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	3	1	0	1	0	5	0	0	0	0	0	0	0	1	0
	8:45 AM	0	0	0	0	0	0	0	1	0	0	3	0	4	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	0	0	5	0	8	0	9	4	0	22	4	52	0	0	0	0	0	0	2	1	0
	APPROACH %	0%	0%	0%	38%	0%	62%	0%	69%	31%	0%	85%	15%										
	APP/DEPART	0	/	4	13	/	4	13	/	14	26	/	30	0									
	BEGIN PEAK HR		7:15 AM																				
	VOLUMES	0	0	0	4	0	6	0	4	2	0	10	3	29						0	1	0	0
	APPROACH %	0%	0%	0%	40%	0%	60%	0%	67%	33%	0%	77%	23%										
	PEAK HR FACTOR		0.000			0.833			0.500			0.542		0.659									
	APP/DEPART	0	/	3	10	/	2	6	/	8	13	/	16	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	1	1	0	1	0	4	0	0	0	0	0	0	1	0	0
	4:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	1	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	1	0	0	0	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	1	0	0	0	1	0	0	3	0	5	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	2	1	0	0	0	3	0	0	0	0	0	0	0	1	0
	5:30 PM	0	0	0	0	0	0	0	1	1	0	3	0	5	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	2	0	2	0	6	5	0	10	1	26	0	0	0	0	0	0	1	1	0
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	55%	45%	0%	91%	9%										
	APP/DEPART	0	/	1	4	/	5	11	/	8	11	/	12	0									
	BEGIN PEAK HR		4:45 PM																				
	VOLUMES	0	0	0	2	0	0	0	4	3	0	7	0	16						0	0	1	0
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	57%	43%	0%	100%	0%										
	PEAK HR FACTOR		0.000			0.500			0.583			0.583		0.800									
	APP/DEPART	0	/	0	2	/	3	7	/	6	7	/	7	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	
AM	7:00 AM	0	0	0	14	0	3	0	6	0	0	4	0	27
AM	7:15 AM	0	0	0	5	0	6	0	5	0	0	5	2	23
AM	7:30 AM	0	0	0	4	0	2	0	2	2	0	8	1	19
AM	7:45 AM	0	0	0	2	0	4	0	5	1	0	7	0	19
AM	8:00 AM	0	0	0	3	0	4	0	3	1	0	8	0	19
AM	8:15 AM	0	0	0	7	0	1	0	3	2	0	7	0	20
AM	8:30 AM	0	0	0	3	0	1	0	2	1	0	6	0	13
AM	8:45 AM	0	0	0	1	0	0	0	4	1	0	9	1	16
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	39	0	21	0	30	8	0	54	4	156
AM	APPROACH %	0%	0%	0%	65%	0%	35%	0%	79%	21%	0%	93%	7%	
AM	APP/DEPART	0	/	4	60	/	8	38	/	69	58	/	75	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	0	0	0	25	0	15	0	18	3	0	24	3	88
AM	APPROACH %	0%	0%	0%	63%	0%	38%	0%	86%	14%	0%	89%	11%	
AM	PEAK HR FACTOR		0.000			0.588			0.875			0.750		0.815
AM	APP/DEPART	0	/	3	40	/	3	21	/	43	27	/	39	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	8	0	0	0	0	1	0	6	0	15
PM	4:15 PM	0	0	0	2	0	0	0	7	0	0	3	0	12
PM	4:30 PM	0	0	0	2	0	3	0	0	3	0	2	0	10
PM	4:45 PM	0	0	0	3	0	1	0	1	0	0	0	0	5
PM	5:00 PM	0	0	0	3	0	2	0	2	1	0	1	0	9
PM	5:15 PM	0	0	0	1	0	0	0	2	0	0	3	0	6
PM	5:30 PM	0	0	0	5	0	2	0	0	0	0	1	0	8
PM	5:45 PM	0	0	0	4	0	3	0	0	1	0	1	0	9
PM	VOLUMES	0	0	0	28	0	11	0	12	6	0	17	0	74
PM	APPROACH %	0%	0%	0%	72%	0%	28%	0%	67%	33%	0%	100%	0%	
PM	APP/DEPART	0	/	0	39	/	6	18	/	40	17	/	28	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	0	0	0	15	0	4	0	8	4	0	11	0	42
PM	APPROACH %	0%	0%	0%	79%	0%	21%	0%	67%	33%	0%	100%	0%	
PM	PEAK HR FACTOR		0.000			0.594			0.429			0.458		0.700
PM	APP/DEPART	0	/	0	19	/	4	12	/	23	11	/	15	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	1	0
4:45 PM	0	0	0	0
5:00 PM	0	1	0	0
5:15 PM	0	0	0	0
5:30 PM	0	1	0	0
5:45 PM	0	0	0	0
VOLUMES	0	2	1	0
PEAK HR VOLUMES	0	0	1	0

I-215 SB Ramps

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

I-215 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	
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	1	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	1	0	0	0	0	0	0	1
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	1	0	1	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	
APP/DEPART	0	/	0	1	/	0	1	/	1	0	/	1	0
BEGIN PEAK HR		7:15 AM											
VOLUMES	0	0	0	0	0	1	0	1	0	0	0	0	2
APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.250			0.250			0.000		0.500
APP/DEPART	0	/	0	1	/	0	1	/	1	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	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
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

I-215 SB Ramps

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

I-215 SB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	I-215 SB Ramps	LOCATION #:	12
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 6:	NOTES:
BUSES	

AM / PM / MD / OTHER / OTHER

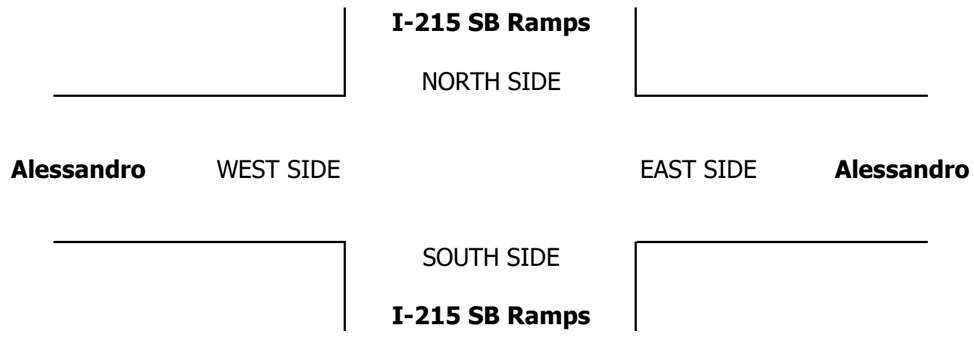
▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 SB Ramps			SOUTHBOUND I-215 SB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	X	X	X	1.5	X	1.5	X	3	1	X	3	1	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	1	0	0	4	0	5	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1	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	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	0	0	0	0	0	0	4	1	0	11	1	17	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	80%	20%	0%	92%	8%										
	APP/DEPART	0	/	1	0	/	1	5	/	4	12	/	11	0									
	BEGIN PEAK HR	7:00 AM																					
	VOLUMES	0	0	0	0	0	0	0	2	0	0	9	1	12						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	90%	10%										
	PEAK HR FACTOR	0.000			0.000			0.500			0.625			0.600									
	APP/DEPART	0	/	1	0	/	0	2	/	2	10	/	9	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	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	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1	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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	5	0	0	5	0	10	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	APP/DEPART	0	/	0	0	/	0	5	/	5	5	/	5	0									
	BEGIN PEAK HR	4:15 PM																					
	VOLUMES	0	0	0	0	0	0	0	3	0	0	5	0	8						0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%										
	PEAK HR FACTOR	0.000			0.000			0.750			0.625			1.000									
	APP/DEPART	0	/	0	0	/	0	3	/	3	5	/	5	0									



INTERSECTION TURNING MOVEMENT COUNTS

T816

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

DATE: Wed, May 23, 18

LOCATION: Moreno Valley
NORTH & SOUTH: I-215 NB Ramps
EAST & WEST: Alessandro

PROJECT #: SC1761
LOCATION #: 13
CONTROL: SIGNAL

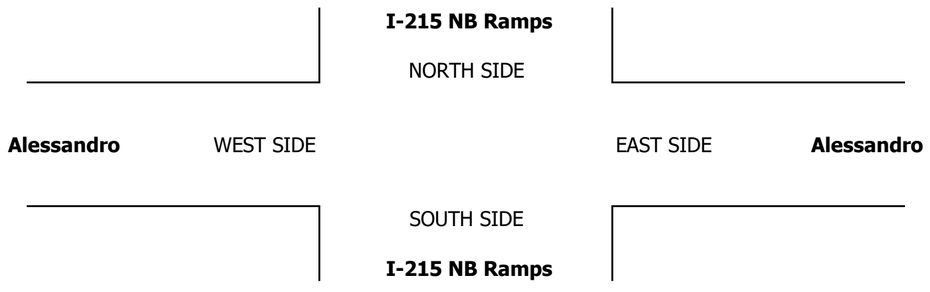
NOTES:

AM / PM / MD / OTHER / OTHER

▲ N
◄ W E ►
S ▼

☑ Add U-Turns to Left Turns

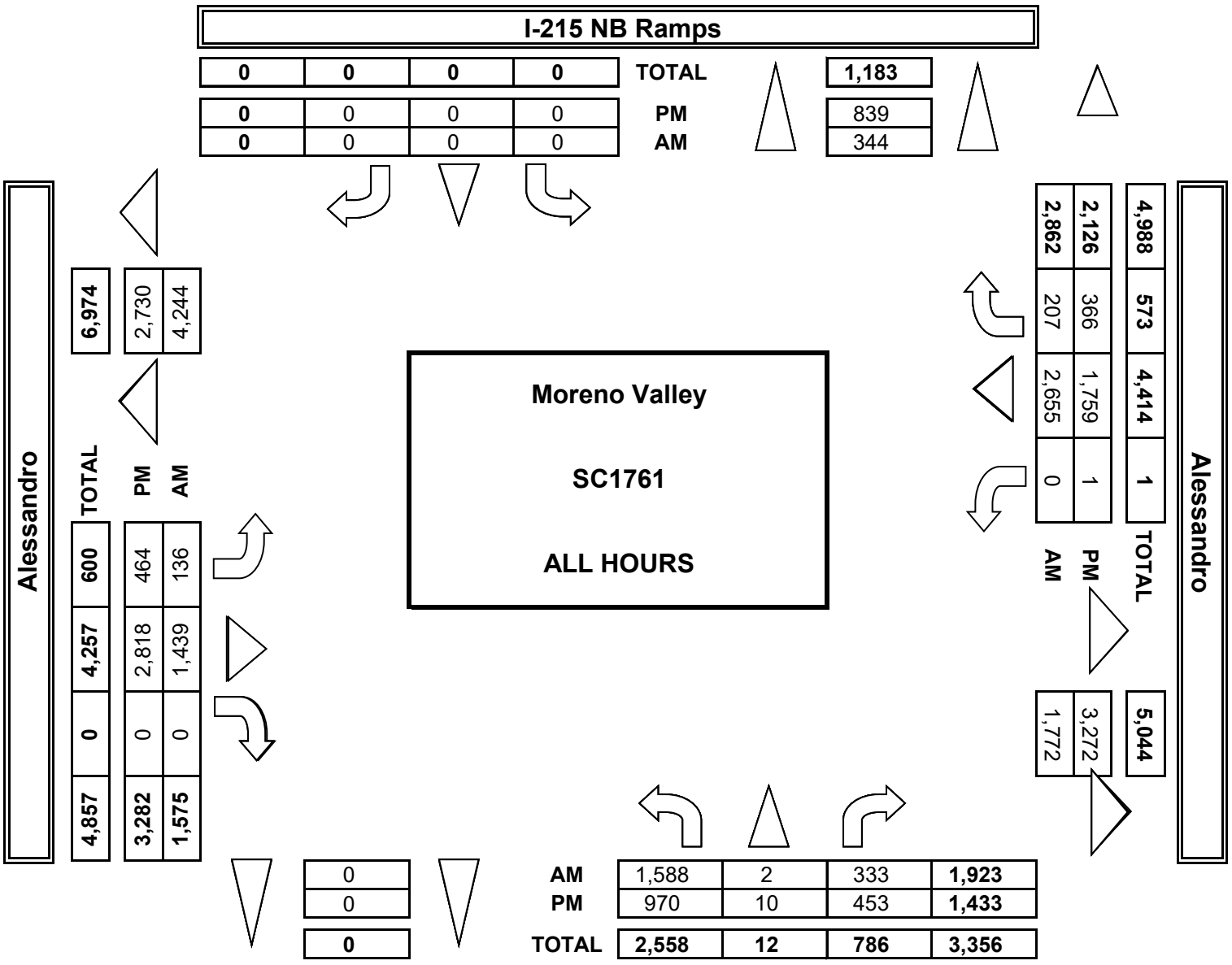
		NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro				U-TURNS					RTOR			
	LANES:	NL 1.3	NT 0.3	NR 1.3	SL X	ST X	SR X	EL 1	ET 3	ER X	WL X	WT 3	WR 0	TOTAL	NB 0	SB 0	EB 0	WB 0	TTL	NRR 0	SRR 0	ERR 0	WRR 0
AM	7:00 AM	212	0	14	0	0	0	17	140	0	0	429	29	841	0	0	0	0	0	7	0	0	7
	7:15 AM	219	0	27	0	0	0	9	166	0	0	427	24	872	0	0	0	0	0	17	0	0	7
	7:30 AM	222	0	47	0	0	0	9	209	0	0	377	21	885	0	0	0	0	0	22	0	0	5
	7:45 AM	200	0	54	0	0	0	11	213	0	0	364	17	859	0	0	0	0	0	19	0	0	1
	8:00 AM	219	0	72	0	0	0	14	206	0	0	322	26	859	0	0	1	0	1	32	0	0	7
	8:15 AM	154	0	34	0	0	0	21	204	0	0	313	31	757	0	0	0	0	0	20	0	0	5
	8:30 AM	202	1	37	0	0	0	30	173	0	0	231	33	707	0	0	0	0	0	24	0	0	4
	8:45 AM	160	1	48	0	0	0	25	128	0	0	192	26	580	0	0	0	0	0	32	0	0	5
	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	1,588	2	333	0	0	0	136	1,439	0	0	2,655	207	6,360	0	0	1	0	1	173	0	0	41
	APPROACH %	83%	0%	17%	0%	0%	0%	9%	91%	0%	0%	93%	7%										
	APP/DEPART	1,923	/	344	0	/	0	1,575	/	1,772	2,862	/	4,244	0									
	BEGIN PEAK HR		7:15 AM																				
	VOLUMES	860	0	200	0	0	0	43	794	0	0	1,490	88	3,475						90	0	0	20
	APPROACH %	81%	0%	19%	0%	0%	0%	5%	95%	0%	0%	94%	6%										
	PEAK HR FACTOR		0.911			0.000			0.934			0.875		0.982									
	APP/DEPART	1,060	/	130	0	/	0	837	/	994	1,578	/	2,351	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	173	8	97	0	0	0	27	352	0	0	239	33	929	0	0	1	0	1	27	0	0	7
	4:15 PM	132	0	80	0	0	0	41	390	0	0	221	51	915	0	0	0	0	0	17	0	0	13
	4:30 PM	138	0	59	0	0	0	55	317	0	0	232	43	844	0	0	0	0	0	20	0	0	11
	4:45 PM	112	0	50	0	0	0	59	343	0	0	212	42	818	0	0	0	0	0	24	0	0	15
	5:00 PM	115	1	30	0	0	0	84	356	0	0	230	54	870	0	0	0	0	0	15	0	0	13
	5:15 PM	121	1	38	0	0	0	52	367	0	1	195	36	811	0	0	0	1	1	16	0	0	15
	5:30 PM	93	0	53	0	0	0	72	345	0	0	228	61	852	0	0	0	0	0	20	0	0	23
	5:45 PM	86	0	46	0	0	0	74	348	0	0	202	46	802	0	0	0	0	0	19	0	0	12
	VOLUMES	970	10	453	0	0	0	464	2,818	0	1	1,759	366	6,841	0	0	1	1	2	158	0	0	109
	APPROACH %	68%	1%	32%	0%	0%	0%	14%	86%	0%	0%	83%	17%										
	APP/DEPART	1,433	/	839	0	/	0	3,282	/	3,272	2,126	/	2,730	0									
	BEGIN PEAK HR		4:00 PM																				
	VOLUMES	555	8	286	0	0	0	182	1,402	0	0	904	169	3,506						88	0	0	46
	APPROACH %	65%	1%	34%	0%	0%	0%	11%	89%	0%	0%	84%	16%										
	PEAK HR FACTOR		0.763			0.000			0.919			0.975		0.943									
	APP/DEPART	849	/	358	0	/	0	1,584	/	1,688	1,073	/	1,460	0									

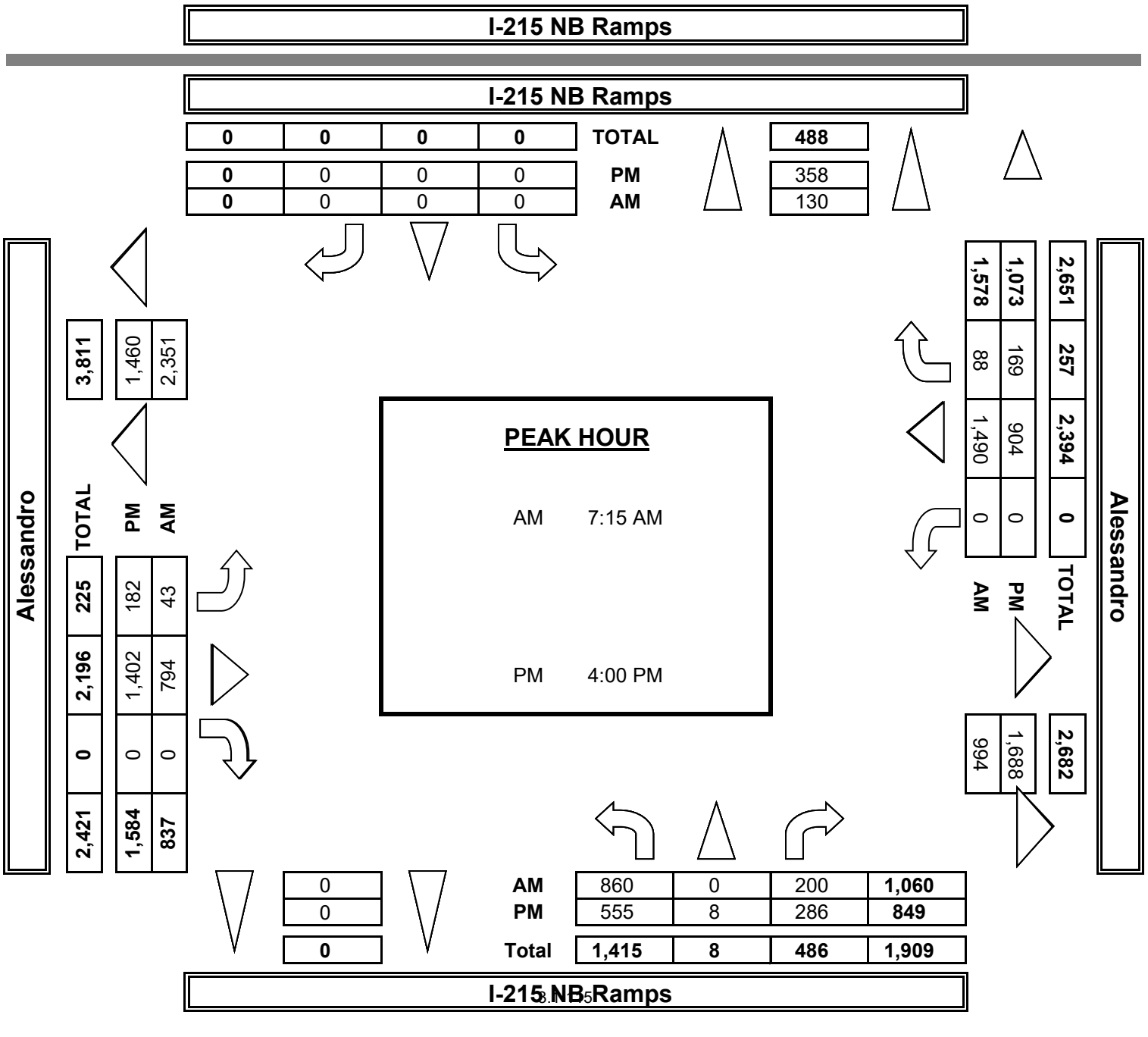


		ALL PED AND BIKE					PEDESTRIAN CROSSINGS					BICYCLE CROSSINGS				
		E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	ES	WS	SS	NS	TOTAL
AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	2	2
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	2	1	3	0	0	0	1	1	0	0	2	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	0	0	3	3	6	0	0	0	1	1	0	0	3	2	5
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	1	0	1	0	0	0	0	0	0	0	1	0	1
	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	1	0	1	0	0	0	0	0	0	0	1	0	1
	5:30 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	5:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
	TOTAL	0	0	4	1	5	0	0	1	0	1	0	0	3	1	4

AimTD LLC

TURNING MOVEMENT COUNTS





INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 1: PASSENGER VEHICLES

NOTES:

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

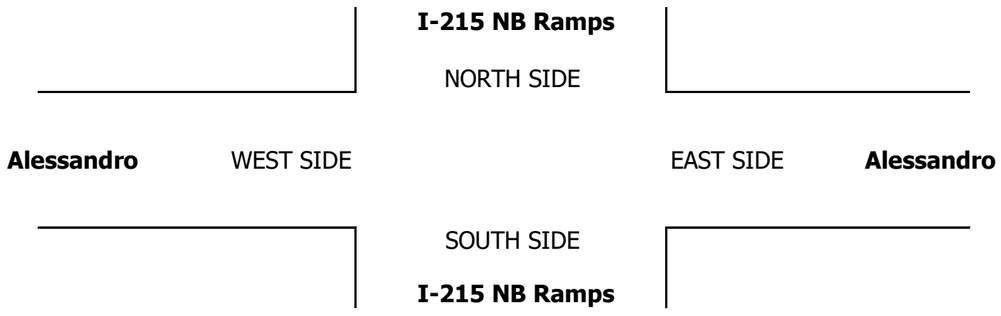
		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
		I-215 NB Ramps			I-215 NB Ramps			Alessandro			Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	
AM	7:00 AM	201	0	14	0	0	0	12	112	0	0	404	24	767
	7:15 AM	208	0	25	0	0	0	5	143	0	0	401	18	800
	7:30 AM	205	0	44	0	0	0	6	181	0	0	350	16	802
	7:45 AM	188	0	51	0	0	0	6	195	0	0	336	5	781
	8:00 AM	203	0	66	0	0	0	10	185	0	0	310	12	786
	8:15 AM	141	0	28	0	0	0	15	184	0	0	295	24	687
	8:30 AM	192	1	36	0	0	0	26	157	0	0	213	24	649
	8:45 AM	146	0	45	0	0	0	24	113	0	0	172	16	516
	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	1,484	1	309	0	0	0	104	1,270	0	0	2,481	139	5,788
	APPROACH %	83%	0%	17%	0%	0%	0%	8%	92%	0%	0%	95%	5%	
	APP/DEPART	1,794	/	243	0	/	0	1,374	/	1,579	2,620	/	3,966	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	804	0	186	0	0	0	26	704	0	0	1,397	51	3,169
	APPROACH %	81%	0%	19%	0%	0%	0%	4%	96%	0%	0%	96%	4%	
	PEAK HR FACTOR		0.920			0.000			0.909			0.864		0.988
	APP/DEPART	990	/	77	0	/	0	731	/	890	1,448	/	2,202	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	158	8	92	0	0	0	25	328	0	0	229	26	866
	4:15 PM	122	0	74	0	0	0	36	367	0	0	210	40	849
	4:30 PM	129	0	53	0	0	0	55	303	0	0	227	37	804
	4:45 PM	105	0	48	0	0	0	57	322	0	0	205	34	771
	5:00 PM	105	1	29	0	0	0	81	348	0	0	220	47	831
	5:15 PM	110	0	33	0	0	0	49	352	0	1	192	26	763
	5:30 PM	89	0	49	0	0	0	69	322	0	0	224	56	809
	5:45 PM	83	0	43	0	0	0	72	336	0	0	192	40	766
	VOLUMES	901	9	421	0	0	0	444	2,678	0	1	1,699	306	6,459
	APPROACH %	68%	1%	32%	0%	0%	0%	14%	86%	0%	0%	85%	15%	
	APP/DEPART	1,331	/	758	0	/	0	3,122	/	3,100	2,006	/	2,601	0
	BEGIN PEAK HR		4:00 PM											
	VOLUMES	514	8	267	0	0	0	172	1,320	0	0	871	137	3,290
	APPROACH %	65%	1%	34%	0%	0%	0%	12%	88%	0%	0%	86%	14%	
	PEAK HR FACTOR		0.765			0.000			0.926			0.955		0.950
	APP/DEPART	789	/	317	0	/	0	1,493	/	1,587	1,008	/	1,386	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	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	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	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	1	1
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

RTOR

NRR	SRR	ERR	WRR
0	0	0	0
7	0	0	5
15	0	0	7
21	0	0	5
18	0	0	0
32	0	0	5
15	0	0	4
23	0	0	3
30	0	0	4
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
161	0	0	33
86	0	0	17
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
26	0	0	4
17	0	0	11
18	0	0	11
23	0	0	13
15	0	0	11
13	0	0	11
19	0	0	22
17	0	0	8
148	0	0	91
84	0	0	39



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:				
5/23/18	LOCATION:	Moreno Valley	PROJECT #:	SC1761
WEDNESDAY	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 2:	NOTES:
2-AXLE WORK VEHICLES/ TRUCKS	

AM / PM / MD / OTHER / OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	

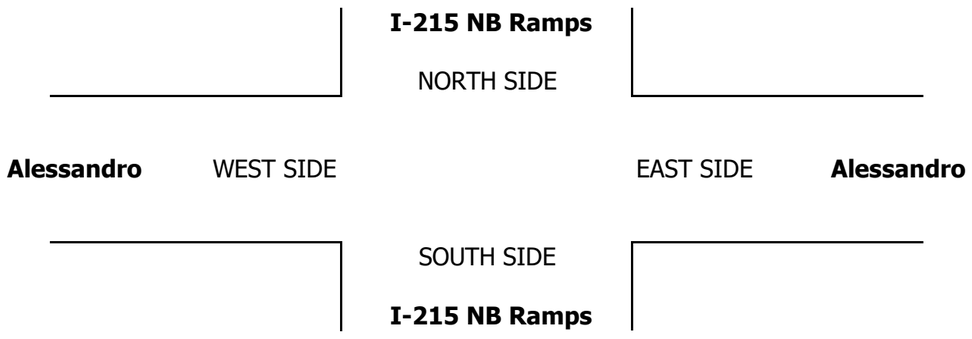
U-TURNS

NB	SB	EB	WB	TTL

RTOR

NRR	SRR	ERR	WRR
0	0	0	0

		NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND				U-TURNS					RTOR			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
AM	7:00 AM	7	0	0	0	0	0	1	11	0	0	18	1	38	0	0	0	0	0	0	0	0	0
	7:15 AM	7	0	2	0	0	0	3	11	0	0	15	1	39	0	0	0	0	0	2	0	0	0
	7:30 AM	9	0	2	0	0	0	0	22	0	0	17	2	52	0	0	0	0	0	1	0	0	0
	7:45 AM	8	0	2	0	0	0	3	11	0	0	24	3	51	0	0	0	0	0	0	0	0	0
	8:00 AM	9	0	3	0	0	0	2	13	0	0	9	8	44	0	0	0	0	0	0	0	0	2
	8:15 AM	7	0	5	0	0	0	3	12	0	0	9	3	39	0	0	0	0	0	4	0	0	0
	8:30 AM	7	0	0	0	0	0	1	10	0	0	14	3	35	0	0	0	0	0	0	0	0	0
	8:45 AM	10	1	2	0	0	0	1	9	0	0	11	2	36	0	0	0	0	0	2	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	64	1	16	0	0	0	14	99	0	0	117	23	334	0	0	0	0	0	9	0	0	2
	APPROACH %	79%	1%	20%	0%	0%	0%	12%	88%	0%	0%	84%	16%										
	APP/DEPART	81	/	38	0	/	0	113	/	115	140	/	181	0									
	BEGIN PEAK HR	7:15 AM																					
	VOLUMES	33	0	12	0	0	0	8	58	0	0	59	16	186						5	0	0	2
	APPROACH %	73%	0%	27%	0%	0%	0%	12%	88%	0%	0%	79%	21%										
	PEAK HR FACTOR	0.938			0.000			0.750			0.694			0.894									
	APP/DEPART	45	/	24	0	/	0	66	/	70	75	/	92	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	12	0	4	0	0	0	1	17	0	0	5	5	44	0	0	0	0	0	1	0	0	2
	4:15 PM	6	0	6	0	0	0	3	14	0	0	9	5	43	0	0	0	0	0	0	0	0	1
	4:30 PM	6	0	6	0	0	0	0	11	0	0	4	4	31	0	0	0	0	0	2	0	0	0
	4:45 PM	5	0	2	0	0	0	2	16	0	0	6	6	37	0	0	0	0	0	1	0	0	2
	5:00 PM	8	0	1	0	0	0	1	2	0	0	7	5	24	0	0	0	0	0	0	0	0	2
	5:15 PM	9	1	4	0	0	0	2	10	0	0	2	4	32	0	0	0	0	0	3	0	0	3
	5:30 PM	2	0	2	0	0	0	2	17	0	0	2	2	27	0	0	0	0	0	1	0	0	1
	5:45 PM	3	0	3	0	0	0	1	8	0	0	8	3	26	0	0	0	0	0	2	0	0	2
	VOLUMES	51	1	28	0	0	0	12	95	0	0	43	34	264	0	0	0	0	0	10	0	0	13
	APPROACH %	64%	1%	35%	0%	0%	0%	11%	89%	0%	0%	56%	44%										
	APP/DEPART	80	/	47	0	/	0	107	/	123	77	/	94	0									
	BEGIN PEAK HR	4:00 PM																					
	VOLUMES	29	0	18	0	0	0	6	58	0	0	24	20	155						4	0	0	5
	APPROACH %	62%	0%	38%	0%	0%	0%	9%	91%	0%	0%	55%	45%										
	PEAK HR FACTOR	0.734			0.000			0.889			0.786			0.881									
	APP/DEPART	47	/	26	0	/	0	64	/	76	44	/	53	0									



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 3: 3-AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

		NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	
AM	7:00 AM	1	0	0	0	0	0	1	0	0	0	2	0	4
	7:15 AM	2	0	0	0	0	0	0	3	0	0	4	0	9
	7:30 AM	1	0	0	0	0	0	0	1	0	0	4	0	6
	7:45 AM	0	0	1	0	0	0	0	1	0	0	1	3	6
	8:00 AM	2	0	1	0	0	0	1	2	0	0	0	2	8
	8:15 AM	2	0	1	0	0	0	1	0	0	0	4	0	8
	8:30 AM	0	0	0	0	0	0	2	1	0	0	1	0	4
	8:45 AM	2	0	0	0	0	0	0	1	0	0	1	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	10	0	3	0	0	0	5	9	0	0	17	5	49
	APPROACH %	77%	0%	23%	0%	0%	0%	36%	64%	0%	0%	77%	23%	
	APP/DEPART	13	/	10	0	/	0	14	/	12	22	/	27	0
	BEGIN PEAK HR		7:15 AM											
	VOLUMES	5	0	2	0	0	0	1	7	0	0	9	5	29
	APPROACH %	71%	0%	29%	0%	0%	0%	13%	88%	0%	0%	64%	36%	
	PEAK HR FACTOR		0.583			0.000			0.667			0.875		0.806
	APP/DEPART	7	/	6	0	/	0	8	/	9	14	/	14	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	1	0	0	0	0	0	0	1	0	0	1	0	3
	4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
	4:45 PM	1	0	0	0	0	0	0	1	0	0	0	1	3
	5:00 PM	1	0	0	0	0	0	1	1	0	0	2	0	5
	5:15 PM	0	0	1	0	0	0	0	2	0	0	0	0	3
	5:30 PM	1	0	0	0	0	0	0	1	0	0	2	1	5
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	5	0	1	0	0	0	1	7	0	0	7	2	23
	APPROACH %	83%	0%	17%	0%	0%	0%	13%	88%	0%	0%	78%	22%	
	APP/DEPART	6	/	3	0	/	0	8	/	8	9	/	12	0
	BEGIN PEAK HR		4:45 PM											
	VOLUMES	3	0	1	0	0	0	1	5	0	0	4	2	16
	APPROACH %	75%	0%	25%	0%	0%	0%	17%	83%	0%	0%	67%	33%	
	PEAK HR FACTOR		1.000			0.000			0.750			0.500		0.800
	APP/DEPART	4	/	3	0	/	0	6	/	6	6	/	7	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	1	0	0	1
8:00 AM	0	0	0	0
8:15 AM	1	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	2	0	0	1
PEAK HR VOLUMES	1	0	0	1
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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

I-215 NB Ramps

NORTH SIDE

Alessandro WEST SIDE EAST SIDE **Alessandro**

SOUTH SIDE

I-215 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 4: 4 OR MORE AXLE TRUCKS

NOTES:

AM PM MD OTHER OTHER

N ▲ ◄ W E ► S ▼

		NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	
AM	7:00 AM	1	0	0	0	0	0	3	17	0	0	3	4	28
AM	7:15 AM	2	0	0	0	0	0	1	9	0	0	5	5	22
AM	7:30 AM	6	0	1	0	0	0	3	3	0	0	3	3	19
AM	7:45 AM	4	0	0	0	0	0	2	5	0	0	3	6	20
AM	8:00 AM	5	0	2	0	0	0	1	5	0	0	3	4	20
AM	8:15 AM	4	0	0	0	0	0	2	8	0	0	3	4	21
AM	8:30 AM	3	0	1	0	0	0	1	4	0	0	3	6	18
AM	8:45 AM	2	0	1	0	0	0	0	5	0	0	8	8	24
AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	VOLUMES	27	0	5	0	0	0	13	56	0	0	31	40	172
AM	APPROACH %	84%	0%	16%	0%	0%	0%	19%	81%	0%	0%	44%	56%	
AM	APP/DEPART	32	/	53	0	/	0	69	/	61	71	/	58	0
AM	BEGIN PEAK HR		7:00 AM											
AM	VOLUMES	13	0	1	0	0	0	9	34	0	0	14	18	89
AM	APPROACH %	93%	0%	7%	0%	0%	0%	21%	79%	0%	0%	44%	56%	
AM	PEAK HR FACTOR		0.500			0.000			0.538			0.800		0.795
AM	APP/DEPART	14	/	27	0	/	0	43	/	35	32	/	27	0
PM	03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:00 PM	3	0	1	0	0	0	1	6	0	0	3	2	16
PM	4:15 PM	2	0	0	0	0	0	2	7	0	0	1	6	18
PM	4:30 PM	2	0	0	0	0	0	0	2	0	0	0	2	6
PM	4:45 PM	0	0	0	0	0	0	0	4	0	0	0	1	5
PM	5:00 PM	1	0	0	0	0	0	1	4	0	0	0	2	8
PM	5:15 PM	2	0	0	0	0	0	1	2	0	0	1	6	12
PM	5:30 PM	1	0	1	0	0	0	1	5	0	0	0	2	10
PM	5:45 PM	0	0	0	0	0	0	1	3	0	0	1	3	8
PM	VOLUMES	11	0	2	0	0	0	7	33	0	0	6	24	83
PM	APPROACH %	85%	0%	15%	0%	0%	0%	18%	83%	0%	0%	20%	80%	
PM	APP/DEPART	13	/	31	0	/	0	40	/	35	30	/	17	0
PM	BEGIN PEAK HR		4:00 PM											
PM	VOLUMES	7	0	1	0	0	0	3	19	0	0	4	11	45
PM	APPROACH %	88%	0%	13%	0%	0%	0%	14%	86%	0%	0%	27%	73%	
PM	PEAK HR FACTOR		0.500			0.000			0.611			0.536		0.625
PM	APP/DEPART	8	/	14	0	/	0	22	/	20	15	/	11	0

U-TURNS / **RTOR**

		NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
							0	0	0	0
AM	7:00 AM	0	0	0	0	0	0	0	0	2
AM	7:15 AM	0	0	0	0	0	0	0	0	0
AM	7:30 AM	0	0	0	0	0	0	0	0	0
AM	7:45 AM	0	0	0	0	0	0	0	0	0
AM	8:00 AM	0	0	0	0	0	0	0	0	0
AM	8:15 AM	0	0	0	0	0	0	0	0	1
AM	8:30 AM	0	0	0	0	0	1	0	0	1
AM	8:45 AM	0	0	0	0	0	0	0	0	1
AM	9:00 AM	0	0	0	0	0	0	0	0	0
AM	9:15 AM	0	0	0	0	0	0	0	0	0
AM	9:30 AM	0	0	0	0	0	0	0	0	0
AM	9:45 AM	0	0	0	0	0	0	0	0	0
AM	VOLUMES	0	0	0	0	0	1	0	0	5
AM	PEAK HR VOLUMES						0	0	0	2
PM	03:00 PM	0	0	0	0	0	0	0	0	0
PM	3:15 PM	0	0	0	0	0	0	0	0	0
PM	3:30 PM	0	0	0	0	0	0	0	0	0
PM	3:45 PM	0	0	0	0	0	0	0	0	0
PM	4:00 PM	0	0	0	0	0	0	0	0	1
PM	4:15 PM	0	0	0	0	0	0	0	0	1
PM	4:30 PM	0	0	0	0	0	0	0	0	0
PM	4:45 PM	0	0	0	0	0	0	0	0	0
PM	5:00 PM	0	0	0	0	0	0	0	0	0
PM	5:15 PM	0	0	0	0	0	0	0	0	1
PM	5:30 PM	0	0	0	0	0	0	0	0	0
PM	5:45 PM	0	0	0	0	0	0	0	0	2
PM	VOLUMES	0	0	0	0	0	0	0	0	5
PM	PEAK HR VOLUMES						0	0	0	2

I-215 NB Ramps

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

I-215 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 5: RV

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	
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	1	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	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	1	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PEAK HR FACTOR		0.000			0.000			0.250			0.000		0.250
APP/DEPART	0	/	0	0	/	0	1	/	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	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					RTOR			
	NB	SB	EB	WB	TTL	NRR	SRR	ERR	WRR
LANES:						0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	0	0	0	0	0	0
9:45 AM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
VOLUMES	0	0	0	0	0	0	0	0	0
PEAK HR VOLUMES						0	0	0	0

I-215 NB Ramps

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

I-215 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:	LOCATION:	Moreno Valley	PROJECT #:	SC1761
5/23/18	NORTH & SOUTH:	I-215 NB Ramps	LOCATION #:	13
WEDNESDAY	EAST & WEST:	Alessandro	CONTROL:	SIGNAL

CLASS 6: BUSES

NOTES:

AM PM MD OTHER OTHER

▲ N ◄ W E ► S ▼

	NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Alessandro			WESTBOUND Alessandro			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1.3	0.3	1.3	X	X	X	1	3	X	X	3	0	
AM 7:00 AM	2	0	0	0	0	0	0	0	0	0	2	0	4
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
7:30 AM	1	0	0	0	0	0	0	1	0	0	3	0	5
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
8:30 AM	0	0	0	0	0	0	0	1	0	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	3	0	0	0	0	0	0	4	0	0	9	0	16
APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	3	/	0	0	/	0	4	/	4	9	/	12	0
BEGIN PEAK HR		7:00 AM											
VOLUMES	3	0	0	0	0	0	0	2	0	0	7	0	12
APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.375			0.000			0.500			0.583		0.600
APP/DEPART	3	/	0	0	/	0	2	/	2	7	/	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	0	0	0	0	0	0
4:15 PM	1	0	0	0	0	0	0	1	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:45 PM	1	0	0	0	0	0	0	0	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	1	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
VOLUMES	2	0	1	0	0	0	0	5	0	0	3	0	11
APPROACH %	67%	0%	33%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	3	/	0	0	/	0	5	/	6	3	/	5	0
BEGIN PEAK HR		4:15 PM											
VOLUMES	2	0	0	0	0	0	0	3	0	0	3	0	8
APPROACH %	100%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR		0.500			0.000			0.750			0.750		1.000
APP/DEPART	2	/	0	0	/	0	3	/	3	3	/	5	0

U-TURNS

	NB	SB	EB	WB	TTL
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
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
VOLUMES	0	0	0	0	0
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	0	0	0	0	0
5:45 PM	0	0	0	0	0
VOLUMES	0	0	0	0	0

RTOR

	NRR	SRR	ERR	WRR
LANES:	0	0	0	0
7:00 AM	0	0	0	0
7:15 AM	0	0	0	0
7:30 AM	0	0	0	0
7:45 AM	0	0	0	0
8:00 AM	0	0	0	0
8:15 AM	0	0	0	0
8:30 AM	0	0	0	0
8:45 AM	0	0	0	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
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	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	0	0	0	0
4:15 PM	0	0	0	0
4:30 PM	0	0	0	0
4:45 PM	0	0	0	0
5:00 PM	0	0	0	0
5:15 PM	0	0	0	0
5:30 PM	0	0	0	0
5:45 PM	0	0	0	0
VOLUMES	0	0	0	0
PEAK HR VOLUMES	0	0	0	0

I-215 NB Ramps

NORTH SIDE

Alessandro WEST SIDE

EAST SIDE **Alessandro**

SOUTH SIDE

I-215 NB Ramps

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APPENDIX 3.2:

EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

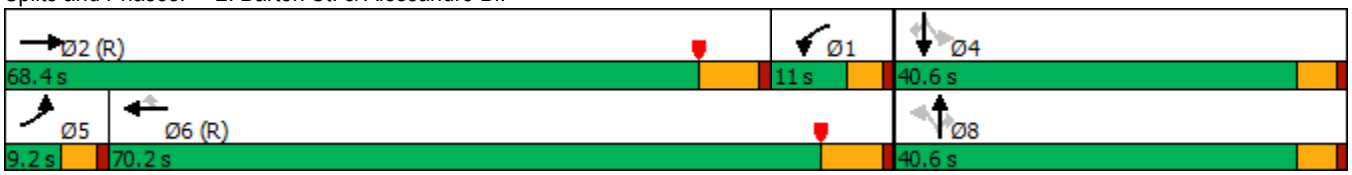
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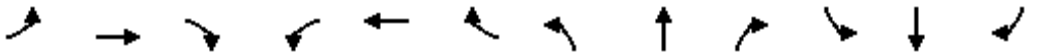
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	9	1203	42	2476	1	62	0	36	1	3	3
Future Volume (vph)	9	1203	42	2476	1	62	0	36	1	3	3
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 88 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	1203	23	42	2476	1	62	0	36	1	3	3
Future Volume (veh/h)	9	1203	23	42	2476	1	62	0	36	1	3	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	10	1294	25	45	2662	1	67	0	8	1	3	0
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	21	2702	52	68	2908	903	491	0	477	147	424	483
Arrive On Green	0.01	0.52	0.52	0.01	0.19	0.19	0.30	0.00	0.30	0.30	0.30	0.00
Sat Flow, veh/h	1810	5239	101	1810	5187	1610	1438	0	1590	366	1413	1610
Grp Volume(v), veh/h	10	854	465	45	2662	1	67	0	8	4	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1610	1438	0	1590	1780	0	1610
Q Serve(g_s), s	0.7	19.1	19.1	3.0	60.4	0.1	3.9	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	19.1	19.1	3.0	60.4	0.1	4.1	0.0	0.4	0.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	0.25		1.00
Lane Grp Cap(c), veh/h	21	1784	971	68	2908	903	491	0	477	571	0	483
V/C Ratio(X)	0.47	0.48	0.48	0.66	0.92	0.00	0.14	0.00	0.02	0.01	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	971	103	2908	903	491	0	477	571	0	483
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.82	0.82	0.82	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.9	18.7	18.7	58.5	46.1	21.5	30.8	0.0	29.5	29.5	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.9	1.7	3.4	4.9	0.0	0.6	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.1	7.9	1.4	29.0	0.0	1.5	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	19.6	20.4	61.9	51.0	21.5	31.4	0.0	29.6	29.5	0.0	0.0
LnGrp LOS	E	B	C	E	D	C	C	A	C	C	A	A
Approach Vol, veh/h		1329			2708			75			4	
Approach Delay, s/veh		20.2			51.1			31.2			29.5	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	68.4		40.6	5.6	73.8		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.0	21.1		2.2	2.7	62.4		6.1				
Green Ext Time (p_c), s	0.0	14.8		0.0	0.0	1.3		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		40.8	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

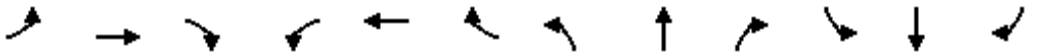
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	5	1217	2	2488	3	0	
Future Volume (vph)	5	1217	2	2488	3	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1217	5	2	2488	0	3	0	3	0	0	0
Future Volume (veh/h)	5	1217	5	2	2488	0	3	0	3	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	5	1323	5	2	2704	0	3	0	0	0	0	0
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	12	3934	15	195	4451	0	71	0	0	0	15	0
Arrive On Green	0.01	1.00	1.00	0.11	0.86	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5334	20	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	5	858	470	2	2704	0	3	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.3	0.0	0.0	0.1	18.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	18.5	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	12	2550	1399	195	4451	0	71	0	0	0	15	0
V/C Ratio(X)	0.43	0.34	0.34	0.01	0.61	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	195	4451	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	59.0	0.0	0.0	47.8	2.5	0.0	59.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.3	0.6	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	0.1	1.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	0.3	0.6	47.8	3.1	0.0	59.4	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		1333			2706			3			0	
Approach Delay, s/veh		0.7			3.2			59.4			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.6	19.4	95.0		5.6	5.0	109.5				
Change Period (Y+Rc), s		4.6	6.5	* 6.5		4.6	* 4.2	6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	* 5.8	88.5				
Max Q Clear Time (g_c+I1), s		2.2	2.1	2.0		0.0	2.3	20.5				
Green Ext Time (p_c), s		0.0	0.0	17.2		0.0	0.0	56.4				

Intersection Summary	
HCM 6th Ctrl Delay	2.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1213	7	12	2488	3	14
Future Vol, veh/h	1213	7	12	2488	3	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	155	-	0	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	1318	8	13	2704	3	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1326	0	2430	663
Stage 1	-	-	-	-	1322	-
Stage 2	-	-	-	-	1108	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	277	-	56	350
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	254	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	277	-	53	350
Mov Cap-2 Maneuver	-	-	-	-	53	-
Stage 1	-	-	-	-	156	-
Stage 2	-	-	-	-	242	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	26.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	53	350	-	-	277	-
HCM Lane V/C Ratio	0.062	0.043	-	-	0.047	-
HCM Control Delay (s)	77.3	15.8	-	-	18.6	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-

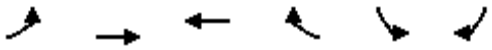
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	11	1239	2642	35	20	14
Future Volume (vph)	11	1239	2642	35	20	14
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.2	28.5	30.5	30.5	26.6	
Total Split (s)	10.0	93.4	83.4	83.4	26.6	
Total Split (%)	8.3%	77.8%	69.5%	69.5%	22.2%	
Yellow Time (s)	3.2	5.5	5.5	5.5	3.6	
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)	4.2	6.5	6.5	6.5	4.6	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	C-Max	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 50.5 (42%), Referenced to phase 2: and 6:SBL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	1239	2642	35	20	14
Future Volume (veh/h)	11	1239	2642	35	20	14
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	12	1347	2872	35	22	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	25	3152	2899	899	1053	
Arrive On Green	0.01	0.61	1.00	1.00	0.30	0.00
Sat Flow, veh/h	1810	5358	5358	1609	3510	1610
Grp Volume(v), veh/h	12	1347	2872	35	22	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1609	1755	1610
Q Serve(g_s), s	0.8	16.5	0.0	0.0	0.5	0.0
Cycle Q Clear(g_c), s	0.8	16.5	0.0	0.0	0.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	25	3152	2899	899	1053	
V/C Ratio(X)	0.48	0.43	0.99	0.04	0.02	
Avail Cap(c_a), veh/h	87	3756	3324	1031	1053	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.25	0.25	1.00	0.00
Uniform Delay (d), s/veh	58.8	12.5	0.0	0.0	29.6	0.0
Incr Delay (d2), s/veh	5.3	0.1	5.7	0.0	0.0	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	0.4	5.5	1.5	0.0	0.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.1	12.6	5.7	0.0	29.6	0.0
LnGrp LOS	E	B	A	A	C	
Approach Vol, veh/h		1359	2907		22	A
Approach Delay, s/veh		13.1	5.6		29.6	
Approach LOS		B	A		C	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			79.4		40.6	5.8	73.6
Change Period (Y+Rc), s			6.5		4.6	* 4.2	6.5
Max Green Setting (Gmax), s			86.9		22.0	* 5.8	76.9
Max Q Clear Time (g_c+I1), s			18.5		2.5	2.8	2.0
Green Ext Time (p_c), s			18.5		0.0	0.0	65.1

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

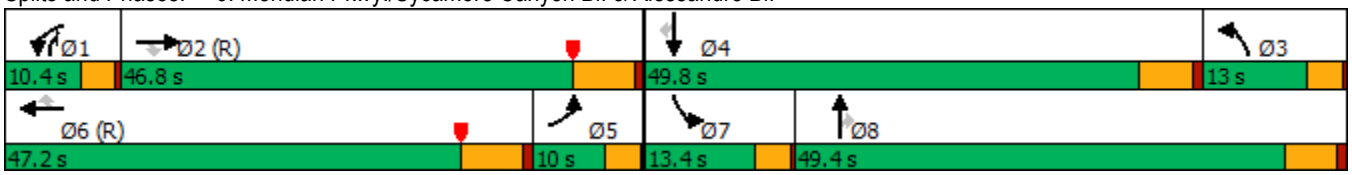
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

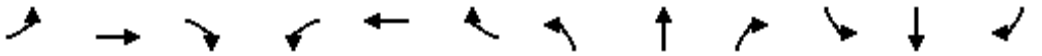
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	902	208	110	1997	522	522	678	67	122	83	115
Future Volume (vph)	142	902	208	110	1997	522	522	678	67	122	83	115
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	10.0	46.8	46.8	10.4	47.2	47.2	13.0	49.4	10.4	13.4	49.8	49.8
Total Split (%)	8.3%	39.0%	39.0%	8.7%	39.3%	39.3%	10.8%	41.2%	8.7%	11.2%	41.5%	41.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	902	208	110	1997	522	522	678	67	122	83	115
Future Volume (veh/h)	142	902	208	110	1997	522	522	678	67	122	83	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		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	149	949	219	116	2102	549	549	714	71	128	87	121
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	325	2560	795	169	1759	546	630	873	822	183	351	156
Arrive On Green	0.36	0.99	0.99	0.05	0.34	0.34	0.18	0.24	0.24	0.05	0.10	0.10
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	149	949	219	116	2102	549	549	714	71	128	87	121
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	7.6	0.4	0.1	3.9	40.7	32.2	18.3	22.4	2.2	4.3	2.7	8.8
Cycle Q Clear(g_c), s	7.6	0.4	0.1	3.9	40.7	32.2	18.3	22.4	2.2	4.3	2.7	8.8
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	325	2560	795	169	1759	546	630	873	822	183	351	156
V/C Ratio(X)	0.46	0.37	0.28	0.68	1.19	1.01	0.87	0.82	0.09	0.70	0.25	0.77
Avail Cap(c_a), veh/h	325	2560	795	196	1759	546	630	1312	1166	284	1324	590
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.94	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	0.4	0.1	56.2	39.7	24.9	47.9	43.0	31.0	55.9	50.1	52.9
Incr Delay (d2), s/veh	0.4	0.4	0.8	5.5	93.6	40.1	12.3	2.6	0.0	1.8	0.4	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.2	0.3	1.8	31.6	17.5	8.8	10.0	0.7	1.9	1.2	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.8	0.9	61.7	133.2	65.0	60.2	45.6	31.1	57.7	50.5	60.8
LnGrp LOS	C	A	A	E	F	F	E	D	C	E	D	E
Approach Vol, veh/h		1317			2767			1334			336	
Approach Delay, s/veh		4.6			116.7			50.8			56.9	
Approach LOS		A			F			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	65.7	27.3	17.5	28.0	47.2	10.0	34.8
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.7	40.3	9.3	* 44	6.3	* 41	9.7	43.6
Max Q Clear Time (g_c+I1), s	5.9	2.4	20.3	10.8	9.6	42.7	6.3	24.4
Green Ext Time (p_c), s	0.0	12.3	0.0	0.9	0.0	0.0	0.1	4.6

Intersection Summary	
HCM 6th Ctrl Delay	72.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

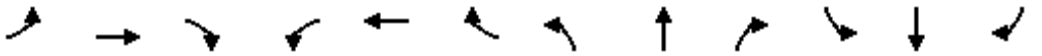
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	710	2412	210	0	311
Future Volume (vph)	710	2412	210	0	311
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	710	324	0	2412	200	0	0	0	210	0	311
Future Volume (veh/h)	0	710	324	0	2412	200	0	0	0	210	0	311
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	732	305	0	2487	206				312	0	174
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	2641	1086	0	3600	292				503	0	223
Arrive On Green	0.00	0.74	0.74	0.00	1.00	1.00				0.14	0.00	0.14
Sat Flow, veh/h	0	3753	1473	0	5052	395				3619	0	1607
Grp Volume(v), veh/h	0	706	331	0	1746	947				312	0	174
Grp Sat Flow(s),veh/h/ln	0	1729	1597	0	1729	1818				1810	0	1607
Q Serve(g_s), s	0.0	5.7	5.8	0.0	0.0	0.0				6.9	0.0	8.9
Cycle Q Clear(g_c), s	0.0	5.7	5.8	0.0	0.0	0.0				6.9	0.0	8.9
Prop In Lane	0.00		0.92	0.00		0.22				1.00		1.00
Lane Grp Cap(c), veh/h	0	2550	1177	0	2550	1341				503	0	223
V/C Ratio(X)	0.00	0.28	0.28	0.00	0.68	0.71				0.62	0.00	0.78
Avail Cap(c_a), veh/h	0	2550	1177	0	2550	1341				724	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.58	0.58				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.7	3.7	0.0	0.0	0.0				34.5	0.0	35.3
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.0	0.9	1.8				1.3	0.0	7.4
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	1.1	1.1	0.0	0.3	0.7				2.9	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.0	4.3	0.0	0.9	1.8				35.7	0.0	42.8
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1037			2693						486	
Approach Delay, s/veh		4.1			1.2						38.3	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		68.2		16.8		68.2						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		7.8		10.9		2.0						
Green Ext Time (p_c), s		7.3		0.9		36.1						

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

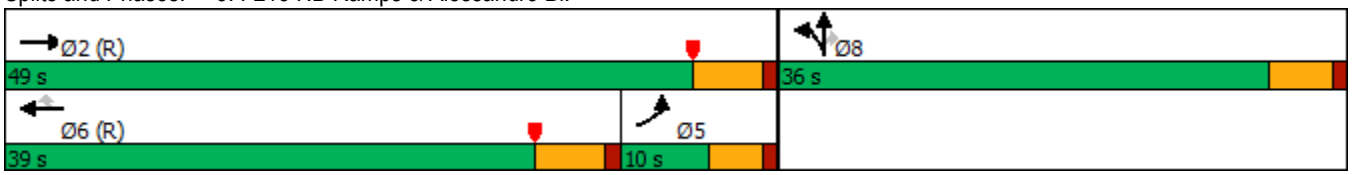
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	63	891	1582	140	934	0	218
Future Volume (vph)	63	891	1582	140	934	0	218
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	891	0	0	1582	140	934	0	218	0	0	0
Future Volume (veh/h)	63	891	0	0	1582	140	934	0	218	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	64	909	0	0	1614	123	1003	0	107			
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	96	2655	0	0	2044	620	1320	0	587			
Arrive On Green	0.11	1.00	0.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5358	0	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	64	909	0	0	1614	123	1003	0	107			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	2.9	0.0	0.0	0.0	23.3	4.4	20.7	0.0	3.8			
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.0	23.3	4.4	20.7	0.0	3.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	96	2655	0	0	2044	620	1320	0	587			
V/C Ratio(X)	0.67	0.34	0.00	0.00	0.79	0.20	0.76	0.00	0.18			
Avail Cap(c_a), veh/h	117	2655	0	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.3	0.0	0.0	0.0	22.6	16.9	23.7	0.0	18.4			
Incr Delay (d2), s/veh	8.0	0.3	0.0	0.0	3.2	0.7	4.2	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			
%ile BackOfQ(50%),veh/ln	1.4	0.1	0.0	0.0	8.6	1.5	8.7	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.3	0.0	0.0	25.8	17.6	27.9	0.0	19.1			
LnGrp LOS	D	A	A	A	C	B	C	A	B			
Approach Vol, veh/h		973			1737			1110				
Approach Delay, s/veh		3.3			25.3			27.0				
Approach LOS		A			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		49.0			10.0	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			4.9	25.3		22.7				
Green Ext Time (p_c), s		6.3			0.0	5.8		2.9				

