ALESSANDRO WAREHOUSE
TRAFFIC ANALYSIS
CITY OF MORENO VALLEY

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DIF	Development Impact Fee
EAP	Existing Plus Ambient Growth Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
N/A	Not Applicable
PCE	Passenger Car Equivalent
PHF	Peak Hour Factor
Project	Alessandro Warehouse
RCTC	Riverside County Transportation Commission
RTA	Riverside Transit Authority
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
TA	Traffic Analysis
TUMF	Transportation Uniform Mitigation Fee
WRCOG	Western Riverside Council of Governments
V/C	Volume to Capacity

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1 SUMMARY OF FINDINGS

This report presents the results of the traffic analysis (TA) for the proposed Alessandro Warehouse development ("Project") located south of Alessandro Boulevard on either side of Chagall Court in the City of Moreno Valley as shown on Exhibit 1-1.

The purpose of this traffic analysis is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, to recommend improvements to achieve acceptable circulation system operational conditions, and determine conformance with the General Plan goals and policies. This traffic study has been prepared in accordance with the City of Moreno Valley Transportation Engineering Division's Traffic Impact Analysis Preparation Guide (June 2020) and consultation with City of Moreno Valley staff during the scoping process. (1) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

1.1 SUMMARY OF FINDINGS

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

- Project to construct Alessandro Boulevard at its ultimate half-section width as a divided major arterial (134-foot right-of-way) between the Project's western and eastern boundaries in compliance with applicable City of Moreno Valley standards.
- Project to construct Driveway 1, Driveway 2, and Driveway 3 with stop controls for the northbound traffic in order to facilitate site access. All driveways will be restricted to right-in/right-out access only. If receiving lanes are available to the west and east, the third eastbound through lane should also be striped per the ultimate roadway cross-section.
- The Project should modify the existing eastbound left turn pocket at the intersection of Graham Street and Alessandro Boulevard to accommodate a 250-foot left turn lane.

Additional details and intersection lane geometrics are provided in Section 1.6 *Recommended Improvements* of this report.

1.2 PROJECT OVERVIEW

In an effort to calculate and evaluate a conservative trip generation for the proposed Project, the following mix of uses have been evaluated for the Project:

- Building 1: 206,665 square feet (sf) of warehousing (70% of total building sf) and 88,571 sf of high-cube cold storage warehouse use (30% of total building sf) for a total of 295,236 sf for Building 1
- Building 2: 70,876 sf of warehousing (70% of total building sf) and 30,376 sf of high-cube cold storage warehouse use (30% of total building sf) for a total of 101,252 sf for Building 2

The Project will be developed in a single phase and has a projected Opening Year of 2022. Vehicular access will be provided via 3 driveways along Alessandro Boulevard (see Exhibit 1-1). All driveways are proposed to be restricted to right-in/right-out access only.

EXHIBIT 1-1: PRELIMINARY SITE PLAN

LEGEND:

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

N

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. (2) The Project is estimated to generate a net total of 742 trip-ends per day on a typical weekday with approximately 59 AM peak hour trips and 64 PM peak hour trips (actual vehicles). The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.2.1 SITE PLAN DRIVEWAY LOCATIONS

As shown on Exhibit 1-1 and based on the City of Moreno Valley General Plan classification as a Divided Major Arterial, all driveways are anticipated to meet the minimum required driveway spacing of 250-feet between driveways per the City of Moreno Valley Municipal Code (9.11.080-14). However, access at these driveways will be restricted to right-in/right-out access only due to the existing raised median between Frederick Street and Graham Street.

1.3 ANALYSIS SCENARIOS

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

- Existing (2020)
- Existing plus Ambient Growth plus Project (EAP)

1.3.1 EXISTING (2020) CONDITIONS

Information for Existing (2020) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. Due to the currently ongoing COVID-19 pandemic, schools and businesses within the study area were closed or operating at less than full capacity at the time this study was prepared. As such, historic traffic counts from 2018 were utilized in conjunction with a 4.04% growth factor to reflect 2020 conditions (2% per year, compounded annually).

1.3.2 EAP (2022) CONDITIONS

To account for growth in traffic between Existing (2020) and EAP (2022) traffic conditions, a compounded annual traffic growth rate of 2.0 percent per year compounded annually was assumed (4.04 percent total aggregate growth in background traffic for the period from 2020 through 2022). The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth. The purpose of this analysis scenario is to determine if the addition of Project traffic is anticipated to result in any new deficiencies.

1.4 STUDY AREA

To ensure that this TA satisfies the City of Moreno Valley's traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by City of Moreno Valley staff prior to the preparation of this report.

The 5 study area intersections shown on Exhibit 1-2 and listed in Table 1-1 were selected for this TA based on the City of Moreno Valley's Traffic Study Guidelines and in consultation with City of Moreno Valley staff. Pursuant to the Traffic Study Guidelines, the City requires analysis of intersections where the Project would contribute 50 or more peak hour trips.[1] In an effort to conduct a conservative analysis, the trip generation for the proposed Project has been utilized to determine if the 50 peak hour trip criteria has been met at the study area intersections.

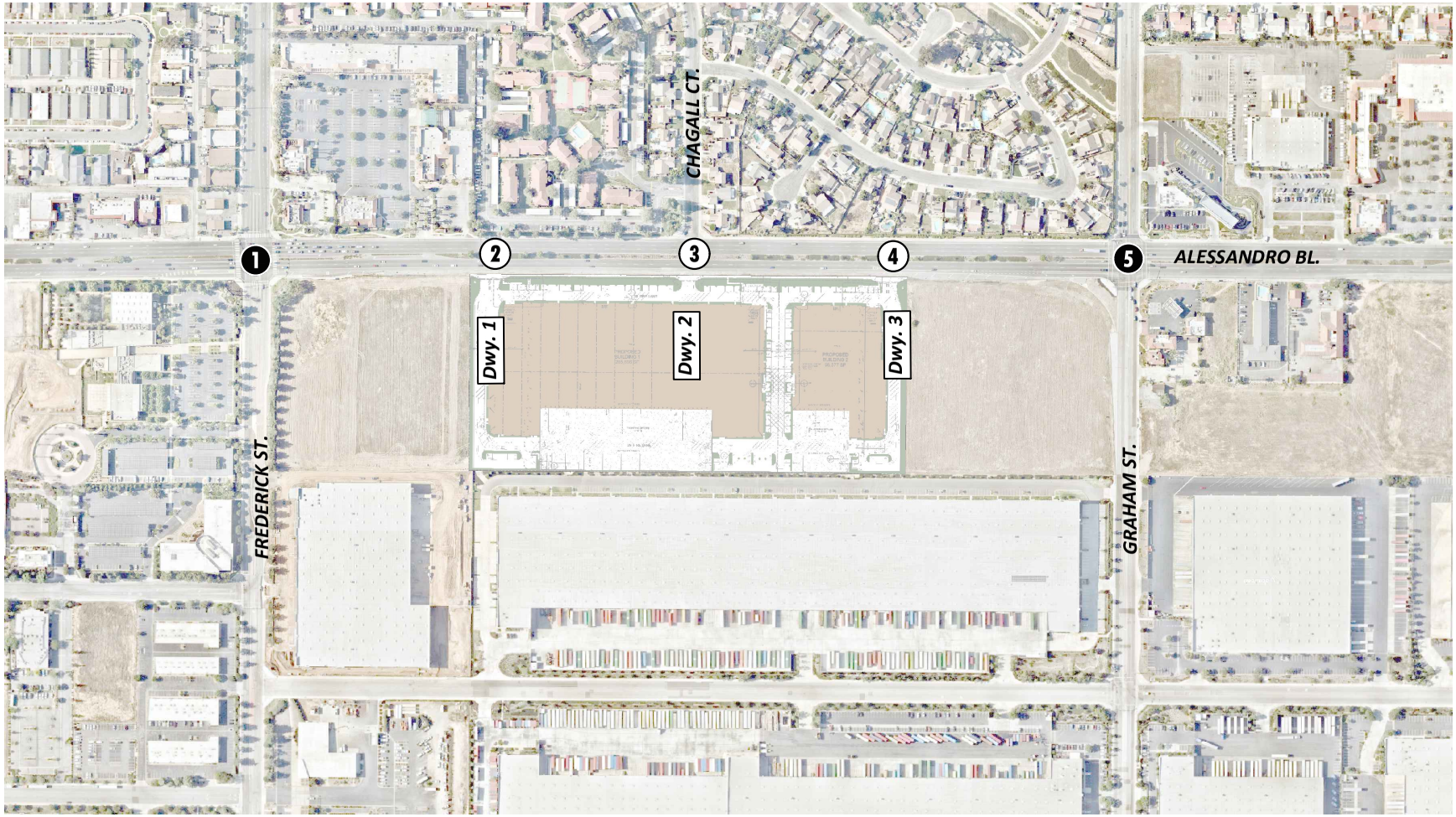
TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction	CMP?
1	Frederick St. & Alessandro Bl.	City of Moreno Valley	No
2	Driveway 1 & Alessandro Bl. – Future Intersection	City of Moreno Valley	No
3	Driveway 2 & Alessandro Bl. – Future Intersection	City of Moreno Valley	No
4	Driveway 3 & Alessandro Bl. – Future Intersection	City of Moreno Valley	No
5	Graham St. & Alessandro Bl.	City of Moreno Valley	No

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and updated most recently in 2011. The Riverside County Transportation Commission (RCTC) adopted the 2011 CMP for the County of Riverside in December 2011. (3) There are no CMP intersections in this study area.

[1] The "50 or more peak hour trips" intersection analytic protocol stipulated in the City's Traffic Study Guidelines is consistent with standard industry practice. It is noted further that the 50 peak hour trip threshold is employed by other agencies throughout Southern California including the County of Riverside, County of San Bernardino, and the County of Orange.

EXHIBIT 1-2: LOCATION MAP



LEGEND:

0 = EXISTING INTERSECTION ANALYSIS LOCATION

(0) = FUTURE INTERSECTION ANALYSIS LOCATION

N

URBAN CROSSROADS

1.5 ANALYSIS FINDINGS

This section provides a summary of analysis findings. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *EAP (2022) Traffic Analysis* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Exhibit 1-3. Based on a comparison of Existing to EAP (2022) traffic conditions, the addition of Project traffic is not anticipated result in any deficiencies at the study area intersections. All study area intersections are anticipated to continue to operate at acceptable levels and no improvements are necessary for EAP (2022) traffic conditions.