Intersection Summary	
HCM 6th Ctrl Delay	20.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

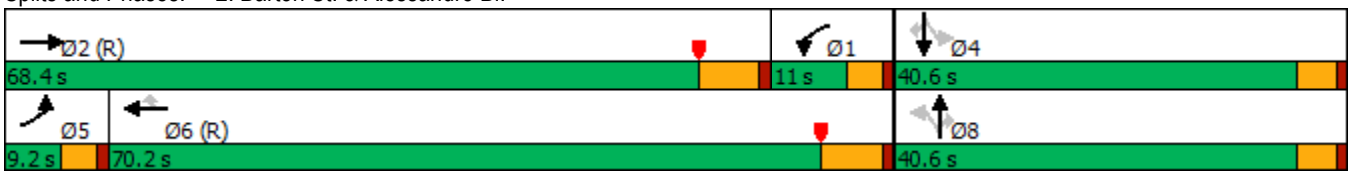
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

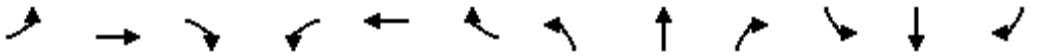
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	6	2287	46	1814	1	55	0	28	8	0	12
Future Volume (vph)	6	2287	46	1814	1	55	0	28	8	0	12
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2287	41	46	1814	1	55	0	28	8	0	12
Future Volume (veh/h)	6	2287	41	46	1814	1	55	0	28	8	0	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	2407	41	48	1909	1	58	0	7	8	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	14	2710	46	68	2930	910	502	0	482	455	0	483
Arrive On Green	0.01	0.52	0.52	0.01	0.19	0.19	0.30	0.00	0.30	0.30	0.00	0.00
Sat Flow, veh/h	1810	5253	89	1810	5187	1610	1474	0	1605	1317	0	1610
Grp Volume(v), veh/h	6	1582	866	48	1909	1	58	0	7	8	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1884	1810	1729	1610	1474	0	1605	1317	0	1610
Q Serve(g_s), s	0.4	49.0	49.4	3.2	40.9	0.1	0.0	0.0	0.4	0.5	0.0	0.0
Cycle Q Clear(g_c), s	0.4	49.0	49.4	3.2	40.9	0.1	2.8	0.0	0.4	3.3	0.0	0.0
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	14	1784	972	68	2930	910	502	0	482	455	0	483
V/C Ratio(X)	0.44	0.89	0.89	0.71	0.65	0.00	0.12	0.00	0.01	0.02	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	972	103	2930	910	502	0	482	455	0	483
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	59.3	25.9	26.0	58.6	37.9	21.3	30.4	0.0	29.5	31.6	0.0	0.0
Incr Delay (d2), s/veh	8.0	7.0	12.1	4.5	1.0	0.0	0.5	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	19.4	22.7	1.5	19.0	0.0	1.3	0.0	0.2	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	32.9	38.1	63.1	38.9	21.3	30.8	0.0	29.6	31.6	0.0	0.0
LnGrp LOS	E	C	D	E	D	C	C	A	C	C	A	A
Approach Vol, veh/h		2454			1958			65			8	
Approach Delay, s/veh		34.8			39.5			30.7			31.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	68.4		40.6	5.1	74.3		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.2	51.4		5.3	2.4	42.9		4.8				
Green Ext Time (p_c), s	0.0	9.8		0.0	0.0	15.9		0.3				

Intersection Summary		
HCM 6th Ctrl Delay		36.8
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	3	2294	3	1926	5	0	
Future Volume (vph)	3	2294	3	1926	5	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2294	1	3	1926	0	5	0	2	0	0	0
Future Volume (veh/h)	3	2294	1	3	1926	0	5	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	3	2493	1	3	2093	0	5	0	0	0	0	0
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	221	3950	2	221	3825	0	78	0	0	0	24	0
Arrive On Green	0.24	1.00	1.00	0.12	0.74	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5355	2	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	3	1610	884	3	2093	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	0.0	0.0	0.2	21.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.2	21.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	221	2550	1401	221	3825	0	78	0	0	0	24	0
V/C Ratio(X)	0.01	0.63	0.63	0.01	0.55	0.00	0.06	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	221	2550	1401	221	3825	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	46.3	6.9	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.0	0.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.1	5.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.4	0.8	46.3	7.5	0.0	59.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2497			2096			5			0	
Approach Delay, s/veh		0.6			7.6			59.0			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	6.1	18.9	95.0	6.1	18.9	95.0
Change Period (Y+Rc), s	4.6	4.2	* 6.5	4.6	4.2	* 6.5
Max Green Setting (Gmax), s	10.4	5.8	* 89	10.4	5.8	* 89
Max Q Clear Time (g_c+I1), s	2.4	2.2	2.0	0.0	2.2	23.3
Green Ext Time (p_c), s	0.0	0.0	58.7	0.0	0.0	39.2

Intersection Summary	
HCM 6th Ctrl Delay	3.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2286	12	23	1922	2	9
Future Vol, veh/h	2286	12	23	1922	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	155	-	0	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	2485	13	25	2089	2	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2498	0	3378	1249
Stage 1	-	-	-	-	2492	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	71	-	17	143
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	333	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	71	-	11	143
Mov Cap-2 Maneuver	-	-	-	-	11	-
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	216	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	98.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	11	143	-	-	71	-
HCM Lane V/C Ratio	0.198	0.068	-	-	0.352	-
HCM Control Delay (s)	$ 400.1	32	-	-	81.1	-
HCM Lane LOS	F	D	-	-	F	-
HCM 95th %tile Q(veh)	0.5	0.2	-	-	1.3	-

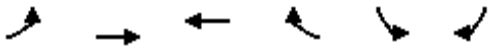
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	2421	1983	20	27	16
Future Volume (vph)	14	2421	1983	20	27	16
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.2	28.5	30.5	30.5	26.6	
Total Split (s)	11.0	92.0	81.0	81.0	28.0	
Total Split (%)	9.2%	76.7%	67.5%	67.5%	23.3%	
Yellow Time (s)	3.2	5.5	5.5	5.5	3.6	
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)	4.2	6.5	6.5	6.5	4.6	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	C-Max	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2: and 6:SBL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	2421	1983	20	27	16
Future Volume (veh/h)	14	2421	1983	20	27	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	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	15	2660	2179	21	30	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	30	3474	3208	974	834	
Arrive On Green	0.02	0.67	1.00	1.00	0.24	0.00
Sat Flow, veh/h	1810	5358	5358	1575	3510	1610
Grp Volume(v), veh/h	15	2660	2179	21	30	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1575	1755	1610
Q Serve(g_s), s	1.0	41.7	0.0	0.0	0.8	0.0
Cycle Q Clear(g_c), s	1.0	41.7	0.0	0.0	0.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	30	3474	3208	974	834	
V/C Ratio(X)	0.51	0.77	0.68	0.02	0.04	
Avail Cap(c_a), veh/h	103	3696	3220	978	834	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.19	0.19	1.00	0.00
Uniform Delay (d), s/veh	58.5	13.4	0.0	0.0	35.2	0.0
Incr Delay (d2), s/veh	4.9	1.0	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	13.1	0.0	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.4	14.5	0.1	0.0	35.2	0.0
LnGrp LOS	E	B	A	A	D	
Approach Vol, veh/h		2675	2200		30	A
Approach Delay, s/veh		14.7	0.1		35.2	
Approach LOS		B	A		D	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	86.9	33.1	6.2	80.7
Change Period (Y+Rc), s	6.5	4.6	* 4.2	6.5
Max Green Setting (Gmax), s	85.5	23.4	* 6.8	74.5
Max Q Clear Time (g_c+I1), s	43.7	2.8	3.0	2.0
Green Ext Time (p_c), s	36.7	0.0	0.0	44.8

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

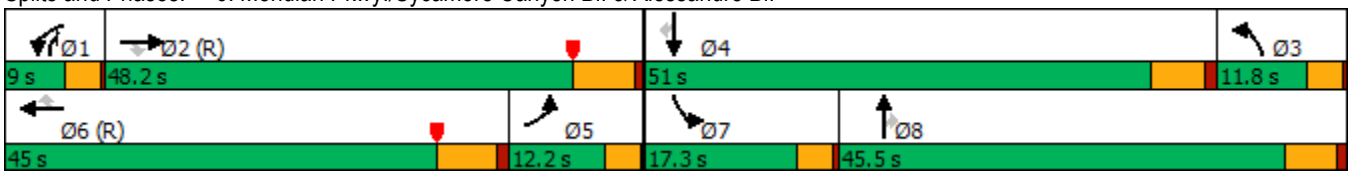
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

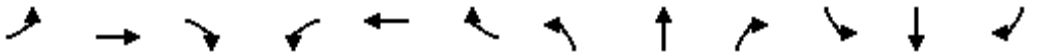
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1612	516	156	1334	146	349	279	158	189	654	310
Future Volume (vph)	148	1612	516	156	1334	146	349	279	158	189	654	310
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	12.2	48.2	48.2	9.0	45.0	45.0	11.8	45.5	9.0	17.3	51.0	51.0
Total Split (%)	10.2%	40.2%	40.2%	7.5%	37.5%	37.5%	9.8%	37.9%	7.5%	14.4%	42.5%	42.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	1612	516	156	1334	146	349	279	158	189	654	310
Future Volume (veh/h)	148	1612	516	156	1334	146	349	279	158	189	654	310
Initial Q (Qb), veh	0	0	0	0	0	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	164	1791	573	173	1482	162	388	310	176	210	727	344
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	1589	6112	1897	155	1664	517	237	1390	1216	269	1360	606
Arrive On Green	1.00	1.00	1.00	0.04	0.32	0.32	0.07	0.39	0.39	0.08	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	164	1791	573	173	1482	162	388	310	176	210	727	344
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	5.3	32.6	18.3	8.1	6.9	4.5	7.1	18.9	20.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.3	32.6	18.3	8.1	6.9	4.5	7.1	18.9	20.3
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	1589	6112	1897	155	1664	517	237	1390	1216	269	1360	606
V/C Ratio(X)	0.10	0.29	0.30	1.12	0.89	0.31	1.64	0.22	0.14	0.78	0.53	0.57
Avail Cap(c_a), veh/h	1589	6112	1897	155	1664	517	237	1390	1216	398	1360	606
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	57.3	38.7	124.4	56.0	24.8	20.8	54.4	29.2	29.6
Incr Delay (d2), s/veh	0.0	0.1	0.3	106.7	7.6	1.6	305.2	0.4	0.3	3.0	1.5	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	0.0	0.0	0.1	4.6	14.4	7.8	13.5	2.9	1.5	3.2	8.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.3	164.1	46.4	126.0	361.1	25.2	21.1	57.5	30.7	33.5
LnGrp LOS	A	A	A	F	D	F	F	C	C	E	C	C
Approach Vol, veh/h		2528			1817			874			1281	
Approach Delay, s/veh		0.1			64.7			173.5			35.8	
Approach LOS		A			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	150.0	13.9	51.0	114.0	45.0	12.9	52.0
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	5.3	41.7	8.1	* 45	8.5	* 39	13.6	39.7
Max Q Clear Time (g_c+I1), s	7.3	2.0	10.1	22.3	2.0	34.6	9.1	8.9
Green Ext Time (p_c), s	0.0	29.8	0.0	6.0	0.1	3.3	0.1	2.6

Intersection Summary	
HCM 6th Ctrl Delay	48.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

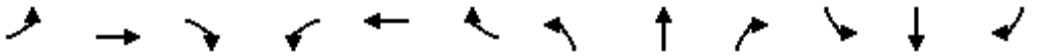
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1536	1332	216	0	357
Future Volume (vph)	1536	1332	216	0	357
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1536	424	0	1332	131	0	0	0	216	0	357
Future Volume (veh/h)	0	1536	424	0	1332	131	0	0	0	216	0	357
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	1634	414	0	1417	137				323	0	176
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	3015	752	0	3513	340				522	0	232
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73				0.14	0.00	0.14
Sat Flow, veh/h	0	4289	1028	0	4970	464				3619	0	1607
Grp Volume(v), veh/h	0	1368	680	0	1021	533				323	0	176
Grp Sat Flow(s),veh/h/ln	0	1729	1688	0	1729	1805				1810	0	1607
Q Serve(g_s), s	0.0	14.9	15.4	0.0	9.5	9.5				7.1	0.0	8.9
Cycle Q Clear(g_c), s	0.0	14.9	15.4	0.0	9.5	9.5				7.1	0.0	8.9
Prop In Lane	0.00		0.61	0.00		0.26				1.00		1.00
Lane Grp Cap(c), veh/h	0	2532	1236	0	2532	1321				522	0	232
V/C Ratio(X)	0.00	0.54	0.55	0.00	0.40	0.40				0.62	0.00	0.76
Avail Cap(c_a), veh/h	0	2532	1236	0	2532	1321				937	0	416
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	1.00	0.00	0.80	0.80				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.0	5.1	0.0	4.3	4.3				34.2	0.0	34.9
Incr Delay (d2), s/veh	0.0	0.8	1.8	0.0	0.4	0.7				1.2	0.0	5.0
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	2.9	3.2	0.0	1.8	2.0				3.0	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.9	6.9	0.0	4.7	5.1				35.4	0.0	40.0
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		2048			1554						499	
Approach Delay, s/veh		6.2			4.8						37.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		67.7		17.3		67.7						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		17.4		10.9		11.5						
Green Ext Time (p_c), s		18.6		1.3		12.6						

Intersection Summary												
HCM 6th Ctrl Delay			9.4									
HCM 6th LOS			A									

Notes

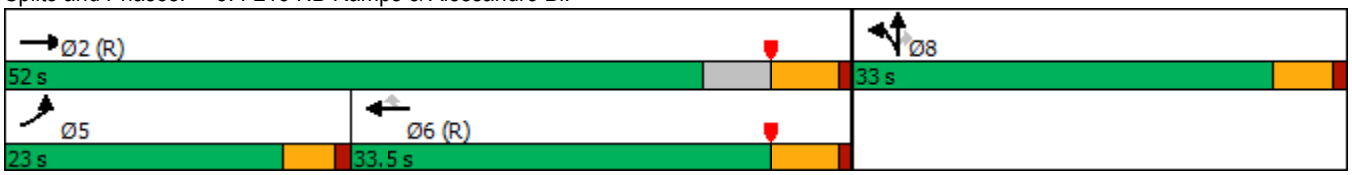
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	195	1501	945	206	598	8	303
Future Volume (vph)	195	1501	945	206	598	8	303
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	23.0	52.0	33.5	33.5	33.0	33.0	33.0
Total Split (%)	25.7%	58.1%	37.4%	37.4%	36.9%	36.9%	36.9%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	195	1501	0	0	945	206	598	8	303	0	0	0
Future Volume (veh/h)	195	1501	0	0	945	206	598	8	303	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	207	1597	0	0	1005	103	688	0	106			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	245	2968	0	0	2007	610	1126	0	501			
Arrive On Green	0.14	0.57	0.00	0.00	0.39	0.39	0.31	0.00	0.31			
Sat Flow, veh/h	1810	5358	0	0	5358	1576	3619	0	1610			
Grp Volume(v), veh/h	207	1597	0	0	1005	103	688	0	106			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1576	1810	0	1610			
Q Serve(g_s), s	10.1	17.1	0.0	0.0	13.3	3.9	14.6	0.0	4.4			
Cycle Q Clear(g_c), s	10.1	17.1	0.0	0.0	13.3	3.9	14.6	0.0	4.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	245	2968	0	0	2007	610	1126	0	501			
V/C Ratio(X)	0.84	0.54	0.00	0.00	0.50	0.17	0.61	0.00	0.21			
Avail Cap(c_a), veh/h	372	2968	0	0	2007	610	1126	0	501			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.0	11.9	0.0	0.0	21.0	18.1	26.4	0.0	22.9			
Incr Delay (d2), s/veh	7.1	0.5	0.0	0.0	0.9	0.6	2.5	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	4.6	5.3	0.0	0.0	4.9	1.3	6.2	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.1	12.4	0.0	0.0	21.9	18.7	28.8	0.0	23.8			
LnGrp LOS	D	B	A	A	C	B	C	A	C			
Approach Vol, veh/h		1804			1108			794				
Approach Delay, s/veh		16.2			21.6			28.2				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.0			16.7	40.3		33.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		46.5			18.5	28.0		28.0				
Max Q Clear Time (g_c+I1), s		19.1			12.1	15.3		16.6				
Green Ext Time (p_c), s		12.2			0.2	5.2		2.3				

Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 3.3:

EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

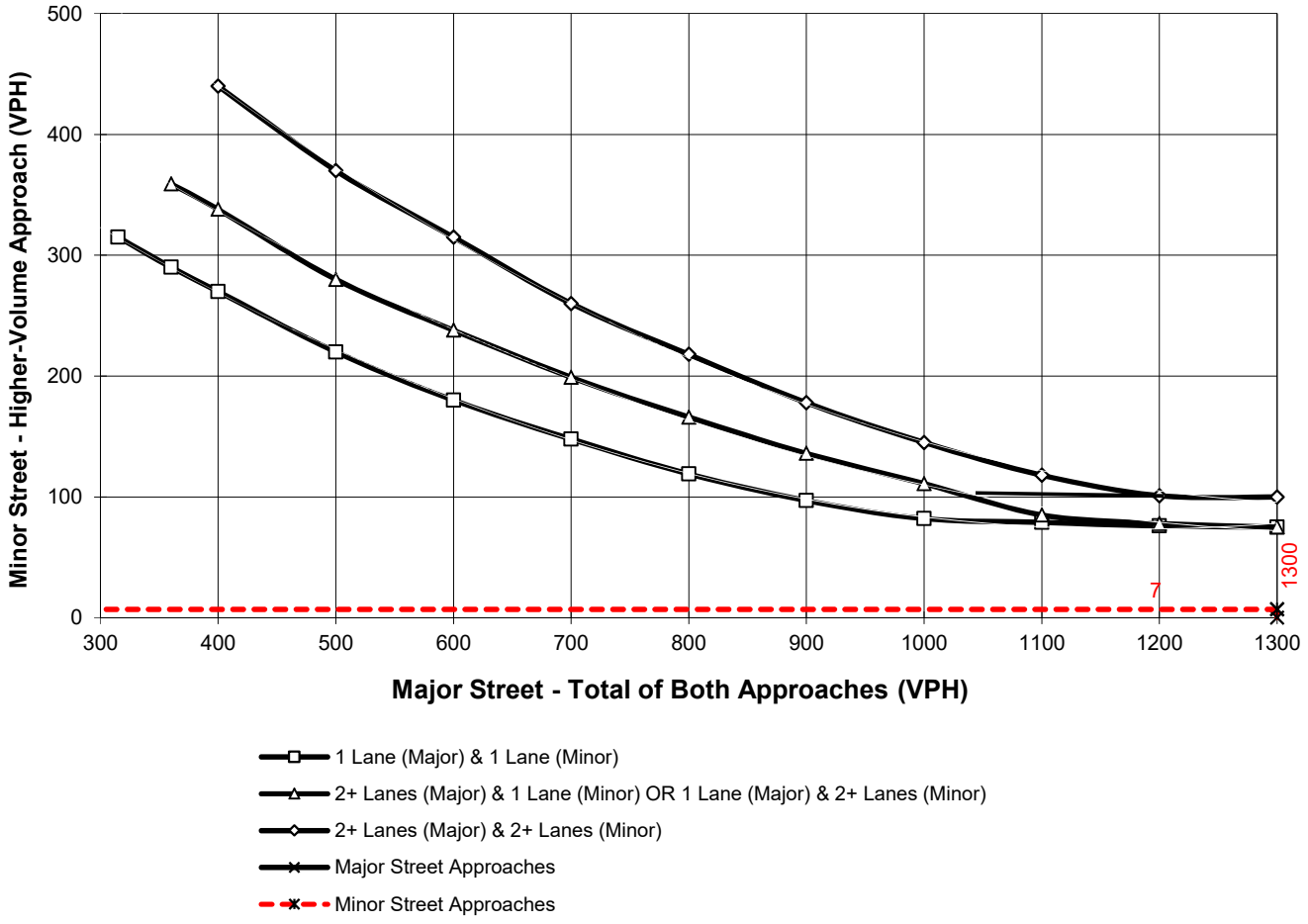
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.**
Total of Both Approaches (VPH) = **4227**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway**
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)

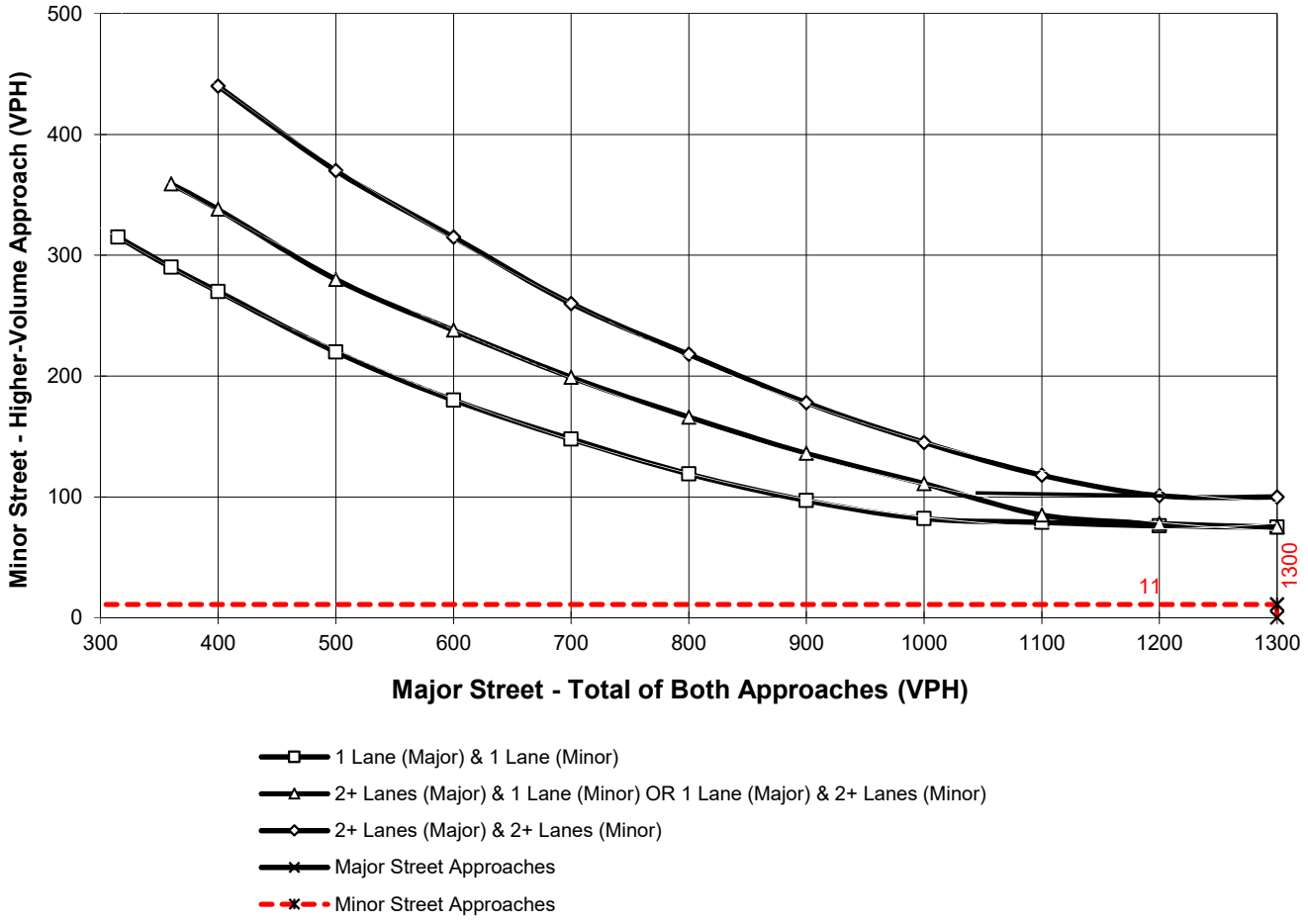
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2019) Conditions - Weekday AM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **4243**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Vista Grande** High Volume Approach (VPH) = **11**
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

APPENDIX 3.4:

EXISTING (2019) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1066	2693	188	176	173
v/c Ratio	0.30	0.74	0.67	0.65	0.63
Control Delay	3.5	3.6	44.9	38.3	36.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.5	3.6	44.9	38.3	36.9
Queue Length 50th (ft)	43	114	100	79	73
Queue Length 95th (ft)	66	105	166	147	137
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3584	3658	343	322	328
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	0.30	0.74	0.55	0.55	0.53

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	64	909	1614	143	486	489	200
v/c Ratio	0.56	0.34	0.75	0.19	0.78	0.74	0.32
Control Delay	54.1	14.1	24.2	3.8	34.3	26.3	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	14.1	24.2	3.8	34.3	26.3	11.0
Queue Length 50th (ft)	32	121	271	0	237	195	35
Queue Length 95th (ft)	#67	150	330	34	#400	327	88
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2654	2166	742	625	662	625
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.34	0.75	0.19	0.78	0.74	0.32

Intersection Summary

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

Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2085	1556	207	202	201
v/c Ratio	0.60	0.44	0.64	0.63	0.61
Control Delay	8.0	6.8	40.1	31.9	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	6.8	40.1	31.9	31.0
Queue Length 50th (ft)	171	115	108	81	77
Queue Length 95th (ft)	267	179	167	146	138
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3481	3522	443	418	428
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	0.60	0.44	0.47	0.48	0.47

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	207	1597	1005	219	337	340	290
v/c Ratio	0.71	0.54	0.54	0.31	0.63	0.66	0.54
Control Delay	48.3	12.8	24.9	4.6	32.5	33.4	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	12.8	24.9	4.6	32.5	33.4	21.9
Queue Length 50th (ft)	111	190	165	0	170	178	97
Queue Length 95th (ft)	176	230	220	49	267	283	183
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	373	2955	1850	705	536	515	538
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.54	0.54	0.31	0.63	0.66	0.54

Intersection Summary

APPENDIX 4.1:

POST PROCESSING WORKSHEETS

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Project:	Sycamore Hills Distribution Center	Job #:	12014
Scenario:	Horizon Year (2040) Without Project	Analyst:	RV
		Date:	5/22/2019

LOCATION: Barton St. & Alessandro Bl.
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	56	58	2	4%	42	40	-2	-5%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	39	42	3	8%	32	30	-2	-6%
	NB Total	95	100	5	5%	74	70	-4	-5%
SOUTH BOUND	Left	1	0	-1	-100%	3	3	0	0%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	2	0	-2	-100%	7	7	0	0%
	SB Total	3	0	-3	-100%	10	10	0	0%
EAST BOUND	Left	2	0	-2	-100%	8	7	-1	-13%
	Through	1,109	1,628	519	47%	2,194	3,387	1,193	54%
	Right	11	12	1	9%	29	30	1	3%
	EB Total	1,122	1,640	518	46%	2,231	3,424	1,193	53%
WEST BOUND	Left	25	28	3	12%	42	40	-2	-5%
	Through	2,353	3,362	1,009	43%	1,818	2,583	765	42%
	Right	2	0	-2	-100%	3	3	0	0%
	WB Total	2,380	3,390	1,010	42%	1,863	2,626	763	41%
TOTAL ENTERING VOLUME		3,600	5,130	1530	43%	4,178	6,130	1952	47%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	0	10			
North Leg	Outbound	0	10			
North Leg	**TOTAL**	**0**	**20**	**#DIV/0!**	**#DIV/0!**	**-**
South Leg	Inbound	100	70			
South Leg	Outbound	40	70			
South Leg	**TOTAL**	**140**	**140**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	3,390	2,626			
East Leg	Outbound	1,670	3,420			
East Leg	**TOTAL**	**5,060**	**6,046**	**7%**	**9%**	**70,194**
West Leg	Inbound	1,640	3,424			
West Leg	Outbound	3,420	2,630			
West Leg	**TOTAL**	**5,060**	**6,054**	**7%**	**9%**	**70,194**
OVERALL TOTAL		***10,260***	***12,260***	***7%***	***9%***	***140,388***

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Project:	Sycamore Hills Distribution Center	Job #:	12014
Scenario:	Horizon Year (2040) Without Project	Analyst:	RV
		Date:	5/22/2019

LOCATION: San Gorgonio Dr. & Alessandro Bl.
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	12	14	2	17%	20	23	3	15%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	14	16	2	14%	15	17	2	13%
	SB Total	26	30	4	15%	35	40	5	14%
EAST BOUND	Left	11	12	1	9%	14	16	2	14%
	Through	1,158	1,686	528	46%	2,320	3,507	1,187	51%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	1,169	1,698	529	45%	2,334	3,523	1,189	51%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	2,491	3,504	1,013	41%	1,893	2,653	760	40%
	Right	26	28	2	8%	13	14	1	8%
	WB Total	2,517	3,532	1,015	40%	1,906	2,667	761	40%
TOTAL ENTERING VOLUME		3,712	5,260	1548	42%	4,275	6,230	1955	46%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	30	40			
North Leg	Outbound	40	30			
North Leg	**TOTAL**	**70**	**70**	**#DIV/0!**	**#DIV/0!**	**-**
South Leg	Inbound	0	0			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**0**	**0**	**#DIV/0!**	**#DIV/0!**	**-**
East Leg	Inbound	3,532	2,667			
East Leg	Outbound	1,700	3,530			
East Leg	**TOTAL**	**5,232**	**6,197**	**7%**	**9%**	**70,194**
West Leg	Inbound	1,698	3,523			
West Leg	Outbound	3,520	2,670			
West Leg	**TOTAL**	**5,218**	**6,193**	**7%**	**9%**	**70,194**
OVERALL TOTAL		***10,520***	***12,460***	***7%***	***9%***	***140,388***

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Project:	Sycamore Hills Distribution Center	Job #:	12014
Scenario:	Horizon Year (2040) Without Project	Analyst:	RV
		Date:	5/22/2019

LOCATION: Sycamore Canyon Bl./Meridian Pkwy. & Alessandro Bl.
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	492	610	118	24%	337	417	80	24%
	Through	626	607	-19	-3%	263	332	69	26%
	Right	59	47	-12	-20%	152	124	-28	-18%
	NB Total	1,177	1,264	87	7%	752	873	121	16%
SOUTH BOUND	Left	98	147	49	50%	173	185	12	7%
	Through	70	84	14	20%	605	591	-14	-2%
	Right	102	238	136	133%	293	474	181	62%
	SB Total	270	469	199	74%	1,071	1,250	179	17%
EAST BOUND	Left	130	232	102	78%	132	306	174	132%
	Through	849	1,243	394	46%	1,542	2,315	773	50%
	Right	201	236	35	17%	498	683	185	37%
	EB Total	1,180	1,711	531	45%	2,172	3,304	1,132	52%
WEST BOUND	Left	103	75	-28	-27%	153	129	-24	-16%
	Through	1,937	2,735	798	41%	1,363	1,907	544	40%
	Right	485	536	51	11%	138	197	59	43%
	WB Total	2,525	3,346	821	33%	1,654	2,233	579	35%
TOTAL ENTERING VOLUME		5,152	6,790	1638	32%	5,649	7,660	2011	36%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	469	1,250			
North Leg	Outbound	1,375	835			
North Leg	**TOTAL**	**1,844**	**2,085**	**17%**	**19%**	**10,915**
South Leg	Inbound	1,264	873			
South Leg	Outbound	395	1,403			
South Leg	**TOTAL**	**1,659**	**2,276**	**44%**	**61%**	**3,753**
East Leg	Inbound	3,346	2,233			
East Leg	Outbound	1,437	2,624			
East Leg	**TOTAL**	**4,783**	**4,857**	**7%**	**7%**	**66,811**
West Leg	Inbound	1,711	3,304			
West Leg	Outbound	3,583	2,798			
West Leg	**TOTAL**	**5,294**	**6,102**	**8%**	**9%**	**69,414**
OVERALL TOTAL		***13,580***	***15,320***	**9%**	***10%***	***150,893***

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Project:	Sycamore Hills Distribution Center	Job #:	12014
Scenario:	Horizon Year (2040) Without Project	Analyst:	RV
		Date:	5/22/19

LOCATION: I-215 Southbound Ramps (NS) & Alessandro Bl. (EW)
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	40	39	3900%	1	81	80	8000%
	Through	0	51	51	#DIV/0!	0	109	109	#DIV/0!
	Right	1	119	118	11800%	1	133	132	13200%
	SB Total	2	210	208	10400%	2	323	321	16050%
EAST BOUND	Left	0	6	6	#DIV/0!	0	13	13	#DIV/0!
	Through	2	1,540	1,538	76900%	2	2,859	2,857	142850%
	Right	1	215	214	21400%	1	431	430	43000%
	EB Total	3	1,761	1,758	58600%	3	3,303	3,300	110000%
WEST BOUND	Left	0	144	144	#DIV/0!	0	209	209	#DIV/0!
	Through	2	3,041	3,039	151950%	2	2,287	2,285	114250%
	Right	1	4	3	300%	1	7	6	600%
	WB Total	3	3,189	3,186	106200%	3	2,503	2,500	83333%
TOTAL ENTERING VOLUME		8	5,160	5152	64400%	8	6,129	6121	76513%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	210	323			
North Leg	Outbound	10	20			
North Leg	**TOTAL**	**220**	**343**	**8%**	**12%**	**2,836**
South Leg	Inbound	0	0			
South Leg	Outbound	410	749			
South Leg	**TOTAL**	**410**	**749**	**5%**	**8%**	**8,880**
East Leg	Inbound	3,189	2,503			
East Leg	Outbound	1,580	2,940			
East Leg	**TOTAL**	**4,769**	**5,443**	**8%**	**9%**	**60,278**
West Leg	Inbound	1,761	3,303			
West Leg	Outbound	3,160	2,420			
West Leg	**TOTAL**	**4,921**	**5,723**	**7%**	**9%**	**66,811**
OVERALL TOTAL		***10,320***	***12,258***	***7%***	***9%***	***138,805***

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Project:	Sycamore Hills Distribution Center	Job #:	12014
Scenario:	Horizon Year (2040) Without Project	Analyst:	RV
		Date:	5/22/19

LOCATION: I-215 Northbound Ramps (NS) & Alessandro Bl. (EW)
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	436	435	43500%	1	226	225	22500%
	Through	0	35	35	#DIV/0!	0	68	68	#DIV/0!
	Right	1	113	112	11200%	1	177	176	17600%
	NB Total	2	584	582	29100%	2	471	469	23450%
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	1	51	50	5000%	1	118	117	11700%
	Through	2	1,467	1,465	73250%	2	2,768	2,766	138300%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	3	1,518	1,515	50500%	3	2,886	2,883	96100%
WEST BOUND	Left	1	0	-1	-100%	1	0	-1	-100%
	Through	2	2,714	2,712	135600%	2	2,198	2,196	109800%
	Right	0	24	24	#DIV/0!	0	74	74	#DIV/0!
	WB Total	3	2,738	2,735	91167%	3	2,272	2,269	75633%
TOTAL ENTERING VOLUME		8	4,840	4832	60400%	8	5,629	5621	70263%

FORECAST PEAK HOUR TO ADT COMPARISON

		VOLUMES		PERCENT OF ADT		
		AM	PM	AM	PM	ADT
North Leg	Inbound	0	0			
North Leg	Outbound	110	260			
North Leg	**TOTAL**	**110**	**260**	**5%**	**11%**	**2,417**
South Leg	Inbound	584	471			
South Leg	Outbound	0	0			
South Leg	**TOTAL**	**584**	**471**	**8%**	**6%**	**7,608**
East Leg	Inbound	2,738	2,272			
East Leg	Outbound	1,580	2,945			
East Leg	**TOTAL**	**4,318**	**5,217**	**8%**	**9%**	**55,015**
West Leg	Inbound	1,518	2,886			
West Leg	Outbound	3,150	2,424			
West Leg	**TOTAL**	**4,668**	**5,310**	**8%**	**9%**	**60,278**
OVERALL TOTAL		***9,680***	***11,258***	**8%**	***9%***	***125,318***

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APPENDIX 5.1:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	0	19	0	0
Future Vol, veh/h	6	0	0	19	0	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	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	7	0	0	21	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	12	11	0	0	21	0
Stage 1	11	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1013	1076	-	-	1608	-
Stage 1	1017	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1013	1076	-	-	1608	-
Mov Cap-2 Maneuver	1013	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	1028	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

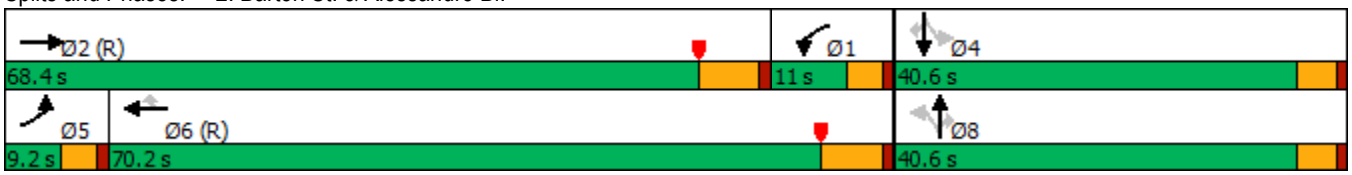
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1013	1608	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

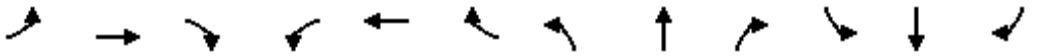
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	11	1207	42	2477	18	62	5	36	6	3	3
Future Volume (vph)	11	1207	42	2477	18	62	5	36	6	3	3
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 88 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	1207	23	42	2477	18	62	5	36	6	3	3
Future Volume (veh/h)	11	1207	23	42	2477	18	62	5	36	6	3	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	12	1298	25	45	2663	19	67	5	8	6	3	0
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	25	2702	52	68	2898	900	473	33	477	331	156	483
Arrive On Green	0.01	0.52	0.52	0.01	0.18	0.18	0.30	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	1810	5239	101	1810	5187	1610	1384	111	1590	936	521	1610
Grp Volume(v), veh/h	12	857	466	45	2663	19	72	0	8	9	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1610	1495	0	1590	1457	0	1610
Q Serve(g_s), s	0.8	19.1	19.1	3.0	60.5	1.2	0.0	0.0	0.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	19.1	19.1	3.0	60.5	1.2	3.5	0.0	0.4	3.5	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	0.93		1.00	0.67		1.00
Lane Grp Cap(c), veh/h	25	1784	971	68	2898	900	507	0	477	487	0	483
V/C Ratio(X)	0.48	0.48	0.48	0.66	0.92	0.02	0.14	0.00	0.02	0.02	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	971	103	2898	900	507	0	477	487	0	483
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.8	18.7	18.7	58.5	46.3	22.1	30.6	0.0	29.5	29.6	0.0	0.0
Incr Delay (d2), s/veh	5.3	0.9	1.7	3.3	5.0	0.0	0.6	0.0	0.1	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.1	8.0	1.4	29.0	0.4	1.6	0.0	0.2	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.1	19.6	20.4	61.8	51.3	22.1	31.2	0.0	29.6	29.6	0.0	0.0
LnGrp LOS	E	B	C	E	D	C	C	A	C	C	A	A
Approach Vol, veh/h		1335			2727			80			9	
Approach Delay, s/veh		20.3			51.2			31.0			29.6	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	68.4		40.6	5.8	73.6		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.0	21.1		5.5	2.8	62.5		5.5				
Green Ext Time (p_c), s	0.0	14.9		0.0	0.0	1.2		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		40.9	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

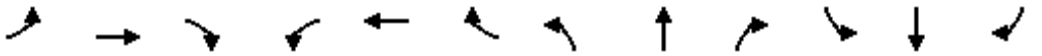
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	5	1226	2	2506	3	0	
Future Volume (vph)	5	1226	2	2506	3	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1226	5	2	2506	0	3	0	3	0	0	0
Future Volume (veh/h)	5	1226	5	2	2506	0	3	0	3	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	5	1333	5	2	2724	0	3	0	0	0	0	0
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	12	3934	15	195	4451	0	71	0	0	0	15	0
Arrive On Green	0.01	1.00	1.00	0.11	0.86	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5334	20	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	5	864	474	2	2724	0	3	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.3	0.0	0.0	0.1	18.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	18.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	12	2550	1399	195	4451	0	71	0	0	0	15	0
V/C Ratio(X)	0.43	0.34	0.34	0.01	0.61	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	195	4451	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	59.0	0.0	0.0	47.8	2.5	0.0	59.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.3	0.6	0.0	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.2	0.1	1.7	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	0.3	0.6	47.8	3.2	0.0	59.4	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		1343			2726			3			0	
Approach Delay, s/veh		0.7			3.2			59.4			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.6	19.4	95.0		5.6	5.0	109.5				
Change Period (Y+Rc), s		4.6	6.5	* 6.5		4.6	* 4.2	6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	* 5.8	88.5				
Max Q Clear Time (g_c+I1), s		2.2	2.1	2.0		0.0	2.3	20.8				
Green Ext Time (p_c), s		0.0	0.0	17.4		0.0	0.0	56.6				

Intersection Summary	
HCM 6th Ctrl Delay	2.4
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	4	1218	7	12	2505	35	3	0	14	11	0	1
Future Vol, veh/h	4	1218	7	12	2505	35	3	0	14	11	0	1
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	155	-	-	155	-	-	0	-	-	0	-	-
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	4	1324	8	13	2723	38	3	0	15	12	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2761	0	0	1332	0	0	2451	4123	666	3306	4108	1381
Stage 1	-	-	-	-	-	-	1336	1336	-	2768	2768	-
Stage 2	-	-	-	-	-	-	1115	2787	-	538	1340	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	52	-	-	275	-	-	34	2	348	~ 10	2	117
Stage 1	-	-	-	-	-	-	118	224	-	~ 11	42	-
Stage 2	-	-	-	-	-	-	202	41	-	456	223	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	52	-	-	275	-	-	31	2	348	~ 9	2	117
Mov Cap-2 Maneuver	-	-	-	-	-	-	31	2	-	~ 9	2	-
Stage 1	-	-	-	-	-	-	109	207	-	~ 10	40	-
Stage 2	-	-	-	-	-	-	191	39	-	403	206	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	36.7	$ 895.4
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	31	348	52	-	-	275	-	-	9	117
HCM Lane V/C Ratio	0.105	0.044	0.084	-	-	0.047	-	-	1.329	0.009
HCM Control Delay (s)	134.3	15.8	80.5	-	-	18.7	-	-	$ 973.5	36.1
HCM Lane LOS	F	C	F	-	-	C	-	-	F	E
HCM 95th %tile Q(veh)	0.3	0.1	0.3	-	-	0.1	-	-	2.3	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

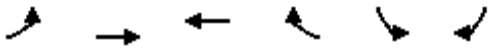
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	11	1255	2694	35	20	14
Future Volume (vph)	11	1255	2694	35	20	14
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.2	28.5	30.5	30.5	26.6	
Total Split (s)	14.0	94.0	80.0	80.0	26.0	
Total Split (%)	11.7%	78.3%	66.7%	66.7%	21.7%	
Yellow Time (s)	3.2	5.5	5.5	5.5	3.6	
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)	4.2	6.5	6.5	6.5	4.6	
Lead/Lag	Lag		Lead	Lead		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	C-Max	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 50.5 (42%), Referenced to phase 2: and 6:SBL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	11	1255	2694	35	20	14
Future Volume (veh/h)	11	1255	2694	35	20	14
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	12	1364	2928	35	22	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	25	3500	3147	976	817	
Arrive On Green	0.01	0.67	0.81	0.81	0.23	0.00
Sat Flow, veh/h	1810	5358	5358	1609	3510	1610
Grp Volume(v), veh/h	12	1364	2928	35	22	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1609	1755	1610
Q Serve(g_s), s	0.8	13.9	52.4	0.5	0.6	0.0
Cycle Q Clear(g_c), s	0.8	13.9	52.4	0.5	0.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	25	3500	3147	976	817	
V/C Ratio(X)	0.48	0.39	0.93	0.04	0.03	
Avail Cap(c_a), veh/h	148	3782	3177	985	817	
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	0.00
Uniform Delay (d), s/veh	58.8	8.6	9.6	4.6	35.5	0.0
Incr Delay (d2), s/veh	5.3	0.1	0.6	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.3	6.2	0.2	0.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.1	8.7	10.2	4.6	35.6	0.0
LnGrp LOS	E	A	B	A	D	
Approach Vol, veh/h		1376	2963		22	A
Approach Delay, s/veh		9.2	10.1		35.6	
Approach LOS		A	B		D	

Timer - Assigned Phs			4		6	7	8
Phs Duration (G+Y+Rc), s			87.5		32.5	8.1	79.3
Change Period (Y+Rc), s			6.5		4.6	6.5	* 6.5
Max Green Setting (Gmax), s			87.5		21.4	9.8	* 74
Max Q Clear Time (g_c+I1), s			15.9		2.6	2.8	54.4
Green Ext Time (p_c), s			19.1		0.0	0.0	18.4

Intersection Summary		
HCM 6th Ctrl Delay		10.0
HCM 6th LOS		A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

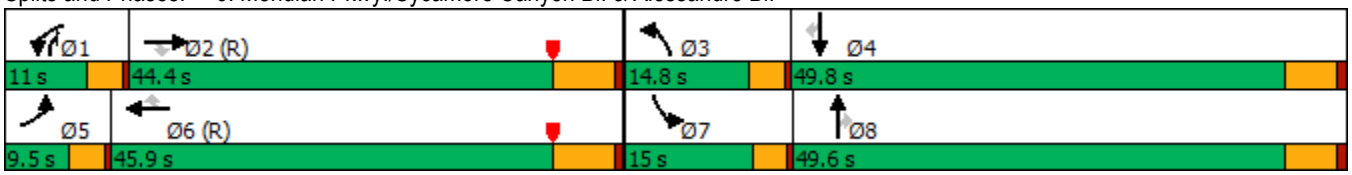
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

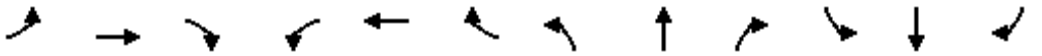
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	918	208	110	2048	522	523	678	67	122	83	115
Future Volume (vph)	142	918	208	110	2048	522	523	678	67	122	83	115
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	9.5	44.4	44.4	11.0	45.9	45.9	14.8	49.6	11.0	15.0	49.8	49.8
Total Split (%)	7.9%	37.0%	37.0%	9.2%	38.3%	38.3%	12.3%	41.3%	9.2%	12.5%	41.5%	41.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	918	208	110	2048	522	523	678	67	122	83	115
Future Volume (veh/h)	142	918	208	110	2048	522	523	678	67	122	83	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		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	149	966	219	116	2156	549	551	714	71	128	87	121
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	87	2558	794	170	2558	794	325	873	822	184	728	325
Arrive On Green	0.06	0.66	0.66	0.05	0.49	0.49	0.09	0.24	0.24	0.05	0.20	0.20
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	149	966	219	116	2156	549	551	714	71	128	87	121
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	5.8	10.2	6.9	3.9	43.3	31.5	11.1	22.4	2.2	4.3	2.4	7.8
Cycle Q Clear(g_c), s	5.8	10.2	6.9	3.9	43.3	31.5	11.1	22.4	2.2	4.3	2.4	7.8
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	87	2558	794	170	2558	794	325	873	822	184	728	325
V/C Ratio(X)	1.70	0.38	0.28	0.68	0.84	0.69	1.70	0.82	0.09	0.70	0.12	0.37
Avail Cap(c_a), veh/h	87	2558	794	214	2558	794	325	1318	1171	331	1324	590
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.1	12.2	11.6	56.2	26.4	23.4	54.5	43.0	31.0	55.9	39.2	41.3
Incr Delay (d2), s/veh	357.3	0.4	0.8	3.6	3.6	4.9	326.5	2.5	0.0	1.8	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	3.4	2.4	1.8	17.3	12.2	19.5	10.0	0.7	1.9	1.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	413.4	12.6	12.4	59.8	30.0	28.3	381.0	45.5	31.1	57.7	39.2	42.0
LnGrp LOS	F	B	B	E	C	C	F	D	C	E	D	D
Approach Vol, veh/h		1334			2821			1336			336	
Approach Delay, s/veh		57.3			30.9			183.1			47.3	
Approach LOS		E			C			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	65.7	14.8	30.0	9.5	65.7	10.0	34.8
Change Period (Y+Rc), s	3.7	6.5	3.7	5.8	3.7	6.5	3.7	5.8
Max Green Setting (Gmax), s	7.3	37.9	11.1	44.0	5.8	39.4	11.3	43.8
Max Q Clear Time (g_c+I1), s	5.9	12.2	13.1	9.8	7.8	45.3	6.3	24.4
Green Ext Time (p_c), s	0.0	10.8	0.0	0.9	0.0	0.0	0.1	4.6

Intersection Summary	
HCM 6th Ctrl Delay	72.8
HCM 6th LOS	E

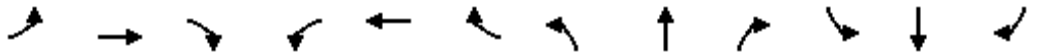
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	720	2436	210	0	337
Future Volume (vph)	720	2436	210	0	337
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	720	330	0	2436	200	0	0	0	210	0	337
Future Volume (veh/h)	0	720	330	0	2436	200	0	0	0	210	0	337
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	742	311	0	2511	206				324	0	187
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	2608	1080	0	3566	286				531	0	236
Arrive On Green	0.00	0.73	0.73	0.00	1.00	1.00				0.15	0.00	0.15
Sat Flow, veh/h	0	3744	1480	0	5056	392				3619	0	1607
Grp Volume(v), veh/h	0	718	335	0	1761	956				324	0	187
Grp Sat Flow(s),veh/h/ln	0	1729	1595	0	1729	1819				1810	0	1607
Q Serve(g_s), s	0.0	6.0	6.1	0.0	0.0	0.0				7.1	0.0	9.6
Cycle Q Clear(g_c), s	0.0	6.0	6.1	0.0	0.0	0.0				7.1	0.0	9.6
Prop In Lane	0.00		0.93	0.00		0.22				1.00		1.00
Lane Grp Cap(c), veh/h	0	2524	1164	0	2524	1328				531	0	236
V/C Ratio(X)	0.00	0.28	0.29	0.00	0.70	0.72				0.61	0.00	0.79
Avail Cap(c_a), veh/h	0	2524	1164	0	2524	1328				724	0	321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.57	0.57				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.9	3.9	0.0	0.0	0.0				34.0	0.0	35.0
Incr Delay (d2), s/veh	0.0	0.3	0.6	0.0	0.9	2.0				1.1	0.0	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.2	0.0	0.3	0.7				3.0	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	4.2	4.6	0.0	0.9	2.0				35.1	0.0	44.2
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		1053			2717						511	
Approach Delay, s/veh		4.3			1.3						38.5	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		67.5		17.5		67.5						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		8.1		11.6		2.0						
Green Ext Time (p_c), s		7.5		0.9		36.6						

Intersection Summary												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

Notes

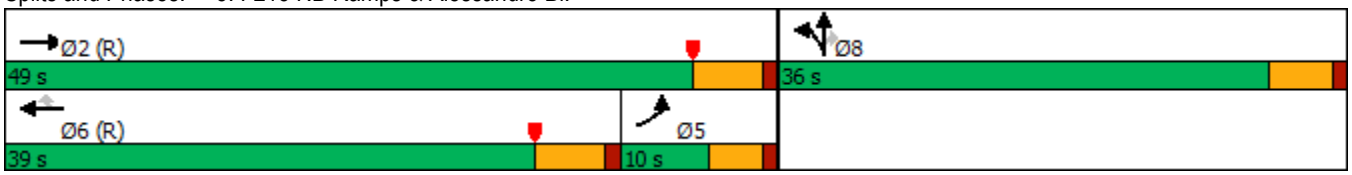
User approved volume balancing among the lanes for turning movement.