1.6 RECOMMENDED IMPROVEMENTS

1.6.1 SITE ADJACENT ROADWAY IMPROVEMENTS

The recommended site-adjacent roadway improvements for the Project are described below. Exhibit 1-4 illustrates the site-adjacent roadway improvement recommendations.

Alessandro Boulevard – Alessandro Boulevard is an east-west oriented roadway located along the Project's northern boundary. Construct Alessandro Boulevard at its ultimate half-section width as a Divided Major Arterial (134-foot right-of-way) between the Project's western boundary and the Project's eastern boundary in compliance with applicable City of Moreno Valley standards.

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

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

EXHIBIT 1-3: SUMMARY OF LOS

#	Intersection	Existing (2020)	EAP (2022)
1	Frederick St. & Alessandro Bl.		
2	Dwy. 1 & Alessandro Bl.	NA	
3	Dwy. 2 & Alessandro Bl.	NA	
4	Dwy. 3 & Alessandro Bl.	NA	
5	Graham St. & Alessandro Bl.		

LEGEND:

 = AM PEAK HOUR

 = PM PEAK HOUR

 = LOS A-D

 = LOS E

 = LOS F

NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

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

LEGEND:

= STOP SIGN IMPROVEMENT

=EXISTING LANE

= LANE IMPROVEMENT

N

URBAN CROSSROADS

1.6.2 SITE ACCESS IMPROVEMENTS

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

Driveway 1, Driveway 2, and Driveway 3 on Alessandro Boulevard – Install a stop control on the northbound approach and construct the intersection with the following geometrics:

- Northbound Approach: One right turn lane.
- Southbound Approach: Not Applicable (N/A)
- Eastbound Approach: Two through lanes and one shared through-right turn lane. 3rd shared through-right turn lane should be accommodated if the receiving lanes are in place on either side of the project between Frederick Street and Graham Street.
- Westbound Approach: Three through lanes.

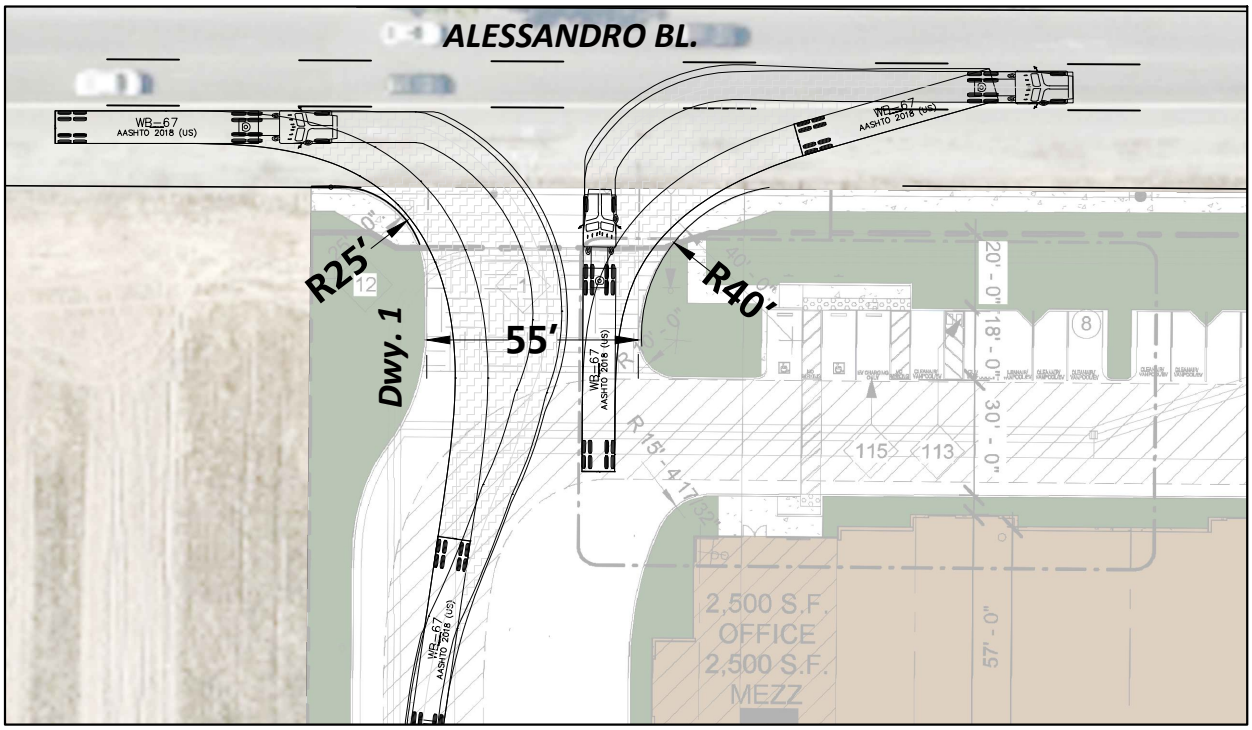
Graham Street at Alessandro Boulevard – A queueing analysis has been evaluated during the morning and evening peak hours at the intersection of Graham Street and Alessandro Boulevard to determine if there is sufficient stacking in the northbound and eastbound left turn pockets to accommodate Project traffic. The northbound left turn lane on Graham Street provides 185-feet of stacking while the eastbound left turn lane on Alessandro Boulevard provides 150-feet of stacking. Based on the queueing analysis, the existing northbound left turn pocket is anticipated to accommodate the 95th percentile peak hour queues under EAP (2022) traffic conditions with at most 105-feet of stacking required during the PM peak hour. The Project should modify the existing eastbound left turn pocket at the intersection of Graham Street and Alessandro Boulevard to accommodate a 250-foot left turn lane.

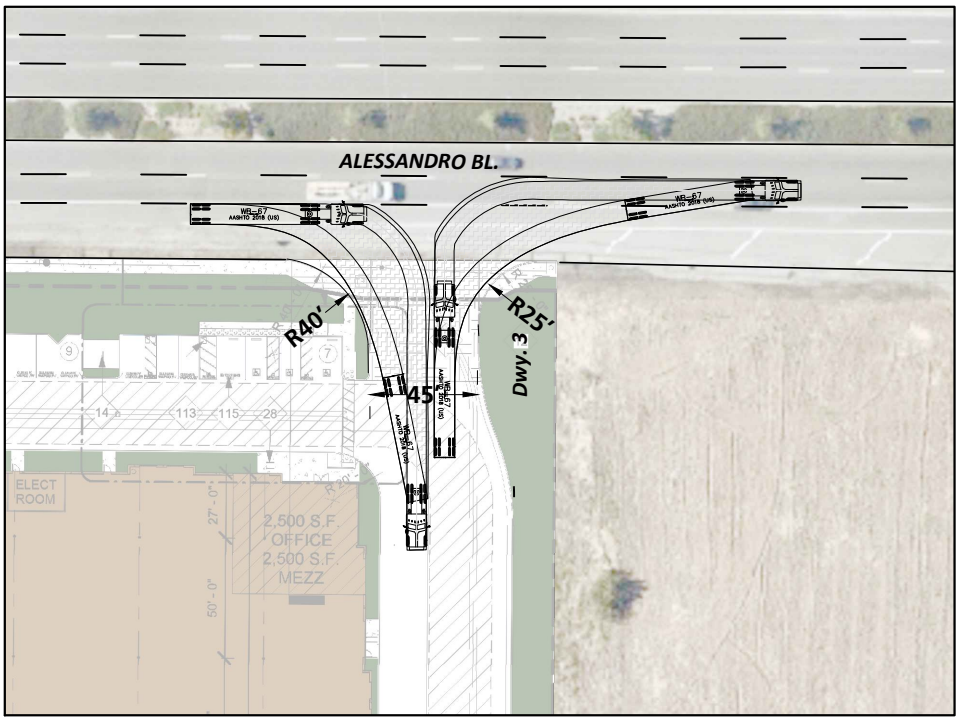
Wherever necessary, roadways adjacent to the Project, site access points and site-adjacent intersections will be constructed to be consistent with the identified roadway classifications and respective cross-sections in the City of Moreno Valley General Plan Circulation Element.

1.7 TRUCK ACCESS AND CIRCULATION

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway and site adjacent intersection anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). As shown, Driveway 1 and Driveway 3 on Alessandro Boulevard are anticipated to accommodate the wide turning radius of heavy trucks as currently designed.

EXHIBIT 1-5: TRUCK ACCESS





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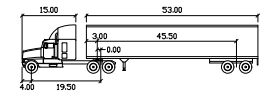
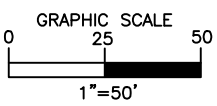




2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of Moreno Valley's traffic study guidelines for LOS-based traffic operations analysis. (1)

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. (4) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Moreno Valley requires signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections, LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 10) analysis software package.

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.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	80.01 and up	F	F

Source: HCM 6th Edition

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

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Moreno Valley requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

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

Source: HCM 6th Edition

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

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by 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. The existing intersections are currently signalized and with the proposed access restrictions, the driveway locations would not be suitable for the implementation of a traffic signal. As such, no traffic signal warrant analysis has been prepared for this TA.

2.4 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency in the City of Moreno Valley is based on the City of Moreno Valley General Plan Circulation Element. The City of Moreno Valley General Plan states that target LOS C or LOS D be maintained along City roads (including intersections) wherever possible. Exhibit 2-1 depicts the level of service standards within the City. LOS D is applicable to 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.

2.5 THRESHOLDS OF SIGNIFICANCE

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

2.5.1 SIGNALIZED INTERSECTIONS

Per the City of Moreno Valley TA Guidelines, the following LOS will be utilized for signalized study area intersections:

- Any signalized study intersection operating at acceptable LOS without project traffic in which the addition of project traffic causes the intersection to degrade to unacceptable LOS shall identify improvements to provide acceptable LOS.
- Any signalized study intersection that is operating at unacceptable LOS without project traffic where the project increases delay by 5.0 or more seconds shall identify improvements to offset the increase in delay.