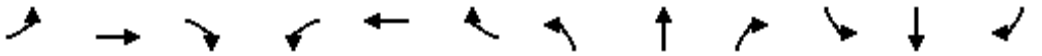
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	71	892	1586	140	954	0	218
Future Volume (vph)	71	892	1586	140	954	0	218
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	892	0	0	1586	140	954	0	218	0	0	0
Future Volume (veh/h)	71	892	0	0	1586	140	954	0	218	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	72	910	0	0	1618	123	1023	0	107			
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	96	2655	0	0	2044	620	1320	0	587			
Arrive On Green	0.11	1.00	0.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5358	0	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	72	910	0	0	1618	123	1023	0	107			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	3.3	0.0	0.0	0.0	23.3	4.4	21.3	0.0	3.8			
Cycle Q Clear(g_c), s	3.3	0.0	0.0	0.0	23.3	4.4	21.3	0.0	3.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	96	2655	0	0	2044	620	1320	0	587			
V/C Ratio(X)	0.75	0.34	0.00	0.00	0.79	0.20	0.78	0.00	0.18			
Avail Cap(c_a), veh/h	117	2655	0	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	22.7	16.9	23.9	0.0	18.4			
Incr Delay (d2), s/veh	16.5	0.3	0.0	0.0	3.2	0.7	4.5	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	1.7	0.1	0.0	0.0	8.7	1.5	9.0	0.0	1.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.3	0.0	0.0	25.9	17.6	28.4	0.0	19.1			
LnGrp LOS	D	A	A	A	C	B	C	A	B			
Approach Vol, veh/h		982			1741			1130				
Approach Delay, s/veh		4.3			25.3			27.5				
Approach LOS		A			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		49.0			10.0	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			5.3	25.3		23.3				
Green Ext Time (p_c), s		6.3			0.0	5.8		2.9				

Intersection Summary	
HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	5.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	0	9	0	0
Future Vol, veh/h	20	0	0	9	0	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	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	22	0	0	10	0	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	6	5	0	0	10	0
Stage 1	5	-	-	-	-	-
Stage 2	1	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1021	1084	-	-	1623	-
Stage 1	1023	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1021	1084	-	-	1623	-
Mov Cap-2 Maneuver	1021	-	-	-	-	-
Stage 1	1023	-	-	-	-	-
Stage 2	1028	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

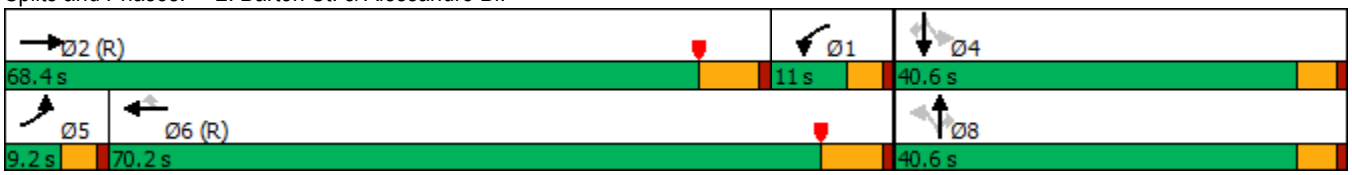
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1021	1623	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

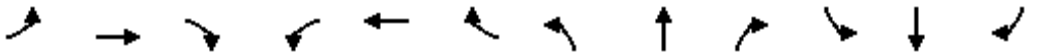
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	7	2289	46	1819	9	55	5	28	26	5	14
Future Volume (vph)	7	2289	46	1819	9	55	5	28	26	5	14
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 105
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2289	41	46	1819	9	55	5	28	26	5	14
Future Volume (veh/h)	7	2289	41	46	1819	9	55	5	28	26	5	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	2409	41	48	1915	9	58	5	7	27	5	2
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	16	2710	46	68	2925	908	58	3	482	55	6	477
Arrive On Green	0.01	0.52	0.52	0.01	0.19	0.19	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	5253	89	1810	5187	1610	0	9	1605	0	20	1590
Grp Volume(v), veh/h	7	1584	866	48	1915	9	63	0	7	32	0	2
Grp Sat Flow(s),veh/h/ln	1810	1729	1884	1810	1729	1610	9	0	1605	20	0	1590
Q Serve(g_s), s	0.5	49.1	49.5	3.2	41.1	0.5	0.0	0.0	0.4	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.5	49.1	49.5	3.2	41.1	0.5	36.0	0.0	0.4	36.0	0.0	0.1
Prop In Lane	1.00		0.05	1.00		1.00	0.92		1.00	0.84		1.00
Lane Grp Cap(c), veh/h	16	1784	972	68	2925	908	60	0	482	61	0	477
V/C Ratio(X)	0.45	0.89	0.89	0.71	0.65	0.01	1.04	0.00	0.01	0.52	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	972	103	2925	908	60	0	482	61	0	477
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.2	26.0	26.0	58.6	38.0	21.5	58.4	0.0	29.5	53.4	0.0	29.4
Incr Delay (d2), s/veh	7.2	7.0	12.2	4.5	1.1	0.0	128.7	0.0	0.1	28.5	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	0.2	19.5	22.7	1.5	19.1	0.2	4.0	0.0	0.2	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	33.0	38.2	63.1	39.1	21.5	187.0	0.0	29.6	81.9	0.0	29.5
LnGrp LOS	E	C	D	E	D	C	F	A	C	F	A	C
Approach Vol, veh/h		2457			1972			70			34	
Approach Delay, s/veh		34.9			39.6			171.3			78.8	
Approach LOS		C			D			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	68.4		40.6	5.2	74.2		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.2	51.5		38.0	2.5	43.1		38.0				
Green Ext Time (p_c), s	0.0	9.7		0.0	0.0	15.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		39.4	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

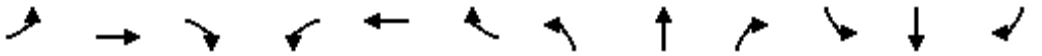
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	3	2314	3	1939	5	0	
Future Volume (vph)	3	2314	3	1939	5	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2314	1	3	1939	0	5	0	2	0	0	0
Future Volume (veh/h)	3	2314	1	3	1939	0	5	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	3	2515	1	3	2108	0	5	0	0	0	0	0
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	221	3950	2	221	3825	0	78	0	0	0	24	0
Arrive On Green	0.24	1.00	1.00	0.12	0.74	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5355	2	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	3	1624	892	3	2108	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	0.0	0.0	0.2	21.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.2	21.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	221	2550	1401	221	3825	0	78	0	0	0	24	0
V/C Ratio(X)	0.01	0.64	0.64	0.01	0.55	0.00	0.06	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	221	2550	1401	221	3825	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.36	0.36	0.36	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	46.3	7.0	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.8	0.0	0.6	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.3	0.1	5.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.4	0.8	46.3	7.5	0.0	59.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2519			2111			5			0	
Approach Delay, s/veh		0.6			7.6			59.0			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.1	18.9	95.0		6.1	18.9	95.0				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	5.8	* 89				
Max Q Clear Time (g_c+I1), s		2.4	2.2	2.0		0.0	2.2	23.6				
Green Ext Time (p_c), s		0.0	0.0	59.5		0.0	0.0	39.5				

Intersection Summary	
HCM 6th Ctrl Delay	3.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	24.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2304	12	23	1930	16	2	0	9	37	0	5
Future Vol, veh/h	2	2304	12	23	1930	16	2	0	9	37	0	5
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	155	-	-	155	-	-	0	-	-	0	-	-
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	2	2504	13	25	2098	17	2	0	10	40	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2115	0	0	2517	0	0	3404	4680	1259	3163	4678	1058
Stage 1	-	-	-	-	-	-	2515	2515	-	2157	2157	-
Stage 2	-	-	-	-	-	-	889	2165	-	1006	2521	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	112	-	-	70	-	-	8	1	141	~ 12	1	192
Stage 1	-	-	-	-	-	-	16	57	-	~ 30	88	-
Stage 2	-	-	-	-	-	-	279	87	-	236	57	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	112	-	-	70	-	-	6	1	141	~ 8	1	192
Mov Cap-2 Maneuver	-	-	-	-	-	-	6	1	-	~ 8	1	-
Stage 1	-	-	-	-	-	-	16	56	-	~ 29	57	-
Stage 2	-	-	-	-	-	-	174	56	-	216	56	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1	173	$ 2396.6
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	6	141	112	-	-	70	-	-	8	192
HCM Lane V/C Ratio	0.362	0.069	0.019	-	-	0.357	-	-	5.027	0.028
HCM Control Delay (s)	$ 805.6	32.4	37.8	-	-	82.6	-	-	$ 2717.2	24.3
HCM Lane LOS	F	D	E	-	-	F	-	-	F	C
HCM 95th %tile Q(veh)	0.7	0.2	0.1	-	-	1.3	-	-	6.4	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

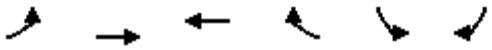
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	14	2476	2007	20	27	16
Future Volume (vph)	14	2476	2007	20	27	16
Turn Type	Prot	NA	NA	Perm	Prot	Free
Protected Phases	7	4	8		6	
Permitted Phases				8		Free
Detector Phase	7	4	8	8	6	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	9.2	28.5	30.5	30.5	26.6	
Total Split (s)	10.0	91.0	81.0	81.0	29.0	
Total Split (%)	8.3%	75.8%	67.5%	67.5%	24.2%	
Yellow Time (s)	3.2	5.5	5.5	5.5	3.6	
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)	4.2	6.5	6.5	6.5	4.6	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	None	None	None	C-Max	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2: and 6:SBL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	2476	2007	20	27	16
Future Volume (veh/h)	14	2476	2007	20	27	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	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	15	2721	2205	21	30	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	30	3479	3213	976	831	
Arrive On Green	0.02	0.67	1.00	1.00	0.24	0.00
Sat Flow, veh/h	1810	5358	5358	1575	3510	1610
Grp Volume(v), veh/h	15	2721	2205	21	30	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1729	1575	1755	1610
Q Serve(g_s), s	1.0	43.6	0.0	0.0	0.8	0.0
Cycle Q Clear(g_c), s	1.0	43.6	0.0	0.0	0.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	30	3479	3213	976	831	
V/C Ratio(X)	0.51	0.78	0.69	0.02	0.04	
Avail Cap(c_a), veh/h	87	3653	3220	978	831	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.09	1.00	0.00
Uniform Delay (d), s/veh	58.5	13.7	0.0	0.0	35.3	0.0
Incr Delay (d2), s/veh	4.9	1.2	0.1	0.0	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	13.7	0.0	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	63.4	14.9	0.1	0.0	35.3	0.0
LnGrp LOS	E	B	A	A	D	
Approach Vol, veh/h		2736	2226		30	A
Approach Delay, s/veh		15.1	0.1		35.3	
Approach LOS		B	A		D	

Timer - Assigned Phs	4	6	7	8
Phs Duration (G+Y+Rc), s	87.0	33.0	6.2	80.8
Change Period (Y+Rc), s	6.5	4.6	* 4.2	6.5
Max Green Setting (Gmax), s	84.5	24.4	* 5.8	74.5
Max Q Clear Time (g_c+I1), s	45.6	2.8	3.0	2.0
Green Ext Time (p_c), s	34.9	0.1	0.0	45.6

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.

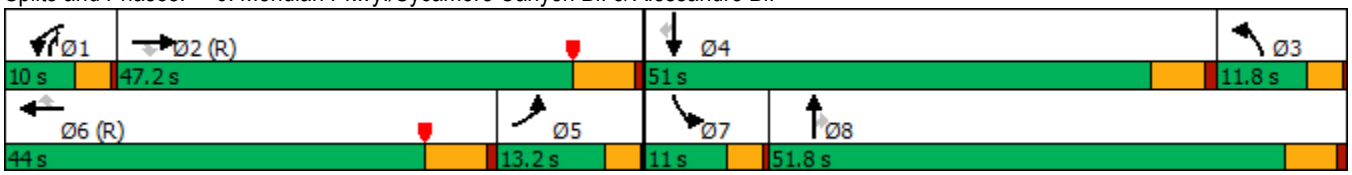
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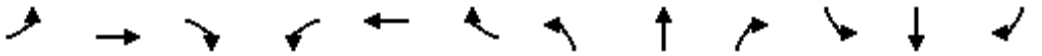
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	148	1665	518	156	1358	146	350	279	158	189	654	310
Future Volume (vph)	148	1665	518	156	1358	146	350	279	158	189	654	310
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	13.2	47.2	47.2	10.0	44.0	44.0	11.8	51.8	10.0	11.0	51.0	51.0
Total Split (%)	11.0%	39.3%	39.3%	8.3%	36.7%	36.7%	9.8%	43.2%	8.3%	9.2%	42.5%	42.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	1665	518	156	1358	146	350	279	158	189	654	310
Future Volume (veh/h)	148	1665	518	156	1358	146	350	279	158	189	654	310
Initial Q (Qb), veh	0	0	0	0	0	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	164	1850	576	173	1509	162	389	310	176	210	727	344
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	1533	5863	1820	184	1621	503	237	1447	1285	214	1360	606
Arrive On Green	1.00	1.00	1.00	0.05	0.31	0.31	0.07	0.40	0.40	0.06	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	164	1850	576	173	1509	162	389	310	176	210	727	344
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	5.9	33.8	18.1	8.1	6.8	4.3	7.2	18.9	20.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.9	33.8	18.1	8.1	6.8	4.3	7.2	18.9	20.3
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	1533	5863	1820	184	1621	503	237	1447	1285	214	1360	606
V/C Ratio(X)	0.11	0.32	0.32	0.94	0.93	0.32	1.64	0.21	0.14	0.98	0.53	0.57
Avail Cap(c_a), veh/h	1533	5863	1820	184	1621	503	237	1447	1285	214	1360	606
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.7	40.0	121.6	55.9	23.6	19.1	56.3	29.2	29.6
Incr Delay (d2), s/veh	0.0	0.1	0.3	48.3	11.0	1.7	307.0	0.3	0.2	56.5	1.5	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	0.0	0.0	0.1	3.8	15.4	7.7	13.6	2.8	1.4	4.8	8.1	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.1	0.3	104.9	51.0	123.3	363.0	23.9	19.3	112.8	30.7	33.5
LnGrp LOS	A	A	A	F	D	F	F	C	B	F	C	C
Approach Vol, veh/h		2590			1844			875			1281	
Approach Delay, s/veh		0.1			62.4			173.7			44.9	
Approach LOS		A			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	144.2	13.9	51.0	110.2	44.0	11.0	53.9
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	40.7	8.1	* 45	9.5	* 38	7.3	46.0
Max Q Clear Time (g_c+I1), s	7.9	2.0	10.1	22.3	2.0	35.8	9.2	8.8
Green Ext Time (p_c), s	0.0	30.0	0.0	6.0	0.1	1.5	0.0	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

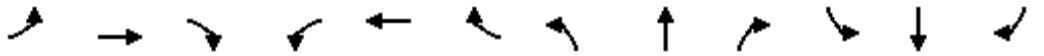
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1568	1344	216	0	369
Future Volume (vph)	1568	1344	216	0	369
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1568	445	0	1344	131	0	0	0	216	0	369
Future Volume (veh/h)	0	1568	445	0	1344	131	0	0	0	216	0	369
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	1668	436	0	1430	137				329	0	183
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2978	764	0	3496	335				538	0	239
Arrive On Green	0.00	0.73	0.73	0.00	0.73	0.73				0.15	0.00	0.15
Sat Flow, veh/h	0	4263	1049	0	4974	460				3619	0	1607
Grp Volume(v), veh/h	0	1405	699	0	1029	538				329	0	183
Grp Sat Flow(s),veh/h/ln	0	1729	1683	0	1729	1806				1810	0	1607
Q Serve(g_s), s	0.0	15.8	16.4	0.0	9.8	9.8				7.2	0.0	9.3
Cycle Q Clear(g_c), s	0.0	15.8	16.4	0.0	9.8	9.8				7.2	0.0	9.3
Prop In Lane	0.00		0.62	0.00		0.25				1.00		1.00
Lane Grp Cap(c), veh/h	0	2517	1225	0	2517	1314				538	0	239
V/C Ratio(X)	0.00	0.56	0.57	0.00	0.41	0.41				0.61	0.00	0.77
Avail Cap(c_a), veh/h	0	2517	1225	0	2517	1314				937	0	416
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	1.00	0.00	0.79	0.79				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.3	5.4	0.0	4.5	4.5				33.9	0.0	34.8
Incr Delay (d2), s/veh	0.0	0.9	1.9	0.0	0.4	0.7				1.1	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	3.2	3.6	0.0	1.9	2.1				3.1	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	7.3	0.0	4.9	5.2				35.0	0.0	39.8
LnGrp LOS	A	A	A	A	A	A				D	A	D
Approach Vol, veh/h		2104			1567						512	
Approach Delay, s/veh		6.6			5.0						36.7	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		67.4		17.6		67.4						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		18.4		11.3		11.8						
Green Ext Time (p_c), s		19.0		1.3		12.7						

Intersection Summary	
HCM 6th Ctrl Delay	9.7
HCM 6th LOS	A

Notes

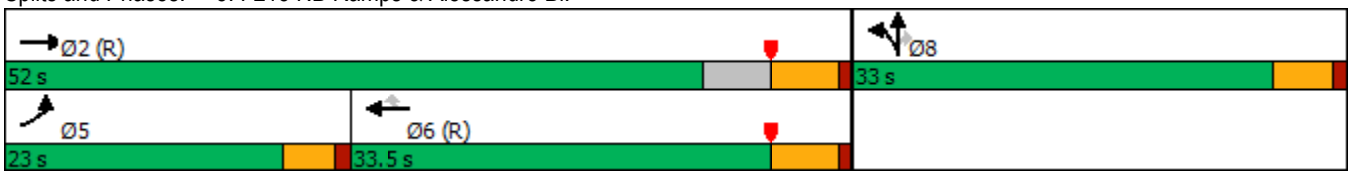
User approved volume balancing among the lanes for turning movement.

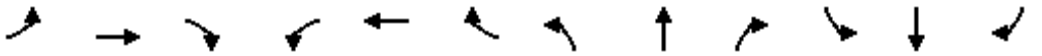
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	222	1506	947	206	607	8	303
Future Volume (vph)	222	1506	947	206	607	8	303
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	23.0	52.0	33.5	33.5	33.0	33.0	33.0
Total Split (%)	25.7%	58.1%	37.4%	37.4%	36.9%	36.9%	36.9%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	1506	0	0	947	206	607	8	303	0	0	0
Future Volume (veh/h)	222	1506	0	0	947	206	607	8	303	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	236	1602	0	0	1007	103	698	0	106			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	274	2968	0	0	1924	585	1126	0	501			
Arrive On Green	0.15	0.57	0.00	0.00	0.37	0.37	0.31	0.00	0.31			
Sat Flow, veh/h	1810	5358	0	0	5358	1576	3619	0	1610			
Grp Volume(v), veh/h	236	1602	0	0	1007	103	698	0	106			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1576	1810	0	1610			
Q Serve(g_s), s	11.5	17.2	0.0	0.0	13.6	4.0	14.8	0.0	4.4			
Cycle Q Clear(g_c), s	11.5	17.2	0.0	0.0	13.6	4.0	14.8	0.0	4.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	274	2968	0	0	1924	585	1126	0	501			
V/C Ratio(X)	0.86	0.54	0.00	0.00	0.52	0.18	0.62	0.00	0.21			
Avail Cap(c_a), veh/h	372	2968	0	0	1924	585	1126	0	501			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.75	0.75	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	37.3	11.9	0.0	0.0	22.1	19.1	26.5	0.0	22.9			
Incr Delay (d2), s/veh	10.2	0.5	0.0	0.0	1.0	0.7	2.6	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	5.4	5.3	0.0	0.0	5.1	1.4	6.3	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.5	12.4	0.0	0.0	23.1	19.7	29.0	0.0	23.8			
LnGrp LOS	D	B	A	A	C	B	C	A	C			
Approach Vol, veh/h		1838			1110			804				
Approach Delay, s/veh		16.9			22.8			28.3				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.0			18.1	38.9		33.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		46.5			18.5	28.0		28.0				
Max Q Clear Time (g_c+I1), s		19.2			13.5	15.6		16.8				
Green Ext Time (p_c), s		12.2			0.2	5.1		2.3				

Intersection Summary	
HCM 6th Ctrl Delay	21.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 5.2:

E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		E+P
				CALC RV	DATE	05/23/19
Jurisdiction: **City of Riverside**				CHK RV	DATE	05/23/19
Major Street: **Barton Street**				Critical Approach Speed (Major)		55 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 = **418** vpd Minor Street Future ADT = **418** 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				
Major Street / Minor Street	Urban	Rural	Urban	Rural
1 **418** / *1* **418**	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	Urban	Rural	Urban	Rural
1 **418** / *1* **418**	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: 7% B: 5%				

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)

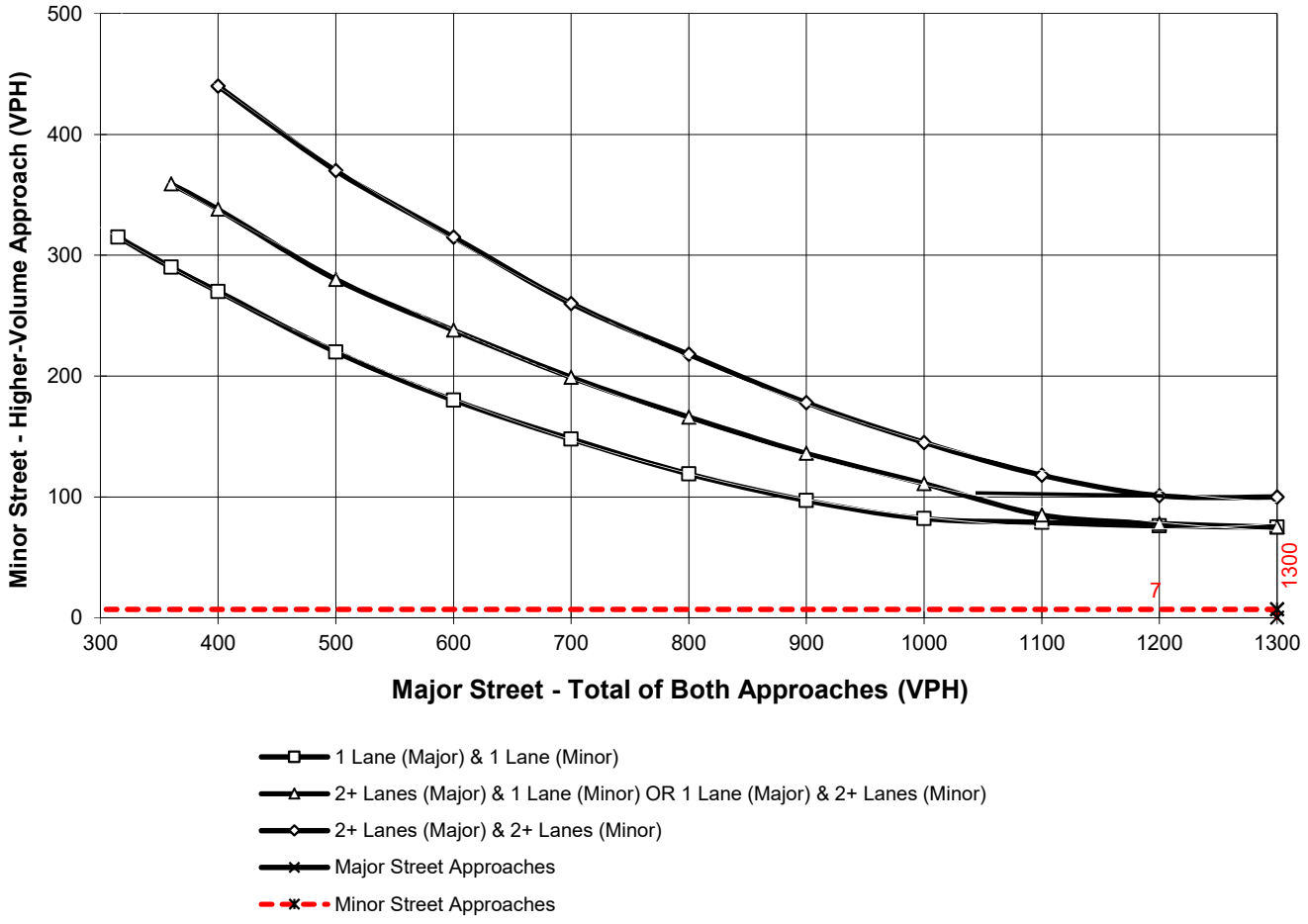
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **4260**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway** 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)

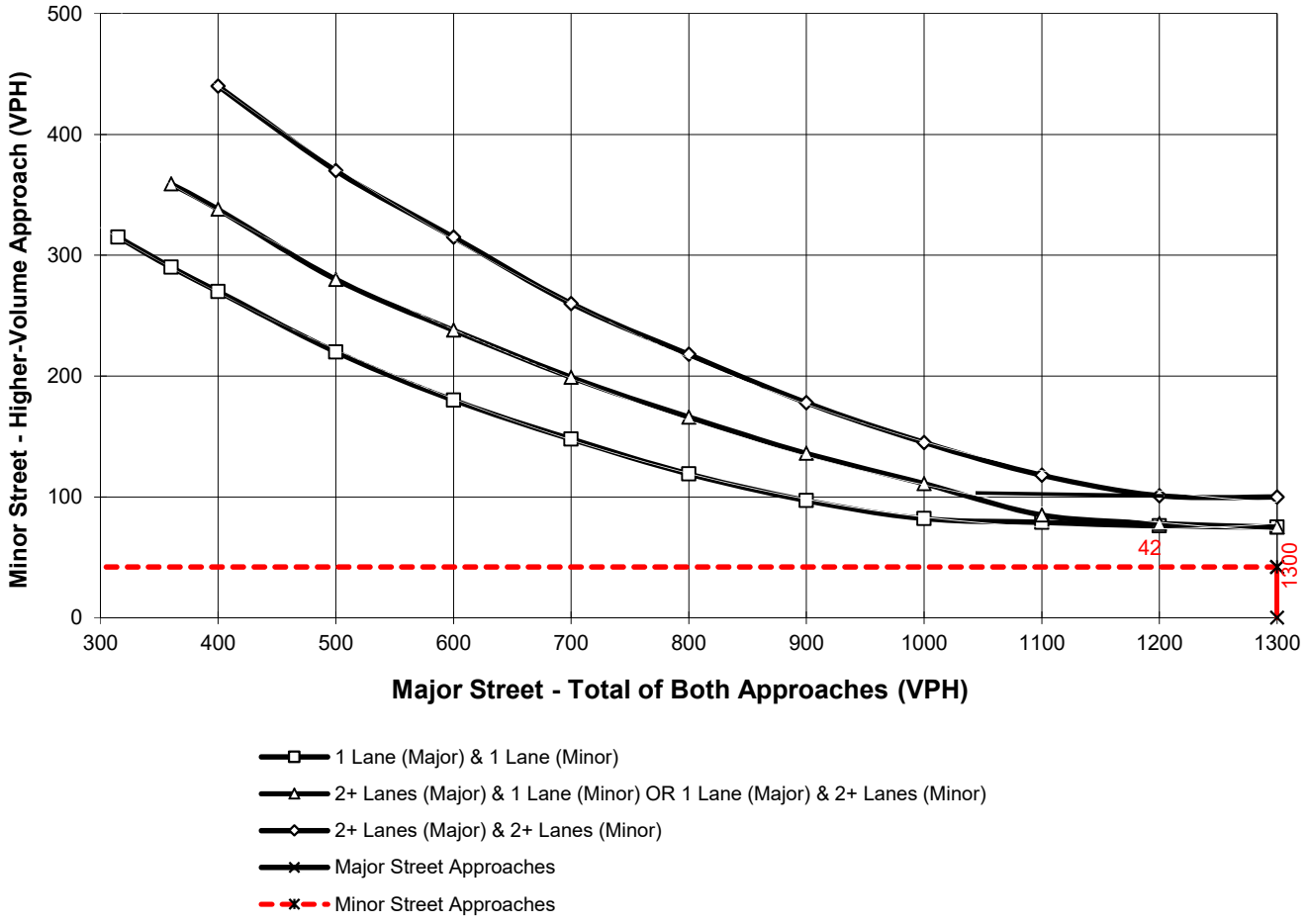
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **4287**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Driveway 2/Vista Grande** High Volume Approach (VPH) = **42**
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

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APPENDIX 5.3:

E+P CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1082	2717	194	185	184
v/c Ratio	0.30	0.75	0.68	0.68	0.66
Control Delay	3.6	3.8	44.8	39.6	38.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	3.6	3.8	44.8	39.6	38.3
Queue Length 50th (ft)	47	147	101	83	78
Queue Length 95th (ft)	67	109	170	156	147
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3567	3639	343	320	328
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	0.30	0.75	0.57	0.58	0.56

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	72	910	1618	143	496	499	200
v/c Ratio	0.63	0.34	0.75	0.19	0.79	0.75	0.32
Control Delay	59.6	14.0	24.2	3.8	35.4	27.2	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	14.0	24.2	3.8	35.4	27.2	11.1
Queue Length 50th (ft)	36	122	272	0	245	202	36
Queue Length 95th (ft)	#83	150	331	34	#412	#339	88
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2654	2166	742	625	662	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.34	0.75	0.19	0.79	0.75	0.32

Intersection Summary

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

Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2141	1569	207	208	208
v/c Ratio	0.62	0.45	0.64	0.65	0.64
Control Delay	8.2	6.9	40.1	33.3	32.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.2	6.9	40.1	33.3	32.3
Queue Length 50th (ft)	180	116	108	85	82
Queue Length 95th (ft)	279	182	167	151	144
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3477	3521	443	417	428
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	0.62	0.45	0.47	0.50	0.49

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	236	1602	1007	219	342	345	290
v/c Ratio	0.75	0.54	0.56	0.32	0.64	0.67	0.54
Control Delay	50.4	12.8	25.8	4.7	32.8	33.8	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	12.8	25.8	4.7	32.8	33.8	21.9
Queue Length 50th (ft)	126	191	169	0	173	181	97
Queue Length 95th (ft)	200	231	221	49	272	287	183
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	373	2955	1795	690	536	515	538
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.54	0.56	0.32	0.64	0.67	0.54

Intersection Summary

APPENDIX 5.4:

E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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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	1226	7	0	2511	0	0	0	6	0	0	0
Future Vol, veh/h	0	1226	7	0	2511	0	0	0	6	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	1333	8	0	2729	0	0	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	671	-	-	1365
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*639	0	0	*337
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*639	-	-	*337
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	10.7	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	639	-	-	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-	-	-
HCM Control Delay (s)	10.7	-	-	-	-	0
HCM Lane LOS	B	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

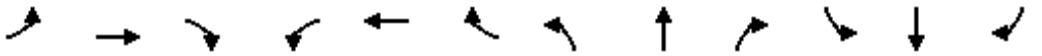
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1221	12	2508	3	0	11	0
Future Volume (vph)	4	1221	12	2508	3	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.6	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	8.0%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.2	5.5	3.2	5.5	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
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Future Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1327	8	13	2726	38	3	0	15	12	0	1
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	112	4278	26	27	3888	54	42	7	72	140	0	86
Arrive On Green	0.12	1.00	1.00	0.01	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5320	32	1810	5272	73	130	139	1347	1421	0	1610
Grp Volume(v), veh/h	4	863	472	13	1785	979	18	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1887	1616	0	0	1421	0	1610
Q Serve(g_s), s	0.2	0.0	0.0	0.9	33.6	34.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.9	33.6	34.0	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.04	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	112	2781	1523	27	2550	1392	122	0	0	140	0	86
V/C Ratio(X)	0.04	0.31	0.31	0.49	0.70	0.70	0.15	0.00	0.00	0.09	0.00	0.01
Avail Cap(c_a), veh/h	112	2781	1523	78	2550	1392	179	0	0	192	0	145
HCM Platoon Ratio	2.00	2.00	2.00	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	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.4	0.0	0.0	58.7	8.5	8.6	54.3	0.0	0.0	54.1	0.0	53.8
Incr Delay (d2), s/veh	0.0	0.3	0.5	2.5	0.8	1.5	0.6	0.0	0.0	0.3	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	0.1	0.2	0.4	9.0	10.2	0.5	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.4	0.3	0.5	61.2	9.3	10.1	54.9	0.0	0.0	54.3	0.0	53.8
LnGrp LOS	D	A	A	E	A	B	D	A	A	D	A	D
Approach Vol, veh/h		1339			2777			18			13	
Approach Delay, s/veh		0.5			9.8			54.9			54.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.0	6.0	103.0		11.0	14.0	95.0				
Change Period (Y+Rc), s		4.6	* 4.2	6.5		4.6	6.5	* 6.5				
Max Green Setting (Gmax), s		10.8	* 5.2	88.7		10.8	5.4	* 89				
Max Q Clear Time (g_c+I1), s		3.3	2.9	2.0		2.8	2.2	36.0				
Green Ext Time (p_c), s		0.0	0.0	10.3		0.0	0.0	35.9				

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	2314	4	0	1947	0	0	0	7	0	0	0
Future Vol, veh/h	0	2314	4	0	1947	0	0	0	7	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	2515	4	0	2116	0	0	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1260	-	-	1058
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*380	0	0	*467
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*380	-	-	*467
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	14.7	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	380	-	-	-	-	-
HCM Lane V/C Ratio	0.02	-	-	-	-	-
HCM Control Delay (s)	14.7	-	-	-	-	0
HCM Lane LOS	B	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	-

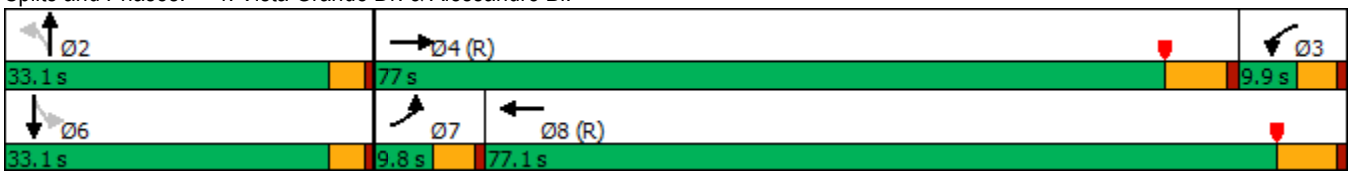
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

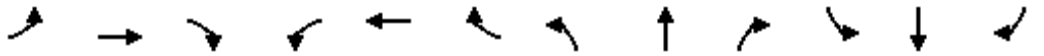
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2309	23	1935	2	0	37	0
Future Volume (vph)	2	2309	23	1935	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.8	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	8.2%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	4.6	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Future Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2510	13	25	2103	17	2	0	10	40	0	5
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	5	3129	16	336	4174	34	44	14	113	181	0	134
Arrive On Green	0.01	1.00	1.00	0.19	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5325	28	1810	5307	43	106	165	1352	1427	0	1610
Grp Volume(v), veh/h	2	1629	894	25	1370	750	12	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1892	1622	0	0	1427	0	1610
Q Serve(g_s), s	0.1	0.0	0.0	1.4	16.8	16.8	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.4	16.8	16.8	0.8	0.0	0.0	3.0	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	5	2032	1113	336	2720	1488	170	0	0	181	0	134
V/C Ratio(X)	0.41	0.80	0.80	0.07	0.50	0.50	0.07	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	78	2032	1113	336	2720	1488	419	0	0	406	0	388
HCM Platoon Ratio	2.00	2.00	2.00	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	0.74	0.74	0.74	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	0.0	0.0	40.3	4.5	4.5	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	19.3	3.5	6.2	0.0	0.5	0.9	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.0	1.9	0.6	3.7	4.3	0.3	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	3.5	6.2	40.4	5.0	5.4	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	E	A	A	D	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2525			2145			12			45	
Approach Delay, s/veh		4.5			5.6			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.2	28.8	77.0		14.2	4.9	100.9				
Change Period (Y+Rc), s		* 4.2	6.5	* 6.5		* 4.2	4.6	6.5				
Max Green Setting (Gmax), s		* 29	5.3	* 71		* 29	5.2	70.6				
Max Q Clear Time (g_c+I1), s		2.8	3.4	2.0		5.0	2.1	18.8				
Green Ext Time (p_c), s		0.0	0.0	35.6		0.1	0.0	22.6				

Intersection Summary		
HCM 6th Ctrl Delay		5.5
HCM 6th LOS		A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 6.1:

OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

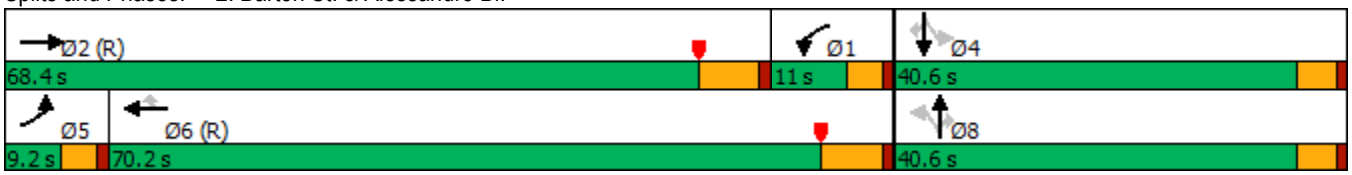
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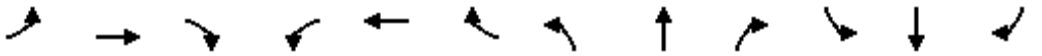
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	10	1557	60	2804	3	68	5	55	7	8	3
Future Volume (vph)	10	1557	60	2804	3	68	5	55	7	8	3
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 88 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1557	28	60	2804	3	68	5	55	7	8	3
Future Volume (veh/h)	10	1557	28	60	2804	3	68	5	55	7	8	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	11	1674	30	65	3015	3	73	5	28	8	9	0
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	2707	48	538	4252	1320	474	31	477	250	267	483
Arrive On Green	0.01	0.52	0.52	0.10	0.27	0.27	0.30	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	1810	5247	94	1810	5187	1610	1388	102	1590	685	889	1610
Grp Volume(v), veh/h	11	1103	601	65	3015	3	78	0	28	17	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1610	1490	0	1590	1574	0	1610
Q Serve(g_s), s	0.7	27.2	27.2	3.9	63.0	0.2	0.0	0.0	1.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.7	27.2	27.2	3.9	63.0	0.2	3.8	0.0	1.5	3.8	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	0.94		1.00	0.47		1.00
Lane Grp Cap(c), veh/h	23	1784	971	538	4252	1320	505	0	477	516	0	483
V/C Ratio(X)	0.48	0.62	0.62	0.12	0.71	0.00	0.15	0.00	0.06	0.03	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	971	538	4252	1320	505	0	477	516	0	483
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.8	20.7	20.7	39.8	30.9	8.0	30.7	0.0	29.9	29.7	0.0	0.0
Incr Delay (d2), s/veh	5.5	1.6	3.0	0.0	0.8	0.0	0.6	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.2	11.5	1.7	29.0	0.0	1.8	0.0	0.6	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.4	22.3	23.6	39.8	31.6	8.0	31.4	0.0	30.2	29.8	0.0	0.0
LnGrp LOS	E	C	C	D	C	A	C	A	C	C	A	A
Approach Vol, veh/h		1715			3083			106			17	
Approach Delay, s/veh		23.0			31.8			31.0			29.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	43.0	68.4		40.6	5.7	105.6		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.9	29.2		5.8	2.7	65.0		5.8				
Green Ext Time (p_c), s	0.0	18.9		0.0	0.0	0.0		0.5				

Intersection Summary		
HCM 6th Ctrl Delay		28.7
HCM 6th LOS		C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

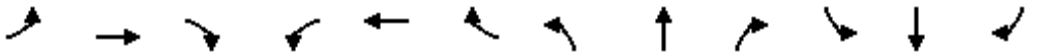
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	5	1594	2	2834	3	0	
Future Volume (vph)	5	1594	2	2834	3	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1594	5	2	2834	0	3	0	3	0	0	0
Future Volume (veh/h)	5	1594	5	2	2834	0	3	0	3	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	5	1733	5	2	3080	0	3	0	0	0	0	0
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	12	3938	11	195	4451	0	71	0	0	0	15	0
Arrive On Green	0.01	1.00	1.00	0.11	0.86	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5340	15	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	5	1122	616	2	3080	0	3	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1897	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.3	0.0	0.0	0.1	24.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	24.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	12	2550	1399	195	4451	0	71	0	0	0	15	0
V/C Ratio(X)	0.43	0.44	0.44	0.01	0.69	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	195	4451	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	59.0	0.0	0.0	47.8	3.0	0.0	59.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.4	0.8	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.1	2.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	0.4	0.8	47.8	3.9	0.0	59.4	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		1743			3082			3			0	
Approach Delay, s/veh		0.7			3.9			59.4			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	5.6	19.4	95.0	5.6	5.0	109.5
Change Period (Y+Rc), s	4.6	6.5	* 6.5	4.6	* 4.2	6.5
Max Green Setting (Gmax), s	10.4	5.8	* 89	10.4	* 5.8	88.5
Max Q Clear Time (g_c+I1), s	2.2	2.1	2.0	0.0	2.3	26.9
Green Ext Time (p_c), s	0.0	0.0	29.1	0.0	0.0	57.1

Intersection Summary	
HCM 6th Ctrl Delay	2.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1590	8	13	2834	3	15
Future Vol, veh/h	1590	8	13	2834	3	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	155	-	0	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	1728	9	14	3080	3	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1737	0	2993	869
Stage 1	-	-	-	-	1733	-
Stage 2	-	-	-	-	1260	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	174	-	27	257
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	210	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	174	-	25	257
Mov Cap-2 Maneuver	-	-	-	-	25	-
Stage 1	-	-	-	-	86	-
Stage 2	-	-	-	-	193	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	44.9
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	25	257	-	-	174	-
HCM Lane V/C Ratio	0.13	0.063	-	-	0.081	-
HCM Control Delay (s)	169.5	20	-	-	27.5	-
HCM Lane LOS	F	C	-	-	D	-
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.3	-

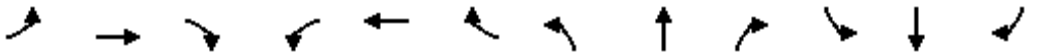
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	12	1575	116	2981	38	12	45	22	15
Future Volume (vph)	12	1575	116	2981	38	12	45	22	15
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	63.2	20.4	74.0	74.0	9.6	26.8	9.6	26.8
Total Split (%)	8.0%	52.7%	17.0%	61.7%	61.7%	8.0%	22.3%	8.0%	22.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77.1 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1575	32	116	2981	38	12	0	45	22	0	15
Future Volume (veh/h)	12	1575	32	116	2981	38	12	0	45	22	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	13	1712	35	126	3240	38	13	0	49	24	0	0
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	27	3358	69	154	3693	1146	27	142	120	53	170	
Arrive On Green	0.01	0.64	0.64	0.08	0.71	0.71	0.01	0.00	0.07	0.03	0.00	0.00
Sat Flow, veh/h	1810	5232	107	1810	5187	1609	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	13	1131	616	126	3240	38	13	0	49	24	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1881	1810	1729	1609	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	0.9	20.9	20.9	8.2	57.5	0.8	0.9	0.0	3.5	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.9	20.9	20.9	8.2	57.5	0.8	0.9	0.0	3.5	1.6	0.0	0.0
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	27	2219	1207	154	3693	1146	27	142	120	53	170	
V/C Ratio(X)	0.49	0.51	0.51	0.82	0.88	0.03	0.49	0.00	0.41	0.45	0.00	
Avail Cap(c_a), veh/h	75	2219	1207	238	3693	1146	75	352	298	75	352	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	11.4	11.4	54.0	13.3	5.1	58.7	0.0	53.0	57.3	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.8	1.5	1.2	0.3	0.0	13.3	0.0	2.2	5.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.9	7.8	3.6	16.2	0.3	0.5	0.0	1.5	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	12.3	13.0	55.2	13.5	5.1	72.0	0.0	55.2	63.1	0.0	0.0
LnGrp LOS	E	B	B	E	B	A	E	A	E	E	A	
Approach Vol, veh/h		1760			3404			62			24	A
Approach Delay, s/veh		12.9			15.0			58.7			63.1	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	83.5	6.4	15.3	6.4	91.9	8.1	13.6
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	15.8	56.7	5.0	22.2	5.0	67.5	5.0	22.2
Max Q Clear Time (g_c+I1), s	10.2	22.9	2.9	0.0	2.9	59.5	3.6	5.5
Green Ext Time (p_c), s	0.1	19.9	0.0	0.0	0.0	7.9	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

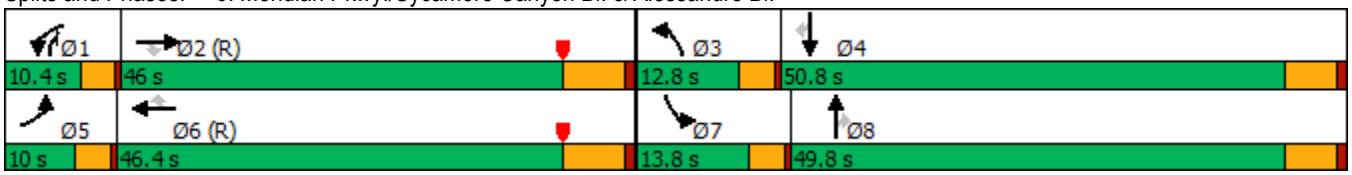
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

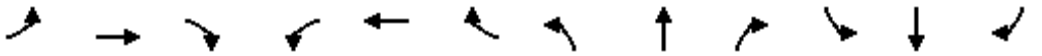
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1159	321	243	2375	565	589	771	93	132	176	124
Future Volume (vph)	154	1159	321	243	2375	565	589	771	93	132	176	124
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	10.0	46.0	46.0	10.4	46.4	46.4	12.8	49.8	10.4	13.8	50.8	50.8
Total Split (%)	8.3%	38.3%	38.3%	8.7%	38.7%	38.7%	10.7%	41.5%	8.7%	11.5%	42.3%	42.3%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1159	321	243	2375	565	589	771	93	132	176	124
Future Volume (veh/h)	154	1159	321	243	2375	565	589	771	93	132	176	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	162	1220	338	256	2500	595	620	812	98	139	185	131
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	95	2354	731	196	2371	735	266	977	925	195	904	403
Arrive On Green	0.02	0.15	0.15	0.06	0.46	0.46	0.08	0.27	0.27	0.06	0.25	0.25
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	162	1220	338	256	2500	595	620	812	98	139	185	131
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	6.3	26.0	23.0	6.7	54.8	38.2	9.1	25.4	2.9	4.7	4.9	8.0
Cycle Q Clear(g_c), s	6.3	26.0	23.0	6.7	54.8	38.2	9.1	25.4	2.9	4.7	4.9	8.0
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	95	2354	731	196	2371	735	266	977	925	195	904	403
V/C Ratio(X)	1.71	0.52	0.46	1.31	1.05	0.81	2.33	0.83	0.11	0.71	0.20	0.32
Avail Cap(c_a), veh/h	95	2354	731	196	2371	735	266	1324	1197	295	1354	604
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	38.9	37.7	56.7	32.6	28.1	55.5	41.2	28.2	55.7	35.5	36.7
Incr Delay (d2), s/veh	352.1	0.7	1.8	169.6	34.8	9.3	609.7	3.4	0.0	1.8	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	12.2	12.1	10.2	7.5	28.8	15.6	26.5	11.3	1.0	2.1	2.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	411.0	39.6	39.4	226.2	67.4	37.4	665.1	44.6	28.2	57.5	35.6	37.2
LnGrp LOS	F	D	D	F	F	D	F	D	C	E	D	D
Approach Vol, veh/h		1720			3351			1530			455	
Approach Delay, s/veh		74.6			74.2			295.0			42.8	
Approach LOS		E			E			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	60.9	12.8	35.9	10.0	61.3	10.4	38.3
Change Period (Y+Rc), s	3.7	6.5	3.7	5.8	3.7	6.5	3.7	5.8
Max Green Setting (Gmax), s	6.7	39.5	9.1	45.0	6.3	39.9	10.1	44.0
Max Q Clear Time (g_c+I1), s	8.7	28.0	11.1	10.0	8.3	56.8	6.7	27.4
Green Ext Time (p_c), s	0.0	8.2	0.0	1.5	0.0	0.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	120.2
HCM 6th LOS	F

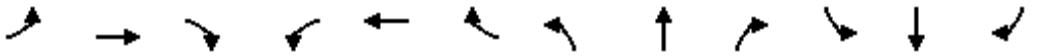
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	931	2816	284	0	471
Future Volume (vph)	931	2816	284	0	471
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	931	392	0	2816	220	0	0	0	284	0	471
Future Volume (veh/h)	0	931	392	0	2816	220	0	0	0	284	0	471
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	960	375	0	2903	227				195	0	546
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	2491	972	0	3356	255				349	0	620
Arrive On Green	0.00	0.68	0.68	0.00	1.00	1.00				0.19	0.00	0.19
Sat Flow, veh/h	0	3814	1422	0	5079	373				1810	0	3215
Grp Volume(v), veh/h	0	911	424	0	2020	1110				195	0	546
Grp Sat Flow(s),veh/h/ln	0	1729	1607	0	1729	1823				1810	0	1608
Q Serve(g_s), s	0.0	9.6	9.6	0.0	0.0	0.0				8.3	0.0	14.0
Cycle Q Clear(g_c), s	0.0	9.6	9.6	0.0	0.0	0.0				8.3	0.0	14.0
Prop In Lane	0.00		0.88	0.00		0.20				1.00		1.00
Lane Grp Cap(c), veh/h	0	2364	1099	0	2364	1247				349	0	620
V/C Ratio(X)	0.00	0.39	0.39	0.00	0.85	0.89				0.56	0.00	0.88
Avail Cap(c_a), veh/h	0	2364	1099	0	2364	1247				362	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.28	0.28				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	5.8	0.0	0.0	0.0				31.0	0.0	33.4
Incr Delay (d2), s/veh	0.0	0.5	1.0	0.0	1.2	3.1				1.8	0.0	13.2
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	2.3	2.3	0.0	0.4	1.1				3.6	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	6.8	0.0	1.2	3.1				32.8	0.0	46.6
LnGrp LOS	A	A	A	A	A	A				C	A	D
Approach Vol, veh/h		1335			3130						741	
Approach Delay, s/veh		6.4			1.9						43.0	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		63.6		21.4		63.6						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		11.6		16.0		2.0						
Green Ext Time (p_c), s		10.5		0.3		44.4						

Intersection Summary		
HCM 6th Ctrl Delay		8.9
HCM 6th LOS		A

Notes

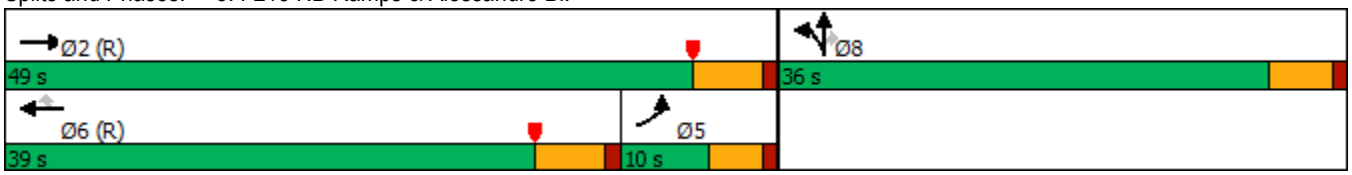
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	102	1149	1840	191	1092	4	245
Future Volume (vph)	102	1149	1840	191	1092	4	245
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	1149	0	0	1840	191	1092	4	245	0	0	0
Future Volume (veh/h)	102	1149	0	0	1840	191	1092	4	245	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	104	1172	0	0	1878	175	1174	0	127			
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	423	3592	0	0	2044	620	1320	0	587			
Arrive On Green	0.47	1.00	0.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5358	0	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	104	1172	0	0	1878	175	1174	0	127			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	2.9	0.0	0.0	0.0	29.2	6.4	25.9	0.0	4.6			
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.0	29.2	6.4	25.9	0.0	4.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	423	3592	0	0	2044	620	1320	0	587			
V/C Ratio(X)	0.25	0.33	0.00	0.00	0.92	0.28	0.89	0.00	0.22			
Avail Cap(c_a), veh/h	423	3592	0	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.89	0.89	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.1	0.0	0.0	0.0	24.5	17.6	25.4	0.0	18.6			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	8.1	1.1	9.3	0.0	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			
%ile BackOfQ(50%),veh/ln	1.1	0.1	0.0	0.0	11.6	2.2	11.6	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.3	0.2	0.0	0.0	32.6	18.7	34.6	0.0	19.5			
LnGrp LOS	B	A	A	A	C	B	C	A	B			
Approach Vol, veh/h		1276			2053			1301				
Approach Delay, s/veh		1.7			31.4			33.2				
Approach LOS		A			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		64.4			25.4	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			4.9	31.2		27.9				
Green Ext Time (p_c), s		8.9			0.0	2.0		1.7				

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

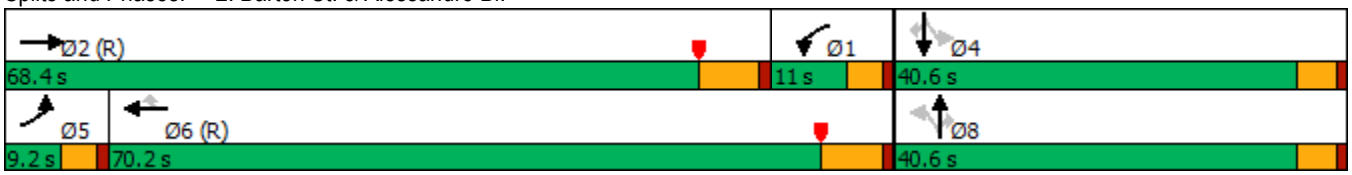
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

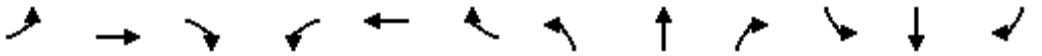
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	6	2639	67	2251	15	64	5	47	14	5	13
Future Volume (vph)	6	2639	67	2251	15	64	5	47	14	5	13
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2639	46	67	2251	15	64	5	47	14	5	13
Future Volume (veh/h)	6	2639	46	67	2251	15	64	5	47	14	5	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	2778	46	71	2369	16	67	5	27	15	5	1
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	2711	45	624	4523	1404	58	2	482	53	11	477
Arrive On Green	0.01	0.52	0.52	0.23	0.58	0.58	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	5256	87	1810	5187	1610	0	8	1605	0	35	1590
Grp Volume(v), veh/h	6	1823	1001	71	2369	16	72	0	27	20	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1884	1810	1729	1610	8	0	1605	35	0	1590
Q Serve(g_s), s	0.4	61.9	61.9	3.7	32.8	0.5	0.0	0.0	1.4	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.4	61.9	61.9	3.7	32.8	0.5	36.0	0.0	1.4	36.0	0.0	0.1
Prop In Lane	1.00		0.05	1.00		1.00	0.93		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	14	1784	972	624	4523	1404	60	0	482	63	0	477
V/C Ratio(X)	0.44	1.02	1.03	0.11	0.52	0.01	1.19	0.00	0.06	0.32	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	972	624	4523	1404	60	0	482	63	0	477
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.3	29.0	29.1	31.7	10.0	3.3	58.6	0.0	29.9	41.2	0.0	29.4
Incr Delay (d2), s/veh	8.0	27.1	36.7	0.0	0.4	0.0	177.7	0.0	0.2	12.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	29.1	34.2	1.6	12.9	0.0	4.8	0.0	0.6	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	56.1	65.7	31.7	10.4	3.3	236.3	0.0	30.1	53.9	0.0	29.4
LnGrp LOS	E	F	F	C	B	A	F	A	C	D	A	C
Approach Vol, veh/h		2830			2456			99			21	
Approach Delay, s/veh		59.6			10.9			180.0			52.7	
Approach LOS		E			B			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	48.5	68.4		40.6	5.1	111.8		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.7	63.9		38.0	2.4	34.8		38.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	24.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		39.7	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

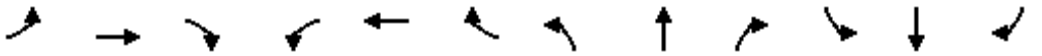
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	3	2668	3	2403	5	0	
Future Volume (vph)	3	2668	3	2403	5	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2668	1	3	2403	0	5	0	2	0	0	0
Future Volume (veh/h)	3	2668	1	3	2403	0	5	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	3	2900	1	3	2612	0	5	0	0	0	0	0
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	221	3950	1	221	3825	0	78	0	0	0	24	0
Arrive On Green	0.24	1.00	1.00	0.12	0.74	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5356	2	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	3	1872	1029	3	2612	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	0.0	0.0	0.2	32.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.2	32.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	221	2550	1401	221	3825	0	78	0	0	0	24	0
V/C Ratio(X)	0.01	0.73	0.73	0.01	0.68	0.00	0.06	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	221	2550	1401	221	3825	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	46.3	8.3	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.3	0.0	1.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.1	8.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.2	0.3	46.3	9.3	0.0	59.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2904			2615			5			0	
Approach Delay, s/veh		0.3			9.4			59.0			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.1	18.9	95.0		6.1	18.9	95.0				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	5.8	* 89				
Max Q Clear Time (g_c+I1), s		2.4	2.2	2.0		0.0	2.2	34.0				
Green Ext Time (p_c), s		0.0	0.0	71.8		0.0	0.0	45.5				

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2659	13	25	2398	2	10
Future Vol, veh/h	2659	13	25	2398	2	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	155	-	0	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	2890	14	27	2607	2	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2904	0	3994	1452
Stage 1	-	-	-	-	2897	-
Stage 2	-	-	-	-	1097	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	44	-	7	105
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	257	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	44	-	3	105
Mov Cap-2 Maneuver	-	-	-	-	3	-
Stage 1	-	-	-	-	15	-
Stage 2	-	-	-	-	99	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	$ 331.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	3	105	-	-	44	-
HCM Lane V/C Ratio	0.725	0.104	-	-	0.618	-
HCM Control Delay (s)	$ 1771.6	43.2	-	-	174.4	-
HCM Lane LOS	F	E	-	-	F	-
HCM 95th %tile Q(veh)	0.9	0.3	-	-	2.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

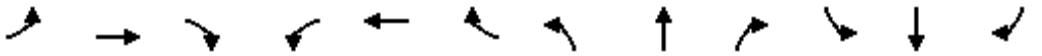
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	15	2779	66	2422	22	33	123	29	17
Future Volume (vph)	15	2779	66	2422	22	33	123	29	17
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	73.0	10.2	73.6	73.6	11.2	27.2	9.6	25.6
Total Split (%)	8.0%	60.8%	8.5%	61.3%	61.3%	9.3%	22.7%	8.0%	21.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 76.7 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2779	18	66	2422	22	33	0	123	29	0	17
Future Volume (veh/h)	15	2779	18	66	2422	22	33	0	123	29	0	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	3054	20	72	2662	23	36	0	134	32	0	0
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	31	3438	22	84	3507	1065	53	190	161	68	206	
Arrive On Green	0.02	0.65	0.65	0.05	0.68	0.68	0.03	0.00	0.10	0.04	0.00	0.00
Sat Flow, veh/h	1810	5317	35	1810	5187	1575	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	16	1984	1090	72	2662	23	36	0	134	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1575	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	1.1	57.1	57.5	4.7	41.0	0.6	2.4	0.0	9.8	2.1	0.0	0.0
Cycle Q Clear(g_c), s	1.1	57.1	57.5	4.7	41.0	0.6	2.4	0.0	9.8	2.1	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	2236	1224	84	3507	1065	53	190	161	68	206	
V/C Ratio(X)	0.51	0.89	0.89	0.85	0.76	0.02	0.68	0.00	0.83	0.47	0.00	
Avail Cap(c_a), veh/h	75	2236	1224	84	3507	1065	100	358	303	75	333	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.5	17.6	17.7	56.8	12.9	6.4	57.7	0.0	53.0	56.6	0.0	0.0
Incr Delay (d2), s/veh	4.8	5.7	9.9	7.7	0.1	0.0	14.5	0.0	10.4	5.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	19.9	23.4	2.3	12.4	0.2	1.3	0.0	4.5	1.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	23.3	27.6	64.4	13.0	6.4	72.2	0.0	63.4	61.7	0.0	0.0
LnGrp LOS	E	C	C	E	B	A	E	A	E	E	A	
Approach Vol, veh/h		3090			2757			170			32	A
Approach Delay, s/veh		25.0			14.3			65.2			61.7	
Approach LOS		C			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	84.1	8.1	17.6	6.7	87.6	9.1	16.6
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	5.6	66.5	6.6	21.0	5.0	67.1	5.0	22.6
Max Q Clear Time (g_c+I1), s	6.7	59.5	4.4	0.0	3.1	43.0	4.1	11.8
Green Ext Time (p_c), s	0.0	6.9	0.0	0.0	0.0	22.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

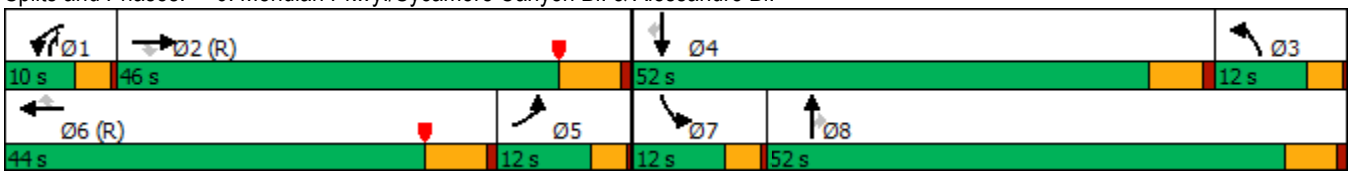
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

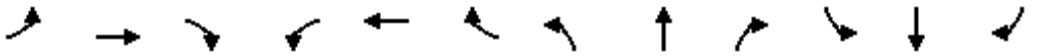
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	1996	589	212	1690	158	474	398	240	205	758	336
Future Volume (vph)	160	1996	589	212	1690	158	474	398	240	205	758	336
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	12.0	46.0	46.0	10.0	44.0	44.0	12.0	52.0	10.0	12.0	52.0	52.0
Total Split (%)	10.0%	38.3%	38.3%	8.3%	36.7%	36.7%	10.0%	43.3%	8.3%	10.0%	43.3%	43.3%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	1996	589	212	1690	158	474	398	240	205	758	336
Future Volume (veh/h)	160	1996	589	212	1690	158	474	398	240	205	758	336
Initial Q (Qb), veh	0	0	0	0	0	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	178	2218	654	236	1878	176	527	442	267	228	842	373
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	2128	7569	2350	184	1621	503	243	1453	1289	243	1390	620
Arrive On Green	0.39	0.48	0.48	0.05	0.31	0.31	0.07	0.40	0.40	0.07	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	178	2218	654	236	1878	176	527	442	267	228	842	373
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.3	37.5	24.8	8.3	10.0	6.8	7.8	22.4	22.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	37.5	24.8	8.3	10.0	6.8	7.8	22.4	22.3
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	2128	7569	2350	184	1621	503	243	1453	1289	243	1390	620
V/C Ratio(X)	0.08	0.29	0.28	1.28	1.16	0.35	2.17	0.30	0.21	0.94	0.61	0.60
Avail Cap(c_a), veh/h	2128	7569	2350	184	1621	503	243	1453	1289	243	1390	620
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.8	41.2	190.3	55.8	24.4	19.7	55.6	29.6	29.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	161.2	78.7	1.9	540.1	0.5	0.4	40.8	2.0	4.3
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	0.0	0.0	0.1	6.8	27.0	10.6	21.8	4.2	2.2	4.7	9.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.1	218.0	120.0	192.3	596.0	24.9	20.0	96.4	31.6	33.8
LnGrp LOS	A	A	A	F	F	F	F	C	C	F	C	C
Approach Vol, veh/h		3050			2290			1236			1443	
Approach Delay, s/veh		0.0			135.6			267.4			42.4	
Approach LOS		A			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	183.7	14.1	52.0	149.7	44.0	12.0	54.1
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	39.5	8.3	* 46	8.3	* 38	8.3	46.2
Max Q Clear Time (g_c+I1), s	8.3	2.0	10.3	24.4	2.0	39.5	9.8	12.0
Green Ext Time (p_c), s	0.0	33.2	0.0	6.9	0.1	0.0	0.0	4.0

Intersection Summary	
HCM 6th Ctrl Delay	87.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

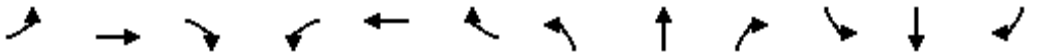
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1894	1668	281	0	450
Future Volume (vph)	1894	1668	281	0	450
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1894	549	0	1668	153	0	0	0	281	0	450
Future Volume (veh/h)	0	1894	549	0	1668	153	0	0	0	281	0	450
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	2015	547	0	1774	161				427	0	237
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2837	728	0	3349	303				663	0	295
Arrive On Green	0.00	0.69	0.69	0.00	0.69	0.69				0.18	0.00	0.18
Sat Flow, veh/h	0	4263	1050	0	5002	437				3619	0	1608
Grp Volume(v), veh/h	0	1685	877	0	1268	667				427	0	237
Grp Sat Flow(s),veh/h/ln	0	1729	1683	0	1729	1810				1810	0	1608
Q Serve(g_s), s	0.0	24.8	28.4	0.0	15.1	15.2				9.3	0.0	12.0
Cycle Q Clear(g_c), s	0.0	24.8	28.4	0.0	15.1	15.2				9.3	0.0	12.0
Prop In Lane	0.00		0.62	0.00		0.24				1.00		1.00
Lane Grp Cap(c), veh/h	0	2397	1167	0	2397	1255				663	0	295
V/C Ratio(X)	0.00	0.70	0.75	0.00	0.53	0.53				0.64	0.00	0.80
Avail Cap(c_a), veh/h	0	2397	1167	0	2397	1255				937	0	416
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	1.00	0.00	0.57	0.57				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.8	8.4	0.0	6.3	6.3				32.1	0.0	33.3
Incr Delay (d2), s/veh	0.0	1.8	4.5	0.0	0.5	0.9				1.1	0.0	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.9	7.4	0.0	3.4	3.7				3.9	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.6	12.8	0.0	6.8	7.3				33.2	0.0	40.8
LnGrp LOS	A	A	B	A	A	A				C	A	D
Approach Vol, veh/h		2562			1935						664	
Approach Delay, s/veh		10.7			7.0						35.9	
Approach LOS		B			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		64.4		20.6		64.4						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		30.4		14.0		17.2						
Green Ext Time (p_c), s		17.6		1.6		16.8						

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

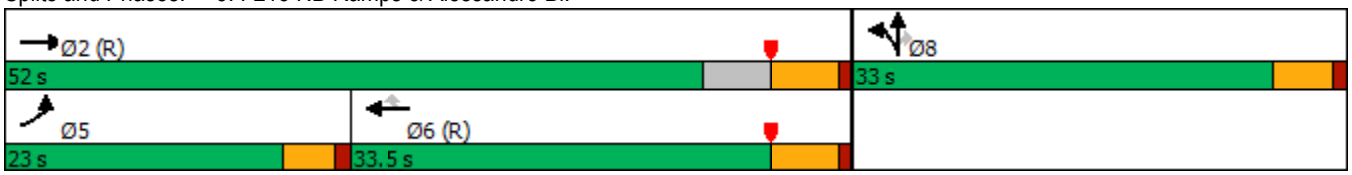
User approved volume balancing among the lanes for turning movement.