2.5.2 UNSIGNALIZED INTERSECTIONS

Per the City of Moreno Valley TA Guidelines, the following LOS will be utilized for unsignalized study area intersections:

a) The addition of project related traffic causes the intersection to degrade from an acceptable LOS to unacceptable LOS.

OR

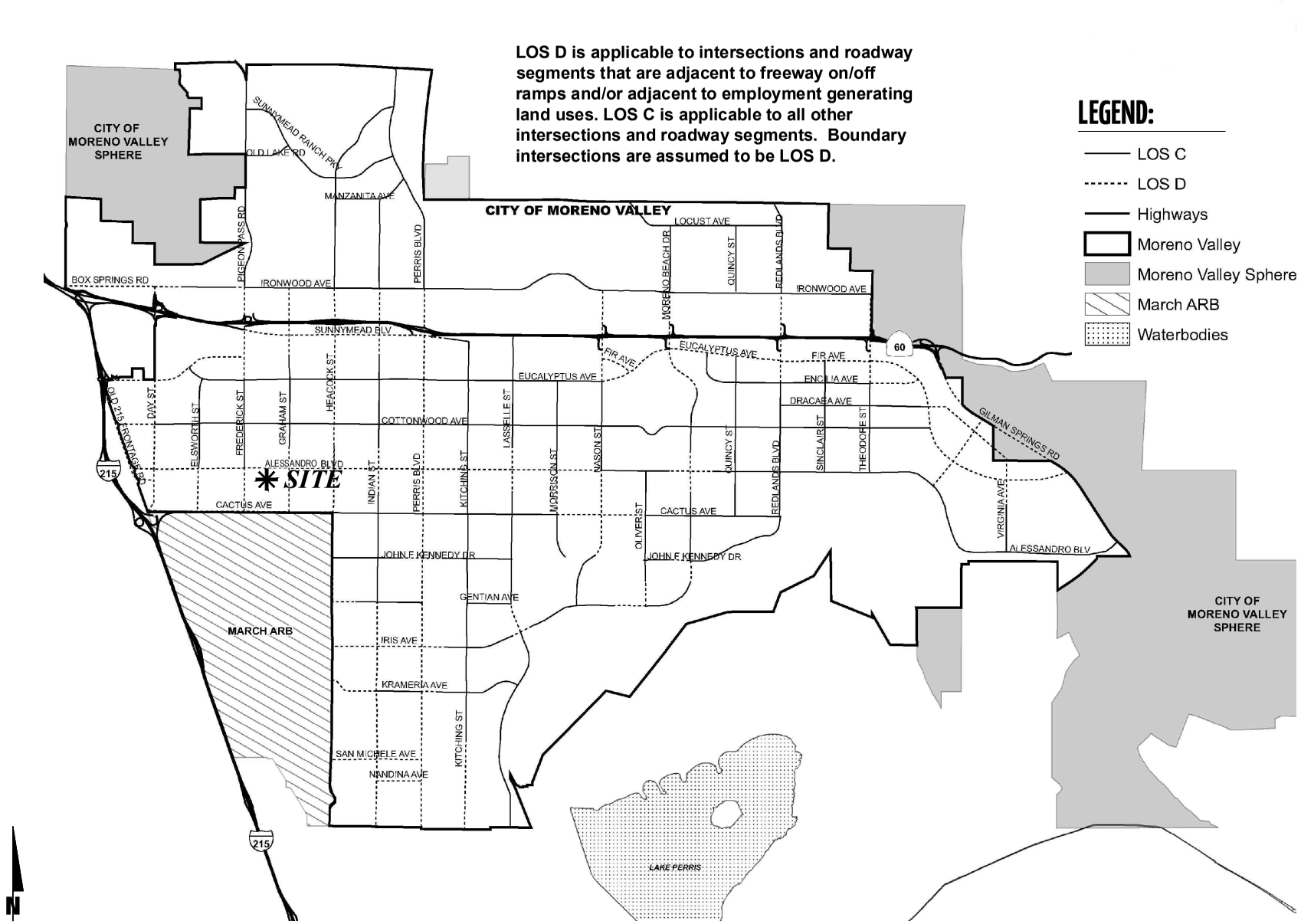
b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at unacceptable LOS,

AND

c) The intersection meets the peak hour traffic signal warrant after the addition of project traffic.

The proposed significance thresholds will be applied at study area intersections for the purposes of determining project-related impacts. If the conditions above are satisfied, improvements should be identified that achieve LOS D or better for a) above or to pre-project LOS and delay for case b) above.

EXHIBIT 2-1: CITY OF MORENO VALLEY LEVEL OF SERVICE (LOS) STANDARDS



URBAN CROSSROADS

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Moreno Valley General Plan Circulation Network, and a review of existing peak hour intersection operations analysis.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with City of Moreno Valley staff (Appendix 1.1), the study area includes a total of 5 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 CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

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 described subsequently. Exhibit 3-2 shows the City of Moreno Valley General Plan Circulation Element and Exhibit 3-3 illustrates the City of Moreno Valley General Plan roadway cross-sections.

Divided Major Arterials can accommodate six travel lanes. These facilities typically provide access between the regional highway system and minor arterials. An example of a Divided Arterial within the study area includes:

- Alessandro Boulevard

Arterials can accommodate four travel lanes (with a 20-foot outer lane in each direction of travel). These facilities typically provide access between divided arterials and collector streets. An example of an Arterial within the study area includes:

- Frederick Street, north of Alessandro Boulevard

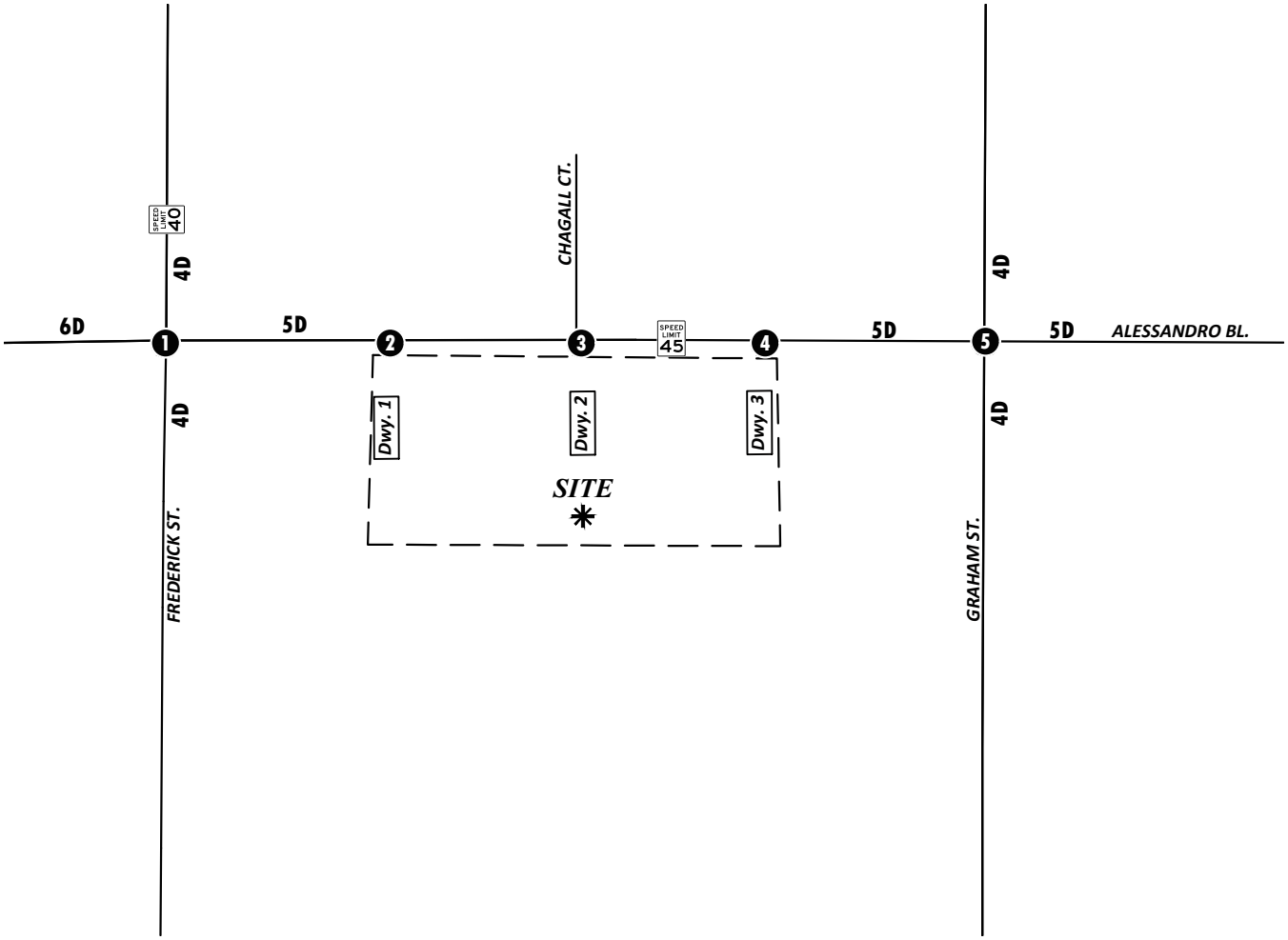
Minor Arterials can accommodate four travel lanes. These facilities typically provide access between divided arterials and collector streets. Examples of Minor Arterials within the study area includes:

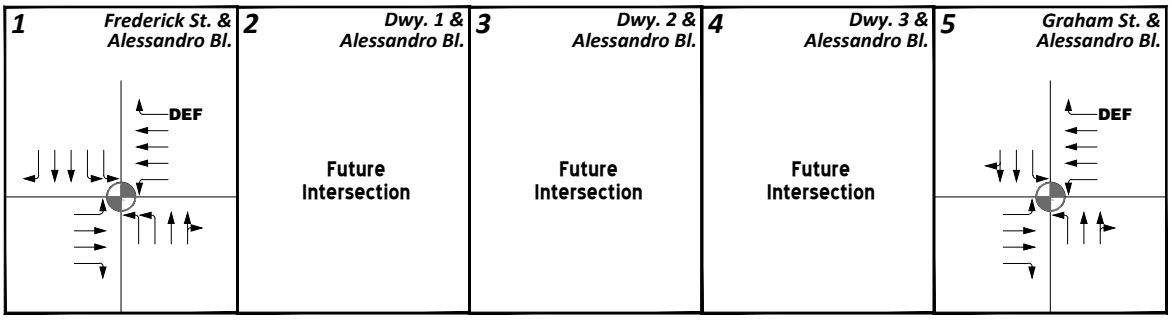
- Frederick Street, south of Alessandro Boulevard
- Graham Street

3.3 TRUCK ROUTES

The City of Moreno Valley designated truck route map is shown on Exhibit 3-4. As shown on Exhibit 3-4, Alessandro Boulevard, Frederick Street, and Graham Street (between Alessandro Boulevard and Cactus Avenue only) are designated truck routes within the study area in City of Moreno Valley. The designated truck route map has been utilized to route truck traffic for Project trips throughout the study area.