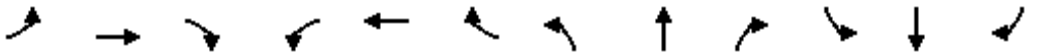
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	288	1825	1209	283	699	12	332
Future Volume (vph)	288	1825	1209	283	699	12	332
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	23.0	52.0	33.5	33.5	33.0	33.0	33.0
Total Split (%)	25.7%	58.1%	37.4%	37.4%	36.9%	36.9%	36.9%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	288	1825	0	0	1209	283	699	12	332	0	0	0
Future Volume (veh/h)	288	1825	0	0	1209	283	699	12	332	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	306	1941	0	0	1286	185	807	0	128			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	341	2968	0	0	1731	526	1126	0	501			
Arrive On Green	0.19	0.57	0.00	0.00	0.33	0.33	0.31	0.00	0.31			
Sat Flow, veh/h	1810	5358	0	0	5358	1576	3619	0	1610			
Grp Volume(v), veh/h	306	1941	0	0	1286	185	807	0	128			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1576	1810	0	1610			
Q Serve(g_s), s	14.9	23.0	0.0	0.0	19.8	8.0	17.8	0.0	5.4			
Cycle Q Clear(g_c), s	14.9	23.0	0.0	0.0	19.8	8.0	17.8	0.0	5.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	341	2968	0	0	1731	526	1126	0	501			
V/C Ratio(X)	0.90	0.65	0.00	0.00	0.74	0.35	0.72	0.00	0.26			
Avail Cap(c_a), veh/h	372	2968	0	0	1731	526	1126	0	501			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.54	0.54	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.7	13.2	0.0	0.0	26.6	22.6	27.5	0.0	23.2			
Incr Delay (d2), s/veh	13.5	0.6	0.0	0.0	2.9	1.8	3.9	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	7.3	7.1	0.0	0.0	7.7	2.9	7.7	0.0	2.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.1	13.8	0.0	0.0	29.5	24.5	31.4	0.0	24.4			
LnGrp LOS	D	B	A	A	C	C	C	A	C			
Approach Vol, veh/h		2247			1471			935				
Approach Delay, s/veh		18.6			28.9			30.5				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.0			21.5	35.5		33.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		46.5			18.5	28.0		28.0				
Max Q Clear Time (g_c+I1), s		25.0			16.9	21.8		19.8				
Green Ext Time (p_c), s		13.5			0.1	4.0		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.2:

OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	2	19	0	6
Future Vol, veh/h	6	0	2	19	0	6
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	-	-	-	-	-
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	7	0	2	21	0	7

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	20	13	0	0	23	0
Stage 1	13	-	-	-	-	-
Stage 2	7	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1002	1073	-	-	1605	-
Stage 1	1015	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1002	1073	-	-	1605	-
Mov Cap-2 Maneuver	1002	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

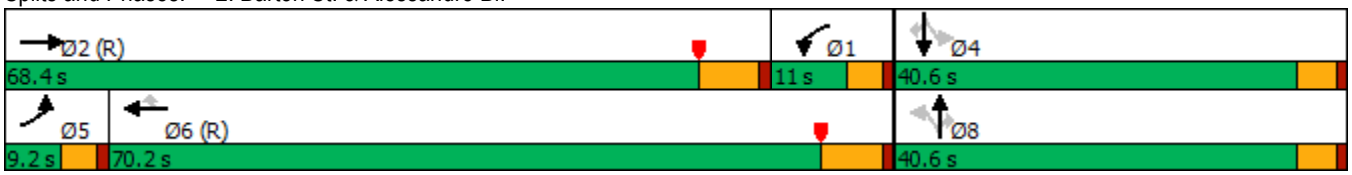
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1002	1605	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

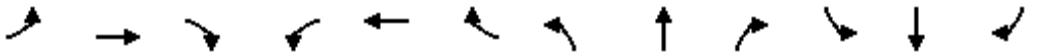
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	12	1561	60	2805	20	68	5	55	12	8	3
Future Volume (vph)	12	1561	60	2805	20	68	5	55	12	8	3
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 88 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1561	28	60	2805	20	68	5	55	12	8	3
Future Volume (veh/h)	12	1561	28	60	2805	20	68	5	55	12	8	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	13	1678	30	65	3016	22	73	5	28	13	9	0
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	27	2707	48	538	4242	1317	474	31	477	296	194	483
Arrive On Green	0.01	0.52	0.52	0.10	0.27	0.27	0.30	0.30	0.30	0.30	0.30	0.00
Sat Flow, veh/h	1810	5247	94	1810	5187	1610	1388	102	1590	829	647	1610
Grp Volume(v), veh/h	13	1106	602	65	3016	22	78	0	28	22	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1610	1490	0	1590	1476	0	1610
Q Serve(g_s), s	0.9	27.3	27.3	3.9	63.0	1.2	0.0	0.0	1.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.9	27.3	27.3	3.9	63.0	1.2	3.8	0.0	1.5	3.8	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	0.94		1.00	0.59		1.00
Lane Grp Cap(c), veh/h	27	1784	971	538	4242	1317	505	0	477	491	0	483
V/C Ratio(X)	0.49	0.62	0.62	0.12	0.71	0.02	0.15	0.00	0.06	0.04	0.00	0.00
Avail Cap(c_a), veh/h	75	1784	971	538	4242	1317	505	0	477	491	0	483
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	20.7	20.7	39.8	31.0	8.4	30.7	0.0	29.9	29.8	0.0	0.0
Incr Delay (d2), s/veh	5.1	1.6	3.0	0.0	0.8	0.0	0.6	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	10.3	11.5	1.7	29.0	0.2	1.8	0.0	0.6	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	22.3	23.7	39.8	31.8	8.4	31.4	0.0	30.2	29.9	0.0	0.0
LnGrp LOS	E	C	C	D	C	A	C	A	C	C	A	A
Approach Vol, veh/h		1721			3103			106			22	
Approach Delay, s/veh		23.1			31.8			31.0			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	43.0	68.4		40.6	6.0	105.4		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.9	29.3		5.8	2.9	65.0		5.8				
Green Ext Time (p_c), s	0.0	19.0		0.1	0.0	0.0		0.5				

Intersection Summary			
HCM 6th Ctrl Delay		28.7	
HCM 6th LOS		C	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

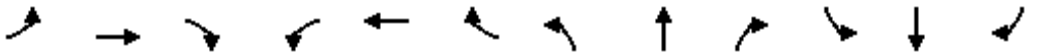
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	5	1603	2	2852	3	0	
Future Volume (vph)	5	1603	2	2852	3	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1603	5	2	2852	0	3	0	3	0	0	0
Future Volume (veh/h)	5	1603	5	2	2852	0	3	0	3	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	5	1742	5	2	3100	0	3	0	0	0	0	0
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	12	3938	11	195	4451	0	71	0	0	0	15	0
Arrive On Green	0.01	1.00	1.00	0.11	0.86	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5340	15	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	5	1128	619	2	3100	0	3	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1897	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.3	0.0	0.0	0.1	25.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.1	25.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	12	2550	1399	195	4451	0	71	0	0	0	15	0
V/C Ratio(X)	0.43	0.44	0.44	0.01	0.70	0.00	0.04	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	195	4451	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	59.0	0.0	0.0	47.8	3.0	0.0	59.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	7.1	0.4	0.8	0.0	0.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.1	2.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.1	0.4	0.8	47.8	3.9	0.0	59.4	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		1752			3102			3			0	
Approach Delay, s/veh		0.7			3.9			59.4			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		5.6	19.4	95.0		5.6	5.0	109.5				
Change Period (Y+Rc), s		4.6	6.5	* 6.5		4.6	* 4.2	6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	* 5.8	88.5				
Max Q Clear Time (g_c+I1), s		2.2	2.1	2.0		0.0	2.3	27.3				
Green Ext Time (p_c), s		0.0	0.0	29.4		0.0	0.0	56.9				

Intersection Summary	
HCM 6th Ctrl Delay	2.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	8.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1595	8	13	2851	35	3	0	15	11	0	1
Future Vol, veh/h	4	1595	8	13	2851	35	3	0	15	11	0	1
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	155	-	-	155	-	-	0	-	-	0	-	-
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	4	1734	9	14	3099	38	3	0	16	12	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3137	0	0	1743	0	0	3015	4912	872	3848	4897	1569
Stage 1	-	-	-	-	-	-	1747	1747	-	3146	3146	-
Stage 2	-	-	-	-	-	-	1268	3165	-	702	1751	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	33	-	-	172	-	-	15	1	256	~ 4	1	87
Stage 1	-	-	-	-	-	-	60	141	-	~ 6	27	-
Stage 2	-	-	-	-	-	-	162	26	-	363	141	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	33	-	-	172	-	-	13	1	256	~ 3	1	87
Mov Cap-2 Maneuver	-	-	-	-	-	-	13	1	-	~ 3	1	-
Stage 1	-	-	-	-	-	-	53	124	-	~ 5	25	-
Stage 2	-	-	-	-	-	-	147	24	-	299	124	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	76.3	$ 3203.3
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	13	256	33	-	-	172	-	-	3	87
HCM Lane V/C Ratio	0.251	0.064	0.132	-	-	0.082	-	-	3.986	0.012
HCM Control Delay (s)	$ 357.6	20	130	-	-	27.8	-	-	$ 3490.2	46.9
HCM Lane LOS	F	C	F	-	-	D	-	-	F	E
HCM 95th %tile Q(veh)	0.7	0.2	0.4	-	-	0.3	-	-	2.8	0

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

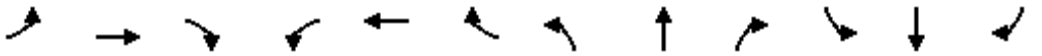
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	12	1591	116	3033	38	12	45	22	15
Future Volume (vph)	12	1591	116	3033	38	12	45	22	15
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	63.2	20.4	74.0	74.0	9.6	26.8	9.6	26.8
Total Split (%)	8.0%	52.7%	17.0%	61.7%	61.7%	8.0%	22.3%	8.0%	22.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77.1 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	1591	32	116	3033	38	12	0	45	22	0	15
Future Volume (veh/h)	12	1591	32	116	3033	38	12	0	45	22	0	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	13	1729	35	126	3297	38	13	0	49	24	0	0
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	27	3359	68	154	3693	1146	27	142	120	53	170	
Arrive On Green	0.01	0.64	0.64	0.08	0.71	0.71	0.01	0.00	0.07	0.03	0.00	0.00
Sat Flow, veh/h	1810	5233	106	1810	5187	1609	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	13	1142	622	126	3297	38	13	0	49	24	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1881	1810	1729	1609	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	0.9	21.2	21.2	8.2	60.3	0.8	0.9	0.0	3.5	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.9	21.2	21.2	8.2	60.3	0.8	0.9	0.0	3.5	1.6	0.0	0.0
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	27	2219	1207	154	3693	1146	27	142	120	53	170	
V/C Ratio(X)	0.49	0.51	0.51	0.82	0.89	0.03	0.49	0.00	0.41	0.45	0.00	
Avail Cap(c_a), veh/h	75	2219	1207	238	3693	1146	75	352	298	75	352	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	11.5	11.5	54.0	13.7	5.1	58.7	0.0	53.0	57.3	0.0	0.0
Incr Delay (d2), s/veh	5.1	0.9	1.6	1.2	0.3	0.0	13.3	0.0	2.2	5.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.0	7.9	3.6	17.0	0.3	0.5	0.0	1.5	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	12.4	13.1	55.2	14.0	5.1	72.0	0.0	55.2	63.1	0.0	0.0
LnGrp LOS	E	B	B	E	B	A	E	A	E	E	A	
Approach Vol, veh/h		1777			3461			62			24	A
Approach Delay, s/veh		13.0			15.4			58.7			63.1	
Approach LOS		B			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.8	83.5	6.4	15.3	6.4	91.9	8.1	13.6
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	15.8	56.7	5.0	22.2	5.0	67.5	5.0	22.2
Max Q Clear Time (g_c+I1), s	10.2	23.2	2.9	0.0	2.9	62.3	3.6	5.5
Green Ext Time (p_c), s	0.1	20.0	0.0	0.0	0.0	5.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

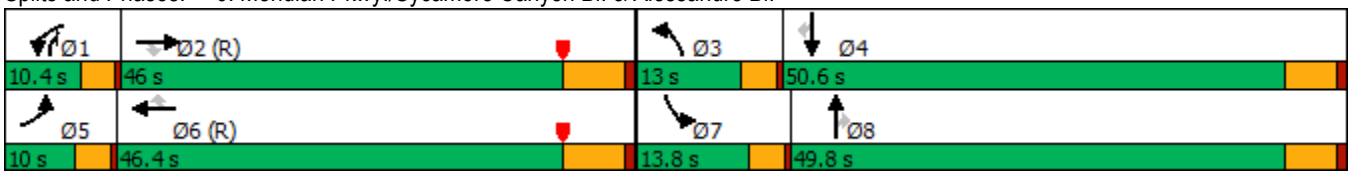
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

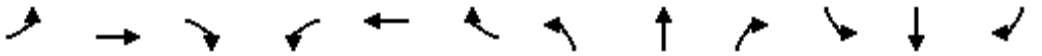
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1175	321	243	2426	565	590	771	93	132	176	124
Future Volume (vph)	154	1175	321	243	2426	565	590	771	93	132	176	124
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	10.0	46.0	46.0	10.4	46.4	46.4	13.0	49.8	10.4	13.8	50.6	50.6
Total Split (%)	8.3%	38.3%	38.3%	8.7%	38.7%	38.7%	10.8%	41.5%	8.7%	11.5%	42.2%	42.2%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1175	321	243	2426	565	590	771	93	132	176	124
Future Volume (veh/h)	154	1175	321	243	2426	565	590	771	93	132	176	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	162	1237	338	256	2554	595	621	812	98	139	185	131
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	95	2354	731	196	2371	735	272	977	925	195	898	401
Arrive On Green	0.02	0.15	0.15	0.06	0.46	0.46	0.08	0.27	0.27	0.06	0.25	0.25
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	162	1237	338	256	2554	595	621	812	98	139	185	131
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	6.3	26.4	23.0	6.7	54.8	38.2	9.3	25.4	2.9	4.7	4.9	8.0
Cycle Q Clear(g_c), s	6.3	26.4	23.0	6.7	54.8	38.2	9.3	25.4	2.9	4.7	4.9	8.0
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	95	2354	731	196	2371	735	272	977	925	195	898	401
V/C Ratio(X)	1.71	0.53	0.46	1.31	1.08	0.81	2.28	0.83	0.11	0.71	0.21	0.33
Avail Cap(c_a), veh/h	95	2354	731	196	2371	735	272	1324	1197	295	1348	601
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	39.1	37.7	56.7	32.6	28.1	55.3	41.2	28.2	55.7	35.7	36.9
Incr Delay (d2), s/veh	352.1	0.7	1.8	169.6	43.3	9.3	588.7	3.4	0.0	1.8	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	12.2	12.3	10.2	7.5	30.7	15.6	26.3	11.3	1.0	2.1	2.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	411.0	39.8	39.4	226.2	75.8	37.4	644.0	44.6	28.2	57.5	35.8	37.3
LnGrp LOS	F	D	D	F	F	D	F	D	C	E	D	D
Approach Vol, veh/h		1737			3405			1531			455	
Approach Delay, s/veh		74.4			80.4			286.7			42.9	
Approach LOS		E			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	60.9	13.0	35.7	10.0	61.3	10.4	38.3
Change Period (Y+Rc), s	3.7	6.5	3.7	5.8	3.7	6.5	3.7	5.8
Max Green Setting (Gmax), s	6.7	39.5	9.3	44.8	6.3	39.9	10.1	44.0
Max Q Clear Time (g_c+I1), s	8.7	28.4	11.3	10.0	8.3	56.8	6.7	27.4
Green Ext Time (p_c), s	0.0	8.0	0.0	1.5	0.0	0.0	0.1	5.1

Intersection Summary	
HCM 6th Ctrl Delay	120.9
HCM 6th LOS	F

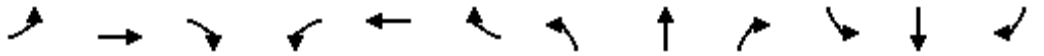
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	941	2840	284	0	497
Future Volume (vph)	941	2840	284	0	497
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	941	398	0	2840	220	0	0	0	284	0	497
Future Volume (veh/h)	0	941	398	0	2840	220	0	0	0	284	0	497
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	970	381	0	2928	227				195	0	572
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	2467	968	0	3331	251				359	0	637
Arrive On Green	0.00	0.68	0.68	0.00	1.00	1.00				0.20	0.00	0.20
Sat Flow, veh/h	0	3808	1427	0	5083	370				1810	0	3215
Grp Volume(v), veh/h	0	922	429	0	2036	1119				195	0	572
Grp Sat Flow(s),veh/h/ln	0	1729	1606	0	1729	1824				1810	0	1608
Q Serve(g_s), s	0.0	9.9	10.0	0.0	0.0	0.0				8.2	0.0	14.7
Cycle Q Clear(g_c), s	0.0	9.9	10.0	0.0	0.0	0.0				8.2	0.0	14.7
Prop In Lane	0.00		0.89	0.00		0.20				1.00		1.00
Lane Grp Cap(c), veh/h	0	2346	1089	0	2346	1237				359	0	637
V/C Ratio(X)	0.00	0.39	0.39	0.00	0.87	0.90				0.54	0.00	0.90
Avail Cap(c_a), veh/h	0	2346	1089	0	2346	1237				362	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.27	0.27				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	6.0	0.0	0.0	0.0				30.6	0.0	33.2
Incr Delay (d2), s/veh	0.0	0.5	1.1	0.0	1.3	3.4				1.6	0.0	15.4
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	2.4	2.4	0.0	0.4	1.2				3.5	0.0	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.5	7.1	0.0	1.3	3.4				32.3	0.0	48.6
LnGrp LOS	A	A	A	A	A	A				C	A	D
Approach Vol, veh/h		1351			3155						767	
Approach Delay, s/veh		6.7			2.1						44.4	
Approach LOS		A			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		63.2		21.8		63.2						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		12.0		16.7		2.0						
Green Ext Time (p_c), s		10.7		0.1		44.8						

Intersection Summary	
HCM 6th Ctrl Delay	9.4
HCM 6th LOS	A

Notes

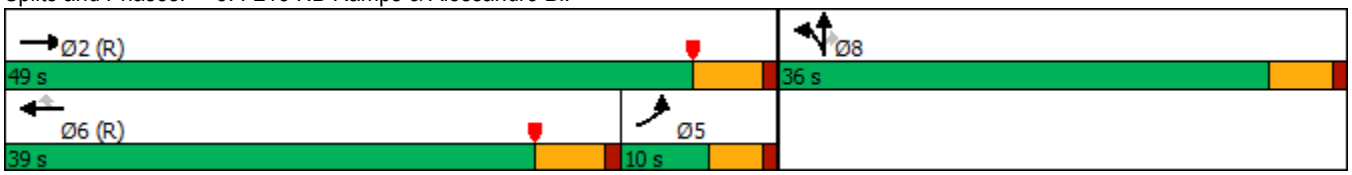
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	110	1150	1844	191	1112	4	245
Future Volume (vph)	110	1150	1844	191	1112	4	245
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1150	0	0	1844	191	1112	4	245	0	0	0
Future Volume (veh/h)	110	1150	0	0	1844	191	1112	4	245	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	112	1173	0	0	1882	175	1195	0	127			
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	484	3768	0	0	2044	620	1320	0	587			
Arrive On Green	0.54	1.00	0.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5358	0	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	112	1173	0	0	1882	175	1195	0	127			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	2.8	0.0	0.0	0.0	29.3	6.4	26.6	0.0	4.6			
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.0	29.3	6.4	26.6	0.0	4.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	484	3768	0	0	2044	620	1320	0	587			
V/C Ratio(X)	0.23	0.31	0.00	0.00	0.92	0.28	0.91	0.00	0.22			
Avail Cap(c_a), veh/h	484	3768	0	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.88	0.88	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	15.1	0.0	0.0	0.0	24.5	17.6	25.6	0.0	18.6			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	8.3	1.1	10.5	0.0	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			
%ile BackOfQ(50%),veh/ln	1.0	0.1	0.0	0.0	11.7	2.2	12.1	0.0	1.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.2	0.0	0.0	32.8	18.7	36.1	0.0	19.5			
LnGrp LOS	B	A	A	A	C	B	D	A	B			
Approach Vol, veh/h		1285			2057			1322				
Approach Delay, s/veh		1.5			31.6			34.5				
Approach LOS		A			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		67.4			28.4	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			4.8	31.3		28.6				
Green Ext Time (p_c), s		8.9			0.0	1.9		1.3				

Intersection Summary	
HCM 6th Ctrl Delay	24.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	14	9	0	5
Future Vol, veh/h	20	0	14	9	0	5
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	-	-	-	-	-
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	22	0	15	10	0	5

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	25	20	0	0	25	0
Stage 1	20	-	-	-	-	-
Stage 2	5	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	996	1064	-	-	1603	-
Stage 1	1008	-	-	-	-	-
Stage 2	1023	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	996	1064	-	-	1603	-
Mov Cap-2 Maneuver	996	-	-	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	1023	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

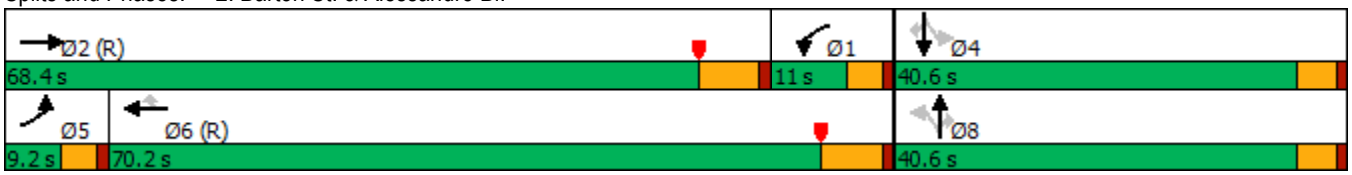
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	996	1603	-
HCM Lane V/C Ratio	-	-	0.022	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

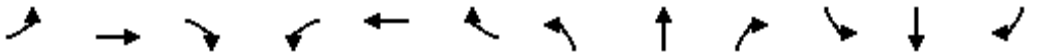
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	7	2641	67	2256	23	64	5	47	32	5	15
Future Volume (vph)	7	2641	67	2256	23	64	5	47	32	5	15
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	40.6	40.6	40.6	26.6	26.6	26.6
Total Split (s)	9.2	68.4	11.0	70.2	70.2	40.6	40.6	40.6	40.6	40.6	40.6
Total Split (%)	7.7%	57.0%	9.2%	58.5%	58.5%	33.8%	33.8%	33.8%	33.8%	33.8%	33.8%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		4.6	4.6		4.6	4.6
Lead/Lag	Lead	Lead	Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 71 (59%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2641	46	67	2256	23	64	5	47	32	5	15
Future Volume (veh/h)	7	2641	46	67	2256	23	64	5	47	32	5	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	2780	46	71	2375	24	67	5	27	34	5	3
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	16	2711	45	624	4518	1402	58	2	482	56	5	477
Arrive On Green	0.01	0.52	0.52	0.23	0.58	0.58	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	1810	5256	87	1810	5187	1610	0	8	1605	0	16	1590
Grp Volume(v), veh/h	7	1825	1001	71	2375	24	72	0	27	39	0	3
Grp Sat Flow(s),veh/h/ln	1810	1729	1884	1810	1729	1610	8	0	1605	16	0	1590
Q Serve(g_s), s	0.5	61.9	61.9	3.7	33.0	0.8	0.0	0.0	1.4	0.0	0.0	0.2
Cycle Q Clear(g_c), s	0.5	61.9	61.9	3.7	33.0	0.8	36.0	0.0	1.4	36.0	0.0	0.2
Prop In Lane	1.00		0.05	1.00		1.00	0.93		1.00	0.87		1.00
Lane Grp Cap(c), veh/h	16	1784	972	624	4518	1402	60	0	482	61	0	477
V/C Ratio(X)	0.45	1.02	1.03	0.11	0.53	0.02	1.19	0.00	0.06	0.64	0.00	0.01
Avail Cap(c_a), veh/h	75	1784	972	624	4518	1402	60	0	482	61	0	477
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.2	29.0	29.1	31.7	10.1	3.4	58.6	0.0	29.9	55.7	0.0	29.5
Incr Delay (d2), s/veh	7.2	27.3	36.9	0.0	0.4	0.0	177.8	0.0	0.2	42.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	29.1	34.3	1.6	12.9	0.0	4.8	0.0	0.6	1.9	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	56.4	65.9	31.7	10.5	3.4	236.4	0.0	30.1	97.7	0.0	29.5
LnGrp LOS	E	F	F	C	B	A	F	A	C	F	A	C
Approach Vol, veh/h		2833			2470			99			42	
Approach Delay, s/veh		59.8			11.0			180.1			92.8	
Approach LOS		E			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	48.5	68.4		40.6	5.2	111.7		40.6				
Change Period (Y+Rc), s	6.5	* 6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	6.8	* 62		36.0	* 5	63.7		36.0				
Max Q Clear Time (g_c+I1), s	5.7	63.9		38.0	2.5	35.0		38.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	24.5		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		40.1
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

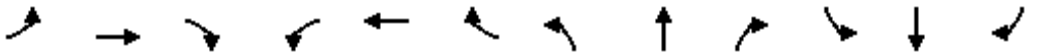
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	3	2688	3	2416	5	0	
Future Volume (vph)	3	2688	3	2416	5	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2688	1	3	2416	0	5	0	2	0	0	0
Future Volume (veh/h)	3	2688	1	3	2416	0	5	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	3	2922	1	3	2626	0	5	0	0	0	0	0
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	221	3950	1	221	3825	0	78	0	0	0	24	0
Arrive On Green	0.24	1.00	1.00	0.12	0.74	0.00	0.01	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5356	2	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	3	1886	1037	3	2626	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	0.0	0.0	0.2	32.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.2	32.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	221	2550	1401	221	3825	0	78	0	0	0	24	0
V/C Ratio(X)	0.01	0.74	0.74	0.01	0.69	0.00	0.06	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	221	2550	1401	221	3825	0	185	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	46.3	8.4	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.3	0.0	1.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.1	8.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.9	0.2	0.3	46.3	9.4	0.0	59.0	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2926			2629			5			0	
Approach Delay, s/veh		0.3			9.4			59.0			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.1	18.9	95.0		6.1	18.9	95.0				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	5.8	* 89				
Max Q Clear Time (g_c+I1), s		2.4	2.2	2.0		0.0	2.2	34.3				
Green Ext Time (p_c), s		0.0	0.0	72.3		0.0	0.0	45.4				

Intersection Summary	
HCM 6th Ctrl Delay	4.7
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	88.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2677	13	25	2406	16	2	0	10	37	0	5
Future Vol, veh/h	2	2677	13	25	2406	16	2	0	10	37	0	5
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	155	-	-	155	-	-	0	-	-	0	-	-
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	2	2910	14	27	2615	17	2	0	11	40	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2632	0	0	2924	0	0	4021	5607	1462	3846	5606	1316
Stage 1	-	-	-	-	-	-	2921	2921	-	2678	2678	-
Stage 2	-	-	-	-	-	-	1100	2686	-	1168	2928	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	61	-	-	43	-	-	3	0	103	~ 4	0	129
Stage 1	-	-	-	-	-	-	8	35	-	~ 12	47	-
Stage 2	-	-	-	-	-	-	207	47	-	188	35	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	61	-	-	43	-	-	~ 1	0	103	~ 2	0	129
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 1	0	-	~ 2	0	-
Stage 1	-	-	-	-	-	-	8	34	-	~ 12	17	-
Stage 2	-	-	-	-	-	-	74	17	-	163	34	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.8	$ 997.4	$ 10576.7
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1	103	61	-	-	43	-	-	2	129
HCM Lane V/C Ratio	2.174	0.106	0.036	-	-	0.632	-	-	20.109	0.042
HCM Control Delay (s)	$ 5764.3	44	66.2	-	-	181	-	-	$ 12001.4	34.1
HCM Lane LOS	F	E	F	-	-	F	-	-	F	D
HCM 95th %tile Q(veh)	1	0.3	0.1	-	-	2.4	-	-	6.9	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

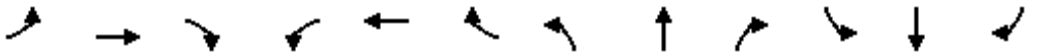
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	15	2834	66	2446	22	33	123	29	17
Future Volume (vph)	15	2834	66	2446	22	33	123	29	17
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	73.0	10.2	73.6	73.6	11.2	27.2	9.6	25.6
Total Split (%)	8.0%	60.8%	8.5%	61.3%	61.3%	9.3%	22.7%	8.0%	21.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 76.7 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	2834	18	66	2446	22	33	0	123	29	0	17
Future Volume (veh/h)	15	2834	18	66	2446	22	33	0	123	29	0	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	16	3114	20	72	2688	23	36	0	134	32	0	0
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	31	3438	22	84	3507	1065	53	190	161	68	206	
Arrive On Green	0.02	0.65	0.65	0.05	0.68	0.68	0.03	0.00	0.10	0.04	0.00	0.00
Sat Flow, veh/h	1810	5318	34	1810	5187	1575	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	16	2023	1111	72	2688	23	36	0	134	32	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1575	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	1.1	59.8	60.2	4.7	41.8	0.6	2.4	0.0	9.8	2.1	0.0	0.0
Cycle Q Clear(g_c), s	1.1	59.8	60.2	4.7	41.8	0.6	2.4	0.0	9.8	2.1	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	2236	1225	84	3507	1065	53	190	161	68	206	
V/C Ratio(X)	0.51	0.90	0.91	0.85	0.77	0.02	0.68	0.00	0.83	0.47	0.00	
Avail Cap(c_a), veh/h	75	2236	1225	84	3507	1065	100	358	303	75	333	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.5	18.1	18.1	56.8	13.1	6.4	57.7	0.0	53.0	56.6	0.0	0.0
Incr Delay (d2), s/veh	4.8	6.6	11.3	7.7	0.1	0.0	14.5	0.0	10.4	5.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	21.0	24.8	2.3	12.7	0.2	1.3	0.0	4.5	1.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.3	24.7	29.5	64.4	13.2	6.4	72.2	0.0	63.4	61.7	0.0	0.0
LnGrp LOS	E	C	C	E	B	A	E	A	E	E	A	
Approach Vol, veh/h		3150			2783			170			32	A
Approach Delay, s/veh		26.6			14.4			65.2			61.7	
Approach LOS		C			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	84.1	8.1	17.6	6.7	87.6	9.1	16.6
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	5.6	66.5	6.6	21.0	5.0	67.1	5.0	22.6
Max Q Clear Time (g_c+I1), s	6.7	62.2	4.4	0.0	3.1	43.8	4.1	11.8
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	21.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

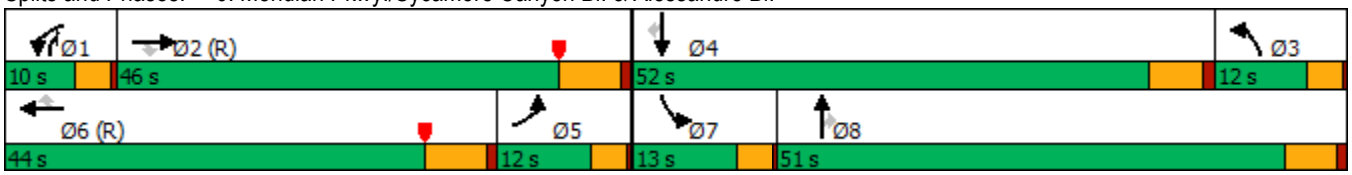
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

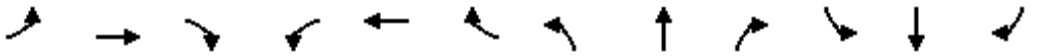
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	2049	591	212	1714	158	475	398	240	205	758	336
Future Volume (vph)	160	2049	591	212	1714	158	475	398	240	205	758	336
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	12.0	46.0	46.0	10.0	44.0	44.0	12.0	51.0	10.0	13.0	52.0	52.0
Total Split (%)	10.0%	38.3%	38.3%	8.3%	36.7%	36.7%	10.0%	42.5%	8.3%	10.8%	43.3%	43.3%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	2049	591	212	1714	158	475	398	240	205	758	336
Future Volume (veh/h)	160	2049	591	212	1714	158	475	398	240	205	758	336
Initial Q (Qb), veh	0	0	0	0	0	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	178	2277	657	236	1904	176	528	442	267	228	842	373
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	2128	7569	2350	184	1621	503	243	1423	1266	272	1390	620
Arrive On Green	0.39	0.48	0.48	0.05	0.31	0.31	0.07	0.39	0.39	0.08	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	178	2277	657	236	1904	176	528	442	267	228	842	373
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.3	37.5	24.6	8.3	10.1	6.9	7.7	22.4	22.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	37.5	24.6	8.3	10.1	6.9	7.7	22.4	22.3
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	2128	7569	2350	184	1621	503	243	1423	1266	272	1390	620
V/C Ratio(X)	0.08	0.30	0.28	1.28	1.17	0.35	2.17	0.31	0.21	0.84	0.61	0.60
Avail Cap(c_a), veh/h	2128	7569	2350	184	1621	503	243	1423	1266	272	1390	620
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.8	41.2	188.5	55.8	25.1	20.3	54.6	29.6	29.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	161.2	85.5	1.9	541.9	0.6	0.4	19.1	2.0	4.3
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	0.0	0.0	0.0	6.8	28.0	10.6	21.9	4.3	2.3	4.0	9.7	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.1	218.0	126.7	190.4	597.8	25.7	20.7	73.7	31.6	33.8
LnGrp LOS	A	A	A	F	F	F	F	C	C	E	C	C
Approach Vol, veh/h		3112			2316			1237			1443	
Approach Delay, s/veh		0.0			140.8			268.8			38.8	
Approach LOS		A			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	183.7	14.1	52.0	149.7	44.0	13.0	53.1
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	39.5	8.3	* 46	8.3	* 38	9.3	45.2
Max Q Clear Time (g_c+I1), s	8.3	2.0	10.3	24.4	2.0	39.5	9.7	12.1
Green Ext Time (p_c), s	0.0	33.6	0.0	6.9	0.1	0.0	0.0	3.9

Intersection Summary	
HCM 6th Ctrl Delay	88.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

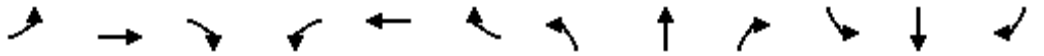
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1926	1680	281	0	462
Future Volume (vph)	1926	1680	281	0	462
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1926	570	0	1680	153	0	0	0	281	0	462
Future Volume (veh/h)	0	1926	570	0	1680	153	0	0	0	281	0	462
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	2049	569	0	1787	161				433	0	243
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2812	733	0	3335	299				676	0	300
Arrive On Green	0.00	0.69	0.69	0.00	0.69	0.69				0.19	0.00	0.19
Sat Flow, veh/h	0	4247	1062	0	5006	434				3619	0	1608
Grp Volume(v), veh/h	0	1718	900	0	1276	672				433	0	243
Grp Sat Flow(s),veh/h/ln	0	1729	1680	0	1729	1811				1810	0	1608
Q Serve(g_s), s	0.0	26.0	30.4	0.0	15.4	15.6				9.4	0.0	12.3
Cycle Q Clear(g_c), s	0.0	26.0	30.4	0.0	15.4	15.6				9.4	0.0	12.3
Prop In Lane	0.00		0.63	0.00		0.24				1.00		1.00
Lane Grp Cap(c), veh/h	0	2385	1159	0	2385	1249				676	0	300
V/C Ratio(X)	0.00	0.72	0.78	0.00	0.54	0.54				0.64	0.00	0.81
Avail Cap(c_a), veh/h	0	2385	1159	0	2385	1249				937	0	416
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	1.00	0.00	0.54	0.54				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	8.1	8.8	0.0	6.5	6.5				31.9	0.0	33.1
Incr Delay (d2), s/veh	0.0	1.9	5.1	0.0	0.5	0.9				1.0	0.0	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.3	8.1	0.0	3.5	3.8				3.9	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.0	14.0	0.0	7.0	7.4				32.9	0.0	41.2
LnGrp LOS	A	B	B	A	A	A				C	A	D
Approach Vol, veh/h		2618			1948						676	
Approach Delay, s/veh		11.4			7.1						35.9	
Approach LOS		B			A						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		64.1		20.9		64.1						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		32.4		14.3		17.6						
Green Ext Time (p_c), s		16.5		1.6		16.9						

Intersection Summary												
HCM 6th Ctrl Delay			13.0									
HCM 6th LOS			B									

Notes

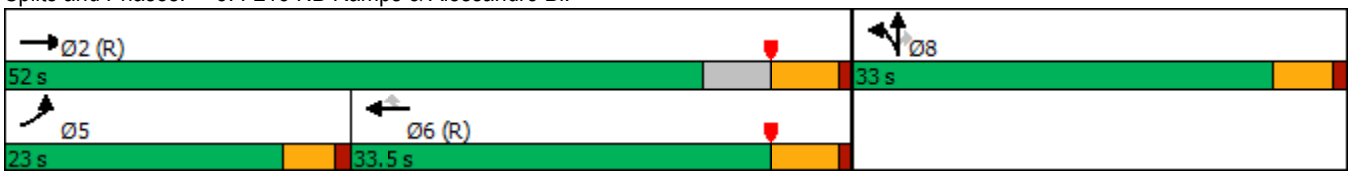
User approved volume balancing among the lanes for turning movement.

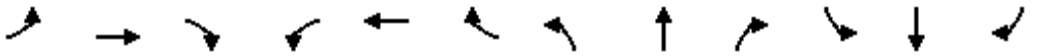
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	315	1830	1211	283	708	12	332
Future Volume (vph)	315	1830	1211	283	708	12	332
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	23.0	52.0	33.5	33.5	33.0	33.0	33.0
Total Split (%)	25.7%	58.1%	37.4%	37.4%	36.9%	36.9%	36.9%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	1830	0	0	1211	283	708	12	332	0	0	0
Future Volume (veh/h)	315	1830	0	0	1211	283	708	12	332	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		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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	335	1947	0	0	1288	185	816	0	128			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	368	2968	0	0	1654	503	1126	0	501			
Arrive On Green	0.20	0.57	0.00	0.00	0.32	0.32	0.31	0.00	0.31			
Sat Flow, veh/h	1810	5358	0	0	5358	1576	3619	0	1610			
Grp Volume(v), veh/h	335	1947	0	0	1288	185	816	0	128			
Grp Sat Flow(s),veh/h/ln	1810	1729	0	0	1729	1576	1810	0	1610			
Q Serve(g_s), s	16.3	23.1	0.0	0.0	20.3	8.2	18.0	0.0	5.4			
Cycle Q Clear(g_c), s	16.3	23.1	0.0	0.0	20.3	8.2	18.0	0.0	5.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	368	2968	0	0	1654	503	1126	0	501			
V/C Ratio(X)	0.91	0.66	0.00	0.00	0.78	0.37	0.72	0.00	0.26			
Avail Cap(c_a), veh/h	372	2968	0	0	1654	503	1126	0	501			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.52	0.52	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.0	13.2	0.0	0.0	27.8	23.7	27.6	0.0	23.2			
Incr Delay (d2), s/veh	15.5	0.6	0.0	0.0	3.7	2.1	4.1	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	8.1	7.1	0.0	0.0	8.0	3.0	7.8	0.0	2.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	13.8	0.0	0.0	31.5	25.7	31.6	0.0	24.4			
LnGrp LOS	D	B	A	A	C	C	C	A	C			
Approach Vol, veh/h		2282			1473			944				
Approach Delay, s/veh		19.2			30.7			30.7				
Approach LOS		B			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		57.0			22.8	34.2		33.0				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		46.5			18.5	28.0		28.0				
Max Q Clear Time (g_c+I1), s		25.1			18.3	22.3		20.0				
Green Ext Time (p_c), s		13.5			0.0	3.8		2.4				

Intersection Summary	
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.3:

OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

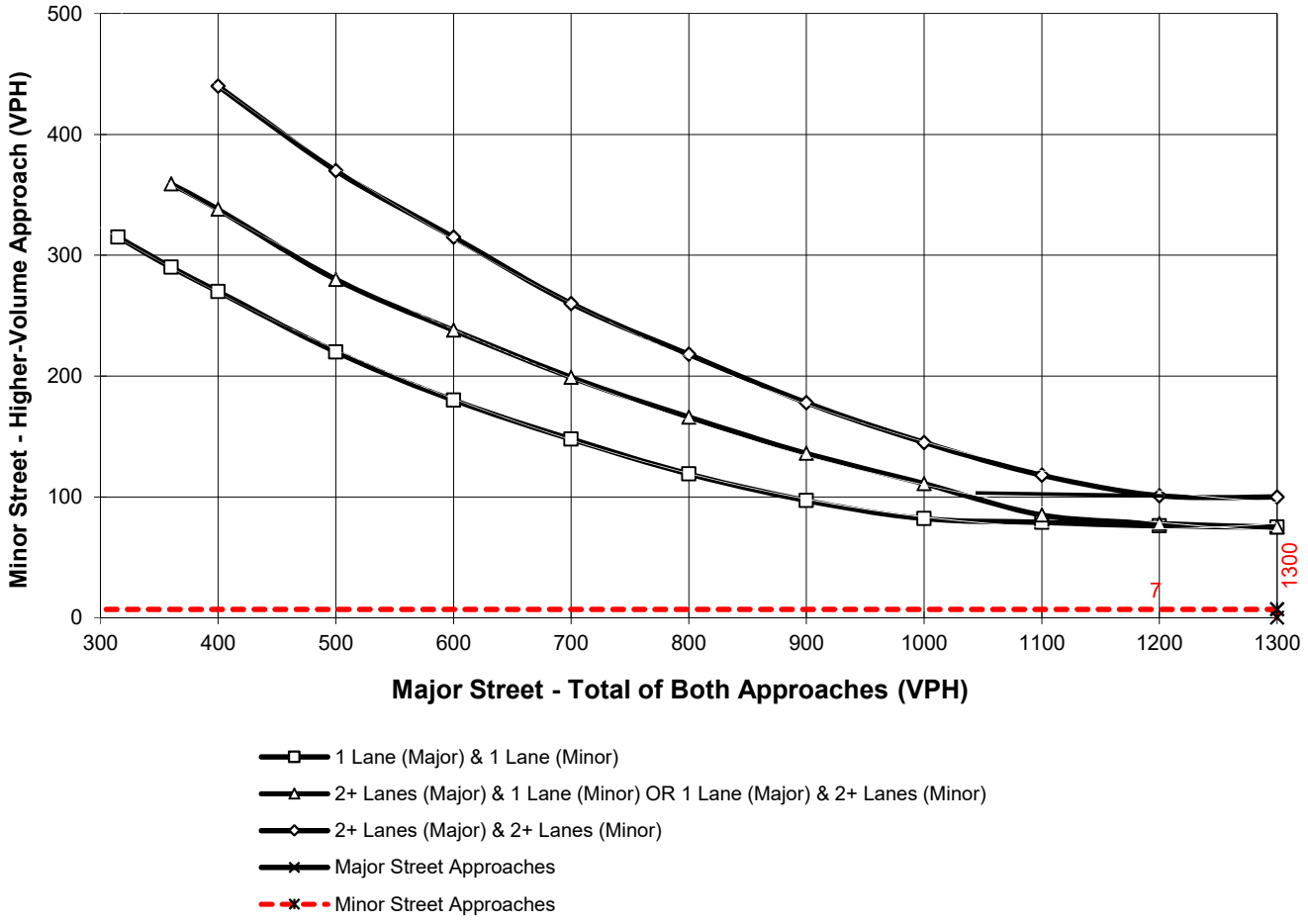
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulatvie (2023) Without Project Conditions - Weekday PM Peak Hou**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **5078**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway** 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)

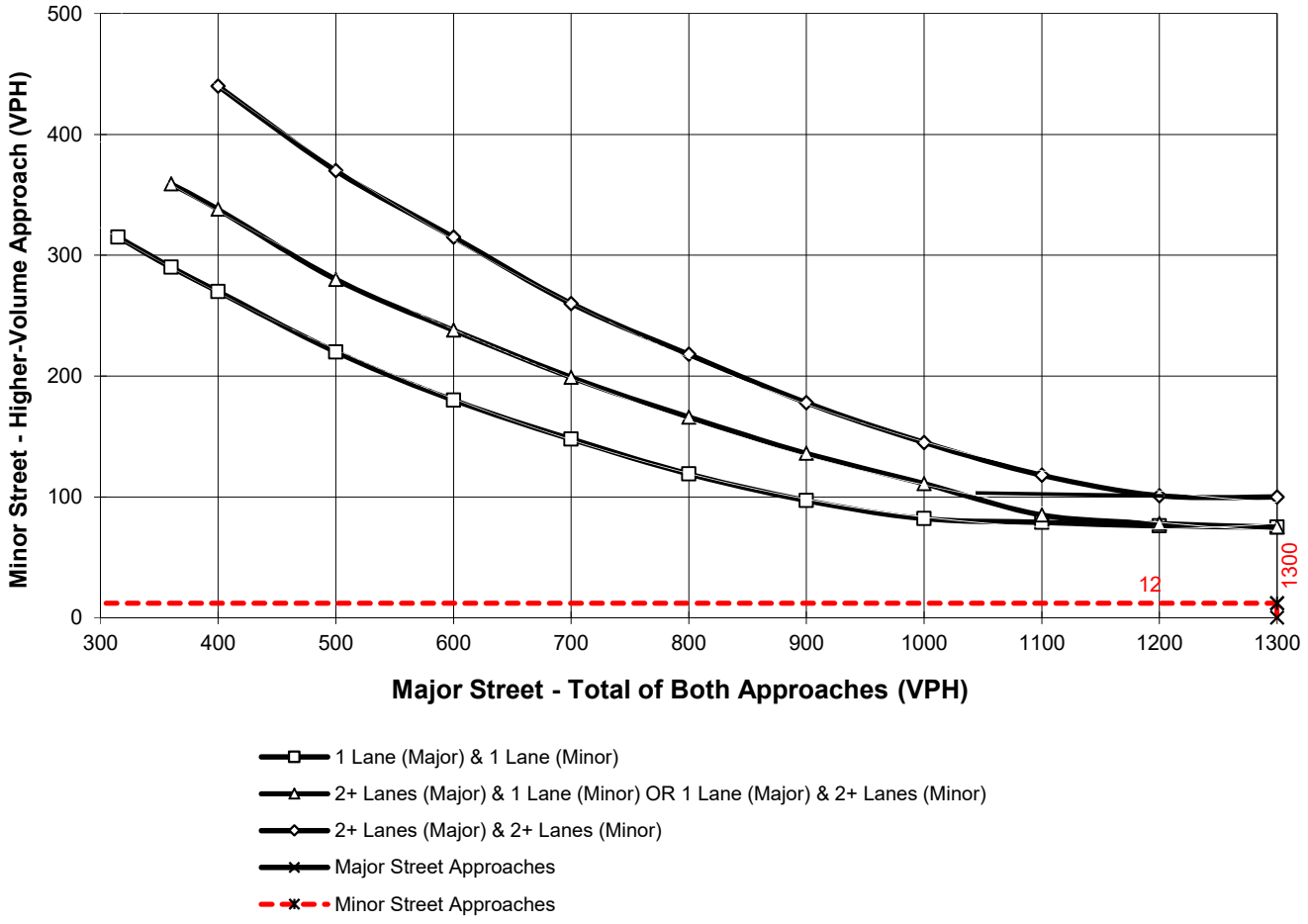
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulatvie (2023) Without Project Conditions - Weekday PM Peak Hou**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **5095**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Vista Grande** High Volume Approach (VPH) = **12**
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

APPENDIX 6.4:

OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS		2023 WP
				CALC RV	DATE	05/23/19
Jurisdiction: **City of Riverside**				CHK RV	DATE	05/23/19
Major Street: **Barton Street**				Critical Approach Speed (Major)		55 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 = **3,672** vpd Minor Street Future ADT = **788** 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 **3,672**	*1* **788**	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 **3,672**	*1* **788**	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 47% B 44%				

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)

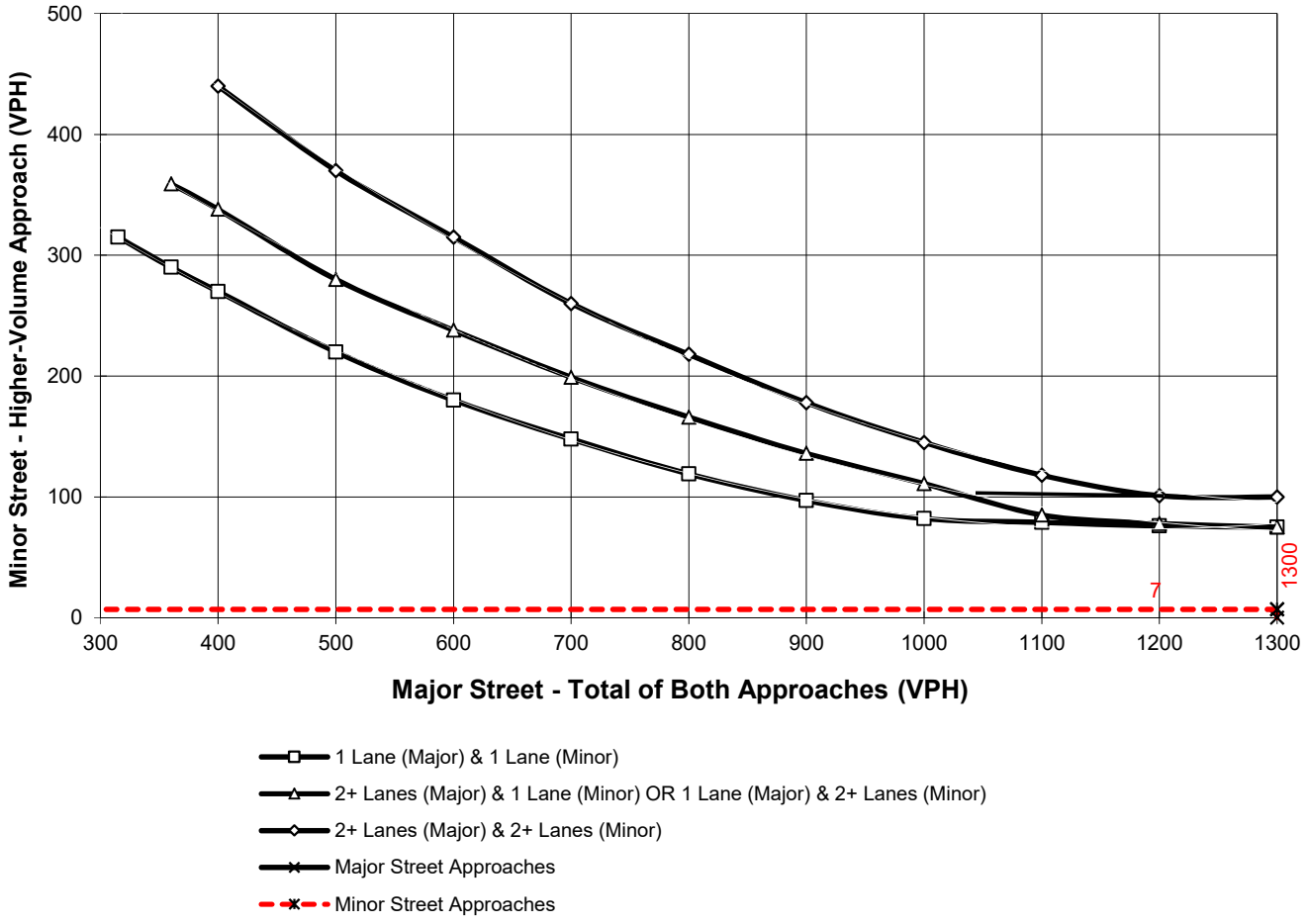
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulatvie (2023) With Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **5091**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway** 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)

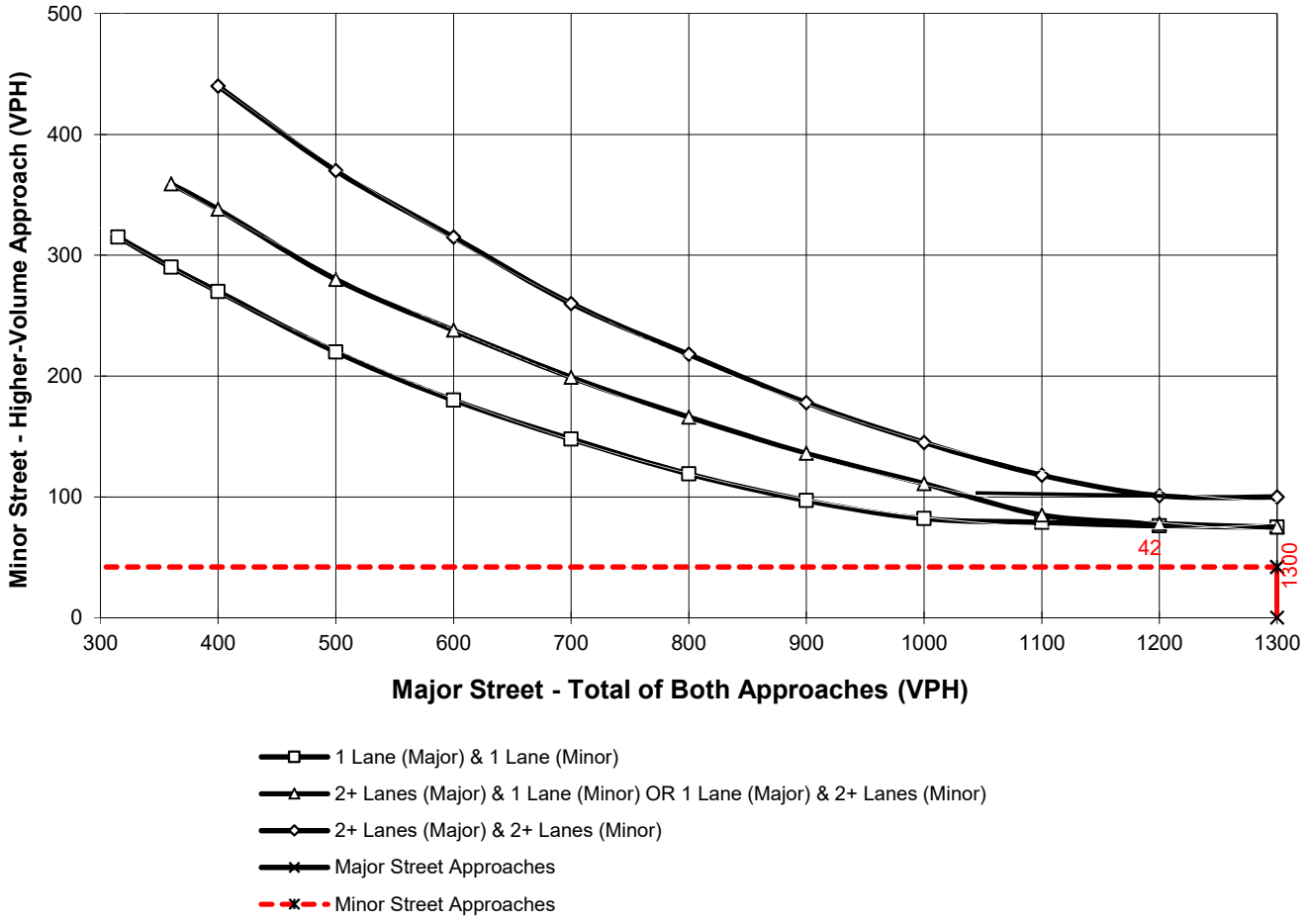
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Opening Year Cumulatvie (2023) With Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **5139**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Vista Grande** High Volume Approach (VPH) = **42**
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

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APPENDIX 6.5:

OPENING YEAR CUMULATIVE (2023) WITHOUT PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1364	3130	264	257	258
v/c Ratio	0.39	0.89	0.81	0.85	0.83
Control Delay	4.8	5.2	53.8	54.4	51.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	5.2	53.8	54.4	51.8
Queue Length 50th (ft)	76	175	141	127	122
Queue Length 95th (ft)	99	m163	#264	#264	#249
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3473	3530	343	320	328
Starvation Cap Reductn	0	2	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.89	0.77	0.80	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	104	1172	1878	195	568	575	225
v/c Ratio	0.90	0.44	0.92	0.26	0.91	0.96	0.36
Control Delay	96.3	14.4	33.3	3.7	46.9	56.1	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	96.3	14.4	33.3	3.7	46.9	56.1	12.3
Queue Length 50th (ft)	54	168	341	0	297	323	46
Queue Length 95th (ft)	#133	201	#447	39	#507	#558	105
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2654	2044	739	625	600	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.44	0.92	0.26	0.91	0.96	0.36

Intersection Summary

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



Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2599	1937	269	255	254
v/c Ratio	0.78	0.57	0.72	0.74	0.72
Control Delay	12.2	9.1	41.9	39.8	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	9.1	41.9	39.8	38.2
Queue Length 50th (ft)	313	191	137	119	113
Queue Length 95th (ft)	411	249	217	204	193
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3339	3377	443	405	415
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	0.78	0.57	0.61	0.63	0.61

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	306	1941	1286	301	394	398	318
v/c Ratio	0.87	0.66	0.77	0.42	0.74	0.77	0.59
Control Delay	59.7	14.6	31.1	4.9	37.1	39.4	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.7	14.6	31.1	4.9	37.1	39.4	23.9
Queue Length 50th (ft)	166	257	241	0	207	218	114
Queue Length 95th (ft)	#301	306	296	56	#325	#372	207
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	373	2955	1680	715	536	515	538
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.66	0.77	0.42	0.74	0.77	0.59

Intersection Summary

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

APPENDIX 6.6:

OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1380	3155	264	270	271
v/c Ratio	0.40	0.90	0.81	0.88	0.86
Control Delay	4.9	5.5	52.9	59.4	56.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	5.5	52.9	59.4	56.1
Queue Length 50th (ft)	78	175	141	136	130
Queue Length 95th (ft)	101	m169	#264	#283	#268
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3462	3521	343	320	328
Starvation Cap Reductn	0	2	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.90	0.77	0.84	0.83

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	112	1173	1882	195	579	585	225
v/c Ratio	0.97	0.44	0.92	0.26	0.93	0.97	0.36
Control Delay	112.2	14.3	33.5	3.7	49.6	59.7	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	112.2	14.3	33.5	3.7	49.6	59.7	12.3
Queue Length 50th (ft)	59	168	342	0	307	330	46
Queue Length 95th (ft)	#152	202	#449	39	#522	#572	105
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2654	2044	739	625	600	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.44	0.92	0.26	0.93	0.97	0.36

Intersection Summary

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



Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2655	1950	269	261	260
v/c Ratio	0.80	0.58	0.72	0.76	0.73
Control Delay	12.7	9.2	41.8	41.0	39.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.7	9.2	41.8	41.0	39.2
Queue Length 50th (ft)	330	194	136	123	116
Queue Length 95th (ft)	431	252	217	210	198
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3338	3376	443	404	415
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	0.80	0.58	0.61	0.65	0.63

Intersection Summary



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	335	1947	1288	301	399	402	318
v/c Ratio	0.92	0.66	0.78	0.43	0.74	0.78	0.59
Control Delay	67.4	14.6	31.9	5.0	37.6	39.9	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	14.6	31.9	5.0	37.6	39.9	23.9
Queue Length 50th (ft)	186	258	242	0	210	221	114
Queue Length 95th (ft)	#340	308	297	56	#333	#380	207
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	373	2955	1648	707	536	515	538
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.66	0.78	0.43	0.74	0.78	0.59

Intersection Summary

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

APPENDIX 6.7:

OPENING YEAR CUMULATIVE (2023) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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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	1603	8	0	2858	0	0	0	6	0	0	0
Future Vol, veh/h	0	1603	8	0	2858	0	0	0	6	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	1742	9	0	3107	0	0	0	7	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	876	-	-	1554
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*553	0	0	*251
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*553	-	-	*251
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.6	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	553	-	-	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-	-	-
HCM Control Delay (s)	11.6	-	-	-	-	0
HCM Lane LOS	B	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

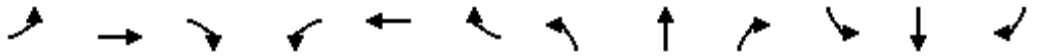
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1598	13	2854	3	0	11	0
Future Volume (vph)	4	1598	13	2854	3	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.6	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	8.0%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.2	5.5	3.2	5.5	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
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1598	8	13	2854	35	3	0	15	11	0	1
Future Volume (veh/h)	4	1598	8	13	2854	35	3	0	15	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1737	9	14	3102	38	3	0	16	12	0	1
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	111	4273	22	28	3895	48	41	7	74	142	0	88
Arrive On Green	0.12	1.00	1.00	0.02	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5325	28	1810	5282	64	122	133	1361	1419	0	1610
Grp Volume(v), veh/h	4	1128	618	14	2027	1113	19	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1888	1616	0	0	1419	0	1610
Q Serve(g_s), s	0.2	0.0	0.0	0.9	44.6	45.3	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.9	44.6	45.3	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.16		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	111	2774	1520	28	2550	1393	123	0	0	142	0	88
V/C Ratio(X)	0.04	0.41	0.41	0.50	0.79	0.80	0.15	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	111	2774	1520	78	2550	1393	179	0	0	192	0	145
HCM Platoon Ratio	2.00	2.00	2.00	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	0.28	0.28	0.28	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.5	0.0	0.0	58.6	10.0	10.1	54.2	0.0	0.0	54.0	0.0	53.7
Incr Delay (d2), s/veh	0.0	0.4	0.8	1.4	0.8	1.4	0.6	0.0	0.0	0.3	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	0.2	0.3	0.4	11.9	13.4	0.6	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	0.4	0.8	60.0	10.7	11.5	54.8	0.0	0.0	54.2	0.0	53.7
LnGrp LOS	D	A	A	E	B	B	D	A	A	D	A	D
Approach Vol, veh/h		1750			3154			19			13	
Approach Delay, s/veh		0.7			11.2			54.8			54.2	
Approach LOS		A			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.2	6.1	102.8		11.2	13.8	95.0				
Change Period (Y+Rc), s		4.6	* 4.2	6.5		4.6	6.5	* 6.5				
Max Green Setting (Gmax), s		10.8	* 5.2	88.7		10.8	5.4	* 89				
Max Q Clear Time (g_c+I1), s		3.3	2.9	2.0		2.8	2.2	47.3				
Green Ext Time (p_c), s		0.0	0.0	16.9		0.0	0.0	34.7				

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	2688	4	0	2424	0	0	0	8	0	0	0
Future Vol, veh/h	0	2688	4	0	2424	0	0	0	8	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	2922	4	0	2635	0	0	0	9	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1463	-	-	1318
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*294	0	0	*359
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*294	-	-	*359
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.6	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	294	-	-	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-	-	-
HCM Control Delay (s)	17.6	-	-	-	-	0
HCM Lane LOS	C	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	-

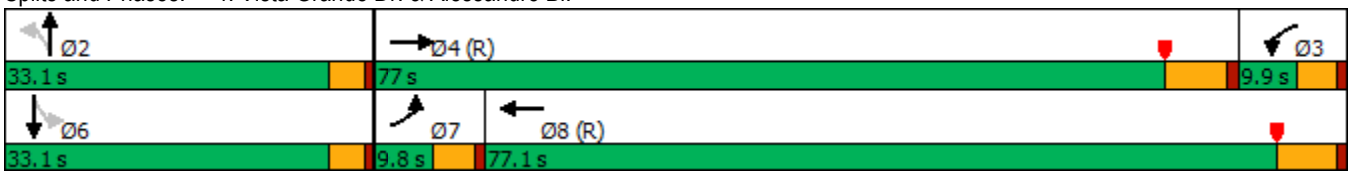
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

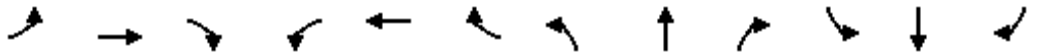
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2683	25	2412	2	0	37	0
Future Volume (vph)	2	2683	25	2412	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.8	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	8.2%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	4.6	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Future Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2916	14	27	2622	17	2	0	11	40	0	5
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	5	3130	15	336	4182	27	42	13	114	182	0	134
Arrive On Green	0.01	1.00	1.00	0.19	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5328	26	1810	5317	34	92	158	1373	1426	0	1610
Grp Volume(v), veh/h	2	1891	1039	27	1704	935	13	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1894	1623	0	0	1426	0	1610
Q Serve(g_s), s	0.1	0.0	0.0	1.5	24.9	25.0	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.5	24.9	25.0	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.15		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	5	2032	1114	336	2720	1489	170	0	0	182	0	134
V/C Ratio(X)	0.41	0.93	0.93	0.08	0.63	0.63	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	78	2032	1114	336	2720	1489	419	0	0	406	0	388
HCM Platoon Ratio	2.00	2.00	2.00	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	0.53	0.53	0.53	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.6	0.0	0.0	40.4	5.4	5.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	19.3	9.2	15.0	0.0	0.6	1.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.6	4.6	0.6	5.5	6.2	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	9.2	15.0	40.4	6.0	6.5	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	E	A	B	D	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2932			2666			13			45	
Approach Delay, s/veh		11.3			6.5			51.0			52.1	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.2	28.8	77.0		14.2	4.9	100.9				
Change Period (Y+Rc), s		* 4.2	6.5	* 6.5		* 4.2	4.6	6.5				
Max Green Setting (Gmax), s		* 29	5.3	* 71		* 29	5.2	70.6				
Max Q Clear Time (g_c+I1), s		2.9	3.5	2.0		4.9	2.1	27.0				
Green Ext Time (p_c), s		0.0	0.0	46.9		0.1	0.0	29.6				

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 7.1:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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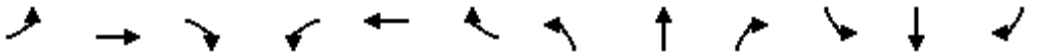
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	4	1809	47	3377	6	76	0	69	7	0	4
Future Volume (vph)	4	1809	47	3377	6	76	0	69	7	0	4
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	23.5	31.6	31.6	31.6	14.6	14.6	14.6
Total Split (s)	11.0	70.0	11.0	70.0	70.0	39.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	9.2%	58.3%	9.2%	58.3%	58.3%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		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	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1809	18	47	3377	6	76	0	69	7	0	4
Future Volume (veh/h)	4	1809	18	47	3377	6	76	0	69	7	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	1945	19	51	3631	6	82	0	43	8	0	1
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	9	3098	30	66	3311	935	61	0	455	61	0	461
Arrive On Green	0.01	0.55	0.55	0.05	0.77	0.77	0.29	0.00	0.29	0.29	0.00	0.29
Sat Flow, veh/h	1810	5635	55	1810	5700	1610	5	0	1590	4	0	1610
Grp Volume(v), veh/h	4	1311	653	51	3631	6	82	0	43	8	0	1
Grp Sat Flow(s),veh/h/ln	1810	1900	1890	1810	1900	1610	5	0	1590	4	0	1610
Q Serve(g_s), s	0.3	28.5	28.5	3.3	69.7	0.1	0.1	0.0	2.4	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.3	28.5	28.5	3.3	69.7	0.1	34.4	0.0	2.4	34.4	0.0	0.1
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	9	2089	1039	66	3311	935	61	0	455	61	0	461
V/C Ratio(X)	0.43	0.63	0.63	0.77	1.10	0.01	1.33	0.00	0.09	0.13	0.00	0.00
Avail Cap(c_a), veh/h	103	2089	1039	103	3311	935	62	0	456	62	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.5	18.6	18.6	56.6	13.6	5.7	60.0	0.0	31.4	60.0	0.0	30.6
Incr Delay (d2), s/veh	10.9	1.4	2.9	4.1	46.7	0.0	227.9	0.0	0.1	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.5	11.8	1.5	25.2	0.0	5.8	0.0	0.9	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.4	20.0	21.5	60.7	60.4	5.7	287.9	0.0	31.5	60.9	0.0	30.6
LnGrp LOS	E	C	C	E	F	A	F	A	C	E	A	C
Approach Vol, veh/h		1968			3688			125			9	
Approach Delay, s/veh		20.6			60.3			199.7			57.6	
Approach LOS		C			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	72.4		39.0	4.8	76.2		39.0				
Change Period (Y+Rc), s	* 4.2	6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	* 6.8	63.5		34.4	* 6.8	63.5		34.4				
Max Q Clear Time (g_c+I1), s	5.3	30.5		36.4	2.3	71.7		36.4				
Green Ext Time (p_c), s	0.0	22.4		0.0	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		49.8	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

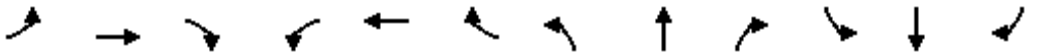
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	6	1873	2	3430	4	0	
Future Volume (vph)	6	1873	2	3430	4	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1873	6	2	3430	0	4	0	4	0	0	0
Future Volume (veh/h)	6	1873	6	2	3430	0	4	0	4	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	7	2036	7	2	3728	0	4	0	1	0	0	0
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	16	3936	14	186	4414	0	69	0	4	0	24	0
Arrive On Green	0.02	1.00	1.00	0.10	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Sat Flow, veh/h	1810	5336	18	1810	5358	0	1177	0	294	0	1900	0
Grp Volume(v), veh/h	7	1319	724	2	3728	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1897	1810	1729	0	1471	0	0	0	1900	0
Q Serve(g_s), s	0.5	0.0	0.0	0.1	45.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.1	45.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.80		0.20	0.00		0.00
Lane Grp Cap(c), veh/h	16	2550	1399	186	4414	0	73	0	0	0	24	0
V/C Ratio(X)	0.45	0.52	0.52	0.01	0.84	0.00	0.07	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	186	4414	0	181	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	0.0	0.0	48.3	4.7	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.7	1.2	0.0	2.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.5	0.1	5.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	0.7	1.2	48.3	6.9	0.0	59.1	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2050			3730			5			0	
Approach Delay, s/veh		1.1			6.9			59.1			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	6.1	18.9	95.0	6.1	5.2	108.6
Change Period (Y+Rc), s	4.6	6.5	* 6.5	4.6	* 4.2	6.5
Max Green Setting (Gmax), s	10.4	5.8	* 89	10.4	* 5.8	88.5
Max Q Clear Time (g_c+I1), s	2.4	2.1	2.0	0.0	2.5	47.7
Green Ext Time (p_c), s	0.0	0.0	40.7	0.0	0.0	40.5

Intersection Summary	
HCM 6th Ctrl Delay	4.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1877	8	14	3432	4	17
Future Vol, veh/h	1877	8	14	3432	4	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	155	-	0	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	2040	9	15	3730	4	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	2049	0	3567	1025
Stage 1	-	-	-	-	2045	-
Stage 2	-	-	-	-	1522	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	121	-	13	202
Stage 1	-	-	-	-	54	-
Stage 2	-	-	-	-	151	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	121	-	11	202
Mov Cap-2 Maneuver	-	-	-	-	11	-
Stage 1	-	-	-	-	54	-
Stage 2	-	-	-	-	132	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	110
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	11	202	-	-	121	-
HCM Lane V/C Ratio	0.395	0.091	-	-	0.126	-
HCM Control Delay (s)	$ 473.2	24.6	-	-	39	-
HCM Lane LOS	F	C	-	-	E	-
HCM 95th %tile Q(veh)	0.9	0.3	-	-	0.4	-

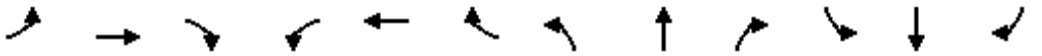
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	13	1869	175	3760	46	13	68	25	16
Future Volume (vph)	13	1869	175	3760	46	13	68	25	16
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	69.6	14.0	74.0	74.0	9.6	26.8	9.6	26.8
Total Split (%)	8.0%	58.0%	11.7%	61.7%	61.7%	8.0%	22.3%	8.0%	22.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77.1 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1869	35	175	3760	46	13	0	68	25	0	16
Future Volume (veh/h)	13	1869	35	175	3760	46	13	0	68	25	0	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	14	2032	38	190	4087	47	14	0	74	27	0	0
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	28	3359	63	142	3650	1132	28	153	130	56	183	
Arrive On Green	0.02	0.64	0.64	0.10	0.94	0.94	0.02	0.00	0.08	0.03	0.00	0.00
Sat Flow, veh/h	1810	5242	98	1810	5187	1609	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	14	1340	730	190	4087	47	14	0	74	27	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1882	1810	1729	1609	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	0.9	27.3	27.3	9.4	84.4	0.2	0.9	0.0	5.3	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	27.3	27.3	9.4	84.4	0.2	0.9	0.0	5.3	1.8	0.0	0.0
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	28	2216	1206	142	3650	1132	28	153	130	56	183	
V/C Ratio(X)	0.50	0.60	0.61	1.34	1.12	0.04	0.50	0.00	0.57	0.48	0.00	
Avail Cap(c_a), veh/h	75	2216	1206	142	3650	1132	75	352	298	75	352	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.6	12.6	12.7	53.7	3.9	1.1	58.6	0.0	53.2	57.2	0.0	0.0
Incr Delay (d2), s/veh	5.0	1.2	2.3	157.6	54.4	0.0	13.0	0.0	3.9	6.2	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	0.4	9.1	10.3	10.2	20.2	0.1	0.5	0.0	0.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	13.9	14.9	211.3	58.2	1.2	71.6	0.0	57.0	63.4	0.0	0.0
LnGrp LOS	E	B	B	F	F	A	E	A	E	E	A	
Approach Vol, veh/h		2084			4324			88			27	A
Approach Delay, s/veh		14.6			64.3			59.4			63.4	
Approach LOS		B			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	83.4	6.5	16.1	6.5	90.9	8.3	14.3
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	9.4	63.1	5.0	22.2	5.0	67.5	5.0	22.2
Max Q Clear Time (g_c+I1), s	11.4	29.3	2.9	0.0	2.9	86.4	3.8	7.3
Green Ext Time (p_c), s	0.0	24.2	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

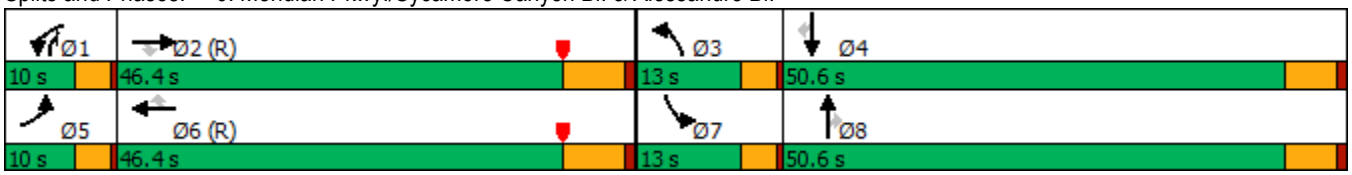
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

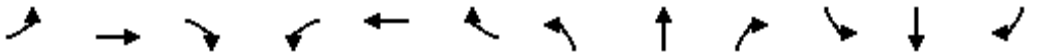
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	1709	367	315	2984	607	672	859	111	174	175	258
Future Volume (vph)	256	1709	367	315	2984	607	672	859	111	174	175	258
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	10.0	46.4	46.4	10.0	46.4	46.4	13.0	50.6	10.0	13.0	50.6	50.6
Total Split (%)	8.3%	38.7%	38.7%	8.3%	38.7%	38.7%	10.8%	42.2%	8.3%	10.8%	42.2%	42.2%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	1709	367	315	2984	607	672	859	111	174	175	258
Future Volume (veh/h)	256	1709	367	315	2984	607	672	859	111	174	175	258
Initial Q (Qb), veh	0	0	0	0	0	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	269	1799	386	332	3141	639	707	904	117	183	184	272
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	95	2171	674	184	2171	673	272	1071	990	239	1037	463
Arrive On Green	0.02	0.14	0.14	0.05	0.42	0.42	0.08	0.30	0.30	0.07	0.29	0.29
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	269	1799	386	332	3141	639	707	904	117	183	184	272
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	6.3	40.5	26.9	6.3	50.2	46.0	9.3	28.2	3.4	6.2	4.6	17.4
Cycle Q Clear(g_c), s	6.3	40.5	26.9	6.3	50.2	46.0	9.3	28.2	3.4	6.2	4.6	17.4
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	95	2171	674	184	2171	673	272	1071	990	239	1037	463
V/C Ratio(X)	2.83	0.83	0.57	1.80	1.45	0.95	2.60	0.84	0.12	0.77	0.18	0.59
Avail Cap(c_a), veh/h	95	2171	674	184	2171	673	272	1348	1207	272	1348	601
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	47.5	41.7	56.8	34.9	33.7	55.3	39.6	26.5	55.0	32.1	36.7
Incr Delay (d2), s/veh	843.1	2.6	2.3	381.4	203.8	24.2	730.0	4.1	0.1	9.0	0.1	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	25.2	19.2	12.0	12.5	60.6	21.3	31.6	12.6	1.1	3.0	2.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	902.1	50.1	44.0	438.2	238.7	57.9	785.4	43.7	26.6	64.0	32.2	37.9
LnGrp LOS	F	D	D	F	F	E	F	D	C	E	C	D
Approach Vol, veh/h		2454			4112			1728			639	
Approach Delay, s/veh		142.5			226.7			346.0			43.7	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	56.7	13.0	40.3	10.0	56.7	11.9	41.4
Change Period (Y+Rc), s	3.7	6.5	3.7	5.8	3.7	6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	39.9	9.3	44.8	6.3	39.9	9.3	44.8
Max Q Clear Time (g_c+I1), s	8.3	42.5	11.3	19.4	8.3	52.2	8.2	30.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	213.6
HCM 6th LOS	F

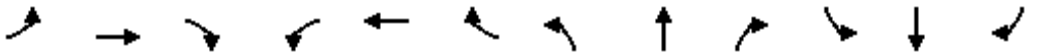
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1513	3319	350	0	587
Future Volume (vph)	1513	3319	350	0	587
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1513	481	0	3319	270	0	0	0	350	0	587
Future Volume (veh/h)	0	1513	481	0	3319	270	0	0	0	350	0	587
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	1560	467	0	3422	278				241	0	690
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	2675	787	0	3310	261				362	0	643
Arrive On Green	0.00	0.68	0.68	0.00	1.00	1.00				0.20	0.00	0.20
Sat Flow, veh/h	0	4125	1164	0	5064	386				1810	0	3216
Grp Volume(v), veh/h	0	1361	666	0	2388	1312				241	0	690
Grp Sat Flow(s),veh/h/ln	0	1729	1660	0	1729	1820				1810	0	1608
Q Serve(g_s), s	0.0	17.8	18.4	0.0	0.0	56.4				10.4	0.0	17.0
Cycle Q Clear(g_c), s	0.0	17.8	18.4	0.0	0.0	56.4				10.4	0.0	17.0
Prop In Lane	0.00		0.70	0.00		0.21				1.00		1.00
Lane Grp Cap(c), veh/h	0	2339	1123	0	2339	1231				362	0	643
V/C Ratio(X)	0.00	0.58	0.59	0.00	1.02	1.07				0.67	0.00	1.07
Avail Cap(c_a), veh/h	0	2339	1123	0	2339	1231				362	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.09	0.09				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.3	7.4	0.0	0.0	0.0				31.4	0.0	34.0
Incr Delay (d2), s/veh	0.0	1.1	2.3	0.0	12.0	31.5				4.6	0.0	56.7
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	4.4	4.8	0.0	3.9	10.8				4.7	0.0	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.4	9.7	0.0	12.0	31.5				36.0	0.0	90.7
LnGrp LOS	A	A	A	A	F	F				D	A	F
Approach Vol, veh/h		2027			3700						931	
Approach Delay, s/veh		8.8			18.9						76.5	
Approach LOS		A			B						E	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		63.0		22.0		63.0						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		20.4		19.0		58.4						
Green Ext Time (p_c), s		18.9		0.0		0.0						

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

Notes

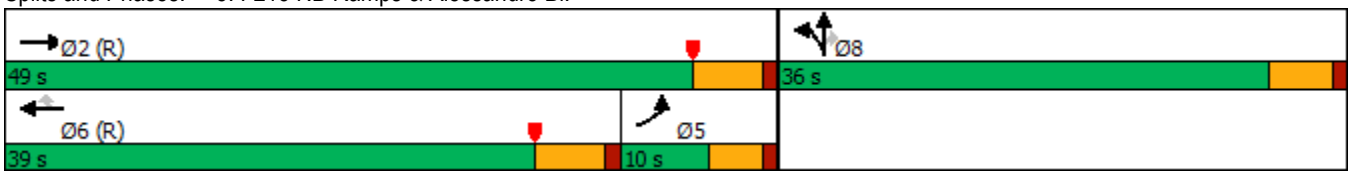
User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	91	1736	2487	211	1165	35	274
Future Volume (vph)	91	1736	2487	211	1165	35	274
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1736	67	0	2487	211	1165	35	274	0	0	0
Future Volume (veh/h)	91	1736	67	0	2487	211	1165	35	274	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	93	1771	68	0	2538	195	1272	0	158			
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	330	3283	126	0	2044	620	1320	0	587			
Arrive On Green	0.36	1.00	1.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5121	196	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	93	1195	644	0	2538	195	1272	0	158			
Grp Sat Flow(s),veh/h/ln	1810	1729	1859	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	3.1	0.0	0.0	0.0	33.5	7.3	29.3	0.0	5.9			
Cycle Q Clear(g_c), s	3.1	0.0	0.0	0.0	33.5	7.3	29.3	0.0	5.9			
Prop In Lane	1.00		0.11	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	330	2217	1192	0	2044	620	1320	0	587			
V/C Ratio(X)	0.28	0.54	0.54	0.00	1.24	0.31	0.96	0.00	0.27			
Avail Cap(c_a), veh/h	330	2217	1192	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.72	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.1	0.0	0.0	0.0	25.8	17.8	26.4	0.0	19.0			
Incr Delay (d2), s/veh	0.2	0.7	1.3	0.0	113.0	1.3	17.5	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	1.2	0.2	0.4	0.0	33.0	2.5	14.4	0.0	2.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.7	1.3	0.0	138.8	19.1	43.9	0.0	20.1			
LnGrp LOS	C	A	A	A	F	B	D	A	C			
Approach Vol, veh/h		1932			2733			1430				
Approach Delay, s/veh		2.0			130.2			41.3				
Approach LOS		A			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		60.0			21.0	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			5.1	35.5		31.3				
Green Ext Time (p_c), s		16.4			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	68.7
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

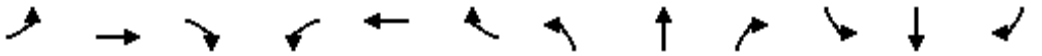
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	12	3282	72	2775	19	59	0	58	10	0	9
Future Volume (vph)	12	3282	72	2775	19	59	0	58	10	0	9
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	30.6	30.6	30.6	26.6	26.6	26.6
Total Split (s)	9.2	75.0	10.0	75.8	75.8	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	7.7%	62.5%	8.3%	63.2%	63.2%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		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	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	3282	41	72	2775	19	59	0	58	10	0	9
Future Volume (veh/h)	12	3282	41	72	2775	19	59	0	58	10	0	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	13	3455	41	76	2921	20	62	0	39	11	0	-4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	27	3209	38	87	3446	973	0	0	406	411	0	408
Arrive On Green	0.01	0.57	0.57	0.05	0.60	0.60	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1810	5622	66	1810	5700	1610	0	0	1604	1385	0	1610
Grp Volume(v), veh/h	13	2331	1165	76	2921	20	62	0	39	11	0	-4
Grp Sat Flow(s),veh/h/ln	1810	1900	1888	1810	1900	1610	0	0	1604	1385	0	1610
Q Serve(g_s), s	0.9	68.5	68.5	5.0	49.9	0.6	0.0	0.0	2.2	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.9	68.5	68.5	5.0	49.9	0.6	0.0	0.0	2.2	0.7	0.0	0.0
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	27	2169	1078	87	3446	973	0	0	406	411	0	408
V/C Ratio(X)	0.49	1.07	1.08	0.87	0.85	0.02	0.00	0.00	0.10	0.03	0.00	-0.01
Avail Cap(c_a), veh/h	75	2169	1078	87	3446	973	0	0	406	411	0	408
HCM Platoon Ratio	1.00	1.00	1.00	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	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	25.7	25.7	56.7	19.2	9.5	0.0	0.0	34.3	33.7	0.0	0.0
Incr Delay (d2), s/veh	5.1	42.9	52.1	43.5	2.1	0.0	0.0	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	38.9	41.4	3.3	19.0	0.2	1.4	0.0	0.9	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.8	68.6	77.9	100.2	21.3	9.5	0.0	0.0	34.8	33.8	0.0	0.0
LnGrp LOS	E	F	F	F	C	A	A	A	C	C	A	A
Approach Vol, veh/h		3509			3017			101			7	
Approach Delay, s/veh		71.7			23.2			0.0			53.2	
Approach LOS		E			C			A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	75.0		35.0	6.0	79.0		35.0				
Change Period (Y+Rc), s	* 4.2	6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	* 5.8	68.5		30.4	* 5	69.3		30.4				
Max Q Clear Time (g_c+I1), s	7.0	70.5		2.7	2.9	51.9		4.2				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	16.8		0.4				

Intersection Summary		
HCM 6th Ctrl Delay		48.5
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

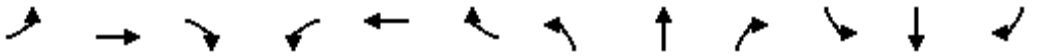
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	4	3345	4	2866	6	0	
Future Volume (vph)	4	3345	4	2866	6	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3345	1	4	2866	0	6	0	2	0	0	0
Future Volume (veh/h)	4	3345	1	4	2866	0	6	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	4	3636	1	4	3115	0	7	0	0	0	0	0
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	213	3950	1	213	3825	0	85	0	0	0	33	0
Arrive On Green	0.12	0.74	0.74	0.12	0.74	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5356	1	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	4	2347	1290	4	3115	0	7	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	66.6	66.6	0.2	47.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	66.6	66.6	0.2	47.4	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	213	2550	1401	213	3825	0	85	0	0	0	33	0
V/C Ratio(X)	0.02	0.92	0.92	0.02	0.81	0.00	0.08	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	213	2550	1401	213	3825	0	185	0	0	0	165	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)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	46.8	12.9	12.9	46.8	10.3	0.0	58.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	1.3	0.0	2.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	17.6	19.5	0.1	13.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	13.6	14.2	46.8	12.4	0.0	58.6	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	E	A	A	A	A	A
Approach Vol, veh/h		3641			3119			7			0	
Approach Delay, s/veh		13.8			12.4			58.6			0.0	
Approach LOS		B			B			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.7	18.3	95.0		6.7	18.3	95.0				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	5.8	* 89				
Max Q Clear Time (g_c+I1), s		2.6	2.2	68.6		0.0	2.2	49.4				
Green Ext Time (p_c), s		0.0	0.0	19.7		0.0	0.0	37.4				

Intersection Summary	
HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	3347	14	27	2870	2	11
Future Vol, veh/h	3347	14	27	2870	2	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	-	-	155	-	0	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	3638	15	29	3120	2	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3653	0	4952	1827
Stage 1	-	-	-	-	3646	-
Stage 2	-	-	-	-	1306	-
Critical Hdwy	-	-	5.3	-	5.7	7.1
Critical Hdwy Stg 1	-	-	-	-	6.6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	3.1	-	3.8	3.9
Pot Cap-1 Maneuver	-	-	~ 18	-	~ 2	58
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	198	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	~ 18	-	0	58
Mov Cap-2 Maneuver	-	-	-	-	0	-
Stage 1	-	-	-	-	5	-
Stage 2	-	-	-	-	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0	7	
HCM LOS			-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	58	-	-	~ 18	-
HCM Lane V/C Ratio	-	0.206	-	-	1.63	-
HCM Control Delay (s)	-	82.5	-	-	$ 755.3	-
HCM Lane LOS	-	F	-	-	F	-
HCM 95th %tile Q(veh)	-	0.7	-	-	4.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

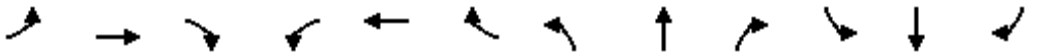
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	18	3683	101	2859	25	36	186	34	21
Future Volume (vph)	18	3683	101	2859	25	36	186	34	21
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	72.2	11.0	73.6	73.6	10.0	27.2	9.6	26.8
Total Split (%)	8.0%	60.2%	9.2%	61.3%	61.3%	8.3%	22.7%	8.0%	22.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 76.7 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	3683	20	101	2859	25	36	0	186	34	0	21
Future Volume (veh/h)	18	3683	20	101	2859	25	36	0	186	34	0	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	4047	11	110	3142	26	39	0	126	37	0	0
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	3659	10	97	3859	1066	55	181	153	69	196	
Arrive On Green	0.02	0.64	0.64	0.05	0.68	0.68	0.03	0.00	0.10	0.04	0.00	0.00
Sat Flow, veh/h	1810	5682	15	1810	5700	1575	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	20	2705	1353	110	3142	26	39	0	126	37	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1897	1810	1900	1575	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	1.3	77.3	77.3	6.4	47.6	0.7	2.6	0.0	9.2	2.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	77.3	77.3	6.4	47.6	0.7	2.6	0.0	9.2	2.4	0.0	0.0
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	37	2447	1222	97	3859	1066	55	181	153	69	196	
V/C Ratio(X)	0.55	1.11	1.11	1.14	0.81	0.02	0.71	0.00	0.82	0.53	0.00	
Avail Cap(c_a), veh/h	75	2447	1222	97	3859	1066	81	358	303	75	352	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.2	21.4	21.4	56.8	13.9	6.4	57.7	0.0	53.3	56.6	0.0	0.0
Incr Delay (d2), s/veh	4.6	54.3	60.4	74.5	0.1	0.0	15.6	0.0	10.4	6.2	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	0.6	45.5	47.5	4.8	15.8	0.2	1.4	0.0	4.2	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	75.6	81.8	131.3	14.1	6.4	73.2	0.0	63.7	62.9	0.0	0.0
LnGrp LOS	E	F	F	F	B	A	E	A	E	E	A	
Approach Vol, veh/h		4078			3278			165			37	A
Approach Delay, s/veh		77.6			18.0			65.9			62.9	
Approach LOS		E			B			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	83.8	8.2	17.0	7.0	87.7	9.2	16.0
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	6.4	65.7	5.4	22.2	5.0	67.1	5.0	22.6
Max Q Clear Time (g_c+I1), s	8.4	79.3	4.6	0.0	3.3	49.6	4.4	11.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Notes

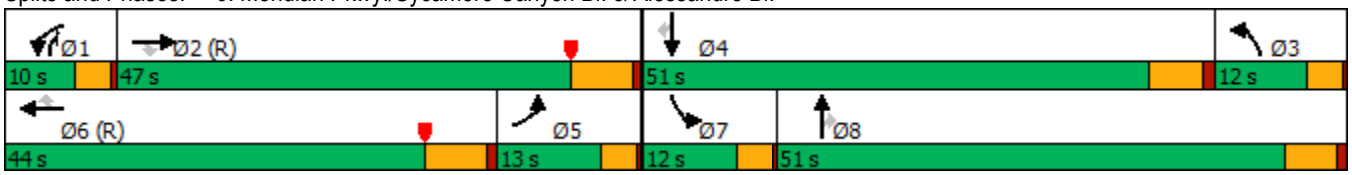
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

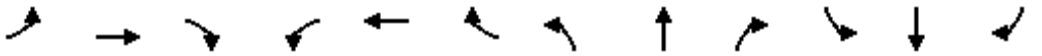
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	2688	716	273	2352	232	536	416	295	245	855	494
Future Volume (vph)	332	2688	716	273	2352	232	536	416	295	245	855	494
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	13.0	47.0	47.0	10.0	44.0	44.0	12.0	51.0	10.0	12.0	51.0	51.0
Total Split (%)	10.8%	39.2%	39.2%	8.3%	36.7%	36.7%	10.0%	42.5%	8.3%	10.0%	42.5%	42.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	2688	716	273	2352	232	536	416	295	245	855	494
Future Volume (veh/h)	332	2688	716	273	2352	232	536	416	295	245	855	494
Initial Q (Qb), veh	0	0	0	0	0	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	369	2987	796	303	2613	258	596	462	328	272	950	549
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	2144	7615	2364	184	1621	503	243	1423	1266	243	1360	606
Arrive On Green	0.39	0.48	0.48	0.05	0.31	0.31	0.07	0.39	0.39	0.07	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	369	2987	796	303	2613	258	596	462	328	272	950	549
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.3	37.5	37.5	8.3	10.7	8.7	8.3	26.7	38.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	37.5	37.5	8.3	10.7	8.7	8.3	26.7	38.7
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	2144	7615	2364	184	1621	503	243	1423	1266	243	1360	606
V/C Ratio(X)	0.17	0.39	0.34	1.64	1.61	0.51	2.45	0.32	0.26	1.12	0.70	0.91
Avail Cap(c_a), veh/h	2144	7615	2364	184	1621	503	243	1423	1266	243	1360	606
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.8	41.2	215.7	55.8	25.3	20.8	55.9	31.6	35.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	312.9	278.3	3.7	666.9	0.6	0.5	93.9	3.0	19.5
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	0.0	0.0	0.0	10.7	57.0	17.1	26.1	4.5	2.8	6.7	11.7	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	369.8	319.6	219.4	722.7	25.9	21.3	149.7	34.6	54.8
LnGrp LOS	A	A	A	F	F	F	F	C	C	F	C	D
Approach Vol, veh/h		4152			3174			1386			1771	
Approach Delay, s/veh		0.0			316.2			324.4			58.6	
Approach LOS		A			F			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	184.8	14.1	51.0	150.8	44.0	12.0	53.1
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	40.5	8.3	* 45	9.3	* 38	8.3	45.2
Max Q Clear Time (g_c+I1), s	8.3	2.0	10.3	40.7	2.0	39.5	10.3	12.7
Green Ext Time (p_c), s	0.0	37.7	0.0	3.0	0.3	0.0	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	148.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

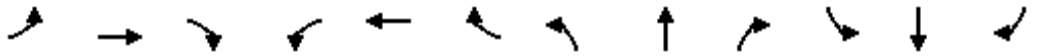
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	2582	2318	333	0	537
Future Volume (vph)	2582	2318	333	0	537
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2582	647	0	2318	183	0	0	0	333	0	537
Future Volume (veh/h)	0	2582	647	0	2318	183	0	0	0	333	0	537
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	2747	651	0	2466	193				517	0	292
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2806	611	0	3243	249				779	0	346
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66				0.22	0.00	0.22
Sat Flow, veh/h	0	4415	923	0	5075	376				3619	0	1608
Grp Volume(v), veh/h	0	2193	1205	0	1724	935				517	0	292
Grp Sat Flow(s),veh/h/ln	0	1729	1709	0	1729	1823				1810	0	1608
Q Serve(g_s), s	0.0	49.9	56.2	0.0	28.6	30.3				11.1	0.0	14.8
Cycle Q Clear(g_c), s	0.0	49.9	56.2	0.0	28.6	30.3				11.1	0.0	14.8
Prop In Lane	0.00		0.54	0.00		0.21				1.00		1.00
Lane Grp Cap(c), veh/h	0	2286	1130	0	2286	1205				779	0	346
V/C Ratio(X)	0.00	0.96	1.07	0.00	0.75	0.78				0.66	0.00	0.84
Avail Cap(c_a), veh/h	0	2286	1130	0	2286	1205				937	0	416
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	1.00	0.00	0.47	0.47				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.3	14.4	0.0	9.7	10.0				30.5	0.0	32.0
Incr Delay (d2), s/veh	0.0	11.4	46.3	0.0	1.1	2.4				1.3	0.0	12.7
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	15.6	27.9	0.0	7.2	8.4				4.7	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.7	60.7	0.0	10.9	12.4				31.9	0.0	44.6
LnGrp LOS	A	C	F	A	B	B				C	A	D
Approach Vol, veh/h		3398			2659						809	
Approach Delay, s/veh		37.5			11.4						36.5	
Approach LOS		D			B						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		61.7		23.3		61.7						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		58.2		16.8		32.3						
Green Ext Time (p_c), s		0.0		1.5		16.6						

Intersection Summary												
HCM 6th Ctrl Delay			27.3									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

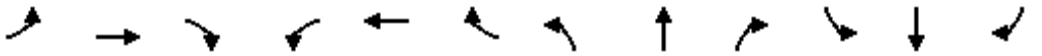
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	252	2613	1765	300	751	68	382
Future Volume (vph)	252	2613	1765	300	751	68	382
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	55.0	45.0	45.0	34.5	34.5	34.5
Total Split (%)	11.2%	61.5%	50.3%	50.3%	38.5%	38.5%	38.5%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2613	219	0	1765	300	751	68	382	0	0	0
Future Volume (veh/h)	252	2613	219	0	1765	300	751	68	382	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	268	2780	233	0	1878	203	902	0	183			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	111	2711	220	0	2305	701	1186	0	528			
Arrive On Green	0.06	0.56	0.56	0.00	0.44	0.44	0.33	0.00	0.33			
Sat Flow, veh/h	1810	4879	396	0	5358	1577	3619	0	1610			
Grp Volume(v), veh/h	268	1945	1068	0	1878	203	902	0	183			
Grp Sat Flow(s),veh/h/ln	1810	1729	1818	0	1729	1577	1810	0	1610			
Q Serve(g_s), s	5.5	50.0	50.0	0.0	28.4	7.4	20.1	0.0	7.8			
Cycle Q Clear(g_c), s	5.5	50.0	50.0	0.0	28.4	7.4	20.1	0.0	7.8			
Prop In Lane	1.00		0.22	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	111	1921	1010	0	2305	701	1186	0	528			
V/C Ratio(X)	2.42	1.01	1.06	0.00	0.81	0.29	0.76	0.00	0.35			
Avail Cap(c_a), veh/h	111	1921	1010	0	2305	701	1186	0	528			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.09	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.3	20.0	20.0	0.0	21.8	15.9	27.1	0.0	22.9			
Incr Delay (d2), s/veh	643.1	9.5	28.8	0.0	3.3	1.0	4.6	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	22.0	17.9	24.2	0.0	10.4	2.5	8.7	0.0	3.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	685.3	29.5	48.8	0.0	25.1	17.0	31.7	0.0	24.7			
LnGrp LOS	F	F	F	A	C	B	C	A	C			
Approach Vol, veh/h		3281			2081			1085				
Approach Delay, s/veh		89.4			24.3			30.5				
Approach LOS		F			C			C				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		55.5			10.0	45.5		34.5				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		49.5			5.5	39.5		29.5				
Max Q Clear Time (g_c+I1), s		52.0			7.5	30.4		22.1				
Green Ext Time (p_c), s		0.0			0.0	7.1		2.6				
Intersection Summary												
HCM 6th Ctrl Delay			58.5									
HCM 6th LOS			E									

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 7.2:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	0	2	19	0	7
Future Vol, veh/h	6	0	2	19	0	7
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	-	-	-	-	-
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	7	0	2	21	0	8

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	21	13	0	0	23	0
Stage 1	13	-	-	-	-	-
Stage 2	8	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	1001	1073	-	-	1605	-
Stage 1	1015	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	1001	1073	-	-	1605	-
Mov Cap-2 Maneuver	1001	-	-	-	-	-
Stage 1	1015	-	-	-	-	-
Stage 2	1020	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	1001	1605	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	-	-	8.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

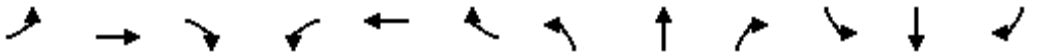
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	6	1813	47	3378	23	76	0	69	12	0	4
Future Volume (vph)	6	1813	47	3378	23	76	0	69	12	0	4
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	23.5	31.6	31.6	31.6	14.6	14.6	14.6
Total Split (s)	11.0	70.0	11.0	70.0	70.0	39.0	39.0	39.0	39.0	39.0	39.0
Total Split (%)	9.2%	58.3%	9.2%	58.3%	58.3%	32.5%	32.5%	32.5%	32.5%	32.5%	32.5%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		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	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1813	18	47	3378	23	76	0	69	12	0	4
Future Volume (veh/h)	6	1813	18	47	3378	23	76	0	69	12	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	1949	19	51	3632	25	82	0	43	13	0	1
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	14	3097	30	66	3297	931	61	0	455	61	0	461
Arrive On Green	0.01	0.55	0.55	0.05	0.77	0.77	0.29	0.00	0.29	0.29	0.00	0.29
Sat Flow, veh/h	1810	5635	55	1810	5700	1610	3	0	1590	3	0	1610
Grp Volume(v), veh/h	6	1314	654	51	3632	25	82	0	43	13	0	1
Grp Sat Flow(s),veh/h/ln	1810	1900	1890	1810	1900	1610	3	0	1590	3	0	1610
Q Serve(g_s), s	0.4	28.6	28.6	3.3	69.4	0.4	0.1	0.0	2.4	0.1	0.0	0.1
Cycle Q Clear(g_c), s	0.4	28.6	28.6	3.3	69.4	0.4	34.4	0.0	2.4	34.4	0.0	0.1
Prop In Lane	1.00		0.03	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	14	2088	1039	66	3297	931	61	0	455	61	0	461
V/C Ratio(X)	0.44	0.63	0.63	0.77	1.10	0.03	1.35	0.00	0.09	0.21	0.00	0.00
Avail Cap(c_a), veh/h	103	2088	1039	103	3297	931	61	0	456	61	0	462
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.3	18.6	18.6	56.6	13.8	5.9	60.0	0.0	31.4	60.0	0.0	30.6
Incr Delay (d2), s/veh	8.0	1.4	2.9	4.0	48.8	0.0	233.3	0.0	0.1	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	11.5	11.9	1.5	26.2	0.1	5.8	0.0	0.9	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.3	20.1	21.5	60.6	62.7	5.9	293.3	0.0	31.5	61.7	0.0	30.6
LnGrp LOS	E	C	C	E	F	A	F	A	C	E	A	C
Approach Vol, veh/h		1974			3708			125			14	
Approach Delay, s/veh		20.7			62.2			203.3			59.5	
Approach LOS		C			E			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.6	72.4		39.0	5.1	75.9		39.0				
Change Period (Y+Rc), s	* 4.2	6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	* 6.8	63.5		34.4	* 6.8	63.5		34.4				
Max Q Clear Time (g_c+I1), s	5.3	30.6		36.4	2.4	71.4		36.4				
Green Ext Time (p_c), s	0.0	22.4		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		51.2
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

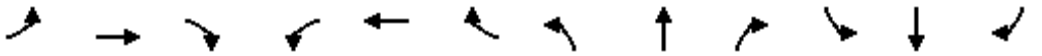
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	6	1882	2	3448	4	0	
Future Volume (vph)	6	1882	2	3448	4	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lead	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81 (68%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1882	6	2	3448	0	4	0	4	0	0	0
Future Volume (veh/h)	6	1882	6	2	3448	0	4	0	4	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	7	2046	7	2	3748	0	4	0	1	0	0	0
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	16	3936	13	186	4414	0	69	0	4	0	24	0
Arrive On Green	0.02	1.00	1.00	0.10	0.85	0.00	0.01	0.00	0.01	0.00	0.00	0.00
Sat Flow, veh/h	1810	5336	18	1810	5358	0	1177	0	294	0	1900	0
Grp Volume(v), veh/h	7	1326	727	2	3748	0	5	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1897	1810	1729	0	1471	0	0	0	1900	0
Q Serve(g_s), s	0.5	0.0	0.0	0.1	46.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.1	46.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00	0.80		0.20	0.00		0.00
Lane Grp Cap(c), veh/h	16	2550	1399	186	4414	0	73	0	0	0	24	0
V/C Ratio(X)	0.45	0.52	0.52	0.01	0.85	0.00	0.07	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	87	2550	1399	186	4414	0	181	0	0	0	165	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	58.7	0.0	0.0	48.3	4.8	0.0	58.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.3	0.7	1.2	0.0	2.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.5	0.1	5.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.0	0.7	1.2	48.3	7.0	0.0	59.1	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	E	A	A	D	A	A	E	A	A	A	A	A
Approach Vol, veh/h		2060			3750			5			0	
Approach Delay, s/veh		1.1			7.0			59.1			0.0	
Approach LOS		A			A			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.1	18.9	95.0		6.1	5.2	108.6				
Change Period (Y+Rc), s		4.6	6.5	* 6.5		4.6	* 4.2	6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	* 5.8	88.5				
Max Q Clear Time (g_c+I1), s		2.4	2.1	2.0		0.0	2.5	48.6				
Green Ext Time (p_c), s		0.0	0.0	41.1		0.0	0.0	39.6				

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	24.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	1882	8	14	3449	35	4	0	17	11	0	1
Future Vol, veh/h	4	1882	8	14	3449	35	4	0	17	11	0	1
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	155	-	-	155	-	-	0	-	-	0	-	-
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	4	2046	9	15	3749	38	4	0	18	12	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3787	0	0	2055	0	0	3589	5876	1028	4624	5861	1894
Stage 1	-	-	-	-	-	-	2059	2059	-	3798	3798	-
Stage 2	-	-	-	-	-	-	1530	3817	-	826	2063	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	15	-	-	120	-	-	6	0	202	~ 1	0	52
Stage 1	-	-	-	-	-	-	36	99	-	~ 2	12	-
Stage 2	-	-	-	-	-	-	111	11	-	305	98	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	15	-	-	120	-	-	~ 4	0	202	~ 1	0	52
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	0	-	~ 1	0	-
Stage 1	-	-	-	-	-	-	26	73	-	~ 1	11	-
Stage 2	-	-	-	-	-	-	95	10	-	203	72	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.2	$ 322.4	$ 10194.8
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	4	202	15	-	-	120	-	-	1	52
HCM Lane V/C Ratio	1.087	0.091	0.29	-	-	0.127	-	-	11.957	0.021
HCM Control Delay (s)	$ 1588.3	24.6	$ 323.6	-	-	39.3	-	-	$ 11114.7	75.7
HCM Lane LOS	F	C	F	-	-	E	-	-	F	F
HCM 95th %tile Q(veh)	1.3	0.3	0.8	-	-	0.4	-	-	2.9	0.1

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

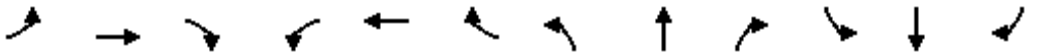
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	13	1885	175	3812	46	13	68	25	16
Future Volume (vph)	13	1885	175	3812	46	13	68	25	16
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	63.2	20.4	74.0	74.0	9.6	26.8	9.6	26.8
Total Split (%)	8.0%	52.7%	17.0%	61.7%	61.7%	8.0%	22.3%	8.0%	22.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 77.1 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: Alessandro Bl. & San Gorgonio Dr.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	1885	35	175	3812	46	13	0	68	25	0	16
Future Volume (veh/h)	13	1885	35	175	3812	46	13	0	68	25	0	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	14	2049	38	190	4143	47	14	0	74	27	0	0
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	28	3143	58	217	3650	1132	28	153	130	56	183	
Arrive On Green	0.02	0.60	0.60	0.16	0.94	0.94	0.02	0.00	0.08	0.03	0.00	0.00
Sat Flow, veh/h	1810	5243	97	1810	5187	1609	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	14	1351	736	190	4143	47	14	0	74	27	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1883	1810	1729	1609	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	0.9	30.8	30.9	12.3	84.4	0.2	0.9	0.0	5.3	1.8	0.0	0.0
Cycle Q Clear(g_c), s	0.9	30.8	30.9	12.3	84.4	0.2	0.9	0.0	5.3	1.8	0.0	0.0
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	28	2073	1129	217	3650	1132	28	153	130	56	183	
V/C Ratio(X)	0.50	0.65	0.65	0.88	1.14	0.04	0.50	0.00	0.57	0.48	0.00	
Avail Cap(c_a), veh/h	75	2073	1129	238	3650	1132	75	352	298	75	352	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.6	15.8	15.8	49.6	3.9	1.1	58.6	0.0	53.2	57.2	0.0	0.0
Incr Delay (d2), s/veh	5.0	1.6	2.9	3.4	61.2	0.0	13.0	0.0	3.9	6.2	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	0.4	10.8	12.2	5.3	22.5	0.1	0.5	0.0	0.1	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	17.4	18.8	53.0	65.1	1.2	71.6	0.0	57.0	63.4	0.0	0.0
LnGrp LOS	E	B	B	D	F	A	E	A	E	E	A	
Approach Vol, veh/h		2101			4380			88			27	A
Approach Delay, s/veh		18.2			63.9			59.4			63.4	
Approach LOS		B			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	78.4	6.5	16.1	6.5	90.9	8.3	14.3
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	15.8	56.7	5.0	22.2	5.0	67.5	5.0	22.2
Max Q Clear Time (g_c+I1), s	14.3	32.9	2.9	0.0	2.9	86.4	3.8	7.3
Green Ext Time (p_c), s	0.1	18.6	0.0	0.0	0.0	0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

Notes

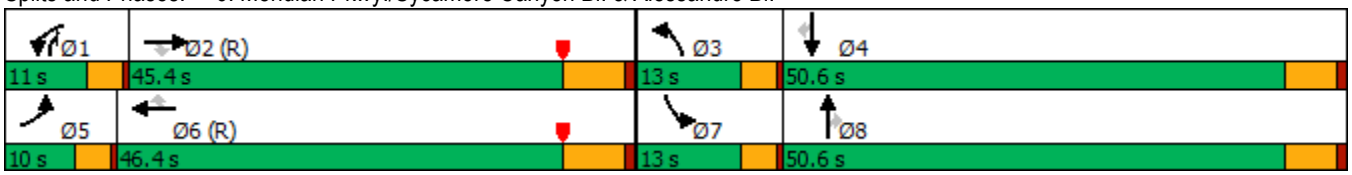
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

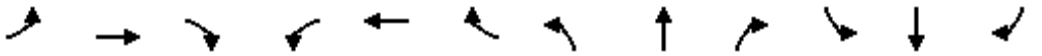
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	1725	367	315	3035	607	673	859	111	174	175	258
Future Volume (vph)	256	1725	367	315	3035	607	673	859	111	174	175	258
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	10.0	45.4	45.4	11.0	46.4	46.4	13.0	50.6	11.0	13.0	50.6	50.6
Total Split (%)	8.3%	37.8%	37.8%	9.2%	38.7%	38.7%	10.8%	42.2%	9.2%	10.8%	42.2%	42.2%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 4 (3%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	1725	367	315	3035	607	673	859	111	174	175	258
Future Volume (veh/h)	256	1725	367	315	3035	607	673	859	111	174	175	258
Initial Q (Qb), veh	0	0	0	0	0	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	269	1816	386	332	3195	639	708	904	117	183	184	272
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	95	2127	660	214	2171	673	272	1071	1013	239	1037	463
Arrive On Green	0.02	0.14	0.14	0.06	0.42	0.42	0.08	0.30	0.30	0.07	0.29	0.29
Sat Flow, veh/h	1810	5187	1610	3510	5187	1609	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	269	1816	386	332	3195	639	708	904	117	183	184	272
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1609	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	6.3	41.1	27.0	7.3	50.2	46.0	9.3	28.2	3.3	6.2	4.6	17.4
Cycle Q Clear(g_c), s	6.3	41.1	27.0	7.3	50.2	46.0	9.3	28.2	3.3	6.2	4.6	17.4
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	95	2127	660	214	2171	673	272	1071	1013	239	1037	463
V/C Ratio(X)	2.83	0.85	0.58	1.55	1.47	0.95	2.60	0.84	0.12	0.77	0.18	0.59
Avail Cap(c_a), veh/h	95	2127	660	214	2171	673	272	1348	1230	272	1348	601
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.0	48.4	42.3	56.3	34.9	33.7	55.3	39.6	25.8	55.0	32.1	36.7
Incr Delay (d2), s/veh	844.5	3.3	2.7	271.3	214.9	24.2	731.6	4.1	0.1	9.0	0.1	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	25.2	19.6	12.1	11.2	62.9	21.3	31.7	12.6	1.1	3.0	2.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	903.5	51.7	45.0	327.7	249.8	57.9	787.0	43.7	25.9	64.0	32.2	37.9
LnGrp LOS	F	D	D	F	F	E	F	D	C	E	C	D
Approach Vol, veh/h		2471			4166			1729			639	
Approach Delay, s/veh		143.4			226.6			346.9			43.7	
Approach LOS		F			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	55.7	13.0	40.3	10.0	56.7	11.9	41.4
Change Period (Y+Rc), s	3.7	6.5	3.7	5.8	3.7	6.5	3.7	5.8
Max Green Setting (Gmax), s	7.3	38.9	9.3	44.8	6.3	39.9	9.3	44.8
Max Q Clear Time (g_c+I1), s	9.3	43.1	11.3	19.4	8.3	52.2	8.2	30.2
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.0	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	213.9
HCM 6th LOS	F

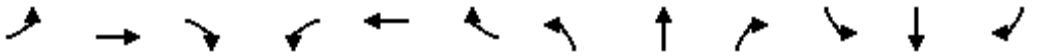
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	1523	3343	350	0	613
Future Volume (vph)	1523	3343	350	0	613
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	63.0	63.0	22.0	22.0	22.0
Total Split (%)	74.1%	74.1%	25.9%	25.9%	25.9%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 9 (11%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1523	487	0	3343	270	0	0	0	350	0	613
Future Volume (veh/h)	0	1523	487	0	3343	270	0	0	0	350	0	613
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	1570	473	0	3446	278				241	0	717
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	790	0	3312	259				362	0	643
Arrive On Green	0.00	0.68	0.68	0.00	1.00	1.00				0.20	0.00	0.20
Sat Flow, veh/h	0	4120	1169	0	5067	383				1810	0	3216
Grp Volume(v), veh/h	0	1371	672	0	2403	1321				241	0	717
Grp Sat Flow(s),veh/h/ln	0	1729	1659	0	1729	1821				1810	0	1608
Q Serve(g_s), s	0.0	18.1	18.7	0.0	0.0	57.5				10.4	0.0	17.0
Cycle Q Clear(g_c), s	0.0	18.1	18.7	0.0	0.0	57.5				10.4	0.0	17.0
Prop In Lane	0.00		0.70	0.00		0.21				1.00		1.00
Lane Grp Cap(c), veh/h	0	2339	1122	0	2339	1232				362	0	643
V/C Ratio(X)	0.00	0.59	0.60	0.00	1.03	1.07				0.67	0.00	1.11
Avail Cap(c_a), veh/h	0	2339	1122	0	2339	1232				362	0	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	0.09	0.09				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.4	7.5	0.0	0.0	0.0				31.4	0.0	34.0
Incr Delay (d2), s/veh	0.0	1.1	2.4	0.0	14.6	34.3				4.6	0.0	71.4
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	4.5	4.8	0.0	4.7	11.7				4.7	0.0	12.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	8.5	9.8	0.0	14.6	34.3				36.0	0.0	105.4
LnGrp LOS	A	A	A	A	F	F				D	A	F
Approach Vol, veh/h		2043			3724						958	
Approach Delay, s/veh		8.9			21.6						87.9	
Approach LOS		A			C						F	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		63.0		22.0		63.0						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		57.5		17.0		57.5						
Max Q Clear Time (g_c+I1), s		20.7		19.0		59.5						
Green Ext Time (p_c), s		19.1		0.0		0.0						

Intersection Summary												
HCM 6th Ctrl Delay			27.2									
HCM 6th LOS			C									

Notes

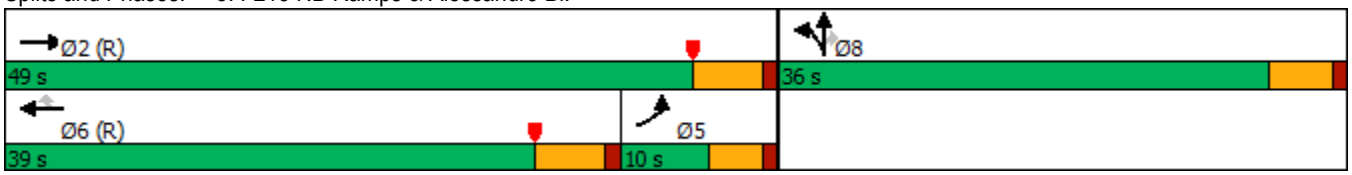
User approved volume balancing among the lanes for turning movement.