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





LEGEND:

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

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EXHIBIT 3-2: CITY OF MORENO VALLEY GENERAL PLAN CIRCULATION ELEMENT

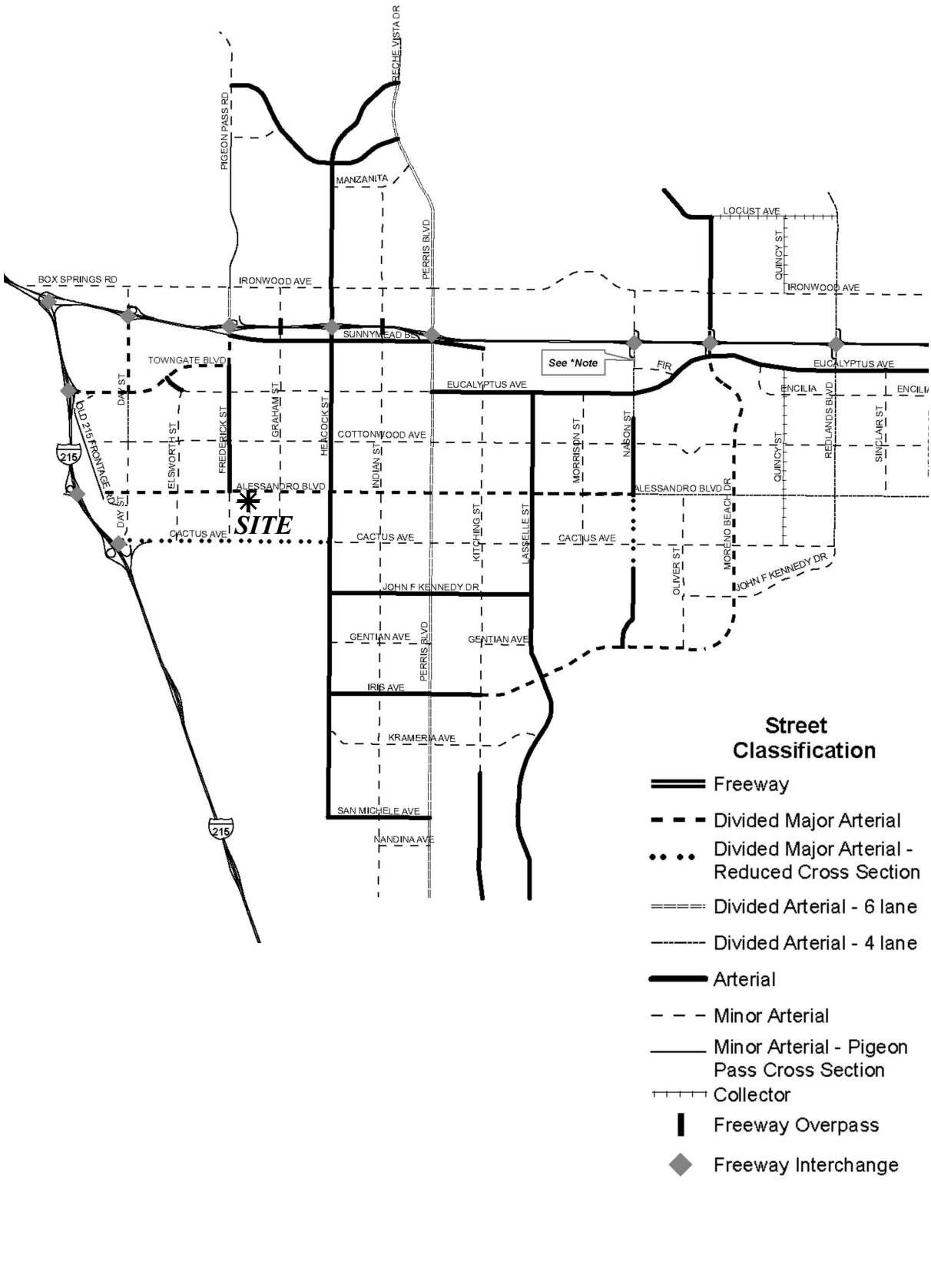

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EXHIBIT 3-3: CITY OF MORENO VALLEY GENERAL PLAN ROADWAY CROSS-SECTIONS

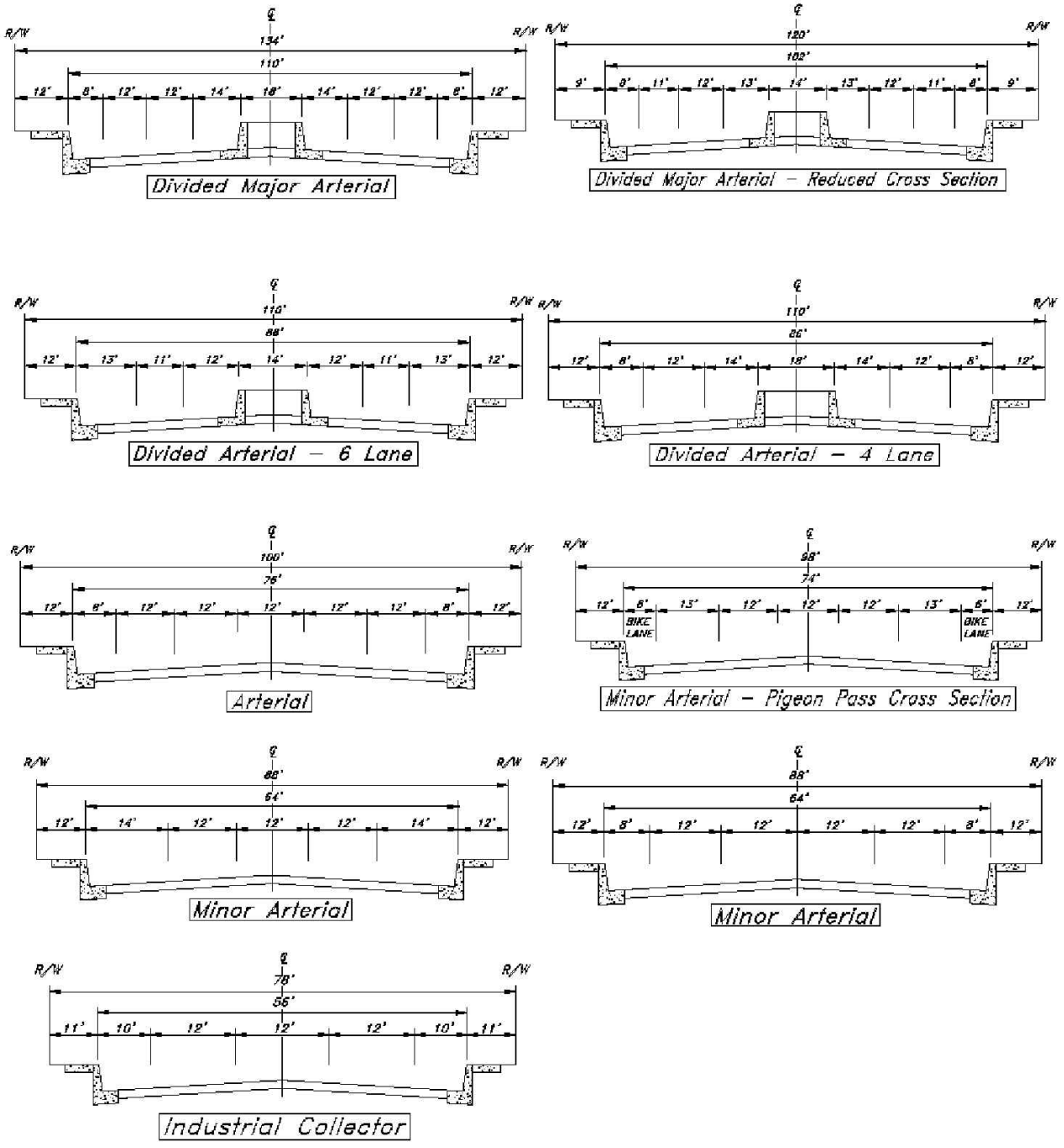
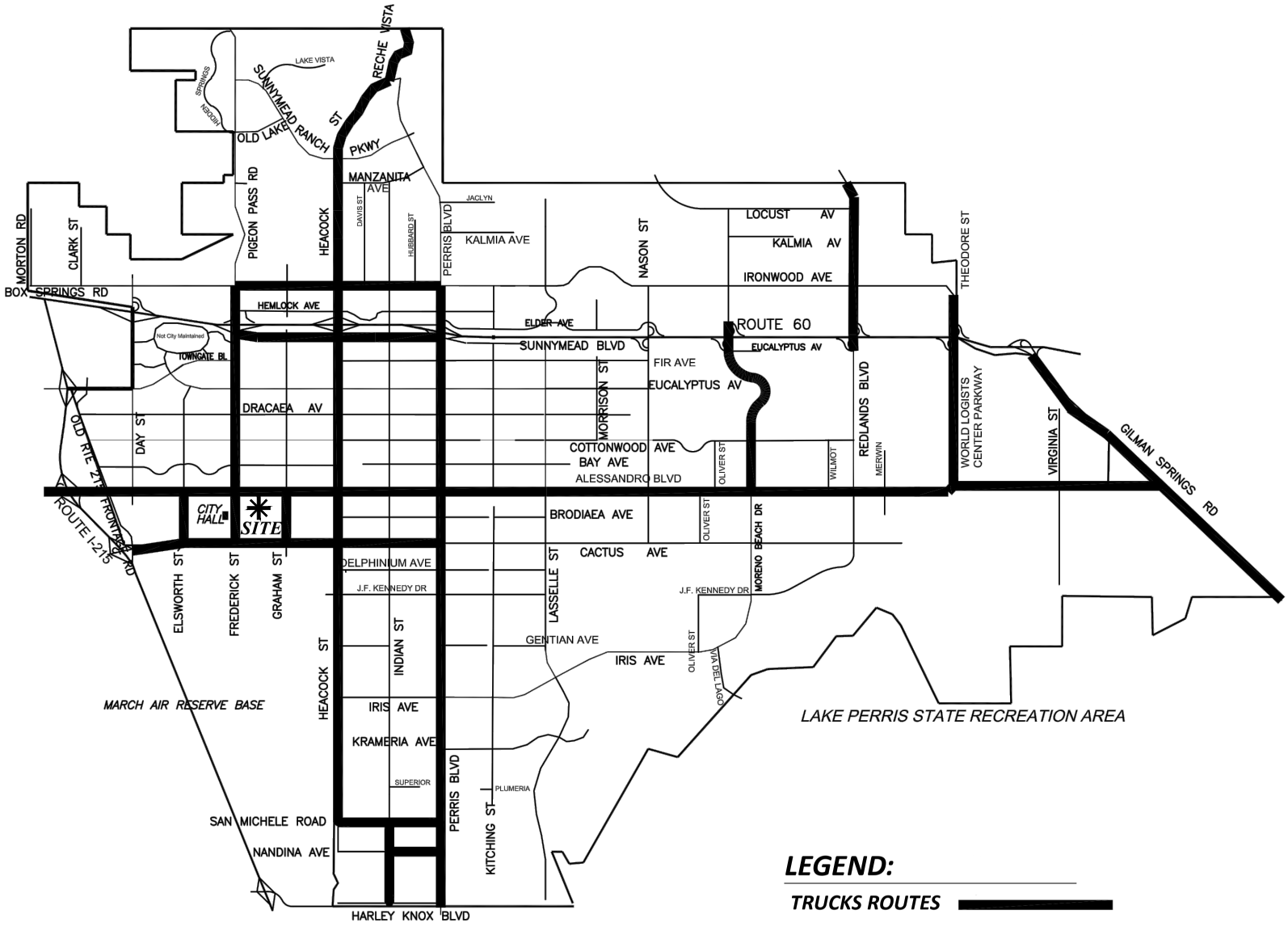