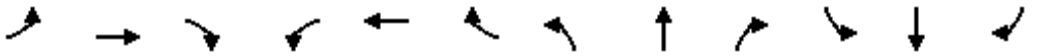
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	99	1737	2491	211	1185	35	274
Future Volume (vph)	99	1737	2491	211	1185	35	274
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	49.0	39.0	39.0	36.0	36.0	36.0
Total Split (%)	11.8%	57.6%	45.9%	45.9%	42.4%	42.4%	42.4%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lag		Lead	Lead			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	1737	67	0	2491	211	1185	35	274	0	0	0
Future Volume (veh/h)	99	1737	67	0	2491	211	1185	35	274	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	101	1772	68	0	2542	195	1292	0	158			
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	399	3478	133	0	2044	620	1320	0	587			
Arrive On Green	0.44	1.00	1.00	0.00	0.39	0.39	0.36	0.00	0.36			
Sat Flow, veh/h	1810	5121	196	0	5358	1573	3619	0	1610			
Grp Volume(v), veh/h	101	1196	644	0	2542	195	1292	0	158			
Grp Sat Flow(s),veh/h/ln	1810	1729	1860	0	1729	1573	1810	0	1610			
Q Serve(g_s), s	3.0	0.0	0.0	0.0	33.5	7.3	30.0	0.0	5.9			
Cycle Q Clear(g_c), s	3.0	0.0	0.0	0.0	33.5	7.3	30.0	0.0	5.9			
Prop In Lane	1.00		0.11	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	399	2349	1263	0	2044	620	1320	0	587			
V/C Ratio(X)	0.25	0.51	0.51	0.00	1.24	0.31	0.98	0.00	0.27			
Avail Cap(c_a), veh/h	399	2349	1263	0	2044	620	1320	0	587			
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.71	0.71	0.71	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.4	0.0	0.0	0.0	25.8	17.8	26.7	0.0	19.0			
Incr Delay (d2), s/veh	0.2	0.6	1.0	0.0	113.9	1.3	20.2	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	1.1	0.2	0.4	0.0	33.1	2.5	15.2	0.0	2.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	0.6	1.0	0.0	139.6	19.1	46.9	0.0	20.1			
LnGrp LOS	B	A	A	A	F	B	D	A	C			
Approach Vol, veh/h		1941			2737			1450				
Approach Delay, s/veh		1.7			131.1			44.0				
Approach LOS		A			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		63.3			24.3	39.0		36.0				
Change Period (Y+Rc), s		5.5			5.5	* 5.5		5.0				
Max Green Setting (Gmax), s		43.5			5.5	* 34		31.0				
Max Q Clear Time (g_c+I1), s		2.0			5.0	35.5		32.0				
Green Ext Time (p_c), s		16.4			0.0	0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	69.5
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	0	15	9	0	6
Future Vol, veh/h	20	0	15	9	0	6
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	-	-	-	-	-
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	22	0	16	10	0	7

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	28	21	0	0	26	0
Stage 1	21	-	-	-	-	-
Stage 2	7	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	992	1062	-	-	1601	-
Stage 1	1007	-	-	-	-	-
Stage 2	1021	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	992	1062	-	-	1601	-
Mov Cap-2 Maneuver	992	-	-	-	-	-
Stage 1	1007	-	-	-	-	-
Stage 2	1021	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	992	1601	-
HCM Lane V/C Ratio	-	-	0.022	-	-
HCM Control Delay (s)	-	-	8.7	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

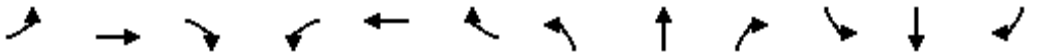
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	13	3284	72	2780	27	59	0	58	28	0	11
Future Volume (vph)	13	3284	72	2780	27	59	0	58	28	0	11
Turn Type	Prot	NA	Prot	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2	1	6			8			4	
Permitted Phases					6	8		8	4		4
Detector Phase	5	2	1	6	6	8	8	8	4	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	10.0	10.0
Minimum Split (s)	9.2	28.5	11.0	28.5	28.5	30.6	30.6	30.6	26.6	26.6	26.6
Total Split (s)	9.2	75.0	10.0	75.8	75.8	35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	7.7%	62.5%	8.3%	63.2%	63.2%	29.2%	29.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	3.2	5.5	3.2	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
Total Lost Time (s)	4.2	6.5	4.2	6.5	6.5		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	C-Max	None	C-Max	C-Max	Max	Max	Max	Max	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 2: Barton St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	3284	41	72	2780	27	59	0	58	28	0	11
Future Volume (veh/h)	13	3284	41	72	2780	27	59	0	58	28	0	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	3457	41	76	2926	28	62	0	39	29	0	-1
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	28	3209	38	87	3441	972	0	0	406	411	0	408
Arrive On Green	0.02	0.57	0.57	0.05	0.60	0.60	0.25	0.00	0.25	0.25	0.00	0.00
Sat Flow, veh/h	1810	5622	66	1810	5700	1610	0	0	1604	1385	0	1610
Grp Volume(v), veh/h	14	2332	1166	76	2926	28	62	0	39	29	0	-1
Grp Sat Flow(s),veh/h/ln	1810	1900	1888	1810	1900	1610	0	0	1604	1385	0	1610
Q Serve(g_s), s	0.9	68.5	68.5	5.0	50.2	0.8	0.0	0.0	2.2	1.9	0.0	0.0
Cycle Q Clear(g_c), s	0.9	68.5	68.5	5.0	50.2	0.8	0.0	0.0	2.2	1.9	0.0	0.0
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	28	2169	1078	87	3441	972	0	0	406	411	0	408
V/C Ratio(X)	0.50	1.08	1.08	0.87	0.85	0.03	0.00	0.00	0.10	0.07	0.00	0.00
Avail Cap(c_a), veh/h	75	2169	1078	87	3441	972	0	0	406	411	0	408
HCM Platoon Ratio	1.00	1.00	1.00	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	0.73	0.73	0.73	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.6	25.7	25.7	56.7	19.4	9.6	0.0	0.0	34.3	34.2	0.0	0.0
Incr Delay (d2), s/veh	5.0	43.1	52.4	43.5	2.1	0.0	0.0	0.0	0.5	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	0.4	39.0	41.5	3.3	19.1	0.3	1.4	0.0	0.9	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.6	68.8	78.1	100.2	21.5	9.6	0.0	0.0	34.8	34.5	0.0	0.0
LnGrp LOS	E	F	F	F	C	A	A	A	C	C	A	A
Approach Vol, veh/h		3512			3030			101			28	
Approach Delay, s/veh		71.9			23.3			0.0			35.7	
Approach LOS		E			C			A			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	75.0		35.0	6.1	78.9		35.0				
Change Period (Y+Rc), s	* 4.2	6.5		4.6	* 4.2	6.5		4.6				
Max Green Setting (Gmax), s	* 5.8	68.5		30.4	* 5	69.3		30.4				
Max Q Clear Time (g_c+I1), s	7.0	70.5		3.9	2.9	52.2		4.2				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	16.6		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		48.6	
HCM 6th LOS		D	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

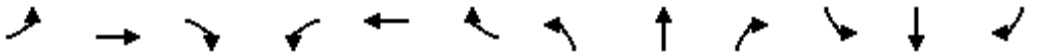
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	Ø6
Lane Configurations							
Traffic Volume (vph)	4	3365	4	2879	6	0	
Future Volume (vph)	4	3365	4	2879	6	0	
Turn Type	Prot	NA	Prot	NA	Perm	NA	
Protected Phases	7	4	3	8		2	6
Permitted Phases					2		
Detector Phase	7	4	3	8	2	2	
Switch Phase							
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	23.5	9.2	23.5	14.6	14.6	14.6
Total Split (s)	10.0	95.0	10.0	95.0	15.0	15.0	15.0
Total Split (%)	8.3%	79.2%	8.3%	79.2%	12.5%	12.5%	13%
Yellow Time (s)	3.2	5.5	3.2	5.5	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	
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	
Lead/Lag	Lag	Lead	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	C-Max	None	C-Max	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 79 (66%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3365	1	4	2879	0	6	0	2	0	0	0
Future Volume (veh/h)	4	3365	1	4	2879	0	6	0	2	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	4	3658	1	4	3129	0	7	0	0	0	0	0
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	213	3950	1	213	3825	0	85	0	0	0	33	0
Arrive On Green	0.12	0.74	0.74	0.12	0.74	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5356	1	1810	5358	0	1440	0	0	0	1900	0
Grp Volume(v), veh/h	4	2361	1298	4	3129	0	7	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	1810	1729	0	1440	0	0	0	1900	0
Q Serve(g_s), s	0.2	67.8	67.9	0.2	47.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	67.8	67.9	0.2	47.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	213	2550	1401	213	3825	0	85	0	0	0	33	0
V/C Ratio(X)	0.02	0.93	0.93	0.02	0.82	0.00	0.08	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	213	2550	1401	213	3825	0	185	0	0	0	165	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)	0.09	0.09	0.09	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	46.8	13.0	13.0	46.8	10.4	0.0	58.2	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	1.4	0.0	2.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	18.0	19.9	0.1	13.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	13.8	14.4	46.8	12.5	0.0	58.6	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	D	B	B	D	B	A	E	A	A	A	A	A
Approach Vol, veh/h		3663			3133			7			0	
Approach Delay, s/veh		14.1			12.5			58.6			0.0	
Approach LOS		B			B			E				

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		6.7	18.3	95.0		6.7	18.3	95.0				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		10.4	5.8	* 89		10.4	5.8	* 89				
Max Q Clear Time (g_c+I1), s		2.6	2.2	69.9		0.0	2.2	49.9				
Green Ext Time (p_c), s		0.0	0.0	18.5		0.0	0.0	36.9				

Intersection Summary	
HCM 6th Ctrl Delay	13.4
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	3365	14	27	2878	16	2	0	11	37	0	5
Future Vol, veh/h	2	3365	14	27	2878	16	2	0	11	37	0	5
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	155	-	-	155	-	-	0	-	-	0	-	-
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	2	3658	15	29	3128	17	2	0	12	40	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	3145	0	0	3673	0	0	4979	6873	1837	4662	6872	1573
Stage 1	-	-	-	-	-	-	3670	3670	-	3195	3195	-
Stage 2	-	-	-	-	-	-	1309	3203	-	1467	3677	-
Critical Hdwy	5.3	-	-	5.3	-	-	6.4	6.5	7.1	6.4	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	7.3	5.5	-	7.3	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.7	5.5	-	6.7	5.5	-
Follow-up Hdwy	3.1	-	-	3.1	-	-	3.8	4	3.9	3.8	4	3.9
Pot Cap-1 Maneuver	33	-	-	~ 17	-	-	~ 1	0	57	~ 1	0	86
Stage 1	-	-	-	-	-	-	~ 2	14	-	~ 5	25	-
Stage 2	-	-	-	-	-	-	153	25	-	121	14	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	33	-	-	~ 17	-	-	-	0	57	-	0	86
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	~ 2	13	-	~ 5	0	-
Stage 2	-	-	-	-	-	-	-	0	-	90	13	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	7.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	-	57	33	-	-	~ 17	-	-	-	86
HCM Lane V/C Ratio	-	0.21	0.066	-	-	1.726	-	-	-	0.063
HCM Control Delay (s)	-	84.2	121.6	-	-	$ 817.5	-	-	-	49.7
HCM Lane LOS	-	F	F	-	-	F	-	-	-	E
HCM 95th %tile Q(veh)	-	0.7	0.2	-	-	4.2	-	-	-	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

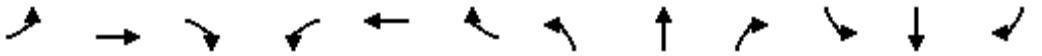
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBR	SBL	SBR
Lane Configurations									
Traffic Volume (vph)	18	3738	101	2883	25	36	186	34	21
Future Volume (vph)	18	3738	101	2883	25	36	186	34	21
Turn Type	Prot	NA	Prot	NA	Perm	Prot	Perm	Prot	Perm
Protected Phases	5	2	1	6		3		7	
Permitted Phases					6		8		4
Detector Phase	5	2	1	6	6	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	16.5	9.6	30.5	30.5	9.6	26.6	9.6	14.6
Total Split (s)	9.6	73.0	10.2	73.6	73.6	11.2	27.2	9.6	25.6
Total Split (%)	8.0%	60.8%	8.5%	61.3%	61.3%	9.3%	22.7%	8.0%	21.3%
Yellow Time (s)	3.6	5.5	3.6	5.5	5.5	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	6.5	6.5	4.6	4.6	4.6	4.6
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	None	None	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 76.7 (64%), Referenced to phase 2:EBT, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated

Splits and Phases: 5: San Gorgonio Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	3738	20	101	2883	25	36	0	186	34	0	21
Future Volume (veh/h)	18	3738	20	101	2883	25	36	0	186	34	0	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		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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	4108	11	110	3168	26	39	0	126	37	0	0
Peak Hour Factor	0.91	0.91	0.92	0.92	0.91	0.91	0.92	0.92	0.92	0.91	0.92	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	37	3697	10	84	3859	1066	55	181	153	69	196	
Arrive On Green	0.02	0.65	0.65	0.05	0.68	0.68	0.03	0.00	0.10	0.04	0.00	0.00
Sat Flow, veh/h	1810	5682	15	1810	5700	1575	1810	1900	1610	1810	1900	1610
Grp Volume(v), veh/h	20	2746	1373	110	3168	26	39	0	126	37	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1897	1810	1900	1575	1810	1900	1610	1810	1900	1610
Q Serve(g_s), s	1.3	78.1	78.1	5.6	48.5	0.7	2.6	0.0	9.2	2.4	0.0	0.0
Cycle Q Clear(g_c), s	1.3	78.1	78.1	5.6	48.5	0.7	2.6	0.0	9.2	2.4	0.0	0.0
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	37	2472	1234	84	3859	1066	55	181	153	69	196	
V/C Ratio(X)	0.55	1.11	1.11	1.30	0.82	0.02	0.71	0.00	0.82	0.53	0.00	
Avail Cap(c_a), veh/h	75	2472	1234	84	3859	1066	100	358	303	75	333	
HCM Platoon Ratio	1.00	1.00	1.00	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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.2	21.0	21.0	57.2	14.1	6.4	57.7	0.0	53.3	56.6	0.0	0.0
Incr Delay (d2), s/veh	4.6	56.3	62.3	144.0	0.1	0.0	15.6	0.0	10.4	6.2	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	0.6	46.4	48.4	5.8	16.1	0.2	1.4	0.0	4.2	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.8	77.2	83.2	201.2	14.2	6.4	73.2	0.0	63.7	62.9	0.0	0.0
LnGrp LOS	E	F	F	F	B	A	E	A	E	E	A	
Approach Vol, veh/h		4139			3304			165			37	A
Approach Delay, s/veh		79.2			20.4			65.9			62.9	
Approach LOS		E			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	84.6	8.2	17.0	7.0	87.7	9.2	16.0
Change Period (Y+Rc), s	4.6	6.5	4.6	4.6	4.6	6.5	4.6	4.6
Max Green Setting (Gmax), s	5.6	66.5	6.6	21.0	5.0	67.1	5.0	22.6
Max Q Clear Time (g_c+I1), s	7.6	80.1	4.6	0.0	3.3	50.5	4.4	11.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	16.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

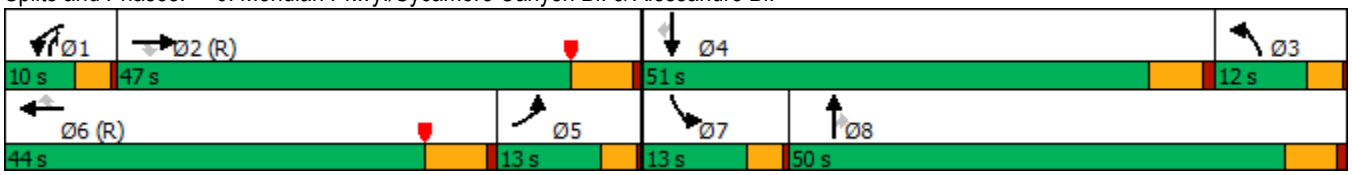
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

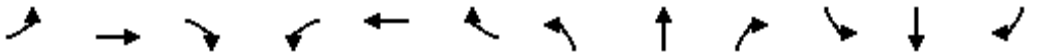
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	332	2741	718	273	2376	232	537	416	295	245	855	494
Future Volume (vph)	332	2741	718	273	2376	232	537	416	295	245	855	494
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Perm
Protected Phases	5	2		1	6		3	8	1	7	4	
Permitted Phases			2			6			8			4
Detector Phase	5	2	2	1	6	6	3	8	1	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0
Minimum Split (s)	8.7	43.5	43.5	8.7	43.5	43.5	8.7	15.8	8.7	8.7	49.8	49.8
Total Split (s)	13.0	47.0	47.0	10.0	44.0	44.0	12.0	50.0	10.0	13.0	51.0	51.0
Total Split (%)	10.8%	39.2%	39.2%	8.3%	36.7%	36.7%	10.0%	41.7%	8.3%	10.8%	42.5%	42.5%
Yellow Time (s)	3.2	5.5	5.5	3.2	5.5	5.5	3.2	4.8	3.2	3.2	4.8	4.8
All-Red Time (s)	0.5	1.0	1.0	0.5	1.0	1.0	0.5	1.0	0.5	0.5	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)	3.7	6.5	6.5	3.7	6.5	6.5	3.7	5.8	3.7	3.7	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	None	None	Max	Max

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 11 (9%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 6: Meridian Pkwy./Sycamore Canyon Bl. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	332	2741	718	273	2376	232	537	416	295	245	855	494
Future Volume (veh/h)	332	2741	718	273	2376	232	537	416	295	245	855	494
Initial Q (Qb), veh	0	0	0	0	0	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	369	3046	798	303	2640	258	597	462	328	272	950	549
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	2144	7615	2364	184	1621	503	243	1393	1242	272	1360	606
Arrive On Green	0.39	0.48	0.48	0.05	0.31	0.31	0.07	0.39	0.39	0.08	0.38	0.38
Sat Flow, veh/h	1810	5187	1610	3510	5187	1610	3510	3610	2834	3510	3610	1610
Grp Volume(v), veh/h	369	3046	798	303	2640	258	597	462	328	272	950	549
Grp Sat Flow(s),veh/h/ln	1810	1729	1610	1755	1729	1610	1755	1805	1417	1755	1805	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.3	37.5	37.5	8.3	10.8	8.8	9.3	26.7	38.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.3	37.5	37.5	8.3	10.8	8.8	9.3	26.7	38.7
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	2144	7615	2364	184	1621	503	243	1393	1242	272	1360	606
V/C Ratio(X)	0.17	0.40	0.34	1.64	1.63	0.51	2.46	0.33	0.26	1.00	0.70	0.91
Avail Cap(c_a), veh/h	2144	7615	2364	184	1621	503	243	1393	1242	272	1360	606
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	56.8	41.2	211.1	55.8	26.0	21.4	55.3	31.6	35.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	312.9	285.8	3.7	668.7	0.6	0.5	54.5	3.0	19.5
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	0.0	0.0	0.0	10.7	58.1	16.9	26.1	4.6	2.9	6.1	11.7	17.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	369.8	327.0	214.8	724.5	26.6	21.9	109.8	34.6	54.8
LnGrp LOS	A	A	A	F	F	F	F	C	C	F	C	D
Approach Vol, veh/h		4213			3201			1387			1771	
Approach Delay, s/veh		0.0			322.0			325.9			52.5	
Approach LOS		A			F			F			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	184.8	14.1	51.0	150.8	44.0	13.0	52.1
Change Period (Y+Rc), s	3.7	6.5	5.8	* 5.8	6.5	* 6.5	3.7	5.8
Max Green Setting (Gmax), s	6.3	40.5	8.3	* 45	9.3	* 38	9.3	44.2
Max Q Clear Time (g_c+I1), s	8.3	2.0	10.3	40.7	2.0	39.5	11.3	12.8
Green Ext Time (p_c), s	0.0	37.8	0.0	3.0	0.3	0.0	0.0	4.4

Intersection Summary	
HCM 6th Ctrl Delay	149.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

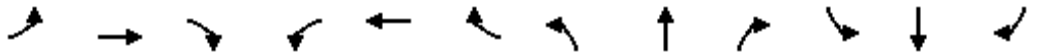
Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Configurations					
Traffic Volume (vph)	2614	2330	333	0	549
Future Volume (vph)	2614	2330	333	0	549
Turn Type	NA	NA	Split	NA	Perm
Protected Phases	2	6	4	4	
Permitted Phases					4
Detector Phase	2	6	4	4	4
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.5	34.5	10.0	10.0	10.0
Total Split (s)	58.0	58.0	27.0	27.0	27.0
Total Split (%)	68.2%	68.2%	31.8%	31.8%	31.8%
Yellow Time (s)	4.5	4.5	4.0	4.0	4.0
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)	5.5	5.5	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Max	C-Max	None	None	None

Intersection Summary

Cycle Length: 85
Actuated Cycle Length: 85
Offset: 33 (39%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 7: I-215 SB Ramps & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2614	668	0	2330	183	0	0	0	333	0	549
Future Volume (veh/h)	0	2614	668	0	2330	183	0	0	0	333	0	549
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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
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	2781	674	0	2479	193				523	0	299
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	2778	617	0	3226	246				792	0	352
Arrive On Green	0.00	0.66	0.66	0.00	0.66	0.66				0.22	0.00	0.22
Sat Flow, veh/h	0	4396	938	0	5078	374				3619	0	1608
Grp Volume(v), veh/h	0	2230	1225	0	1732	940				523	0	299
Grp Sat Flow(s),veh/h/ln	0	1729	1706	0	1729	1823				1810	0	1608
Q Serve(g_s), s	0.0	52.9	55.9	0.0	29.2	31.0				11.2	0.0	15.2
Cycle Q Clear(g_c), s	0.0	52.9	55.9	0.0	29.2	31.0				11.2	0.0	15.2
Prop In Lane	0.00		0.55	0.00		0.21				1.00		1.00
Lane Grp Cap(c), veh/h	0	2274	1122	0	2274	1199				792	0	352
V/C Ratio(X)	0.00	0.98	1.09	0.00	0.76	0.78				0.66	0.00	0.85
Avail Cap(c_a), veh/h	0	2274	1122	0	2274	1199				937	0	416
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	1.00	0.00	0.51	0.51				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.0	14.6	0.0	10.0	10.3				30.3	0.0	31.8
Incr Delay (d2), s/veh	0.0	14.8	55.7	0.0	1.3	2.7				1.3	0.0	13.4
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	17.5	30.8	0.0	7.5	8.9				4.7	0.0	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	28.9	70.3	0.0	11.3	13.0				31.6	0.0	45.3
LnGrp LOS	A	C	F	A	B	B				C	A	D
Approach Vol, veh/h		3455			2672						822	
Approach Delay, s/veh		43.6			11.9						36.6	
Approach LOS		D			B						D	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		61.4		23.6		61.4						
Change Period (Y+Rc), s		5.5		5.0		5.5						
Max Green Setting (Gmax), s		52.5		22.0		52.5						
Max Q Clear Time (g_c+I1), s		57.9		17.2		33.0						
Green Ext Time (p_c), s		0.0		1.4		16.2						

Intersection Summary												
HCM 6th Ctrl Delay			30.6									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	279	2618	1767	300	760	68	382
Future Volume (vph)	279	2618	1767	300	760	68	382
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	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)	9.5	10.5	33.5	33.5	10.0	10.0	10.0
Total Split (s)	10.0	58.0	48.0	48.0	31.5	31.5	31.5
Total Split (%)	11.2%	64.8%	53.6%	53.6%	35.2%	35.2%	35.2%
Yellow Time (s)	3.5	4.5	4.5	4.5	4.0	4.0	4.0
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)	4.5	5.5	5.5	5.5	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	Max	Max	Max

Intersection Summary

Cycle Length: 89.5
Actuated Cycle Length: 89.5
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: I-215 NB Ramps & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	279	2618	219	0	1767	300	760	68	382	0	0	0
Future Volume (veh/h)	279	2618	219	0	1767	300	760	68	382	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		0.98	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			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	1900	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	297	2785	233	0	1880	203	912	0	183			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	111	2874	233	0	2478	753	1066	0	474			
Arrive On Green	0.06	0.59	0.59	0.00	0.48	0.48	0.29	0.00	0.29			
Sat Flow, veh/h	1810	4880	396	0	5358	1577	3619	0	1610			
Grp Volume(v), veh/h	297	1948	1070	0	1880	203	912	0	183			
Grp Sat Flow(s),veh/h/ln	1810	1729	1818	0	1729	1577	1810	0	1610			
Q Serve(g_s), s	5.5	47.7	53.0	0.0	26.7	6.9	21.4	0.0	8.1			
Cycle Q Clear(g_c), s	5.5	47.7	53.0	0.0	26.7	6.9	21.4	0.0	8.1			
Prop In Lane	1.00		0.22	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	111	2036	1071	0	2478	753	1066	0	474			
V/C Ratio(X)	2.69	0.96	1.00	0.00	0.76	0.27	0.86	0.00	0.39			
Avail Cap(c_a), veh/h	111	2036	1071	0	2478	753	1066	0	474			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.09	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.3	17.4	18.5	0.0	19.2	14.1	29.9	0.0	25.3			
Incr Delay (d2), s/veh	760.9	1.6	8.2	0.0	2.2	0.9	8.8	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	25.7	14.4	18.7	0.0	9.4	2.3	9.9	0.0	3.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	803.2	19.0	26.7	0.0	21.5	15.0	38.8	0.0	27.6			
LnGrp LOS	F	B	C	A	C	B	D	A	C			
Approach Vol, veh/h		3315			2083			1095				
Approach Delay, s/veh		91.8			20.8			36.9				
Approach LOS		F			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		58.5			10.0	48.5		31.5				
Change Period (Y+Rc), s		5.5			4.5	5.5		5.0				
Max Green Setting (Gmax), s		52.5			5.5	42.5		26.5				
Max Q Clear Time (g_c+I1), s		55.0			7.5	28.7		23.4				
Green Ext Time (p_c), s		0.0			0.0	9.9		1.4				

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

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)

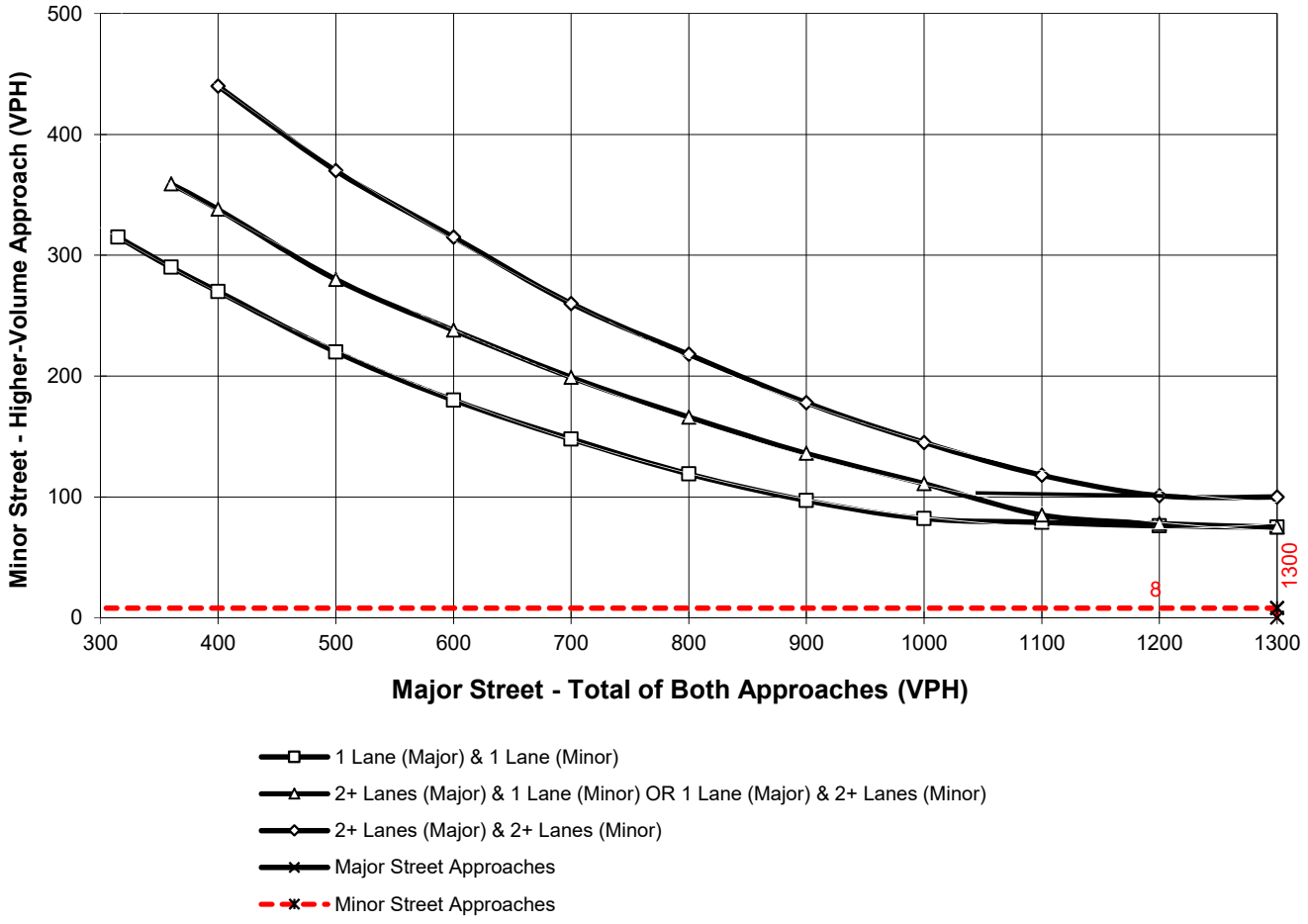
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **6220**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway** High Volume Approach (VPH) = **8**
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)

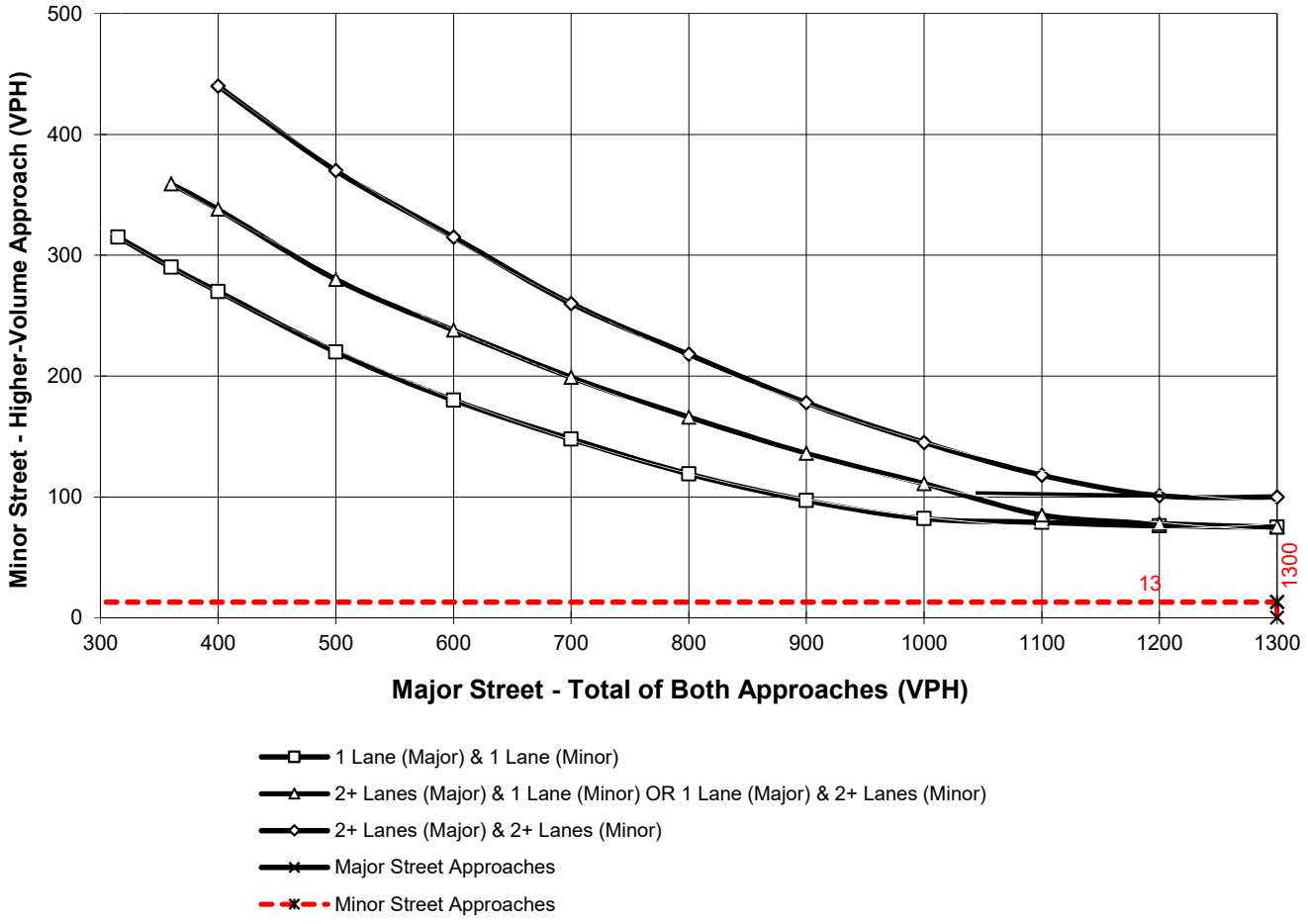
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) Without Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.**
Total of Both Approaches (VPH) = **6258**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Vista Grande**
High Volume Approach (VPH) = **13**
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

APPENDIX 7.4:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet
(Average Traffic Estimate Form)

DIST	CO	RTE	PM	TRAFFIC CONDITIONS	2040 WP
				CALC RV	DATE 05/23/19
Jurisdiction: **City of Riverside**				CHK RV	DATE 05/23/19
Major Street: **Barton Street**				Critical Approach Speed (Major)	55 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 = **793** vpd Minor Street Future ADT = **209** 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 **793**	*1* **209**	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 **793**	*1* **209**	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** 12% **B** 9%	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)

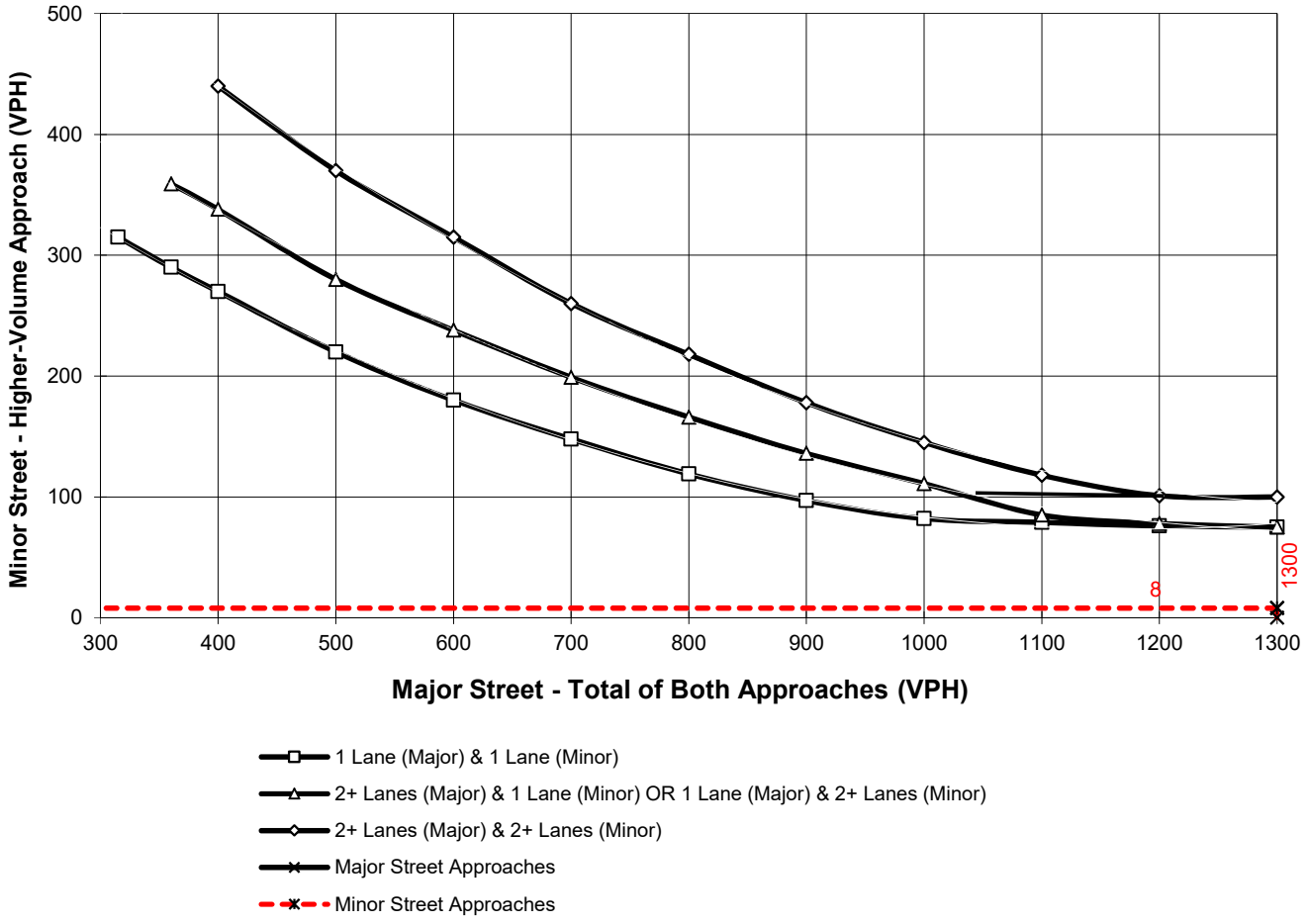
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) With Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **6253**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Private Driveway** High Volume Approach (VPH) = **8**
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)

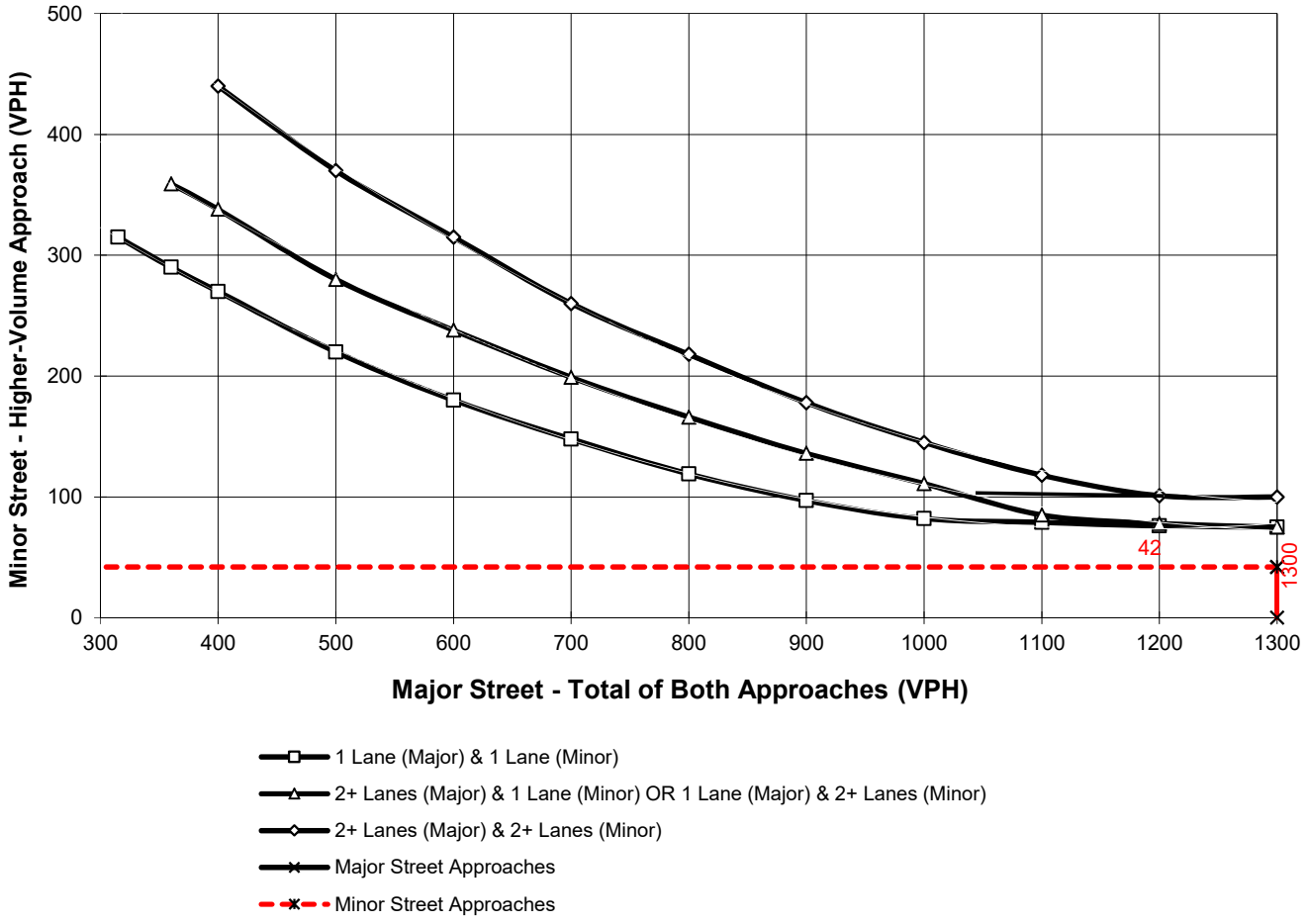
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Horizon Year (2040) With Project Conditions - Weekday PM Peak Hour**

Major Street Name = **Alessandro Bl.** Total of Both Approaches (VPH) = **6302**
Number of Approach Lanes Major Street = **4**

Minor Street Name = **Vista Grande** High Volume Approach (VPH) = **42**
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

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APPENDIX 7.5:

HORIZON YEAR (2040) WITHOUT PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2056	3700	325	320	321
v/c Ratio	0.60	1.06	0.95	1.00	0.98
Control Delay	7.4	40.3	73.0	83.7	77.7
Queue Delay	0.0	0.9	0.0	0.0	0.0
Total Delay	7.4	41.2	73.0	83.7	77.7
Queue Length 50th (ft)	167	~784	182	172	164
Queue Length 95th (ft)	204	m157	#349	#360	#341
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3432	3475	343	320	328
Starvation Cap Reductn	0	7	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	1.07	0.95	1.00	0.98

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.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	93	1839	2538	215	630	623	252
v/c Ratio	0.80	0.70	1.24	0.29	1.01	1.04	0.40
Control Delay	72.8	15.3	139.2	5.5	67.1	75.3	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	15.3	139.2	5.5	67.1	75.3	13.8
Queue Length 50th (ft)	49	292	~624	12	~353	~397	57
Queue Length 95th (ft)	m#103	m337	#720	55	#588	#624	123
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2641	2044	729	625	601	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.70	1.24	0.29	1.01	1.04	0.40

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.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	3435	2661	319	303	303
v/c Ratio	1.05	0.81	0.80	0.83	0.80
Control Delay	48.1	14.1	46.3	46.8	44.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	48.1	14.1	46.3	46.8	44.2
Queue Length 50th (ft)	~759	368	163	146	138
Queue Length 95th (ft)	#853	443	#281	#279	#261
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3270	3305	443	404	415
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	1.05	0.81	0.72	0.75	0.73

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	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	268	3013	1878	319	455	457	365
v/c Ratio	2.44	1.06	0.82	0.36	0.81	0.84	0.65
Control Delay	694.6	57.1	25.7	3.1	40.3	44.0	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	694.6	57.1	25.7	3.1	40.3	44.0	25.7
Queue Length 50th (ft)	~253	~692	330	0	244	260	140
Queue Length 95th (ft)	#403	#787	394	45	#409	#446	244
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	110	2840	2289	875	565	542	562
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.44	1.06	0.82	0.36	0.81	0.84	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 7.6:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2072	3724	325	333	335
v/c Ratio	0.60	1.07	0.95	1.04	1.02
Control Delay	7.5	43.4	73.0	94.1	88.4
Queue Delay	0.0	0.9	0.0	0.0	0.0
Total Delay	7.5	44.3	73.0	94.1	88.4
Queue Length 50th (ft)	169	~795	182	~197	~180
Queue Length 95th (ft)	207	m154	#349	#378	#360
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3432	3475	343	320	328
Starvation Cap Reductn	0	7	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	1.07	0.95	1.04	1.02

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	101	1840	2542	215	641	632	252
v/c Ratio	0.87	0.70	1.24	0.29	1.03	1.05	0.40
Control Delay	84.3	15.3	140.0	5.5	71.6	79.7	13.8
Queue Delay	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	84.3	15.3	140.3	5.5	71.6	79.7	13.8
Queue Length 50th (ft)	54	293	~626	12	~389	~409	57
Queue Length 95th (ft)	m#117	m337	#722	55	#602	#636	123
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	116	2641	2044	729	625	601	624
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	183	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.70	1.37	0.29	1.03	1.05	0.40

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.

m Volume for 95th percentile queue is metered by upstream signal.



Lane Group	EBT	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	3492	2674	319	309	310
v/c Ratio	1.07	0.81	0.79	0.83	0.81
Control Delay	57.0	14.4	45.2	47.4	45.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	14.4	45.2	47.4	45.0
Queue Length 50th (ft)	~783	372	163	150	144
Queue Length 95th (ft)	#877	447	#281	#287	#270
Internal Link Dist (ft)	673	688		1585	
Turn Bay Length (ft)			525		525
Base Capacity (vph)	3254	3290	443	404	415
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	1.07	0.81	0.72	0.76	0.75

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	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	297	3018	1880	319	461	461	365
v/c Ratio	2.70	1.00	0.76	0.35	0.91	0.95	0.71
Control Delay	809.9	36.2	21.9	2.8	54.9	62.1	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	809.9	36.2	21.9	2.8	54.9	62.1	30.1
Queue Length 50th (ft)	~287	~579	307	0	263	278	148
Queue Length 95th (ft)	#444	#750	368	42	#453	#490	257
Internal Link Dist (ft)		688	486			1005	
Turn Bay Length (ft)	200				400		400
Base Capacity (vph)	110	3011	2463	918	507	487	514
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.70	1.00	0.76	0.35	0.91	0.95	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.