EXHIBIT 3-4: CITY OF MORENO VALLEY TRUCK ROUTES



3.4 TRANSIT SERVICE

The study area is currently served by the Riverside Transit Authority (RTA), a public transit agency serving the unincorporated Riverside County region. As shown on Exhibit 3-5, RTA Route 20 serves Alessandro Boulevard within the study area and would likely serve the Project site. There are existing bus stops on south side at Frederick Street, Chagall Court, and Graham Street along Alessandro Boulevard. RTA Route 11 also serves the study area and runs along Frederick Street. Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demands. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.5 BICYCLE & PEDESTRIAN FACILITIES

Exhibit 3-6 illustrates the existing pedestrian facilities, including sidewalks and crosswalk locations. Bus stop locations are also identified, which are on both the north and south sides of Alessandro Boulevard at Frederick Street, Chagall Court, and Graham Street. Both intersections on Alessandro Boulevard at Frederick Street and Graham Street have crosswalks on all approaches. Alessandro Boulevard is currently striped with Class II (on-street) bike lanes. Sidewalks are in place along most of the study area roadways and intersections, with most of the southern side of Alessandro Boulevard between Frederick Street and Graham Street and also along the west side of Graham Street south of Alessandro Boulevard.

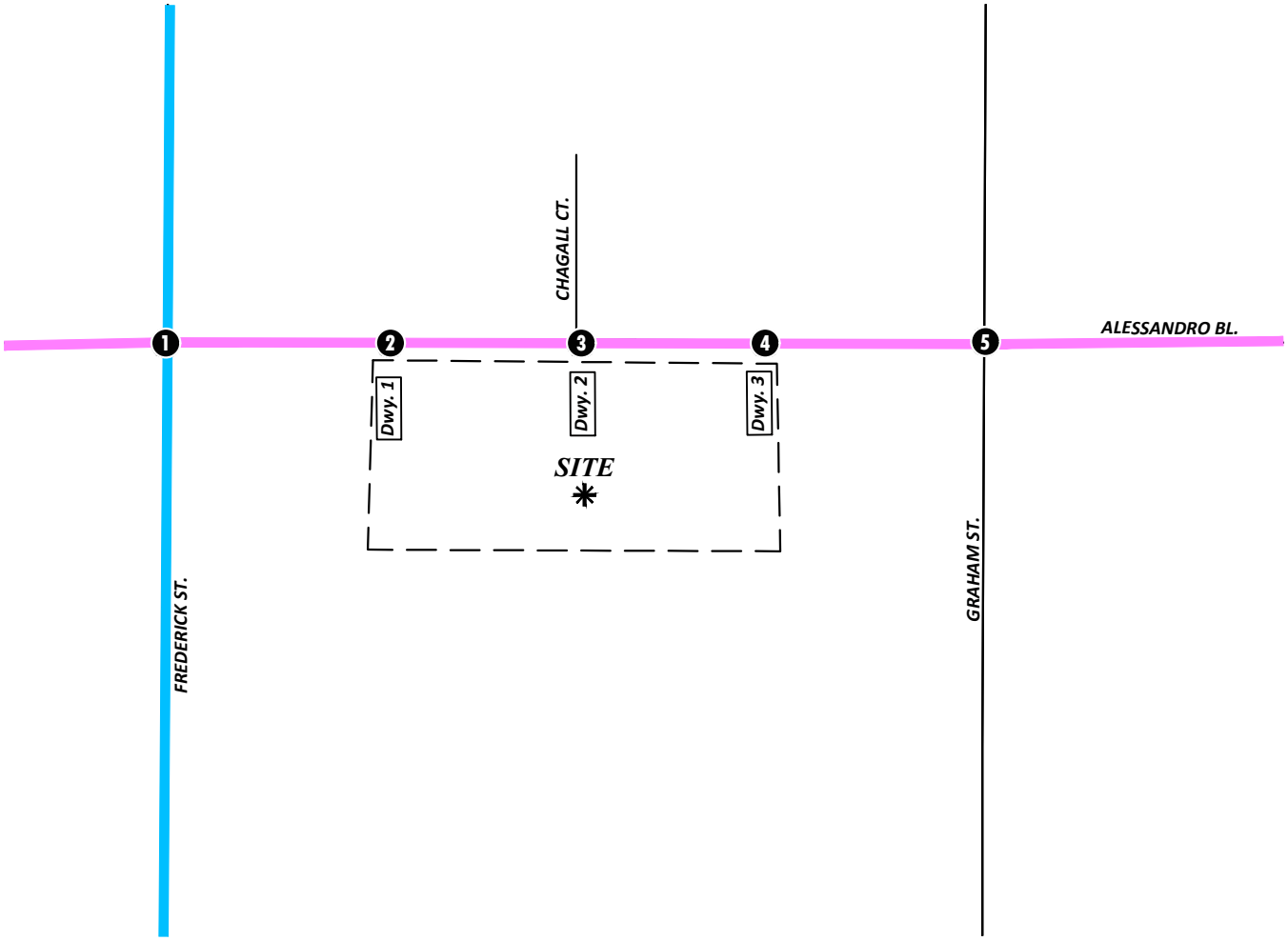
3.6 EXISTING (2020) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in April and May of 2018. 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)

Due to the currently ongoing COVID-19 pandemic, schools and businesses within the study area were closed or operating at less than full capacity at the time this study was prepared. As such, historic (2018) traffic counts were utilized in conjunction with a 4.04% growth factor to reflect 2020 conditions (2% per year, compounded annually). The 2018 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.

EXHIBIT 3-5: EXISTING TRANSIT ROUTES



LEGEND:

= RTA ROUTE 11

= RTA ROUTE 20

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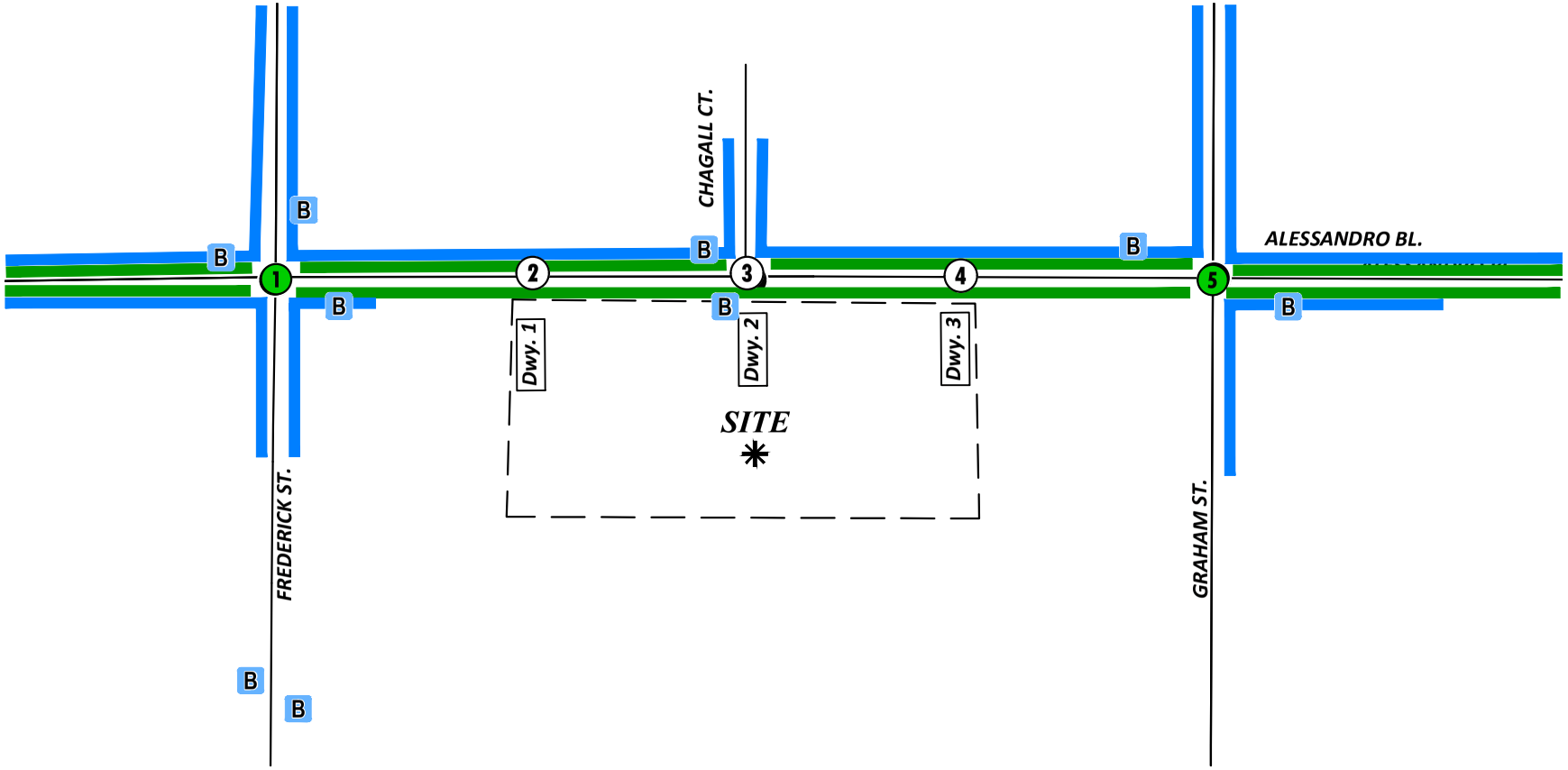
EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES



The traffic counts collected in April and May of 2018 include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. To represent the effects large trucks, buses and recreational vehicles have on traffic flow; all trucks were converted into passenger car equivalent (PCE). 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 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 City's traffic study guidelines.

Existing weekday ADT volumes are shown on Exhibit 3-7. Consistent with other projects in the area, 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 14.32 = Leg Volume

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 6.98 percent. As such, the above equation utilizing a factor of 10.08 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 6.98 percent (i.e., 1/0.0698 = 14.32) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes (in PCE) are also shown on Exhibit 3-7.

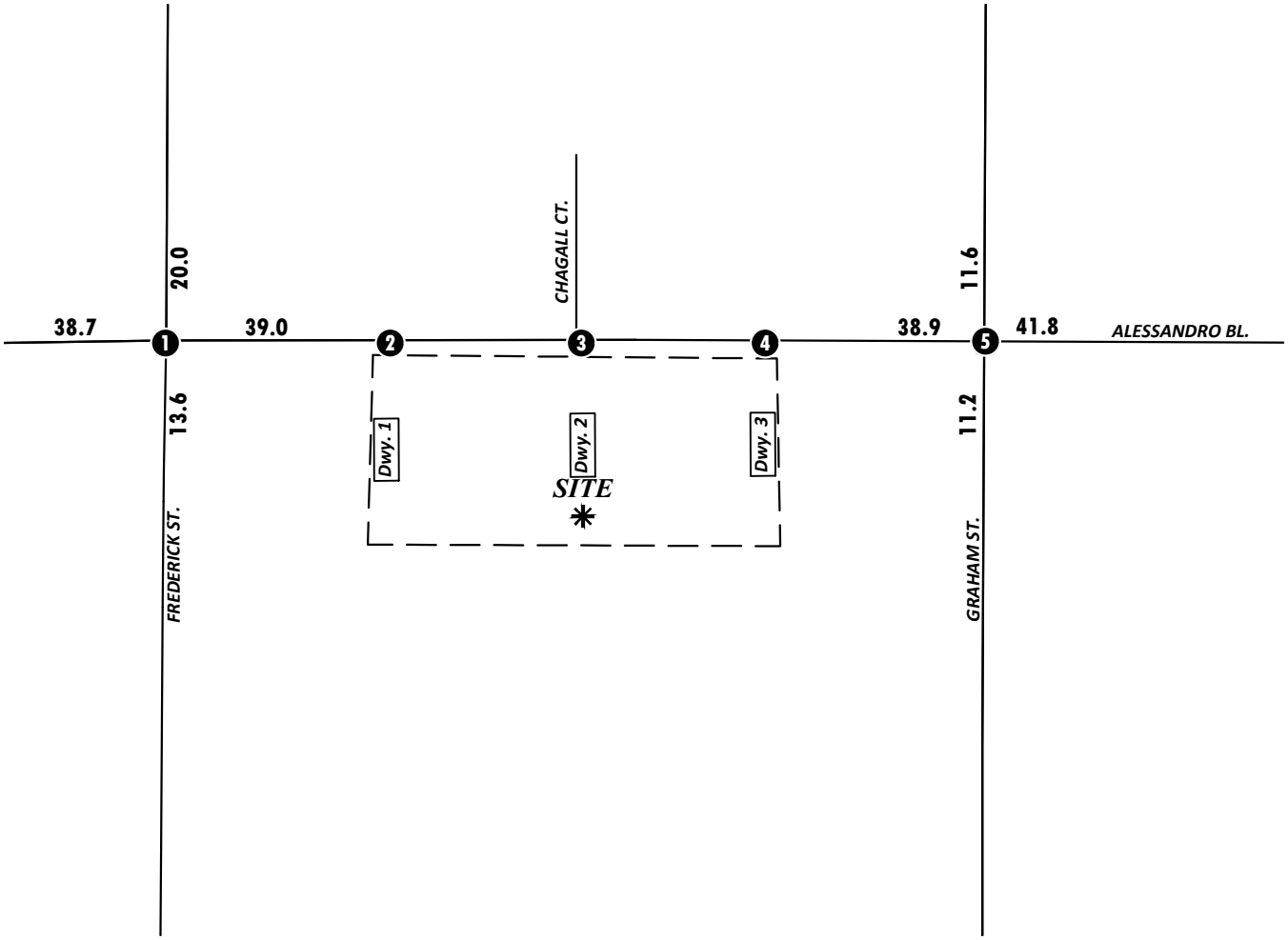
3.7 INTERSECTION OPERATIONS ANALYSIS

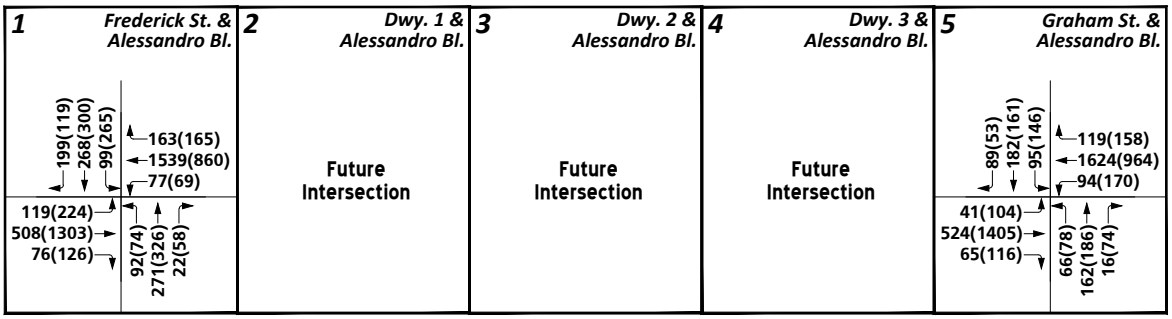
Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1 which indicates that the existing study area intersections are currently operating at an acceptable LOS during the peak hours. Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions is shown on Exhibit 3-8. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

3.8 RECOMMENDED IMPROVEMENTS

All study area intersections are currently operating at an acceptable LOS for Existing (2020) traffic conditions. As such, no improvements have been recommended.

EXHIBIT 3-7: EXISTING (2020) TRAFFIC VOLUMES (IN PCE)





LEGEND:

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

N

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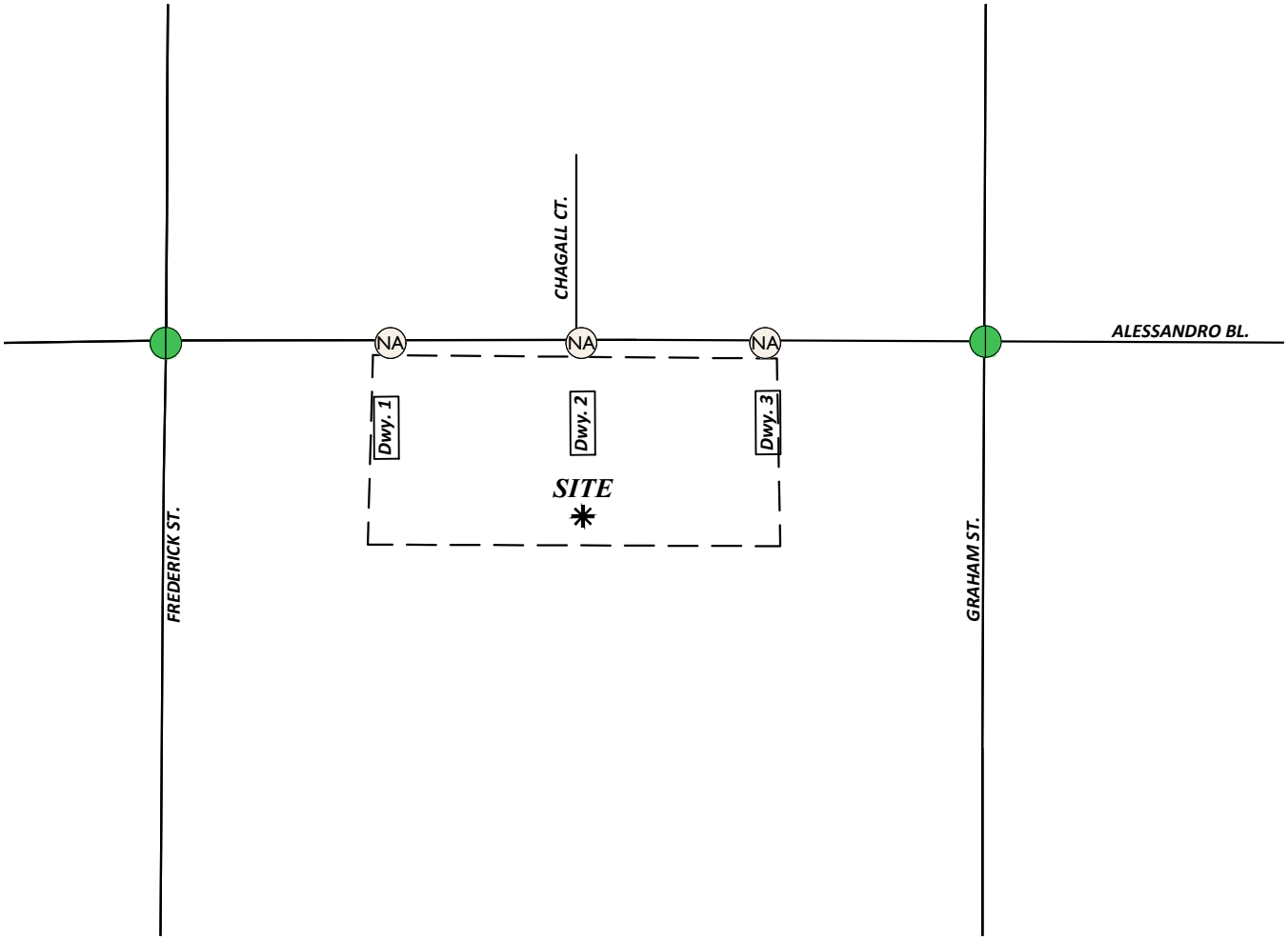
EXHIBIT 3-8: EXISTING (2020) SUMMARY OF LOS



LEGEND:

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

N

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Table 3-1

Intersection Analysis for Existing (2020) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay (secs.)[2]		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Frederick St. & Alessandro Bl.	TS	2	2	0	2	2	1	1	2	1	1	3	d	22.4	30.7	C	C
2	Driveway 1 & Alessandro Bl.		Future Intersection															
3	Driveway 2 & Alessandro Bl.		Future Intersection															
4	Driveway 3 & Alessandro Bl.		Future Intersection															
5	Graham St. & Alessandro Bl.	TS	1	2	0	1	2	0	1	2	1	1	3	d	20.4	32.6	C	C

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

L = Left; T = Through; R = Right; 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] TS = Traffic Signal

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. In an effort to calculate and evaluate a conservative trip generation for the proposed Project, the following mix of uses have been evaluated for the Project:

- Building 1: 206,665 sf of warehousing (70% of total building sf) and 88,571 sf of high-cube cold storage warehouse use (30% of total building sf) for a total of 295,236 sf for Building 1
- Building 2: 70,876 sf of warehousing (70% of total building sf) and 30,376 sf of high-cube cold storage warehouse use (30% of total building sf) for a total of 101,252 sf for Building 2

The Project will be developed in a single phase and has a projected Opening Year of 2022. Vehicular access will be provided via 3 driveways along Alessandro Boulevard. All driveways are proposed to be restricted to right-in/right-out access only. Regional access to the Project site is available from the I-215 Freeway via Alessandro Boulevard and Cactus Avenue interchanges. Frederick Street to the north also provides access to the SR-60 Freeway.

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 (in actual vehicles and PCE) for the Project are shown in Table 4-1. The Project's trip generation has been calculated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017, for the following land uses. (2)

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 277,541 sf (70% of Buildings 1 and 2). The vehicle mix has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). (5) This study provides the following vehicle mix: AM Peak Hour: 87.0% passenger cars and 13.0% trucks; PM Peak Hour: 85.0% passenger cars and 15.0% trucks; Weekday Daily: 73.0% passenger cars and 27.0% trucks. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%. (6)
- ITE land use code 157 (High-Cube Cold Storage Warehouse) has been used to derive site specific trip generation estimates for up to 118,947 sf (30% of Buildings 1 and 2). High-cube cold storage warehouses include warehouses characterized by the storage and/or consolidation of manufactured goods (and to a lesser extent, raw materials) prior to their distribution to retail locations or other warehouses. High-cube cold storage warehouses are facilities typified by temperature-controlled environments for frozen food or other perishable products. The High-Cube Cold Storage Warehouse vehicle mix (passenger cars versus trucks) has been obtained from the ITE's Trip Generation Manual Supplement (dated February 2020). (5) This study provides the following vehicle mix: AM Peak Hour: 73.0% passenger cars and 27.0% trucks; PM Peak Hour: 77.0% passenger cars and 23.0% trucks; Weekday Daily: 65.0% passenger cars and 35.0% trucks. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 34.7%; 3-Axle = 11.0%; 4+-Axle = 54.3%. (6)

Table 4-1

Project Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (AM-87.0%; PM-85.0%; Daily-73.0%)			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (AM-2.17%; PM-2.51%; Daily-4.51%)			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks (AM-2.69%; PM-3.11%; Daily-5.59%)			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4-Axle+ Trucks (AM-8.14%; PM-9.39%; Daily-16.90%)			0.011	0.003	0.014	0.005	0.013	0.018	0.294
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars (AM-73.0%; PM-77.0%; Daily-65.0%)			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks (AM-9.37%; PM-7.98%; Daily-12.15%)			0.008	0.002	0.010	0.003	0.007	0.010	0.257
3-Axle Trucks (AM-2.97%; PM-2.53%; Daily-3.85%)			0.003	0.001	0.003	0.001	0.002	0.003	0.082
4-Axle+ Trucks (AM-14.66%; PM-12.49%; Daily-19.01%)			0.012	0.004	0.016	0.004	0.011	0.015	0.403
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (PCE = 1.5)			0.004	0.001	0.006	0.002	0.005	0.007	0.118
3-Axle Trucks (PCE = 2.0)			0.007	0.002	0.009	0.003	0.009	0.012	0.194
4+-Axle Trucks (PCE = 3.0)			0.032	0.010	0.042	0.014	0.039	0.054	0.882
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks (PCE = 1.5)			0.012	0.004	0.016	0.004	0.010	0.014	0.386
3-Axle Trucks (PCE = 2.0)			0.005	0.002	0.007	0.002	0.004	0.006	0.163
4+-Axle Trucks (PCE = 3.0)			0.037	0.011	0.048	0.012	0.033	0.045	1.209

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

[4] PCE factors per City of Moreno Valley's TIA Guidelines: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

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 the City's traffic study guidelines.

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project in actual vehicles and PCE are shown in Table 4-2 and Table 4-3, respectively. The proposed Project is anticipated to generate 742 vehicle trip-ends per day with 59 AM peak hour trips and 64 PM peak hour trips (of which 224 trip-ends per day are associated with trucks with 8 AM peak hour truck trips and 9 PM peak hour truck trips) (see Table 4-2). The operations analyses utilize the PCE trip generation consistent with the City's traffic study guidelines.

The site is currently zoned for commercial retail use (0.25 floor to area ratio which would allow 192,426 square feet of commercial retail use on 17.67 acres). As shown on Table 4-4, the proposed Project General Plan Amendment (light industrial) is anticipated to result in a reduction in trips as compared to the currently adopted General Plan Land Use (commercial).

4.2 PROJECT TRIP DISTRIBUTION

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

The Project trip distribution was developed based on anticipated travel patterns to and from the Project site for both passenger cars and truck traffic and are consistent with other similar projects that have been reviewed and approved by City of Moreno Valley staff. The Project trip distribution patterns for both passenger cars and trucks were developed based on an understanding of existing travel patterns in the area, the geographical location of the site, and the site's proximity to the regional arterial and state highway system.

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

4.3 MODAL SPLIT

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

Table 4-2

Project Trip Generation Summary (Actual Vehicles)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1:									
Warehousing (70%)	206.665	TSF							
Passenger Cars:			24	7	31	9	24	33	264
Truck Trips:									
2-axle:			1	0	1	0	1	1	16
3-axle:			1	0	1	0	1	1	20
4+-axle:			2	1	3	1	3	4	62
- Truck Trips			4	1	5	1	5	6	98
High-Cube Cold Storage (30%)	88.571	TSF							
Passenger Cars:			5	2	7	2	6	8	122
Truck Trips:									
2-axle:			1	0	1	0	1	1	24
3-axle:			0	0	0	0	0	0	8
4+-axle:			1	0	1	0	1	1	36
- Truck Trips			2	0	2	0	2	2	68
Total Passenger Cars (Building 1)			29	9	38	11	30	41	386
Total Trucks (Building 1)			6	1	7	1	7	8	166
BUILDING 1 TOTAL TRIPS (Actual Vehicles)			***35***	***10***	***45***	***12***	***37***	***49***	***552***
Building 2:									
Warehousing (70%)	70.876	TSF							
Passenger Cars:			8	2	10	3	8	11	90
Truck Trips:									
2-axle:			0	0	0	0	0	0	6
3-axle:			0	0	0	0	0	0	8
4+-axle:			1	0	1	0	1	1	22
- Truck Trips			1	0	1	0	1	1	36
High-Cube Cold Storage (30%)	30.376	TSF							
Passenger Cars:			2	1	3	1	2	3	42
Truck Trips:									
2-axle:			0	0	0	0	0	0	8
3-axle:			0	0	0	0	0	0	2
4+-axle:			0	0	0	0	0	0	12
- Truck Trips			0	0	0	0	0	0	22
Total Passenger Cars (Building 2)			10	3	13	4	10	14	132
Total Trucks (Building 2)			1	0	1	0	1	1	58
BUILDING 2 TOTAL TRIPS (Actual Vehicles)			***11***	***3***	***14***	***4***	***11***	***15***	***190***
Total Passenger Cars (Building 1 + Building 2)			**39**	**12**	**51**	**15**	**40**	**55**	**518**
Total Trucks (Building 1 + Building 2)			**7**	**1**	**8**	**1**	**8**	**9**	**224**
TOTAL TRIPS (Building 1 + Building 2)			**46**	**13**	**59**	**16**	**48**	**64**	**742**