APPENDIX 7.7:

HORIZON YEAR (2040) WITH PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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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	1886	8	0	3448	0	0	0	7	0	0	0
Future Vol, veh/h	0	1886	8	0	3448	0	0	0	7	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	2050	9	0	3748	0	0	0	8	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1030	-	-	1874
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*488	0	0	*122
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*488	-	-	*122
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.5	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	488	-	-	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-	-	-
HCM Control Delay (s)	12.5	-	-	-	-	0
HCM Lane LOS	B	-	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

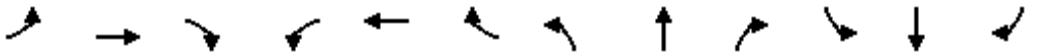
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1889	14	3447	4	0	11	0
Future Volume (vph)	4	1889	14	3447	4	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.2	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.6	93.6	9.4	93.4	17.0	17.0	17.0	17.0
Total Split (%)	8.0%	78.0%	7.8%	77.8%	14.2%	14.2%	14.2%	14.2%
Yellow Time (s)	3.2	5.5	3.2	5.5	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
Total Lost Time (s)	4.2	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lead	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1889	8	14	3447	35	4	0	17	11	0	1
Future Volume (veh/h)	4	1889	8	14	3447	35	4	0	17	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	2053	9	15	3747	38	4	0	18	12	0	1
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	165	3869	17	162	3834	39	44	9	76	146	0	92
Arrive On Green	0.18	1.00	1.00	0.09	0.72	0.72	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1810	5330	23	1810	5295	54	145	149	1322	1417	0	1610
Grp Volume(v), veh/h	4	1332	730	15	2443	1342	22	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1890	1616	0	0	1417	0	1610
Q Serve(g_s), s	0.2	0.0	0.0	0.9	79.6	81.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.9	79.6	81.0	1.5	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.18		0.82	1.00		1.00
Lane Grp Cap(c), veh/h	165	2510	1376	162	2504	1369	128	0	0	146	0	92
V/C Ratio(X)	0.02	0.53	0.53	0.09	0.98	0.98	0.17	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	165	2510	1376	162	2504	1369	201	0	0	211	0	166
HCM Platoon Ratio	2.00	2.00	2.00	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	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.7	0.0	0.0	50.2	15.5	15.7	54.0	0.0	0.0	53.7	0.0	53.3
Incr Delay (d2), s/veh	0.0	0.8	1.5	0.0	2.2	4.1	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.3	0.6	0.4	22.3	25.6	0.7	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	0.8	1.5	50.2	17.7	19.8	54.7	0.0	0.0	53.9	0.0	53.4
LnGrp LOS	D	A	A	D	B	B	D	A	A	D	A	D
Approach Vol, veh/h		2066			3800			22			13	
Approach Delay, s/veh		1.1			18.6			54.7			53.9	
Approach LOS		A			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.5	14.9	93.6		11.5	15.1	93.4				
Change Period (Y+Rc), s		4.6	4.2	* 6.5		4.6	4.2	* 6.5				
Max Green Setting (Gmax), s		12.4	5.2	* 87		12.4	5.4	* 87				
Max Q Clear Time (g_c+I1), s		3.5	2.9	2.0		2.8	2.2	83.0				
Green Ext Time (p_c), s		0.0	0.0	24.3		0.0	0.0	3.8				

Intersection Summary		
HCM 6th Ctrl Delay		12.7
HCM 6th LOS		B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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	3365	5	0	2879	0	0	0	8	0	0	0
Future Vol, veh/h	0	3365	5	0	2879	0	0	0	8	0	0	0
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	-	-	-	-	-	-	-	-	0	-	-	0
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	0	3658	5	0	3129	0	0	0	9	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-	1832	-	-	1565
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	-	-	7.1	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	-	-	3.9	-	-	3.9
Pot Cap-1 Maneuver	0	-	-	0	-	-	0	0	*144	0	0	*251
Stage 1	0	-	-	0	-	-	0	0	-	0	0	-
Stage 2	0	-	-	0	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-			1			1
Mov Cap-1 Maneuver	-	-	-	-	-	-	-	-	*144	-	-	*251
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	31.6	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	144	-	-	-	-	-
HCM Lane V/C Ratio	0.06	-	-	-	-	-
HCM Control Delay (s)	31.6	-	-	-	-	0
HCM Lane LOS	D	-	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

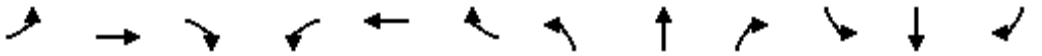
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	3371	27	2874	2	0	37	0
Future Volume (vph)	2	3371	27	2874	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	23.6	81.6	19.4	77.4	19.0	19.0	19.0	19.0
Total Split (%)	19.7%	68.0%	16.2%	64.5%	15.8%	15.8%	15.8%	15.8%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	4.6	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 60 (50%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3371	14	27	2874	16	2	0	11	37	0	5
Future Volume (veh/h)	2	3371	14	27	2874	16	2	0	11	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	3664	15	29	3124	17	2	0	12	40	0	5
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	330	4070	17	47	3146	17	41	13	116	182	0	134
Arrive On Green	0.36	1.00	1.00	0.03	0.59	0.59	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5332	22	1810	5324	29	80	152	1391	1424	0	1610
Grp Volume(v), veh/h	2	2374	1305	29	2027	1114	14	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1895	1623	0	0	1424	0	1610
Q Serve(g_s), s	0.1	0.0	0.0	1.9	69.6	70.0	0.0	0.0	0.0	2.0	0.0	0.3
Cycle Q Clear(g_c), s	0.1	0.0	0.0	1.9	69.6	70.0	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.14		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	330	2640	1447	47	2043	1120	170	0	0	182	0	134
V/C Ratio(X)	0.01	0.90	0.90	0.62	0.99	0.99	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	330	2640	1447	223	2043	1120	233	0	0	239	0	199
HCM Platoon Ratio	2.00	2.00	2.00	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	0.32	0.32	0.32	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	0.0	57.9	24.3	24.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	0.0	5.4	9.4	1.6	9.6	14.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	3.8	0.9	26.3	30.4	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	5.4	9.4	59.5	33.9	38.5	51.1	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	C	A	A	E	C	D	D	A	A	D	A	D
Approach Vol, veh/h		3681			3170			14			45	
Approach Delay, s/veh		6.9			35.7			51.1			52.1	
Approach LOS		A			D			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.2	7.7	98.1	14.2	28.4	77.4
Change Period (Y+Rc), s	* 4.2	4.6	6.5	* 4.2	6.5	* 6.5
Max Green Setting (Gmax), s	* 15	14.8	75.1	* 15	19.0	* 71
Max Q Clear Time (g_c+I1), s	2.9	3.9	2.0	4.9	2.1	72.0
Green Ext Time (p_c), s	0.0	0.0	65.6	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX 8.1:

SUPPLEMENTAL ANALYSIS (ALTERNATIVE 1) WORKSHEETS

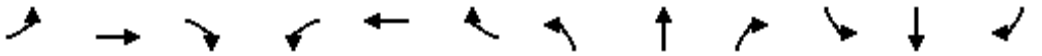
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Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	5	1226	2511	6	
Future Volume (vph)	5	1226	2511	6	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	11.0	110.0	99.0	10.0	10.0
Total Split (%)	9.2%	91.7%	82.5%	8.3%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 63.4
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1226	7	0	2511	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1226	7	0	2511	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	5	1333	8	0	2729	0	0	0	4	0	0	0
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	12	4982	30	0	4492	0	0	0	0	0	0	0
Arrive On Green	0.01	0.94	0.94	0.00	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5320	32	0	5529	0		0			0	
Grp Volume(v), veh/h	5	866	475	0	2729	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	0	1729	0						
Q Serve(g_s), s	0.2	1.5	1.5	0.0	10.7	0.0						
Cycle Q Clear(g_c), s	0.2	1.5	1.5	0.0	10.7	0.0						
Prop In Lane	1.00		0.02	0.00		0.00						
Lane Grp Cap(c), veh/h	12	3238	1774	0	4492	0						
V/C Ratio(X)	0.42	0.27	0.27	0.00	0.61	0.00						
Avail Cap(c_a), veh/h	160	5044	2763	0	6776	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	35.8	0.2	0.2	0.0	1.4	0.0						
Incr Delay (d2), s/veh	8.4	0.0	0.1	0.0	0.1	0.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.1	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.2	0.2	0.3	0.0	1.5	0.0						
LnGrp LOS	D	A	A	A	A	A						
Approach Vol, veh/h		1346			2729							
Approach Delay, s/veh		0.4			1.5							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		72.3			5.1	67.2						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		105.4			6.4	94.4						
Max Q Clear Time (g_c+I1), s		3.5			2.2	12.7						
Green Ext Time (p_c), s		10.4			0.0	49.8						
Intersection Summary												
HCM 6th Ctrl Delay			1.1									
HCM 6th LOS			A									

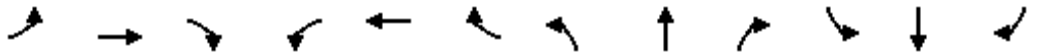
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1221	12	2508	3	0	11	0
Future Volume (vph)	4	1221	12	2508	3	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Future Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1327	8	13	2726	38	3	0	15	12	0	1
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	112	4278	26	27	3888	54	42	7	72	140	0	86
Arrive On Green	0.06	0.80	0.80	0.01	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5320	32	1810	5272	73	130	139	1347	1421	0	1610
Grp Volume(v), veh/h	4	863	472	13	1785	979	18	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1887	1616	0	0	1421	0	1610
Q Serve(g_s), s	0.2	7.8	7.8	0.9	33.6	34.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	7.8	7.8	0.9	33.6	34.0	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.04	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	112	2781	1523	27	2550	1392	122	0	0	140	0	86
V/C Ratio(X)	0.04	0.31	0.31	0.49	0.70	0.70	0.15	0.00	0.00	0.09	0.00	0.01
Avail Cap(c_a), veh/h	112	2781	1523	78	2550	1392	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	0.97	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	3.1	3.1	58.7	8.5	8.6	54.3	0.0	0.0	54.1	0.0	53.8
Incr Delay (d2), s/veh	0.1	0.3	0.5	2.5	0.8	1.5	0.6	0.0	0.0	0.3	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	1.6	1.8	0.4	9.0	10.2	0.5	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	3.3	3.6	61.2	9.3	10.1	54.9	0.0	0.0	54.3	0.0	53.8
LnGrp LOS	D	A	A	E	A	B	D	A	A	D	A	D
Approach Vol, veh/h		1339			2777			18			13	
Approach Delay, s/veh		3.6			9.8			54.9			54.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.0	6.0	103.0	11.0	14.0	95.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5	* 6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	5.0	* 89
Max Q Clear Time (g_c+I1), s	3.3	2.9	9.8	2.8	2.2	36.0
Green Ext Time (p_c), s	0.0	0.0	10.3	0.0	0.0	35.9

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

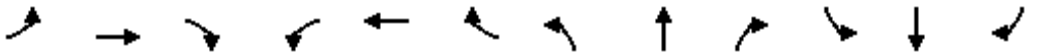
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	3	2314	1947	7	
Future Volume (vph)	3	2314	1947	7	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	12.0	108.0	96.0	12.0	12.0
Total Split (%)	10.0%	90.0%	80.0%	10.0%	10%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 49.1
Natural Cycle: 50
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





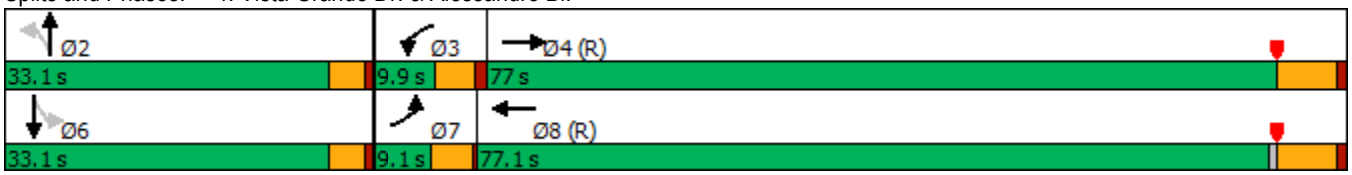
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2314	4	0	1947	0	0	0	7	0	0	0
Future Volume (veh/h)	3	2314	4	0	1947	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	3	2515	4	0	2116	0	0	0	6	0	0	0
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	7	4869	8	0	4236	0	0	0	0	0	0	0
Arrive On Green	0.00	0.91	0.91	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5348	9	0	5529	0		0			0	
Grp Volume(v), veh/h	3	1626	893	0	2116	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1729	1898	0	1729	0						
Q Serve(g_s), s	0.1	4.1	4.1	0.0	6.5	0.0						
Cycle Q Clear(g_c), s	0.1	4.1	4.1	0.0	6.5	0.0						
Prop In Lane	1.00		0.00	0.00		0.00						
Lane Grp Cap(c), veh/h	7	3148	1728	0	4236	0						
V/C Ratio(X)	0.41	0.52	0.52	0.00	0.50	0.00						
Avail Cap(c_a), veh/h	261	6964	3824	0	9234	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	25.5	0.4	0.4	0.0	1.5	0.0						
Incr Delay (d2), s/veh	12.8	0.1	0.2	0.0	0.1	0.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.0	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	0.5	0.6	0.0	1.5	0.0						
LnGrp LOS	D	A	A	A	A	A						
Approach Vol, veh/h		2522			2116							
Approach Delay, s/veh		0.6			1.5							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		51.3			4.8	46.5						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		103.4			7.4	91.4						
Max Q Clear Time (g_c+I1), s		6.1			2.1	8.5						
Green Ext Time (p_c), s		40.7			0.0	28.6						
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

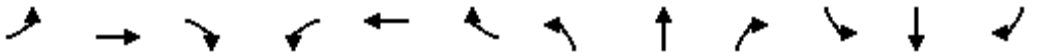
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2309	23	1935	2	0	37	0
Future Volume (vph)	2	2309	23	1935	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Future Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2510	13	25	2103	17	2	0	10	40	0	5
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	5	4077	21	43	4196	34	44	14	113	181	0	134
Arrive On Green	0.00	0.77	0.77	0.02	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5325	28	1810	5307	43	106	165	1352	1427	0	1610
Grp Volume(v), veh/h	2	1629	894	25	1370	750	12	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1892	1622	0	0	1427	0	1610
Q Serve(g_s), s	0.1	25.1	25.1	1.6	16.5	16.5	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	25.1	25.1	1.6	16.5	16.5	0.8	0.0	0.0	3.0	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	5	2647	1451	43	2734	1496	170	0	0	181	0	134
V/C Ratio(X)	0.41	0.62	0.62	0.59	0.50	0.50	0.07	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2647	1451	80	2734	1496	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.74	0.74	0.74	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	6.2	6.2	58.0	4.4	4.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	41.5	0.9	1.7	3.5	0.5	0.9	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.2	7.1	0.8	3.6	4.1	0.3	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.3	7.2	7.9	61.5	4.8	5.2	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2525			2145			12			45	
Approach Delay, s/veh		7.5			5.6			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.2	7.4	98.4	14.2	4.4	101.4
Change Period (Y+Rc), s	* 4.2	4.6	6.5	* 4.2	4.1	6.5
Max Green Setting (Gmax), s	* 29	5.3	70.5	* 29	5.0	70.6
Max Q Clear Time (g_c+I1), s	2.8	3.6	27.1	5.0	2.1	18.5
Green Ext Time (p_c), s	0.0	0.0	27.7	0.1	0.0	22.7

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

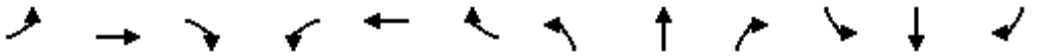
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	5	1603	2858	6	
Future Volume (vph)	5	1603	2858	6	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	11.0	110.0	99.0	10.0	10.0
Total Split (%)	9.2%	91.7%	82.5%	8.3%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 80.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1603	8	0	2858	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1603	8	0	2858	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	5	1742	9	0	3107	0	0	0	4	0	0	0
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	12	5043	26	0	4602	0	0	0	0	0	0	0
Arrive On Green	0.01	0.95	0.95	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5326	28	0	5529	0		0			0	
Grp Volume(v), veh/h	5	1131	620	0	3107	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	0	1729	0						
Q Serve(g_s), s	0.2	2.2	2.2	0.0	14.6	0.0						
Cycle Q Clear(g_c), s	0.2	2.2	2.2	0.0	14.6	0.0						
Prop In Lane	1.00		0.01	0.00		0.00						
Lane Grp Cap(c), veh/h	12	3274	1794	0	4602	0						
V/C Ratio(X)	0.42	0.35	0.35	0.00	0.68	0.00						
Avail Cap(c_a), veh/h	134	4207	2306	0	5653	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	42.9	0.2	0.2	0.0	1.4	0.0						
Incr Delay (d2), s/veh	8.6	0.1	0.1	0.0	0.2	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	0.1	0.0	0.1	0.0	0.1	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.2	0.3	0.0	1.6	0.0						
LnGrp LOS	D	A	A	A	A	A						
Approach Vol, veh/h		1756			3107							
Approach Delay, s/veh		0.4			1.6							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		86.6			5.2	81.5						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		105.4			6.4	94.4						
Max Q Clear Time (g_c+I1), s		4.2			2.2	16.6						
Green Ext Time (p_c), s		17.1			0.0	60.3						
Intersection Summary												
HCM 6th Ctrl Delay			1.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1598	13	2854	3	0	11	0
Future Volume (vph)	4	1598	13	2854	3	0	11	0
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)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1598	8	13	2854	35	3	0	15	11	0	1
Future Volume (veh/h)	4	1598	8	13	2854	35	3	0	15	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1737	9	14	3102	38	3	0	16	12	0	1
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	111	4273	22	28	3895	48	41	7	74	142	0	88
Arrive On Green	0.06	0.80	0.80	0.02	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5325	28	1810	5282	64	122	133	1361	1419	0	1610
Grp Volume(v), veh/h	4	1128	618	14	2027	1113	19	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1888	1616	0	0	1419	0	1610
Q Serve(g_s), s	0.2	11.5	11.5	0.9	44.6	45.3	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	11.5	11.5	0.9	44.6	45.3	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.16		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	111	2774	1520	28	2550	1393	123	0	0	142	0	88
V/C Ratio(X)	0.04	0.41	0.41	0.50	0.79	0.80	0.15	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	111	2774	1520	78	2550	1393	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.28	0.28	0.28	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.0	3.5	3.5	58.6	10.0	10.1	54.2	0.0	0.0	54.0	0.0	53.7
Incr Delay (d2), s/veh	0.1	0.4	0.8	1.4	0.8	1.4	0.6	0.0	0.0	0.3	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	2.3	2.7	0.4	11.9	13.4	0.6	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	3.9	4.2	60.0	10.7	11.5	54.8	0.0	0.0	54.2	0.0	53.7
LnGrp LOS	D	A	A	E	B	B	D	A	A	D	A	D
Approach Vol, veh/h		1750			3154			19			13	
Approach Delay, s/veh		4.1			11.2			54.8			54.2	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.2	6.1	102.8	11.2	13.8	95.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5	* 6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	5.0	* 89
Max Q Clear Time (g_c+I1), s	3.3	2.9	13.5	2.8	2.2	47.3
Green Ext Time (p_c), s	0.0	0.0	16.7	0.0	0.0	34.7

Intersection Summary	
HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

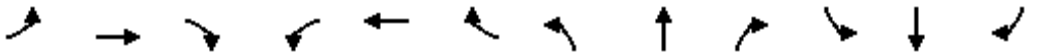
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	3	2688	2424	8	
Future Volume (vph)	3	2688	2424	8	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	12.0	108.0	96.0	12.0	12.0
Total Split (%)	10.0%	90.0%	80.0%	10.0%	10%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 70.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





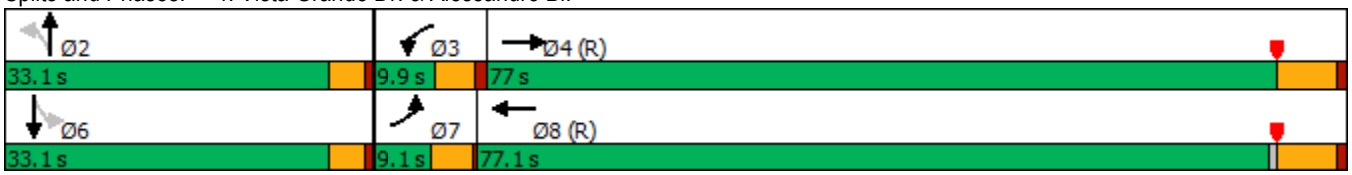
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2688	4	0	2424	0	0	0	8	0	0	0
Future Volume (veh/h)	3	2688	4	0	2424	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	3	2922	4	0	2635	0	0	0	7	0	0	0
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	7	4996	7	0	4480	0	0	0	0	0	0	0
Arrive On Green	0.00	0.93	0.93	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5349	7	0	5529	0		0			0	
Grp Volume(v), veh/h	3	1888	1038	0	2635	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1729	1899	0	1729	0						
Q Serve(g_s), s	0.1	5.5	5.5	0.0	9.8	0.0						
Cycle Q Clear(g_c), s	0.1	5.5	5.5	0.0	9.8	0.0						
Prop In Lane	1.00		0.00	0.00		0.00						
Lane Grp Cap(c), veh/h	7	3229	1773	0	4480	0						
V/C Ratio(X)	0.41	0.58	0.59	0.00	0.59	0.00						
Avail Cap(c_a), veh/h	192	5138	2821	0	6812	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	34.6	0.3	0.3	0.0	1.3	0.0						
Incr Delay (d2), s/veh	13.0	0.2	0.3	0.0	0.1	0.0						
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0						
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.2	0.0	0.1	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.5	0.6	0.0	1.4	0.0						
LnGrp LOS	D	A	A	A	A	A						
Approach Vol, veh/h		2929			2635							
Approach Delay, s/veh		0.6			1.4							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		69.6			4.9	64.7						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		103.4			7.4	91.4						
Max Q Clear Time (g_c+I1), s		7.5			2.1	11.8						
Green Ext Time (p_c), s		57.4			0.0	45.8						
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

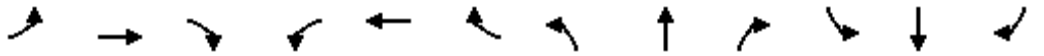
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2683	25	2412	2	0	37	0
Future Volume (vph)	2	2683	25	2412	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Future Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2916	14	27	2622	17	2	0	11	40	0	5
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	5	4073	20	45	4204	27	42	13	114	182	0	134
Arrive On Green	0.00	0.76	0.76	0.02	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5328	26	1810	5317	34	92	158	1373	1426	0	1610
Grp Volume(v), veh/h	2	1891	1039	27	1704	935	13	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1894	1623	0	0	1426	0	1610
Q Serve(g_s), s	0.1	34.1	34.3	1.8	24.4	24.5	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	34.1	34.3	1.8	24.4	24.5	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.15		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	5	2643	1449	45	2734	1497	170	0	0	182	0	134
V/C Ratio(X)	0.41	0.72	0.72	0.60	0.62	0.62	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2643	1449	80	2734	1497	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.79	0.56	0.56	0.56	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	7.3	7.4	57.9	5.2	5.2	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	38.5	1.3	2.4	2.7	0.6	1.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.5	9.8	0.8	5.2	6.0	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.3	8.7	9.8	60.6	5.8	6.3	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2932			2666			13			45	
Approach Delay, s/veh		9.1			6.5			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.2	7.6	98.2	14.2	4.4	101.4
Change Period (Y+Rc), s	* 4.2	4.6	6.5	* 4.2	4.1	6.5
Max Green Setting (Gmax), s	* 29	5.3	70.5	* 29	5.0	70.6
Max Q Clear Time (g_c+I1), s	2.9	3.8	36.3	4.9	2.1	26.5
Green Ext Time (p_c), s	0.0	0.0	27.9	0.1	0.0	29.9

Intersection Summary	
HCM 6th Ctrl Delay	8.3
HCM 6th LOS	A

Notes

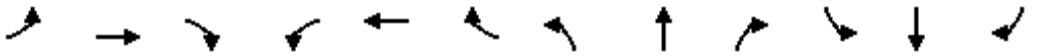
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	6	1880	3448	7	
Future Volume (vph)	6	1880	3448	7	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	11.0	110.0	99.0	10.0	10.0
Total Split (%)	9.2%	91.7%	82.5%	8.3%	8%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 102.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1880	8	0	3448	0	0	0	7	0	0	0
Future Volume (veh/h)	6	1880	8	0	3448	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	7	2043	9	0	3748	0	0	0	5	0	0	0
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	16	5087	22	0	4668	0	0	0	0	0	0	0
Arrive On Green	0.01	0.95	0.95	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5330	23	0	5529	0		0			0	
Grp Volume(v), veh/h	7	1325	727	0	3748	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	0	1729	0						
Q Serve(g_s), s	0.4	2.9	2.9	0.0	26.3	0.0						
Cycle Q Clear(g_c), s	0.4	2.9	2.9	0.0	26.3	0.0						
Prop In Lane	1.00		0.01	0.00		0.00						
Lane Grp Cap(c), veh/h	16	3300	1809	0	4668	0						
V/C Ratio(X)	0.44	0.40	0.40	0.00	0.80	0.00						
Avail Cap(c_a), veh/h	115	3612	1980	0	4852	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	49.8	0.2	0.2	0.0	1.8	0.0						
Incr Delay (d2), s/veh	6.9	0.1	0.1	0.0	1.0	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	0.2	0.0	0.1	0.0	0.4	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	0.2	0.3	0.0	2.8	0.0						
LnGrp LOS	E	A	A	A	A	A						
Approach Vol, veh/h		2059			3748							
Approach Delay, s/veh		0.5			2.8							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		100.9			5.5	95.4						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		105.4			6.4	94.4						
Max Q Clear Time (g_c+I1), s		4.9			2.4	28.3						
Green Ext Time (p_c), s		24.5			0.0	62.5						
Intersection Summary												
HCM 6th Ctrl Delay			2.0									
HCM 6th LOS			A									

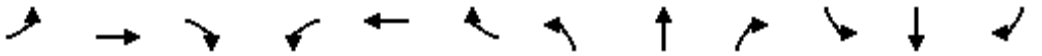
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1883	14	3447	4	0	11	0
Future Volume (vph)	4	1883	14	3447	4	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1883	8	14	3447	35	4	0	17	11	0	1
Future Volume (veh/h)	4	1883	8	14	3447	35	4	0	17	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	2047	9	15	3747	38	4	0	18	12	0	1
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	106	4257	19	30	3905	39	44	9	76	146	0	92
Arrive On Green	0.06	0.80	0.80	0.02	0.74	0.74	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1810	5330	23	1810	5295	54	145	149	1322	1417	0	1610
Grp Volume(v), veh/h	4	1328	728	15	2443	1342	22	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1890	1616	0	0	1417	0	1610
Q Serve(g_s), s	0.3	15.1	15.1	1.0	75.8	77.1	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.3	15.1	15.1	1.0	75.8	77.1	1.5	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.18		0.82	1.00		1.00
Lane Grp Cap(c), veh/h	106	2762	1514	30	2550	1394	128	0	0	146	0	92
V/C Ratio(X)	0.04	0.48	0.48	0.51	0.96	0.96	0.17	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	106	2762	1514	78	2550	1394	180	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	3.9	3.9	58.5	14.1	14.3	54.0	0.0	0.0	53.7	0.0	53.3
Incr Delay (d2), s/veh	0.1	0.6	1.0	0.4	1.3	2.6	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.1	3.6	0.4	20.2	23.0	0.7	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	4.5	5.0	59.0	15.4	16.9	54.7	0.0	0.0	53.9	0.0	53.4
LnGrp LOS	D	A	A	E	B	B	D	A	A	D	A	D
Approach Vol, veh/h		2060			3800			22			13	
Approach Delay, s/veh		4.8			16.1			54.7			53.9	
Approach LOS		A			B			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.5	6.2	102.3		11.5	13.5	95.0				
Change Period (Y+Rc), s		4.6	* 4.2	6.5		4.6	6.5	* 6.5				
Max Green Setting (Gmax), s		10.8	* 5.2	88.7		10.8	5.0	* 89				
Max Q Clear Time (g_c+I1), s		3.5	3.0	17.1		2.8	2.3	79.1				
Green Ext Time (p_c), s		0.0	0.0	23.4		0.0	0.0	9.2				

Intersection Summary		
HCM 6th Ctrl Delay		12.4
HCM 6th LOS		B

Notes

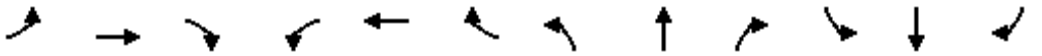
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø7
Lane Configurations					
Traffic Volume (vph)	4	3361	2879	8	
Future Volume (vph)	4	3361	2879	8	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	7
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	5.0	5.0
Minimum Split (s)	9.6	26.6	26.6	9.1	9.1
Total Split (s)	12.0	108.0	96.0	12.0	12.0
Total Split (%)	10.0%	90.0%	80.0%	10.0%	10%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 104.9
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





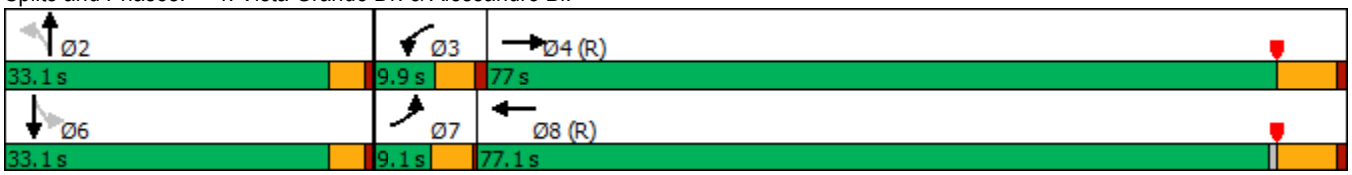
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3361	5	0	2879	0	0	0	8	0	0	0
Future Volume (veh/h)	4	3361	5	0	2879	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1900	1900	0	0	1900	0	0	1900
Adj Flow Rate, veh/h	4	3653	5	0	3129	0	0	0	7	0	0	0
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	10	5415	7	0	5118	0	0	0	0	0	0	0
Arrive On Green	0.01	0.95	0.95	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5691	8	0	5700	0		0			0	
Grp Volume(v), veh/h	4	2439	1219	0	3129	0		0.0			0.0	
Grp Sat Flow(s),veh/h/ln	1810	1900	1899	0	1900	0						
Q Serve(g_s), s	0.2	8.2	8.3	0.0	11.8	0.0						
Cycle Q Clear(g_c), s	0.2	8.2	8.3	0.0	11.8	0.0						
Prop In Lane	1.00		0.00	0.00		0.00						
Lane Grp Cap(c), veh/h	10	3616	1807	0	5118	0						
V/C Ratio(X)	0.42	0.67	0.67	0.00	0.61	0.00						
Avail Cap(c_a), veh/h	141	4135	2066	0	5483	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	0.00	1.00	0.00						
Uniform Delay (d), s/veh	47.1	0.3	0.3	0.0	1.1	0.0						
Incr Delay (d2), s/veh	10.5	0.4	0.7	0.0	0.2	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	0.1	0.2	0.4	0.0	0.1	0.0						
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.7	1.0	0.0	1.3	0.0						
LnGrp LOS	E	A	A	A	A	A						
Approach Vol, veh/h		3662			3129							
Approach Delay, s/veh		0.9			1.3							
Approach LOS		A			A							
Timer - Assigned Phs		2			5	6						
Phs Duration (G+Y+Rc), s		95.0			5.1	89.9						
Change Period (Y+Rc), s		4.6			4.6	4.6						
Max Green Setting (Gmax), s		103.4			7.4	91.4						
Max Q Clear Time (g_c+I1), s		10.3			2.2	13.8						
Green Ext Time (p_c), s		80.2			0.0	60.7						
Intersection Summary												
HCM 6th Ctrl Delay			1.1									
HCM 6th LOS			A									

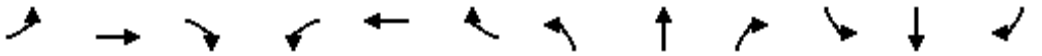
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	3367	27	2874	2	0	37	0
Future Volume (vph)	2	3367	27	2874	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3367	14	27	2874	16	2	0	11	37	0	5
Future Volume (veh/h)	2	3367	14	27	2874	16	2	0	11	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	3660	15	29	3124	17	2	0	12	40	0	5
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	5	4070	17	47	4209	23	41	13	116	182	0	134
Arrive On Green	0.00	0.76	0.76	0.03	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5332	22	1810	5324	29	80	152	1391	1424	0	1610
Grp Volume(v), veh/h	2	2372	1303	29	2027	1114	14	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1895	1623	0	0	1424	0	1610
Q Serve(g_s), s	0.1	62.0	62.4	1.9	35.6	35.8	0.0	0.0	0.0	2.0	0.0	0.3
Cycle Q Clear(g_c), s	0.1	62.0	62.4	1.9	35.6	35.8	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.14		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	5	2640	1447	47	2734	1498	170	0	0	182	0	134
V/C Ratio(X)	0.41	0.90	0.90	0.62	0.74	0.74	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2640	1447	80	2734	1498	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.32	0.32	0.32	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	10.7	10.7	57.9	6.4	6.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	35.0	3.9	6.9	1.6	0.6	1.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	16.1	19.0	0.9	7.5	8.6	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.8	14.6	17.7	59.5	7.0	7.5	51.1	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	B	B	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		3677			3170			14			45	
Approach Delay, s/veh		15.8			7.6			51.1			52.1	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.2	7.7	98.1	14.2	4.4	101.4
Change Period (Y+Rc), s	* 4.2	4.6	6.5	* 4.2	4.1	6.5
Max Green Setting (Gmax), s	* 29	5.3	70.5	* 29	5.0	70.6
Max Q Clear Time (g_c+I1), s	2.9	3.9	64.4	4.9	2.1	37.8
Green Ext Time (p_c), s	0.0	0.0	6.0	0.1	0.0	28.5

Intersection Summary	
HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	TR	T	T	TR	R
Maximum Queue (ft)	29	52	74	53	498	503	494	31
Average Queue (ft)	5	3	3	2	33	35	43	5
95th Queue (ft)	22	21	26	18	181	188	195	22
Link Distance (ft)		592	592	592	528	528	528	346
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150							
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L
Maximum Queue (ft)	49	138	114	141	72	3894	3893	969	31	52
Average Queue (ft)	2	14	19	11	15	349	226	116	14	16
95th Queue (ft)	16	61	66	56	44	1956	1408	506	38	43
Link Distance (ft)		528	528	528		4017	4017	4017	846	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	155				155					150
Storage Blk Time (%)		0				3				
Queuing Penalty (veh)		0				0				

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	TR	T	T	TR	R
Maximum Queue (ft)	31	624	580	524	76	90	70	53
Average Queue (ft)	4	43	57	37	8	9	8	9
95th Queue (ft)	21	285	316	237	39	43	40	36
Link Distance (ft)		598	598	598	542	542	542	279
Upstream Blk Time (%)		0	0					
Queuing Penalty (veh)		0	0					
Storage Bay Dist (ft)	150							
Storage Blk Time (%)								
Queuing Penalty (veh)								

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	31	366	378	384	71	95	94	76	31	71	31
Average Queue (ft)	3	157	173	181	29	30	28	31	10	25	3
95th Queue (ft)	16	311	330	332	60	76	67	74	34	57	18
Link Distance (ft)		542	542	542		3997	3997	3997	839		778
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	155				155					150	
Storage Blk Time (%)		7									
Queuing Penalty (veh)		0									

Zone Summary

Zone wide Queuing Penalty: 0

APPENDIX 8.2:

SUPPLEMENTAL ANALYSIS (ALTERNATIVE 2) WORKSHEETS

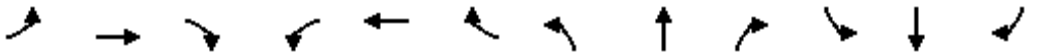
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Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	5	1226	2506	6	
Future Volume (vph)	5	1226	2506	6	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 63.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1226	7	0	2506	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1226	7	0	2506	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1333	8	0	2724	0	0	0	4	0	0	0
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	12	4974	30	0	4478	0	0	0	0	0	3	0
Arrive On Green	0.01	0.93	0.93	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5320	32	0	5529	0		0		0	-87400	0
Grp Volume(v), veh/h	5	866	475	0	2724	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	0	1729	0				0	1900	0
Q Serve(g_s), s	0.2	1.5	1.5	0.0	10.7	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	1.5	1.5	0.0	10.7	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.02	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	12	3233	1771	0	4478	0				0	3	0
V/C Ratio(X)	0.42	0.27	0.27	0.00	0.61	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	138	4926	2698	0	6656	0				0	268	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	35.0	0.2	0.2	0.0	1.4	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	8.4	0.0	0.1	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	0.2	0.3	0.0	1.5	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		1346			2724						0	
Approach Delay, s/veh		0.4			1.5						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		70.8		0.0	5.1	65.7						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		3.5		0.0	2.2	12.7						
Green Ext Time (p_c), s		10.4		0.0	0.0	48.4						

Intersection Summary												
HCM 6th Ctrl Delay			1.2									
HCM 6th LOS			A									

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	1218	12	2505	3	0	11	0
Future Volume (vph)	1218	12	2505	3	0	11	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	5.5	3.2	5.5	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
Total Lost Time (s)	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1218	7	12	2505	39	3	0	14	11	0	1
Future Volume (veh/h)	0	1218	7	12	2505	39	3	0	14	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	1324	8	13	2723	42	3	0	15	12	0	1
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	0	5431	33	27	4493	69	42	7	72	140	0	86
Arrive On Green	0.00	0.80	0.80	0.01	0.85	0.85	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	0	7020	41	1810	5263	81	130	139	1347	1421	0	1610
Grp Volume(v), veh/h	0	961	371	13	1785	980	18	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	0	1634	1893	1810	1729	1885	1616	0	0	1421	0	1610
Q Serve(g_s), s	0.0	5.7	5.7	0.9	18.7	19.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	5.7	5.7	0.9	18.7	19.0	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	0.00		0.02	1.00		0.04	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	0	3942	1522	27	2953	1610	122	0	0	140	0	86
V/C Ratio(X)	0.00	0.24	0.24	0.49	0.60	0.61	0.15	0.00	0.00	0.09	0.00	0.01
Avail Cap(c_a), veh/h	0	3942	1522	78	2953	1610	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.97	0.97	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	2.9	2.9	58.7	2.7	2.7	54.3	0.0	0.0	54.1	0.0	53.8
Incr Delay (d2), s/veh	0.0	0.1	0.4	2.5	0.4	0.8	0.6	0.0	0.0	0.3	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	0.0	1.1	1.3	0.4	1.8	2.1	0.5	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.0	3.2	61.2	3.1	3.5	54.9	0.0	0.0	54.3	0.0	53.8
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		1332			2778			18			13	
Approach Delay, s/veh		3.1			3.5			54.9			54.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	8
Phs Duration (G+Y+Rc), s	11.0	6.0	103.0	11.0	109.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	88.5
Max Q Clear Time (g_c+I1), s	3.3	2.9	7.7	2.8	21.0
Green Ext Time (p_c), s	0.0	0.0	10.3	0.0	42.1

Intersection Summary	
HCM 6th Ctrl Delay	3.8
HCM 6th LOS	A

Notes

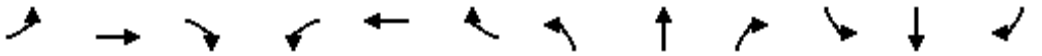
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	3	2314	1939	7	
Future Volume (vph)	3	2314	1939	7	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 50.8
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2314	4	0	1939	0	0	0	7	0	0	0
Future Volume (veh/h)	3	2314	4	0	1939	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2515	4	0	2108	0	0	0	6	0	0	0
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	7	4865	8	0	4230	0	0	0	0	0	4	0
Arrive On Green	0.00	0.91	0.91	0.00	0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5348	9	0	5529	0		0		0	-87400	0
Grp Volume(v), veh/h	3	1626	893	0	2108	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1898	0	1729	0				0	1900	0
Q Serve(g_s), s	0.1	4.1	4.1	0.0	6.4	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.1	4.1	0.0	6.4	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	7	3146	1727	0	4230	0				0	4	0
V/C Ratio(X)	0.41	0.52	0.52	0.00	0.50	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	263	6837	3753	0	9034	0				0	373	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	25.3	0.4	0.4	0.0	1.5	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.1	0.2	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.0	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	0.5	0.6	0.0	1.6	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2522			2108						0	
Approach Delay, s/veh		0.6			1.6						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		51.0		0.0	4.8	46.2						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		6.1		0.0	2.1	8.4						
Green Ext Time (p_c), s		40.3		0.0	0.0	28.2						

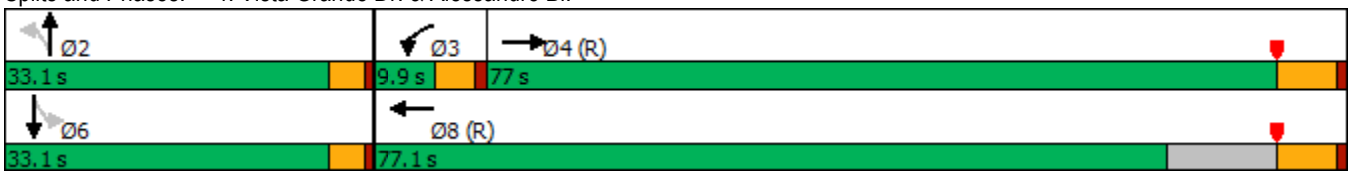
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

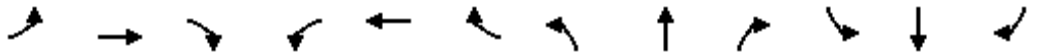
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	2304	23	1930	2	0	37	0
Future Volume (vph)	2304	23	1930	2	0	37	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2304	12	23	1930	18	2	0	9	37	0	5
Future Volume (veh/h)	0	2304	12	23	1930	18	2	0	9	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	2504	13	25	2098	20	2	0	10	40	0	5
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	0	5176	27	43	4384	42	44	14	113	181	0	134
Arrive On Green	0.00	0.77	0.77	0.02	0.83	0.83	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	0	7027	35	1810	5298	50	106	165	1352	1427	0	1610
Grp Volume(v), veh/h	0	1815	702	25	1369	749	12	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	0	1634	1894	1810	1729	1891	1622	0	0	1427	0	1610
Q Serve(g_s), s	0.0	16.5	16.6	1.6	13.6	13.6	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.0	16.5	16.6	1.6	13.6	13.6	0.8	0.0	0.0	3.0	0.0	0.3
Prop In Lane	0.00		0.02	1.00		0.03	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	0	3753	1450	43	2861	1565	170	0	0	181	0	134
V/C Ratio(X)	0.00	0.48	0.48	0.59	0.48	0.48	0.07	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	0	3753	1450	80	2861	1565	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.85	0.85	0.73	0.73	0.73	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.2	5.2	58.0	3.0	3.0	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	0.0	0.4	1.0	3.4	0.4	0.8	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	4.7	0.8	2.1	2.5	0.3	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.6	6.2	61.5	3.4	3.7	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2517			2143			12			45	
Approach Delay, s/veh		5.8			4.2			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		14.2	7.4	98.4		14.2		105.8				
Change Period (Y+Rc), s		* 4.2	4.6	6.5		* 4.2		6.5				
Max Green Setting (Gmax), s		* 29	5.3	70.5		* 29		70.6				
Max Q Clear Time (g_c+I1), s		2.8	3.6	18.6		5.0		15.6				
Green Ext Time (p_c), s		0.0	0.0	29.2		0.1		23.1				

Intersection Summary												
HCM 6th Ctrl Delay			5.6									
HCM 6th LOS			A									

Notes

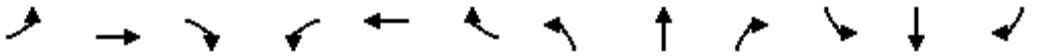
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	5	1603	2852	6	
Future Volume (vph)	5	1603	2852	6	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 106.8
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1603	7	0	2852	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1603	7	0	2852	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1742	8	0	3100	0	0	0	4	0	0	0
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	12	5038	23	0	4586	0	0	0	0	0	2	0
Arrive On Green	0.01	0.95	0.95	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5329	24	0	5529	0		0		0	-87400	0
Grp Volume(v), veh/h	5	1130	620	0	3100	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	0	1729	0				0	1900	0
Q Serve(g_s), s	0.2	2.2	2.2	0.0	14.5	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	2.2	2.2	0.0	14.5	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.01	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	12	3269	1792	0	4586	0				0	2	0
V/C Ratio(X)	0.42	0.35	0.35	0.00	0.68	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	116	4138	2269	0	5592	0				0	226	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	41.7	0.2	0.2	0.0	1.4	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	8.6	0.1	0.1	0.0	0.2	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.3	0.2	0.3	0.0	1.6	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		1755			3100						0	
Approach Delay, s/veh		0.4			1.6						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		84.2		0.0	5.2	79.1						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		4.2		0.0	2.2	16.5						
Green Ext Time (p_c), s		17.1		0.0	0.0	58.0						

Intersection Summary												
HCM 6th Ctrl Delay			1.2									
HCM 6th LOS			A									

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	1595	13	2851	3	0	11	0
Future Volume (vph)	1595	13	2851	3	0	11	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	5.5	3.2	5.5	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
Total Lost Time (s)	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1595	8	13	2851	39	3	0	15	11	0	1
Future Volume (veh/h)	0	1595	8	13	2851	39	3	0	15	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	1734	9	14	3099	42	3	0	16	12	0	1
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	0	5424	28	28	4498	61	41	7	74	142	0	88
Arrive On Green	0.00	0.80	0.80	0.02	0.85	0.85	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	0	7027	35	1810	5274	71	122	133	1361	1419	0	1610
Grp Volume(v), veh/h	0	1257	486	14	2027	1114	19	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	0	1634	1894	1810	1729	1887	1616	0	0	1419	0	1610
Q Serve(g_s), s	0.0	8.2	8.2	0.9	25.0	25.4	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	8.2	8.2	0.9	25.0	25.4	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	0.00		0.02	1.00		0.04	0.16		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	0	3933	1519	28	2949	1609	123	0	0	142	0	88
V/C Ratio(X)	0.00	0.32	0.32	0.50	0.69	0.69	0.15	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	0	3933	1519	78	2949	1609	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.91	0.91	0.28	0.28	0.28	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.2	3.2	58.6	3.1	3.2	54.2	0.0	0.0	54.0	0.0	53.7
Incr Delay (d2), s/veh	0.0	0.2	0.5	1.4	0.4	0.7	0.6	0.0	0.0	0.3	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	0.0	1.5	1.9	0.4	2.3	2.8	0.6	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.3	3.7	60.0	3.5	3.9	54.8	0.0	0.0	54.2	0.0	53.7
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		1743			3155			19			13	
Approach Delay, s/veh		3.4			3.9			54.8			54.2	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		11.2	6.1	102.8		11.2		108.8				
Change Period (Y+Rc), s		4.6	* 4.2	6.5		4.6		6.5				
Max Green Setting (Gmax), s		10.8	* 5.2	88.7		10.8		88.5				
Max Q Clear Time (g_c+I1), s		3.3	2.9	10.2		2.8		27.4				
Green Ext Time (p_c), s		0.0	0.0	16.4		0.0		47.8				

Intersection Summary	
HCM 6th Ctrl Delay	4.1
HCM 6th LOS	A

Notes

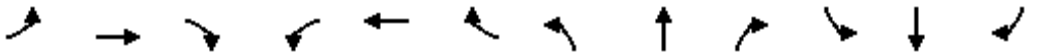
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	3	2688	2416	7	
Future Volume (vph)	3	2688	2416	7	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 99.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





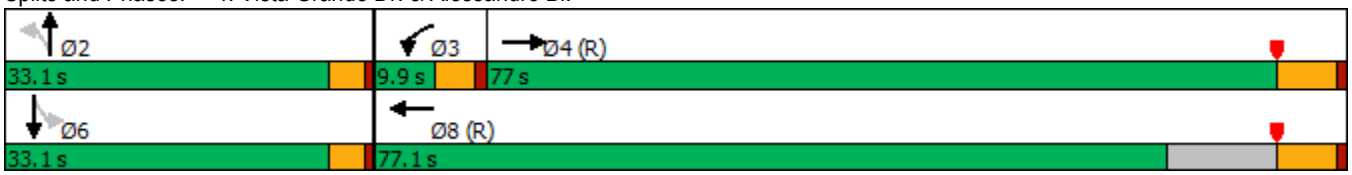
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2688	4	0	2416	0	0	0	7	0	0	0
Future Volume (veh/h)	3	2688	4	0	2416	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2922	4	0	2626	0	0	0	6	0	0	0
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	7	4991	7	0	4472	0	0	0	0	0	3	0
Arrive On Green	0.00	0.93	0.93	0.00	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5349	7	0	5529	0		0		0	-87400	0
Grp Volume(v), veh/h	3	1888	1038	0	2626	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1899	0	1729	0				0	1900	0
Q Serve(g_s), s	0.1	5.5	5.5	0.0	9.7	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.5	5.5	0.0	9.7	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	7	3227	1772	0	4472	0				0	3	0
V/C Ratio(X)	0.41	0.59	0.59	0.00	0.59	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	195	5073	2785	0	6703	0				0	277	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	34.1	0.3	0.3	0.0	1.3	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	13.0	0.2	0.3	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.2	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	0.5	0.6	0.0	1.4	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2929			2626						0	
Approach Delay, s/veh		0.6			1.4						0.0	
Approach LOS		A			A							
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.7		0.0	4.9	63.8						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		7.5		0.0	2.1	11.7						
Green Ext Time (p_c), s		56.6		0.0	0.0	44.7						
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

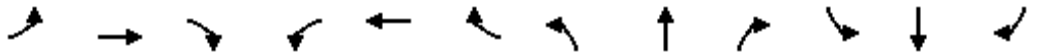
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	2677	25	2406	2	0	37	0
Future Volume (vph)	2677	25	2406	2	0	37	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	2677	13	25	2406	18	2	0	10	37	0	5
Future Volume (veh/h)	0	2677	13	25	2406	18	2	0	10	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	2910	14	27	2615	20	2	0	11	40	0	5
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	0	5170	25	45	4394	34	42	13	114	182	0	134
Arrive On Green	0.00	0.76	0.76	0.02	0.83	0.83	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	0	7030	33	1810	5310	41	92	158	1373	1426	0	1610
Grp Volume(v), veh/h	0	2109	815	27	1701	934	13	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	0	1634	1894	1810	1729	1893	1623	0	0	1426	0	1610
Q Serve(g_s), s	0.0	21.3	21.4	1.8	20.0	20.1	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.0	21.3	21.4	1.8	20.0	20.1	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	0.00		0.02	1.00		0.02	0.15		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	0	3747	1448	45	2861	1566	170	0	0	182	0	134
V/C Ratio(X)	0.00	0.56	0.56	0.60	0.59	0.60	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	0	3747	1448	80	2861	1566	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.56	0.56	0.56	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	5.8	57.9	3.5	3.5	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	0.0	0.4	1.0	2.7	0.5	0.9	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	5.9	0.8	3.1	3.6	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.2	6.8	60.6	4.0	4.5	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2924			2662			13			45	
Approach Delay, s/veh		6.4			4.8			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		14.2	7.6	98.2		14.2		105.8				
Change Period (Y+Rc), s		* 4.2	4.6	6.5		* 4.2		6.5				
Max Green Setting (Gmax), s		* 29	5.3	70.5		* 29		70.6				
Max Q Clear Time (g_c+I1), s		2.9	3.8	23.4		4.9		22.1				
Green Ext Time (p_c), s		0.0	0.0	34.0		0.1		31.7				

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

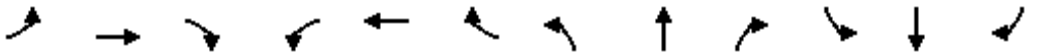
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	6	1882	3448	8	
Future Volume (vph)	6	1882	3448	8	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 114.8
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1882	8	0	3448	0	0	0	8	0	0	0
Future Volume (veh/h)	6	1882	8	0	3448	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	2046	9	0	3748	0	0	0	6	0	0	0
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	16	5079	22	0	4652	0	0	0	0	0	2	0
Arrive On Green	0.01	0.95	0.95	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5330	23	0	5529	0		0		0	-87400	0
Grp Volume(v), veh/h	7	1327	728	0	3748	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	0	1729	0				0	1900	0
Q Serve(g_s), s	0.4	2.9	2.9	0.0	26.2	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	2.9	2.9	0.0	26.2	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.01	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	16	3295	1806	0	4652	0				0	2	0
V/C Ratio(X)	0.44	0.40	0.40	0.00	0.81	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	100	3570	1957	0	4823	0				0	195	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	48.1	0.2	0.2	0.0	1.9	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.1	0.1	0.0	1.0	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.4	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	0.3	0.3	0.0	2.9	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2062			3748						0	
Approach Delay, s/veh		0.5			2.9						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		97.6		0.0	5.5	92.2						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		4.9		0.0	2.4	28.2						
Green Ext Time (p_c), s		24.5		0.0	0.0	59.4						

Intersection Summary												
HCM 6th Ctrl Delay			2.0									
HCM 6th LOS			A									

Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	1882	14	3449	4	0	11	0
Future Volume (vph)	1882	14	3449	4	0	11	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	5.5	3.2	5.5	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
Total Lost Time (s)	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1882	8	14	3449	39	4	0	17	11	0	1
Future Volume (veh/h)	0	1882	8	14	3449	39	4	0	17	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	2046	9	15	3749	42	4	0	18	12	0	1
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	0	5405	24	30	4496	50	44	9	76	146	0	92
Arrive On Green	0.00	0.80	0.80	0.02	0.85	0.85	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	0	7033	30	1810	5288	59	145	149	1322	1417	0	1610
Grp Volume(v), veh/h	0	1482	573	15	2447	1344	22	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	0	1634	1895	1810	1729	1889	1616	0	0	1417	0	1610
Q Serve(g_s), s	0.0	10.5	10.5	1.0	43.5	44.4	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	10.5	10.5	1.0	43.5	44.4	1.5	0.0	0.0	0.8	0.0	0.1
Prop In Lane	0.00		0.02	1.00		0.03	0.18		0.82	1.00		1.00
Lane Grp Cap(c), veh/h	0	3915	1513	30	2940	1606	128	0	0	146	0	92
V/C Ratio(X)	0.00	0.38	0.38	0.51	0.83	0.84	0.17	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	0	3915	1513	78	2940	1606	180	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.87	0.87	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	3.5	3.5	58.5	4.6	4.7	54.0	0.0	0.0	53.7	0.0	53.3
Incr Delay (d2), s/veh	0.0	0.2	0.6	0.4	0.3	0.5	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	2.5	0.4	4.3	4.8	0.7	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	3.7	4.1	59.0	4.9	5.2	54.7	0.0	0.0	53.9	0.0	53.4
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2055			3806			22			13	
Approach Delay, s/veh		3.8			5.2			54.7			53.9	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		11.5	6.2	102.3		11.5		108.5				
Change Period (Y+Rc), s		4.6	* 4.2	6.5		4.6		6.5				
Max Green Setting (Gmax), s		10.8	* 5.2	88.7		10.8		88.5				
Max Q Clear Time (g_c+I1), s		3.5	3.0	12.5		2.8		46.4				
Green Ext Time (p_c), s		0.0	0.0	22.6		0.0		40.0				

Intersection Summary	
HCM 6th Ctrl Delay	5.0
HCM 6th LOS	A

Notes

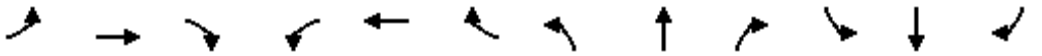
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBT	NBR	Ø4
Lane Configurations					
Traffic Volume (vph)	4	3365	2879	8	
Future Volume (vph)	4	3365	2879	8	
Turn Type	Prot	NA	NA	Prot	
Protected Phases	5	2	6	3	4
Permitted Phases					
Detector Phase	5	2	6	3	
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.6	4.6	4.6	4.1	
Lead/Lag	Lead		Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 122.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3365	5	0	2879	0	0	0	8	0	0	0
Future Volume (veh/h)	4	3365	5	0	2879	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	3658	5	0	3129	0	0	0	7	0	0	0
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	10	5410	7	0	5107	0	0	0	0	0	2	0
Arrive On Green	0.01	0.95	0.95	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5691	8	0	5700	0		0		0	-87400	0
Grp Volume(v), veh/h	4	2442	1221	0	3129	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1899	0	1900	0				0	1900	0
Q Serve(g_s), s	0.2	8.3	8.3	0.0	11.8	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	8.3	8.3	0.0	11.8	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	10	3612	1805	0	5107	0				0	2	0
V/C Ratio(X)	0.42	0.68	0.68	0.00	0.61	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	144	4109	2053	0	5430	0				0	204	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	46.2	0.3	0.3	0.0	1.1	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	10.5	0.4	0.8	0.0	0.2	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.4	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.7	0.7	1.1	0.0	1.3	0.0				0.0	0.0	0.0
LnGrp LOS	E	A	A	A	A	A				A	A	A
Approach Vol, veh/h		3667			3129						0	
Approach Delay, s/veh		0.9			1.3						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		93.2		0.0	5.1	88.1						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		10.3		0.0	2.2	13.8						
Green Ext Time (p_c), s		78.3		0.0	0.0	59.2						

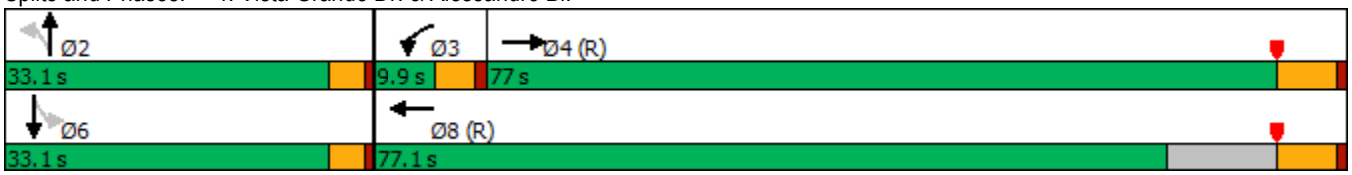
Intersection Summary												
HCM 6th Ctrl Delay			1.1									
HCM 6th LOS			A									

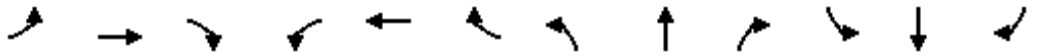
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations							
Traffic Volume (vph)	3365	27	2878	2	0	37	0
Future Volume (vph)	3365	27	2878	2	0	37	0
Turn Type	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	4	3	8		2		6
Permitted Phases				2		6	
Detector Phase	4	3	8	2	2	6	6
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	5.5	3.6	5.5	3.2	3.2	3.2	3.2
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
Total Lost Time (s)	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes					
Recall Mode	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	3365	14	27	2878	18	2	0	11	37	0	5
Future Volume (veh/h)	0	3365	14	27	2878	18	2	0	11	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	0	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	0	3658	15	29	3128	20	2	0	12	40	0	5
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	0	5167	21	47	4401	28	41	13	116	182	0	134
Arrive On Green	0.00	0.76	0.76	0.03	0.83	0.83	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	0	7035	28	1810	5318	34	80	152	1391	1424	0	1610
Grp Volume(v), veh/h	0	2647	1026	29	2032	1116	14	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	0	1634	1895	1810	1729	1894	1623	0	0	1424	0	1610
Q Serve(g_s), s	0.0	33.3	33.5	1.9	29.5	29.7	0.0	0.0	0.0	2.0	0.0	0.3
Cycle Q Clear(g_c), s	0.0	33.3	33.5	1.9	29.5	29.7	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	0.00		0.01	1.00		0.02	0.14		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	0	3742	1447	47	2861	1567	170	0	0	182	0	134
V/C Ratio(X)	0.00	0.71	0.71	0.62	0.71	0.71	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	0	3742	1447	80	2861	1567	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.53	0.53	0.32	0.32	0.32	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	7.3	7.3	57.9	4.3	4.3	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	0.0	0.6	1.6	1.6	0.5	0.9	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	9.3	0.9	4.5	5.1	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	7.9	8.9	59.5	4.8	5.3	51.1	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	A	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		3673			3177			14			45	
Approach Delay, s/veh		8.2			5.5			51.1			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6		8				
Phs Duration (G+Y+Rc), s		14.2	7.7	98.1		14.2		105.8				
Change Period (Y+Rc), s		* 4.2	4.6	6.5		* 4.2		6.5				
Max Green Setting (Gmax), s		* 29	5.3	70.5		* 29		70.6				
Max Q Clear Time (g_c+I1), s		2.9	3.9	35.5		4.9		31.7				
Green Ext Time (p_c), s		0.0	0.0	32.2		0.1		33.1				

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	TR	T	T	TR	R
Maximum Queue (ft)	52	182	182	204	276	329	334	65
Average Queue (ft)	12	51	54	54	110	119	131	12
95th Queue (ft)	42	144	150	148	229	236	243	41
Link Distance (ft)		592	592	592	528	528	528	332
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)	150							
Storage Blk Time (%)		1						
Queuing Penalty (veh)		0						

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB
Directions Served	T	T	T	TR	L	T	T	TR	LTR	L
Maximum Queue (ft)	75	74	52	31	49	3975	4074	115	72	51
Average Queue (ft)	20	20	11	8	10	142	666	32	20	9
95th Queue (ft)	56	59	35	28	36	1317	3057	91	52	34
Link Distance (ft)	528	528	528	528		4017	4017	4017	834	
Upstream Blk Time (%)							0			
Queuing Penalty (veh)							2			
Storage Bay Dist (ft)					155					150
Storage Blk Time (%)										
Queuing Penalty (veh)										

Zone Summary

Zone wide Queuing Penalty: 2

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	NB
Directions Served	L	T	T	TR	T	T	TR	R
Maximum Queue (ft)	31	572	556	530	552	554	584	28
Average Queue (ft)	8	77	108	97	97	105	110	5
95th Queue (ft)	27	262	340	285	371	381	387	21
Link Distance (ft)		598	598	598	542	542	542	265
Upstream Blk Time (%)					2	3	3	
Queuing Penalty (veh)					23	26	28	
Storage Bay Dist (ft)	150							
Storage Blk Time (%)		1						
Queuing Penalty (veh)		0						

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	T	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	223	205	210	186	94	470	441	444	30	73	52
Average Queue (ft)	96	110	96	96	34	60	63	67	5	34	3
95th Queue (ft)	180	189	167	168	71	229	219	223	23	71	20
Link Distance (ft)	542	542	542	542		3997	3997	3997	827		778
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)					155					150	
Storage Blk Time (%)						2					
Queuing Penalty (veh)						1					

Zone Summary

Zone wide Queuing Penalty: 78

APPENDIX 8.3:

SUPPLEMENTAL ANALYSIS (ALTERNATIVE 3) WORKSHEETS

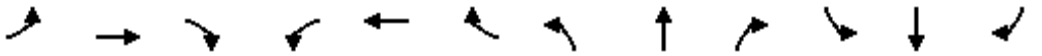
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Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	5	1226	2	2509	6	
Future Volume (vph)	5	1226	2	2509	6	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	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	4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 89.7
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1226	5	2	2509	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1226	5	2	2509	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1333	5	2	2727	0	0	0	4	0	0	0
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	12	4989	19	460	4480	0	0	0	0	0	3	0
Arrive On Green	0.01	0.94	0.94	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5334	20	415	5358	0		0		0	-87400	0
Grp Volume(v), veh/h	5	864	474	2	2727	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	415	1729	0				0	1900	0
Q Serve(g_s), s	0.2	1.5	1.5	0.0	10.7	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	1.5	1.5	0.0	10.7	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	12	3234	1773	460	4480	0				0	3	0
V/C Ratio(X)	0.42	0.27	0.27	0.00	0.61	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	138	4911	2693	633	6636	0				0	268	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	35.1	0.2	0.2	0.7	1.4	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	8.4	0.0	0.1	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	0.2	0.3	0.7	1.5	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		1343			2729						0	
Approach Delay, s/veh		0.4			1.5						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		71.0		0.0	5.1	65.9						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		3.5		0.0	2.2	12.7						
Green Ext Time (p_c), s		10.3		0.0	0.0	48.6						

Intersection Summary		
HCM 6th Ctrl Delay	1.2	
HCM 6th LOS	A	

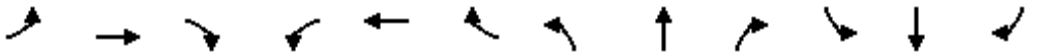
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1221	12	2508	3	0	11	0
Future Volume (vph)	4	1221	12	2508	3	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Future Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1327	8	13	2726	38	3	0	15	12	0	1
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	112	4278	26	27	3888	54	42	7	72	140	0	86
Arrive On Green	0.06	0.80	0.80	0.01	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5320	32	1810	5272	73	130	139	1347	1421	0	1610
Grp Volume(v), veh/h	4	863	472	13	1785	979	18	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1887	1616	0	0	1421	0	1610
Q Serve(g_s), s	0.2	7.8	7.8	0.9	33.6	34.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	7.8	7.8	0.9	33.6	34.0	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.04	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	112	2781	1523	27	2550	1392	122	0	0	140	0	86
V/C Ratio(X)	0.04	0.31	0.31	0.49	0.70	0.70	0.15	0.00	0.00	0.09	0.00	0.01
Avail Cap(c_a), veh/h	112	2781	1523	78	2550	1392	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	3.1	3.1	58.7	8.5	8.6	54.3	0.0	0.0	54.1	0.0	53.8
Incr Delay (d2), s/veh	0.1	0.3	0.5	2.5	0.8	1.5	0.6	0.0	0.0	0.3	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	1.6	1.8	0.4	9.0	10.2	0.5	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	3.3	3.6	61.2	9.3	10.1	54.9	0.0	0.0	54.3	0.0	53.8
LnGrp LOS	D	A	A	E	A	B	D	A	A	D	A	D
Approach Vol, veh/h		1339			2777			18			13	
Approach Delay, s/veh		3.6			9.8			54.9			54.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.0	6.0	103.0	11.0	14.0	95.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5	* 6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	5.0	* 89
Max Q Clear Time (g_c+I1), s	3.3	2.9	9.8	2.8	2.2	36.0
Green Ext Time (p_c), s	0.0	0.0	10.3	0.0	0.0	35.9

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

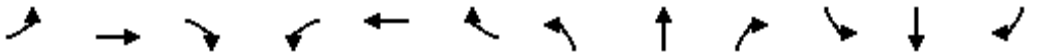
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	3	2314	3	1944	7	
Future Volume (vph)	3	2314	3	1944	7	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	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	4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 78.7
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





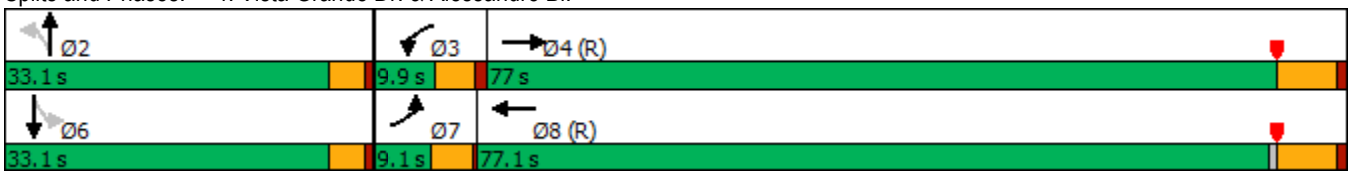
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2314	1	3	1944	0	0	0	7	0	0	0
Future Volume (veh/h)	3	2314	1	3	1944	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2515	1	3	2113	0	0	0	6	0	0	0
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	7	4871	2	249	4227	0	0	0	0	0	4	0
Arrive On Green	0.00	0.91	0.91	0.81	0.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5355	2	131	5358	0		0		0	-87400	0
Grp Volume(v), veh/h	3	1624	892	3	2113	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	131	1729	0				0	1900	0
Q Serve(g_s), s	0.1	4.1	4.1	0.2	6.5	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	4.1	4.1	0.2	6.5	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	7	3145	1728	249	4227	0				0	4	0
V/C Ratio(X)	0.41	0.52	0.52	0.01	0.50	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	263	6855	3766	371	9059	0				0	374	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	25.3	0.4	0.4	0.9	1.5	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	12.8	0.1	0.2	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.1	0.0	0.0	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	0.5	0.6	0.9	1.6	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2519			2116						0	
Approach Delay, s/veh		0.6			1.6						0.0	
Approach LOS		A			A							
Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		50.8		0.0	4.8	46.0						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		6.1		0.0	2.1	8.5						
Green Ext Time (p_c), s		40.2		0.0	0.0	28.9						
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

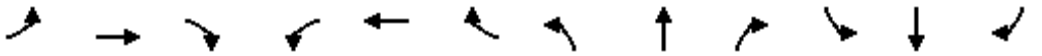
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2309	23	1935	2	0	37	0
Future Volume (vph)	2	2309	23	1935	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Future Volume (veh/h)	2	2309	12	23	1935	16	2	0	9	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2510	13	25	2103	17	2	0	10	40	0	5
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	5	4077	21	43	4196	34	44	14	113	181	0	134
Arrive On Green	0.00	0.77	0.77	0.02	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5325	28	1810	5307	43	106	165	1352	1427	0	1610
Grp Volume(v), veh/h	2	1629	894	25	1370	750	12	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1892	1622	0	0	1427	0	1610
Q Serve(g_s), s	0.1	25.1	25.1	1.6	16.5	16.5	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	25.1	25.1	1.6	16.5	16.5	0.8	0.0	0.0	3.0	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	5	2647	1451	43	2734	1496	170	0	0	181	0	134
V/C Ratio(X)	0.41	0.62	0.62	0.59	0.50	0.50	0.07	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2647	1451	80	2734	1496	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.73	0.73	0.73	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	6.2	6.2	58.0	4.4	4.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	33.7	0.7	1.3	3.4	0.5	0.9	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	6.1	7.0	0.8	3.6	4.1	0.3	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.5	7.0	7.6	61.5	4.8	5.2	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2525			2145			12			45	
Approach Delay, s/veh		7.3			5.6			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.2	7.4	98.4		14.2	4.4	101.4				
Change Period (Y+Rc), s		* 4.2	4.6	6.5		* 4.2	4.1	6.5				
Max Green Setting (Gmax), s		* 29	5.3	70.5		* 29	5.0	70.6				
Max Q Clear Time (g_c+I1), s		2.8	3.6	27.1		5.0	2.1	18.5				
Green Ext Time (p_c), s		0.0	0.0	27.7		0.1	0.0	22.7				

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

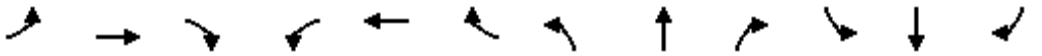
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	5	1226	2	2509	6	
Future Volume (vph)	5	1226	2	2509	6	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.6	4.6		4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 92.2
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1226	5	2	2509	0	0	0	6	0	0	0
Future Volume (veh/h)	5	1226	5	2	2509	0	0	0	6	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1333	5	2	2727	0	0	0	4	0	0	0
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	12	4972	19	54	4327	0	0	0	0	0	3	0
Arrive On Green	0.01	0.93	0.93	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5334	20	0	5200	0		0		0	-87400	0
Grp Volume(v), veh/h	5	864	474	1027	1702	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1898	1573	0				0	1900	0
Q Serve(g_s), s	0.2	1.5	1.5	0.0	11.4	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	1.5	1.5	11.4	11.4	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.01	0.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	12	3223	1768	1681	2699	0				0	3	0
V/C Ratio(X)	0.42	0.27	0.27	0.61	0.63	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	144	5143	2821	2591	4216	0				0	280	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	33.5	0.2	0.2	1.5	1.5	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	8.3	0.0	0.1	0.4	0.2	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.2	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.9	0.3	0.3	1.9	1.7	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		1343			2729						0	
Approach Delay, s/veh		0.4			1.8						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		67.8		0.0	5.0	62.7						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		3.5		0.0	2.2	13.4						
Green Ext Time (p_c), s		10.3		0.0	0.0	44.8						

Intersection Summary												
HCM 6th Ctrl Delay			1.3									
HCM 6th LOS			A									

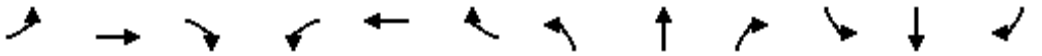
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1221	12	2508	3	0	11	0
Future Volume (vph)	4	1221	12	2508	3	0	11	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Future Volume (veh/h)	4	1221	7	12	2508	35	3	0	14	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	1327	8	13	2726	38	3	0	15	12	0	1
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	112	4278	26	27	3888	54	42	7	72	140	0	86
Arrive On Green	0.06	0.80	0.80	0.01	0.74	0.74	0.05	0.00	0.05	0.05	0.00	0.05
Sat Flow, veh/h	1810	5320	32	1810	5272	73	130	139	1347	1421	0	1610
Grp Volume(v), veh/h	4	863	472	13	1785	979	18	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1894	1810	1729	1887	1616	0	0	1421	0	1610
Q Serve(g_s), s	0.2	7.8	7.8	0.9	33.6	34.0	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.2	7.8	7.8	0.9	33.6	34.0	1.3	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.02	1.00		0.04	0.17		0.83	1.00		1.00
Lane Grp Cap(c), veh/h	112	2781	1523	27	2550	1392	122	0	0	140	0	86
V/C Ratio(X)	0.04	0.31	0.31	0.49	0.70	0.70	0.15	0.00	0.00	0.09	0.00	0.01
Avail Cap(c_a), veh/h	112	2781	1523	78	2550	1392	179	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.95	0.95	0.95	0.48	0.48	0.48	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	3.1	3.1	58.7	8.5	8.6	54.3	0.0	0.0	54.1	0.0	53.8
Incr Delay (d2), s/veh	0.1	0.3	0.5	2.5	0.8	1.5	0.6	0.0	0.0	0.3	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	1.6	1.8	0.4	9.0	10.2	0.5	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	3.3	3.6	61.2	9.3	10.1	54.9	0.0	0.0	54.3	0.0	53.8
LnGrp LOS	D	A	A	E	A	B	D	A	A	D	A	D
Approach Vol, veh/h		1339			2777			18			13	
Approach Delay, s/veh		3.6			9.8			54.9			54.3	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.0	6.0	103.0	11.0	14.0	95.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5	* 6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	5.0	* 89
Max Q Clear Time (g_c+I1), s	3.3	2.9	9.8	2.8	2.2	36.0
Green Ext Time (p_c), s	0.0	0.0	10.3	0.0	0.0	35.9

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

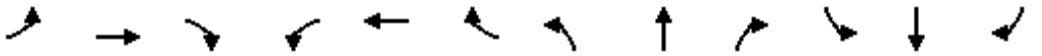
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	3	2688	3	2421	8	
Future Volume (vph)	3	2688	3	2421	8	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	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	4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 99.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	2688	1	3	2421	0	0	0	8	0	0	0
Future Volume (veh/h)	3	2688	1	3	2421	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2922	1	3	2632	0	0	0	7	0	0	0
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	7	4997	2	179	4470	0	0	0	0	0	3	0
Arrive On Green	0.00	0.93	0.93	0.86	0.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5356	2	87	5358	0		0		0	-87400	0
Grp Volume(v), veh/h	3	1886	1037	3	2632	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1900	87	1729	0				0	1900	0
Q Serve(g_s), s	0.1	5.5	5.5	0.4	9.8	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	5.5	5.5	1.0	9.8	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	7	3226	1772	179	4470	0				0	3	0
V/C Ratio(X)	0.41	0.58	0.58	0.02	0.59	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	195	5083	2793	217	6717	0				0	277	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	34.1	0.3	0.3	0.8	1.3	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	13.0	0.2	0.3	0.0	0.1	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.1	0.2	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.5	0.6	0.8	1.5	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2926			2635						0	
Approach Delay, s/veh		0.6			1.5						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		68.6		0.0	4.9	63.7						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		7.5		0.0	2.1	11.8						
Green Ext Time (p_c), s		56.4		0.0	0.0	45.5						

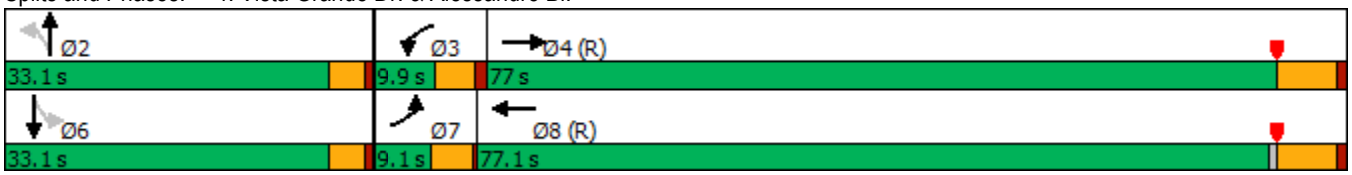
Intersection Summary												
HCM 6th Ctrl Delay			1.0									
HCM 6th LOS			A									

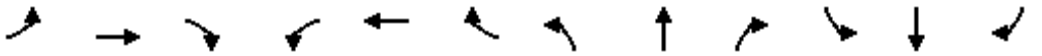
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	2683	25	2412	2	0	37	0
Future Volume (vph)	2	2683	25	2412	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Future Volume (veh/h)	2	2683	13	25	2412	16	2	0	10	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	2916	14	27	2622	17	2	0	11	40	0	5
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	5	4073	20	45	4204	27	42	13	114	182	0	134
Arrive On Green	0.00	0.76	0.76	0.02	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5328	26	1810	5317	34	92	158	1373	1426	0	1610
Grp Volume(v), veh/h	2	1891	1039	27	1704	935	13	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1895	1810	1729	1894	1623	0	0	1426	0	1610
Q Serve(g_s), s	0.1	34.1	34.3	1.8	24.4	24.5	0.0	0.0	0.0	2.1	0.0	0.3
Cycle Q Clear(g_c), s	0.1	34.1	34.3	1.8	24.4	24.5	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.15		0.85	1.00		1.00
Lane Grp Cap(c), veh/h	5	2643	1449	45	2734	1497	170	0	0	182	0	134
V/C Ratio(X)	0.41	0.72	0.72	0.60	0.62	0.62	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2643	1449	80	2734	1497	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.53	0.53	0.53	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	7.3	7.4	57.9	5.2	5.2	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	31.0	1.1	1.9	2.6	0.6	1.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	8.4	9.6	0.8	5.2	6.0	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.8	8.4	9.3	60.5	5.8	6.2	51.0	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	A	A	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		2932			2666			13			45	
Approach Delay, s/veh		8.8			6.5			51.0			52.1	
Approach LOS		A			A			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	14.2	7.6	98.2	14.2	4.4	101.4
Change Period (Y+Rc), s	* 4.2	4.6	6.5	* 4.2	4.1	6.5
Max Green Setting (Gmax), s	* 29	5.3	70.5	* 29	5.0	70.6
Max Q Clear Time (g_c+I1), s	2.9	3.8	36.3	4.9	2.1	26.5
Green Ext Time (p_c), s	0.0	0.0	27.9	0.1	0.0	29.9

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

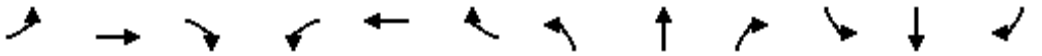
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	6	1882	2	3448	7	
Future Volume (vph)	6	1882	2	3448	7	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	10.0	105.4	95.4	95.4	14.6	14.6
Total Split (%)	7.4%	78.3%	70.9%	70.9%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	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	4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 114.8
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1882	6	2	3448	0	0	0	7	0	0	0
Future Volume (veh/h)	6	1882	6	2	3448	0	0	0	7	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	7	2046	7	2	3748	0	0	0	5	0	0	0
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	16	5085	17	260	4653	0	0	0	0	0	2	0
Arrive On Green	0.01	0.95	0.95	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5336	18	208	5358	0		0		0	-87400	0
Grp Volume(v), veh/h	7	1326	727	2	3748	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1729	1897	208	1729	0				0	1900	0
Q Serve(g_s), s	0.4	2.9	2.9	0.1	26.2	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	2.9	2.9	0.1	26.2	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	16	3295	1807	260	4653	0				0	2	0
V/C Ratio(X)	0.44	0.40	0.40	0.01	0.81	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	100	3569	1957	267	4822	0				0	195	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	48.2	0.2	0.2	0.5	1.9	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	6.8	0.1	0.1	0.0	1.0	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.4	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	0.3	0.3	0.5	2.9	0.0				0.0	0.0	0.0
LnGrp LOS	D	A	A	A	A	A				A	A	A
Approach Vol, veh/h		2060			3750						0	
Approach Delay, s/veh		0.5			2.9						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		97.7		0.0	5.5	92.2						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	5.4	90.8						
Max Q Clear Time (g_c+I1), s		4.9		0.0	2.4	28.2						
Green Ext Time (p_c), s		24.4		0.0	0.0	59.4						

Intersection Summary												
HCM 6th Ctrl Delay			2.0									
HCM 6th LOS			A									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	1885	14	3449	4	0	11	0
Future Volume (vph)	4	1885	14	3449	4	0	11	0
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)	9.1	16.5	9.2	16.5	14.6	14.6	14.6	14.6
Total Split (s)	9.1	95.2	9.4	95.0	15.4	15.4	15.4	15.4
Total Split (%)	7.6%	79.3%	7.8%	79.2%	12.8%	12.8%	12.8%	12.8%
Yellow Time (s)	3.6	5.5	3.2	5.5	3.6	3.6	3.6	3.6
All-Red Time (s)	0.5	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)	4.1	6.5	4.2	6.5		4.6	4.6	4.6
Lead/Lag	Lag	Lag	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	None	None	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.9 (87%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	1885	8	14	3449	35	4	0	17	11	0	1
Future Volume (veh/h)	4	1885	8	14	3449	35	4	0	17	11	0	1
Initial Q (Qb), veh	0	0	0	0	0	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	4	2049	9	15	3749	38	4	0	18	12	0	1
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	106	4257	19	30	3905	39	44	9	76	146	0	92
Arrive On Green	0.06	0.80	0.80	0.02	0.74	0.74	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1810	5330	23	1810	5295	53	145	149	1322	1417	0	1610
Grp Volume(v), veh/h	4	1329	729	15	2444	1343	22	0	0	12	0	1
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1890	1616	0	0	1417	0	1610
Q Serve(g_s), s	0.3	15.1	15.1	1.0	75.9	77.3	0.0	0.0	0.0	0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.3	15.1	15.1	1.0	75.9	77.3	1.5	0.0	0.0	0.8	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.03	0.18		0.82	1.00		1.00
Lane Grp Cap(c), veh/h	106	2762	1514	30	2550	1394	128	0	0	146	0	92
V/C Ratio(X)	0.04	0.48	0.48	0.51	0.96	0.96	0.17	0.00	0.00	0.08	0.00	0.01
Avail Cap(c_a), veh/h	106	2762	1514	78	2550	1394	180	0	0	192	0	145
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	3.9	3.9	58.5	14.1	14.3	54.0	0.0	0.0	53.7	0.0	53.3
Incr Delay (d2), s/veh	0.1	0.5	1.0	0.4	1.4	2.6	0.6	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.1	3.6	0.4	20.3	23.0	0.7	0.0	0.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	4.5	4.9	59.0	15.5	16.9	54.7	0.0	0.0	53.9	0.0	53.4
LnGrp LOS	D	A	A	E	B	B	D	A	A	D	A	D
Approach Vol, veh/h		2062			3802			22			13	
Approach Delay, s/veh		4.7			16.1			54.7			53.9	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	2	3	4	6	7	8
Phs Duration (G+Y+Rc), s	11.5	6.2	102.3	11.5	13.5	95.0
Change Period (Y+Rc), s	4.6	* 4.2	6.5	4.6	6.5	* 6.5
Max Green Setting (Gmax), s	10.8	* 5.2	88.7	10.8	5.0	* 89
Max Q Clear Time (g_c+I1), s	3.5	3.0	17.1	2.8	2.3	79.3
Green Ext Time (p_c), s	0.0	0.0	23.4	0.0	0.0	9.1

Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B

Notes

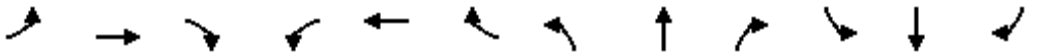
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lane Group	EBL	EBT	WBL	WBT	NBR	Ø4
Lane Configurations						
Traffic Volume (vph)	4	3365	4	2879	8	
Future Volume (vph)	4	3365	4	2879	8	
Turn Type	Prot	NA	Perm	NA	Prot	
Protected Phases	5	2		6	3	4
Permitted Phases			6			
Detector Phase	5	2	6	6	3	
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	26.6	26.6	26.6	14.1	14.6
Total Split (s)	12.0	105.4	93.4	93.4	14.6	14.6
Total Split (%)	8.9%	78.3%	69.4%	69.4%	10.8%	11%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	0.5	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	4.6	4.1	
Lead/Lag	Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min

Intersection Summary
Cycle Length: 134.6
Actuated Cycle Length: 122.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: Private Driveway & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	3365	1	4	2879	0	0	0	8	0	0	0
Future Volume (veh/h)	4	3365	1	4	2879	0	0	0	8	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	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	0	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	4	3658	1	4	3129	0	0	0	7	0	0	0
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	10	5417	1	113	5107	0	0	0	0	0	2	0
Arrive On Green	0.01	0.95	0.95	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	1810	5698	2	41	5700	0		0		0	-87400	0
Grp Volume(v), veh/h	4	2439	1220	4	3129	0		0.0		0	0	0
Grp Sat Flow(s),veh/h/ln	1810	1900	1900	41	1900	0				0	1900	0
Q Serve(g_s), s	0.2	8.2	8.3	1.4	11.8	0.0				0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	8.2	8.3	4.5	11.8	0.0				0.0	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.00				0.00		0.00
Lane Grp Cap(c), veh/h	10	3612	1806	113	5107	0				0	2	0
V/C Ratio(X)	0.42	0.68	0.68	0.04	0.61	0.00				0.00	0.00	0.00
Avail Cap(c_a), veh/h	144	4114	2057	115	5436	0				0	204	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				0.00	0.00	0.00
Uniform Delay (d), s/veh	46.2	0.3	0.3	1.0	1.1	0.0				0.0	0.0	0.0
Incr Delay (d2), s/veh	10.5	0.4	0.7	0.1	0.2	0.0				0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.4	0.0	0.1	0.0				0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	0.7	1.1	1.1	1.3	0.0				0.0	0.0	0.0
LnGrp LOS	E	A	A	A	A	A				A	A	A
Approach Vol, veh/h		3663			3133						0	
Approach Delay, s/veh		0.9			1.3						0.0	
Approach LOS		A			A							

Timer - Assigned Phs		2		4	5	6						
Phs Duration (G+Y+Rc), s		93.1		0.0	5.1	88.0						
Change Period (Y+Rc), s		4.6		4.6	4.6	4.6						
Max Green Setting (Gmax), s		100.8		10.0	7.4	88.8						
Max Q Clear Time (g_c+I1), s		10.3		0.0	2.2	13.8						
Green Ext Time (p_c), s		78.3		0.0	0.0	59.6						

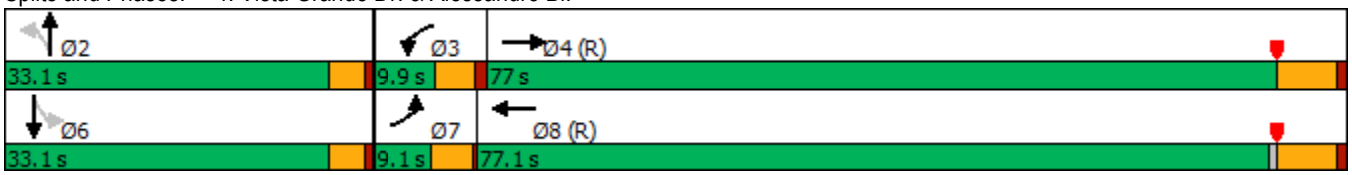
Intersection Summary												
HCM 6th Ctrl Delay			1.1									
HCM 6th LOS			A									

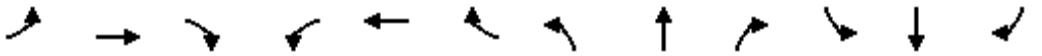
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	2	3371	27	2878	2	0	37	0
Future Volume (vph)	2	3371	27	2878	2	0	37	0
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.1	11.5	9.6	11.5	14.2	14.2	14.2	14.2
Total Split (s)	9.1	77.0	9.9	77.1	33.1	33.1	33.1	33.1
Total Split (%)	7.6%	64.2%	8.3%	64.3%	27.6%	27.6%	27.6%	27.6%
Yellow Time (s)	3.6	5.5	3.6	5.5	3.2	3.2	3.2	3.2
All-Red Time (s)	0.5	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)	4.1	6.5	4.6	6.5		4.2	4.2	4.2
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Min	Min	None	None

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 103.6 (86%), Referenced to phase 4:EBT and 8:WBT, Start of Yellow
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 4: Vista Grande Dr. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	3371	14	27	2878	16	2	0	11	37	0	5
Future Volume (veh/h)	2	3371	14	27	2878	16	2	0	11	37	0	5
Initial Q (Qb), veh	0	0	0	0	0	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	2	3664	15	29	3128	17	2	0	12	40	0	5
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	5	4070	17	47	4209	23	41	13	116	182	0	134
Arrive On Green	0.00	0.76	0.76	0.03	0.79	0.79	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	1810	5332	22	1810	5324	29	80	152	1391	1424	0	1610
Grp Volume(v), veh/h	2	2374	1305	29	2030	1115	14	0	0	40	0	5
Grp Sat Flow(s),veh/h/ln	1810	1729	1896	1810	1729	1895	1623	0	0	1424	0	1610
Q Serve(g_s), s	0.1	62.2	62.6	1.9	35.7	35.9	0.0	0.0	0.0	2.0	0.0	0.3
Cycle Q Clear(g_c), s	0.1	62.2	62.6	1.9	35.7	35.9	0.9	0.0	0.0	2.9	0.0	0.3
Prop In Lane	1.00		0.01	1.00		0.02	0.14		0.86	1.00		1.00
Lane Grp Cap(c), veh/h	5	2640	1447	47	2734	1498	170	0	0	182	0	134
V/C Ratio(X)	0.41	0.90	0.90	0.62	0.74	0.74	0.08	0.00	0.00	0.22	0.00	0.04
Avail Cap(c_a), veh/h	75	2640	1447	80	2734	1498	419	0	0	406	0	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.32	0.32	0.32	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	59.7	10.7	10.8	57.9	6.4	6.4	50.8	0.0	0.0	51.7	0.0	50.6
Incr Delay (d2), s/veh	26.9	3.0	5.4	1.6	0.6	1.1	0.2	0.0	0.0	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	15.8	18.4	0.9	7.6	8.6	0.4	0.0	0.0	1.2	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	13.8	16.1	59.5	7.0	7.5	51.1	0.0	0.0	52.3	0.0	50.7
LnGrp LOS	F	B	B	E	A	A	D	A	A	D	A	D
Approach Vol, veh/h		3681			3174			14			45	
Approach Delay, s/veh		14.6			7.6			51.1			52.1	
Approach LOS		B			A			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		14.2	7.7	98.1		14.2	4.4	101.4				
Change Period (Y+Rc), s		* 4.2	4.6	6.5		* 4.2	4.1	6.5				
Max Green Setting (Gmax), s		* 29	5.3	70.5		* 29	5.0	70.6				
Max Q Clear Time (g_c+I1), s		2.9	3.9	64.6		4.9	2.1	37.9				
Green Ext Time (p_c), s		0.0	0.0	5.8		0.1	0.0	28.4				

Intersection Summary	
HCM 6th Ctrl Delay	11.7
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB
Directions Served	L	T	T	TR	L	T	T	TR	R
Maximum Queue (ft)	51	201	180	140	199	528	528	528	50
Average Queue (ft)	5	53	48	44	9	153	175	180	11
95th Queue (ft)	26	134	125	116	68	409	439	441	35
Link Distance (ft)		592	592	592		528	528	528	346
Upstream Blk Time (%)						0	0	0	
Queuing Penalty (veh)						1	2	2	
Storage Bay Dist (ft)	150				110				
Storage Blk Time (%)		0				6			
Queuing Penalty (veh)		0				0			

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	31	118	143	100	92	4021	4064	1234	54	47	30
Average Queue (ft)	6	23	31	28	22	439	723	209	19	16	1
95th Queue (ft)	22	68	90	84	56	2086	2899	745	47	39	10
Link Distance (ft)		528	528	528		4017	4017	4017	833		749
Upstream Blk Time (%)						0	0				
Queuing Penalty (veh)						1	2				
Storage Bay Dist (ft)	155				155					150	
Storage Blk Time (%)						7					
Queuing Penalty (veh)						1					

Zone Summary

Zone wide Queuing Penalty: 9

Intersection: 3: Private Driveway & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB
Directions Served	L	T	T	TR	L	T	T	TR	R
Maximum Queue (ft)	28	594	632	638	31	225	248	270	53
Average Queue (ft)	1	111	154	148	8	35	42	44	9
95th Queue (ft)	10	378	476	455	28	128	143	151	34
Link Distance (ft)		598	598	598		542	542	542	279
Upstream Blk Time (%)		0	0	0					
Queuing Penalty (veh)		1	0	1					
Storage Bay Dist (ft)	150				110				
Storage Blk Time (%)		3				1			
Queuing Penalty (veh)		0				0			

Intersection: 4: Vista Grande Dr. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	SB	SB
Directions Served	L	T	T	TR	L	T	T	TR	LTR	L	TR
Maximum Queue (ft)	30	403	400	447	95	93	118	136	51	96	31
Average Queue (ft)	4	149	173	170	26	35	39	45	13	27	4
95th Queue (ft)	20	306	316	333	63	75	88	96	41	67	21
Link Distance (ft)		542	542	542		3997	3997	3997	827		778
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	155				155					150	
Storage Blk Time (%)		5									
Queuing Penalty (veh)		0									

Zone Summary

Zone wide Queuing Penalty: 3

URBAN CROSSROADS

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urbanxroads.com

October 1, 2020

Ms. Sonya Hooker
Ruth Villalobos & Associates, Inc.
3602 Inland Empire Blvd., Suite C310
Ontario, CA 91764

SUBJECT: SYCAMORE HILLS DISTRIBUTION CENTER VEHICLE MILES TRAVELLED (VMT) ANALYSIS

Dear Ms. Sonya Hooker:

The following Vehicle Miles Travelled (VMT) Analysis has been prepared for the proposed Sycamore Hills Distribution Center (**Project**), which is located north of Alessandro Boulevard and east of Barton Street and west of San Gorgonio Drive within the Sycamore Canyon Business Park Specific Plan (SP) located in the City of Riverside.

PROJECT OVERVIEW

The project proposes subdividing the site into two parcels (Parcels 1 and 2), and three lettered parcels (Parcels A, B, and C). Each parcel is proposed to be developed with a high cube transload short-term warehouse building (Buildings A and B). Building A, a 400,000 square foot warehouse, will be constructed on Parcel 1. Building B, a 203,100 square foot warehouse, will be constructed on Parcel 2. Associated improvements include parking, fire lanes, fencing and walls (including retaining walls), landscaping, and water quality treatment areas.

Parcels A and Parcel B consist of existing Restricted Property of natural land, with a supporting jurisdictional feature, totaling approximately 11.6 acres. A 0.67-acre driveway will be constructed through the Restricted Property to provide street access from Alessandro Boulevard to Parcel 1, which would reduce the Restricted Property to 10.93 acres. However, 1.44 acres will be added to Parcel A to mitigate this loss, resulting in a total of 12.37 acres of Restricted Property (net gain of 0.77 acres). A Conservation Easement is proposed to be placed over the amended 12.37 acres of Restricted Property.

A trailhead parking lot is proposed on Parcel C, totaling 1.18 acres, for access to the Sycamore Canyon Wilderness Park. Improvements include a parking lot, sidewalk, shade structure, bike rack, drinking fountain, fencing, and a Fire Department and access gate. Parcel C will be dedicated to the City. Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (1) The proposed Project is anticipated to generate a total of 847 vehicle trip-ends per day. (2)

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which requires all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the new measure for identifying transportation impacts for land use projects. This statewide mandate takes effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**). (3) Based on OPR's Technical Advisory, the Western Riverside Council of Governments (WRCOG) prepared a WRCOG SB 743 Implementation Pathway Document Package (March 2019) to assist its member agencies with implementation tools necessary to adopt analysis methodology, impact thresholds and mitigation approaches for VMT. To add to the previous work effort, WRCOG in February 2020 released its Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (**WRCOG Guidelines**), which provides recommendations for specific procedures for complying with the new CEQA requirements for VMT analysis to its member agencies. (4) Utilizing the WRCOG Guidelines, the City of Riverside recently adopted updated Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (**City Guidelines**). (5) The updated City Guidelines have been utilized to prepare this VMT analysis.

PROJECT SCREENING

Consistent with City Guidelines, projects that meet certain screening thresholds based on their location and project type may be presumed to result in a less than significant transportation impact. The City of Riverside utilizes the WRCOG VMT Screening Tool (**Screening Tool**) to evaluate the following Project Screening Thresholds:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

As noted in the City Guidelines, a land use project need only meet one of the above screening thresholds to result in a less than significant impact.

TPA SCREENING

Consistent with guidance identified in the City Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing "major transit stop"[1] or an existing stop along a "high-quality

[1] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

transit corridor"[2]) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool results presented in Attachment A, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

The TPA screening threshold is not met.

LOW VMT AREA SCREENING

As described in the City Guidelines, "residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary."[3] The Screening Tool uses the sub-regional Riverside Transportation Analysis Model (RIVTAM) to measure VMT performance within individual traffic analysis zones (TAZ's) within the City. The Project's physical location based on parcel number is input into the Screening Tool to determine project-generated VMT as compared to the City threshold. Based on the Screening Tool results (see Attachment A), the Project is not located within a low VMT generating zone.

The Low VMT Area screening threshold is not met.

PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail or other types of local serving land use projects that are consistent with the current Sustainable Communities Strategy (SCS) or general plan are presumed to have a less than significant impact. City Guidelines also states projects that generate or attract fewer than 110 trips per day are assumed to cause a less than significant impact. As previously noted, the Project is estimated to generate in excess of 110 daily trips and would therefore not be eligible for the project type screening threshold.

The Project Type screening threshold is not met.

Since the Project does not meet the City's project-level VMT screening thresholds, a VMT analysis has been prepared consistent with City Guidelines.

[2] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").
[3] Page 24 of the City Guidelines

VMT ANALYSIS METHODOLOGY

VMT thresholds adopted by City Council on June 16, 2020 have been used to prepare this analysis. Based on the adopted VMT thresholds applicable to the Project, a significant impact for VMT would occur if the following condition is met:

- For new office and industrial projects, utilizing a threshold consistent with 15% below the City's current baseline VMT Per Worker.

PROJECT GENERATED VMT PER EMPLOYEE

The Riverside Transportation Analysis Model (RIVTAM) is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households, and employment. RIVTAM is a travel forecasting model that represents a sub-area of the SCAG model. The model was originally completed in 2009 and was later updated to include a 2012 base year and 2040 forecast horizon year. The model was designed to provide a greater level of detail and sensitivity in the Riverside County area as compared to the regional SCAG model. The City Guidelines identifies RIVTAM as the appropriate tool for conducting VMT analysis for land use projects in the City of Riverside.

Project VMT has been calculated using the most current version of RIVTAM, which includes a 2012 base year model and a 2040 horizon year model. Adjustments in socio-economic data (SED) (i.e., employment) for the Project have been made to a separate traffic analysis zone (TAZ) within the RIVTAM model to reflect the Project's proposed land use (i.e., industrial/warehouse type use). A separate TAZ has been utilized in order to isolate trips to/from the Project. Table 1 summarizes the employment factors and employment estimates for the Project.

TABLE 1: EMPLOYMENT DENSITY FACTORS

	Project
Building Square Footage	603,100
Employment Density Factor[4]	1 employee/1,030 SF
Employment	586

Adjustments to employment for the Project's TAZ were made to both the RIVTAM base year model (2012) and the cumulative year model (2040). Project-generated home-based work VMT was then calculated for the base year model (2012) and cumulative year model (2040). The VMT is then normalized by dividing by the number of Project employees. As shown in Table 2, the Project base year (2012) VMT per employee is 15.71 and the Project cumulative year (2040) VMT per employee is 17.34.

[4] Employee Density Factor was obtained from the County of Riverside General Plan Appendix E-2: Socioeconomic Build-Out Assumptions and Methodology (see Table E-5, Commercial Employment Factors, Page 3).

TABLE 2: PROJECT VMT PER EMPLOYEE

	2012 Project	2040 Project
VMT	9,206	10,159
Employment	586	586
VMT / Employee	15.71	17.34

CITY OF RIVERSIDE VMT PER EMPLOYEE

The City of Riverside's current baseline VMT per employee for current baseline conditions is 13.24. As noted in the City Guidelines this information is available through the WRCOG Screening Tool and is shown in Attachment A of this report.

PROJECT LEVEL VMT ASSESSMENT

Table 3 illustrates the comparison between the Project generated VMT per employee to the City of Riverside's current baseline VMT per employee. As shown, the Project would exceed the threshold of 15% below the current baseline City of Riverside VMT per employee for both the baseline and cumulative Project generated VMT. As such, the Project's impact is potentially significant.

TABLE 3: VMT PER EMPLOYEE COMPARISON

	2012 VMT/Employee	2040 VMT/Employee
City of Riverside Current VMT/Employee	13.24	13.24
Project VMT/Employee	15.71	17.34
Percent Change	+18.66%	+30.97%
Potentially Significant?	Yes	Yes

PROJECT'S EFFECT ON VMT

Consistent with City Guidelines, projects that are found to have a potentially significant impact using efficiency-based metrics (such as VMT per employee) should also provide an additional assessment to evaluate a project's effect on VMT. As noted in the City Guidelines, this analysis is performed using the boundary method, which includes all vehicle trips with one or both trip-ends within a specific geographic area of interest (i.e., the City of Riverside). As shown on Table 4, the Project is anticipated to result in a base year (2012) net decrease of 0.200 VMT per employee and a cumulative year (2040) net decrease of 0.091 VMT per employee. The Project's effect on VMT is less than significant.

TABLE 4: PROJECT'S EFFECT ON CITY OF RIVERSIDE VMT

	2012 Without Project	2012 With Project	2040 Without Project	2040 With Project
VMT	5,730,358	5,734,341	8,723,408	8,724,916
Employment	119,544	120,130	228,619	229,205
VMT/Employee	47.935	47.735	38.157	38.066
Change in VMT	-0.200		-0.091	
Potentially Significant?	No		No	

POTENTIAL VMT REDUCTION STRATEGIES

Transportation demand management (TDM) strategies have been evaluated for the purpose of reducing VMT. The purpose of TDM strategies is to reduce the need for single occupancy automobile trips. The effectiveness of TDM strategies available to individual land use projects in Riverside County was thoroughly evaluated by the SB 743 Implementation TDM Strategy Assessment (February 26, 2019, Fehr & Peers) (**WRCOG Report**) prepared for WRCOG, which evaluated the TDM measures identified in the Quantifying Greenhouse Gas Mitigation Measures (CAPCOA, 2010) (**CAPCOA**) for their relevance to projects in the WRCOG area.

The WRCOG Report indicates that of the 50 transportation measures presented by CAPCOA, only 41 are applicable at a building and site level. The remaining 9 measures are functions of, or depend on, site location and/or actions by local and regional agencies or funders. Based on a review of the 41 transportation measures identified by CAPCOA, the WRCOG Report identifies that only a few of those measures have the potential to be effective at the project level in the predominantly suburban context of the WRCOG area. Evaluation of potentially applicable TDM strategies in the context of the proposed Project is summarized below.

- *Measure 1: Increase Diversity of Land Uses (LUT-3).* Having different types of land uses near one another can decrease VMT since trips between land use types are shorter and may be accommodated by non-auto modes of transportation. For example, when residential areas are in the same neighborhood as retail and office buildings, a resident does not need to travel outside of the neighborhood to meet his/her trip needs.

  Remarks: The Project proposes the construction of two high-cube short-term transload warehouse buildings, totaling 603,100 square feet. In order for the above measure to apply, at least three of the following will be located on-site, or off-site within ¼ mile of the Project: Residential Development, Retail Development, Park, Open Space, or Office. There is residential and limited retail located off-site within ¼ mile south of the Project, and park/open space (Sycamore Canyon Wilderness Park) within a ¼ mile north of the Project. As the proposed Project does not include a mix of land uses within the development site, but is instead located within a sphere of influence to a mix residential and retail uses (i.e., ¼ mile radius), this particular TDM measure would provide a low reduction and is therefore not evaluated further as a means of providing a reduction in Project VMT.

- *Measure 2: Provide Pedestrian Network Improvements (SDT-1).* Providing a pedestrian access network to link areas of the Project site encourages people to walk instead of drive assuming that desirable destinations are within walking distance of the Project. This mode shift results in people driving less and a reduction in VMT.

  Remarks: There are existing sidewalks along Alessandro Boulevard and Barton Street. The Project is proposing to improve the pedestrian network along the Project frontage and at the intersection of Vista Del Grande & Alessandro Boulevard. As noted in the WRCOG Report and by CAPCOA, this measure would provide a nominal reduction in Project VMT due to the limited new pedestrian connections created.

- *Measure 3: Provide Traffic Calming Measure (SDT-2).* Providing traffic calming measures encourages people to walk or bike instead of using a vehicle. This mode shift will result in a decrease in VMT. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others.

  Remarks: The Alessandro Boulevard corridor provides for sidewalk and bike lane enhancements. There is limited opportunity for the Project to implement meaningful enhanced mitigation in this area. This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 4: Implement Car-Sharing Program (TRT-9).* Implementing a car-sharing program would allow individuals to have on-demand access to a shared fleet of vehicles on an as-needed basis. User costs are typically determined through mileage or hourly rates, with deposits and/or annual membership fees.

  Remarks: It is possible that employers within the Project site could implement car-sharing programs. This may provide car access for employees on an as-needed basis, and thereby alleviate some of the costs and responsibilities of individual car ownership. The effectiveness of this measure is dependent on the ultimate building tenant(s) which are unknown currently. As such, this measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 5: Increase Transit Service Frequency and Speed (TST-4).* This measure serves to reduce transit-passenger travel time through more reduced headways and increased speed and reliability. This makes transit service more attractive and may result in a mode shift from auto to transit which reduces VMT.

  Remarks: The study area is currently served by Riverside Transit Agency (RTA), a public transit agency serving various jurisdictions within Riverside County. RTA Routes 20 and 26 currently provide proximate service (within one-quarter mile) of the Project site. Transit service is reviewed and updated by RTA 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. It is recommended that the Applicant work in conjunction with the Lead Agency and RTA to coordinate potential bus service to the Project site. Since implementation of this strategy would require agency implementation it is not applicable for individual development projects. This measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 6: Encourage Telecommuting and Alternative Work Schedule (TRT-6).* Encouraging telecommuting and alternative work schedules reduces the number of commute trips and therefore VMT traveled by employees. Alternative work schedules could take the form of staggered starting times, flexible schedules, or compressed work weeks.

Remarks: The effectiveness of this measure is dependent on the ultimate building tenant(s) which are unknown currently. As such, this measure is therefore not evaluated further as means of providing a reduction in Project VMT.

- *Measure 7: Provide Ride-Sharing Programs (TRT-3).* This strategy focuses on encouraging carpooling and vanpooling but its ultimate implementation is limited as Measure 6 above.

  Remarks: The effectiveness of this measure is dependent on the ultimate building tenant(s) which are unknown currently. As such, this measure is therefore not evaluated further as means of providing a reduction in Project VMT.

The effectiveness of the above-noted TDM measures would be dependent in large part on future Project occupancies, which are unknown at this time. Beyond Project tenancy considerations, land use context is a major factor relevant to the potential application and effectiveness of TDM measures. More specifically, the land use context of the Project is characteristically suburban center. Of itself, the Project's suburban center context acts to limit the range of feasible TDM measures and moderates their potential effectiveness. Relevant discussion in this regard is presented in *WRCOG SB 743 Implementation Pathway Document Package* (Fehr & Peers [for WRCOG]) March 2019, excerpted in pertinent part below:

> The Technical Advisory relies on the Quantifying Greenhouse Gas Mitigation Measures, (CAPCOA) 2010 resource document to help justify the 15 percent reduction in VMT threshold stating, " . . . fifteen percent reduction in VMT are achievable at the project level in a variety of place types . . . ". A more accurate reading of the CAPCOA document is that a fifteen percent is the maximum reduction when combining multiple mitigation strategies for the *suburban center*[5] place type. For *suburban*[6] place types 10 percent is the maximum and requires a project to contain a diverse land use mix, workforce housing, and project-specific transit. It is also important to note that the maximum percent reductions were not based on data or research comparing the actual performance of VMT reduction strategies in these place types. Instead, the percentages were derived from a limited comparison of aggregate citywide VMT performance for Sebastopol, San Rafael, and San Mateo where VMT performance ranged from 0 to 17 percent below the statewide VMT/capita average based on data collected prior to 2002. Little evidence exists about the long-term performance of similar TDM strategies in different land use contexts. As such, VMT reductions from TDM strategies cannot be guaranteed in most cases (*WRCOG SB 743 Implementation Pathway Document Package*, pp. 65 – 66).

As indicated in the preceding discussion, even under the most favorable circumstances, projects located

[5] ***Suburban Center:*** A project typically involving a cluster of multi-use development within dispersed, low-density, automobile dependent land use patterns (a suburb). The center may be an historic downtown of a smaller community that has become surrounded by its region's suburban growth pattern in the latter half of the 20th Century. The suburban center serves the population of the suburb with office, retail and housing which is denser than the surrounding suburb (*Quantifying Greenhouse Gas Mitigation Measures,* p. 60).

[6] ***Suburban:*** A project characterized by dispersed, low-density, single-use, automobile dependent land use patterns, usually outside.

within a suburban center context, such as the proposed Project evaluated here, could realize a maximum 15 percent reduction in VMT through implementation of feasible TDM measures. The Project is estimated to exceed the current City of Riverside VMT per employee by 18.66% in base year (2012) and 30.97% in cumulative year (2040). Given that the maximum percent reduction is 15% through feasible TDM measures, the Project cannot reduce the Project-generated VMT to below the threshold of 15% below the current City of Riverside VMT per employee.

The Project VMT impact is therefore considered ***significant and unavoidable.***

If you have any questions, please contact me directly at (949) 336-5978.

Respectfully submitted,

URBAN CROSSROADS, INC.

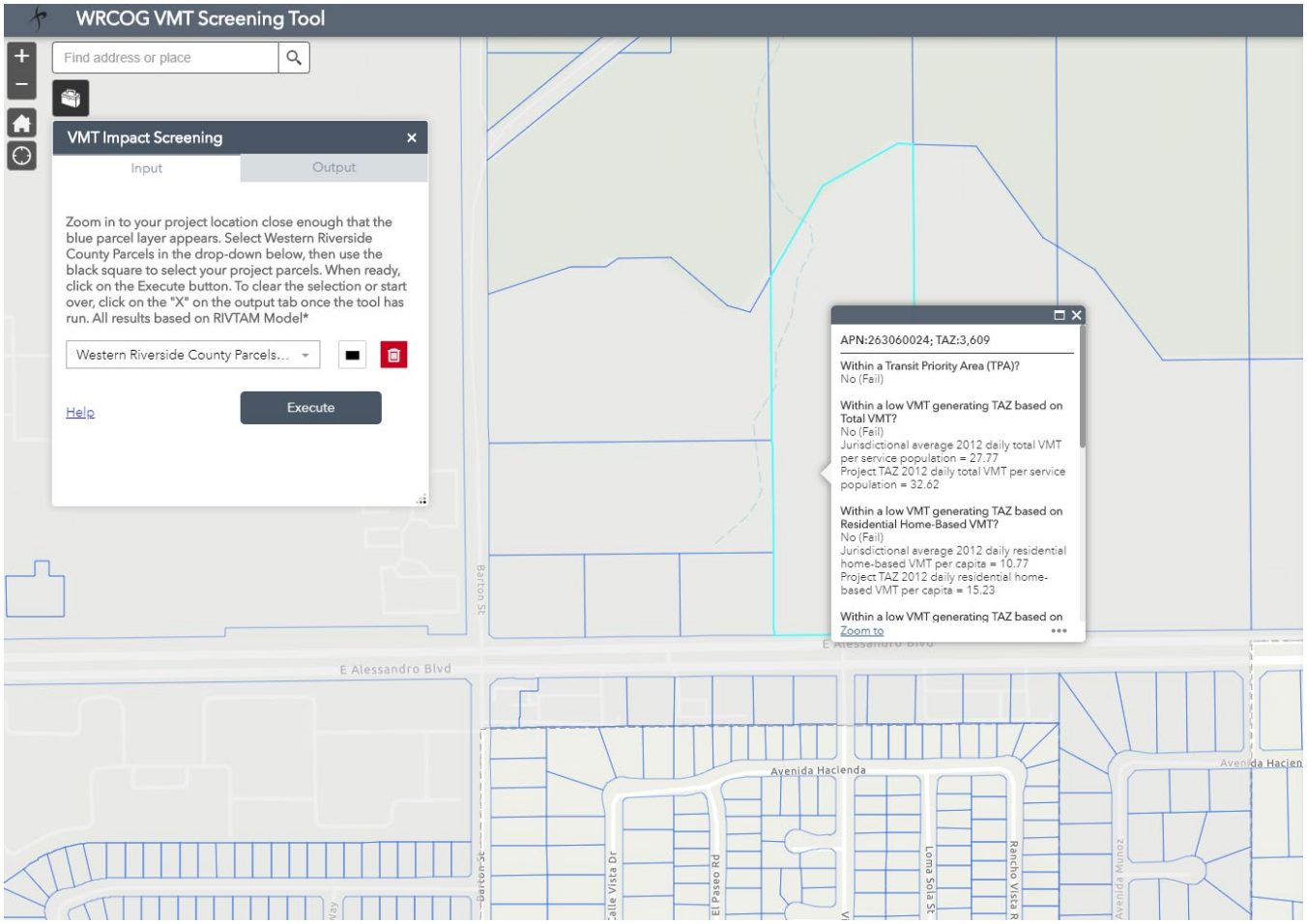
Aric Evatt, PTP
President

Robert Vu, PE
Transportation Engineer

REFERENCES

1. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.
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3. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
4. **Western Riverside Council of Governments (WRCOG).** *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* February 13, 2020.
5. **City of Riverside Public Works Department.** *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* City of Riverside : s.n., July 2020.

ATTACHMENT A
SCREENING TOOL RESULTS



APN:263060024; TAZ:3,609

Within a Transit Priority Area (TPA)?
No (Fail)

Within a low VMT generating TAZ based on Total VMT?
No (Fail)
Jurisdictional average 2012 daily total VMT per service population = 27.77
Project TAZ 2012 daily total VMT per service population = 32.62

Within a low VMT generating TAZ based on Residential Home-Based VMT?
No (Fail)
Jurisdictional average 2012 daily residential home-based VMT per capita = 10.77
Project TAZ 2012 daily residential home-based VMT per capita = 15.23

Within a low VMT generating TAZ based on Home-Based Work VMT?
No (Fail)
Jurisdictional average 2012 daily home-based work VMT per worker = 13.24
Project TAZ 2012 daily home-based work VMT per worker = 15.91

Notes:

- TPA designation is based on October 2018 conditions.
- Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.
- If VMT screening is desired for current baseline conditions, contact WRCOG for 2012 and 2040 VMT data. Interpolated VMT results can be obtained using the complete data set.
- VMT results do not account for full length of trips that occur beyond the SCAG region.