[1] TSF = thousand square feet

Table 4-3

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total	Daily
Building 1:									
Warehousing (70%)	206.665	TSF							
Passenger Cars:			24	7	31	9	24	33	264
Truck Trips:									
2-axle:			1	0	1	0	1	1	24
3-axle:			1	0	1	1	2	3	40
4+-axle:			7	2	9	3	8	11	182
- Truck Trips			9	2	11	4	11	15	246
High-Cube Cold Storage (30%)	88.571	TSF							
Passenger Cars:			5	2	7	2	6	8	122
Truck Trips:									
2-axle:			1	0	1	0	1	1	34
3-axle:			0	0	0	0	0	0	14
4+-axle:			3	1	4	1	3	4	108
- Truck Trips			4	1	5	1	4	5	156
Total Passenger Cars (Building 1)			29	9	38	11	30	41	386
Total Trucks (Building 1)			13	3	16	5	15	20	402
BUILDING 1 TOTAL TRIPS (PCE)			***42***	***12***	***54***	***16***	***45***	***61***	***788***
Building 2:									
Warehousing (70%)	70.876	TSF							
Passenger Cars:			8	2	10	3	8	11	90
Truck Trips:									
2-axle:			0	0	0	0	0	0	8
3-axle:			0	0	0	0	1	1	14
4+-axle:			2	1	3	1	3	4	64
- Truck Trips			2	1	3	1	4	5	86
High-Cube Cold Storage (30%)	30.376	TSF							
Passenger Cars:			2	1	3	1	2	3	42
Truck Trips:									
2-axle:			0	0	0	0	0	0	12
3-axle:			0	0	0	0	0	0	6
4+-axle:			1	0	1	0	1	1	38
- Truck Trips			1	0	1	0	1	1	56
Total Passenger Cars (Building 2)			10	3	13	4	10	14	132
Total Trucks (Building 2)			3	1	4	1	5	6	142
BUILDING 2 TOTAL TRIPS (PCE)			***13***	***4***	***17***	***5***	***15***	***20***	***274***
Total Passenger Cars (Building 1 + Building 2)			**39**	**12**	**51**	**15**	**40**	**55**	**518**
Total Trucks (Building 1 + Building 2)			**16**	**4**	**20**	**6**	**20**	**26**	**544**
TOTAL TRIPS (Building 1 + Building 2) (PCE)			**55**	**16**	**71**	**21**	**60**	**81**	**1,062**

[1] TSF = thousand square feet

Table 4-4

Trip Generation Comparison

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Shopping Center	TSF	820	0.58	0.36	0.94	1.83	1.98	3.81	37.75

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

[2] TSF = thousand square feet

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing General Plan Land Use:									
Commercial (Shopping Center)[2]	192.426	TSF	112	69	181	352	381	733	7,264
Proposed Project (see Table 3):									
Alessandro Warehouse (PCE)	295.236	TSF	55	16	71	21	60	81	1,062
Net Reduction in Trip Generation:			**-57**	**-53**	**-110**	**-331**	**-321**	**-652**	**-6,202**

[1] TSF = thousand square feet

[2] Current General Plan land use and zoning is Commercial. Shopping Center (ITE 820) land use used to calculate trip generation. The square footage was calculated assuming a 0.25 floor-to-area ratio (FAR): 17.67 acres x 43,560 square feet/acre x 0.25 FAR

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

EXHIBIT 4-2: PROJECT (TRUCK) TRIP DISTRIBUTION

LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

N

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 movements volumes in PCE are shown on Exhibit 4-3.

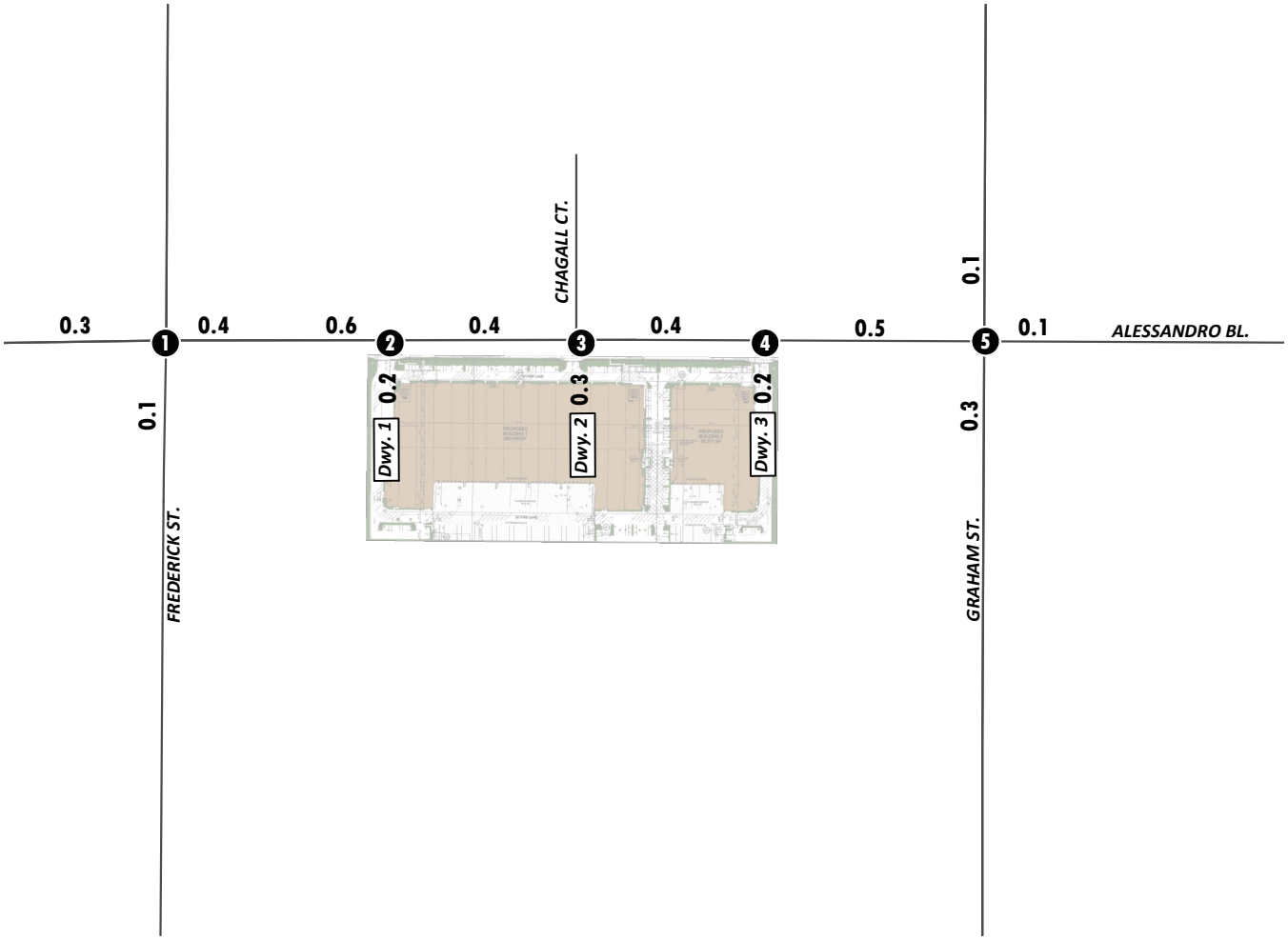
4.5 BACKGROUND TRAFFIC

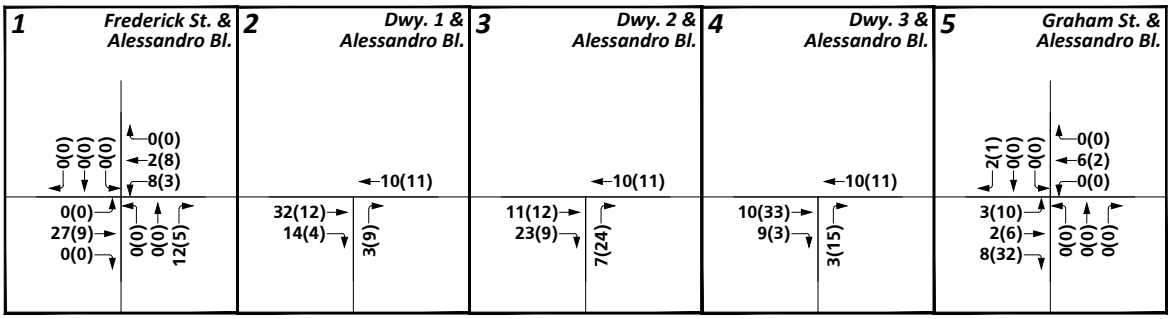
To account for growth in traffic between Existing (2020) and EAP (2022) traffic conditions, an annual traffic growth rate of 2.0 percent per year, compounded annually, was assumed (4.04 percent total aggregate growth in background traffic for the period between 2020 and 2022). The 2.0 percent annual growth rate is intended to capture non-specific ambient traffic growth.

4.6 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 EAP traffic forecasts and is intended to identify the deficiencies on both the existing and planned near-term circulation system. The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the near-term 2022 traffic conditions. An ambient growth factor of 4.04% (2022) accounts for background (area-wide) traffic increases that occur over time, up to the year 2020 from the year 2020 (compounded two percent per year growth over a 2-year period). Traffic volumes generated by the Project are then added to assess the EAP (2022) traffic conditions. The 2022 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 4-3: PROJECT ONLY TRAFFIC VOLUMES (IN PCE)





LEGEND:

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

N

5 EAP (2022) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Ambient Growth plus Project (EAP) conditions and the resulting intersection operations analysis.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAP 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 EAP conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 EAP TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes and ambient growth factor of 4.04% (2022) which accounts for background (area-wide) traffic plus Project traffic. Exhibit 5-1 shows the ADT and peak hour intersection turning movement volumes in PCE, which can be expected for EAP (2022) traffic conditions.

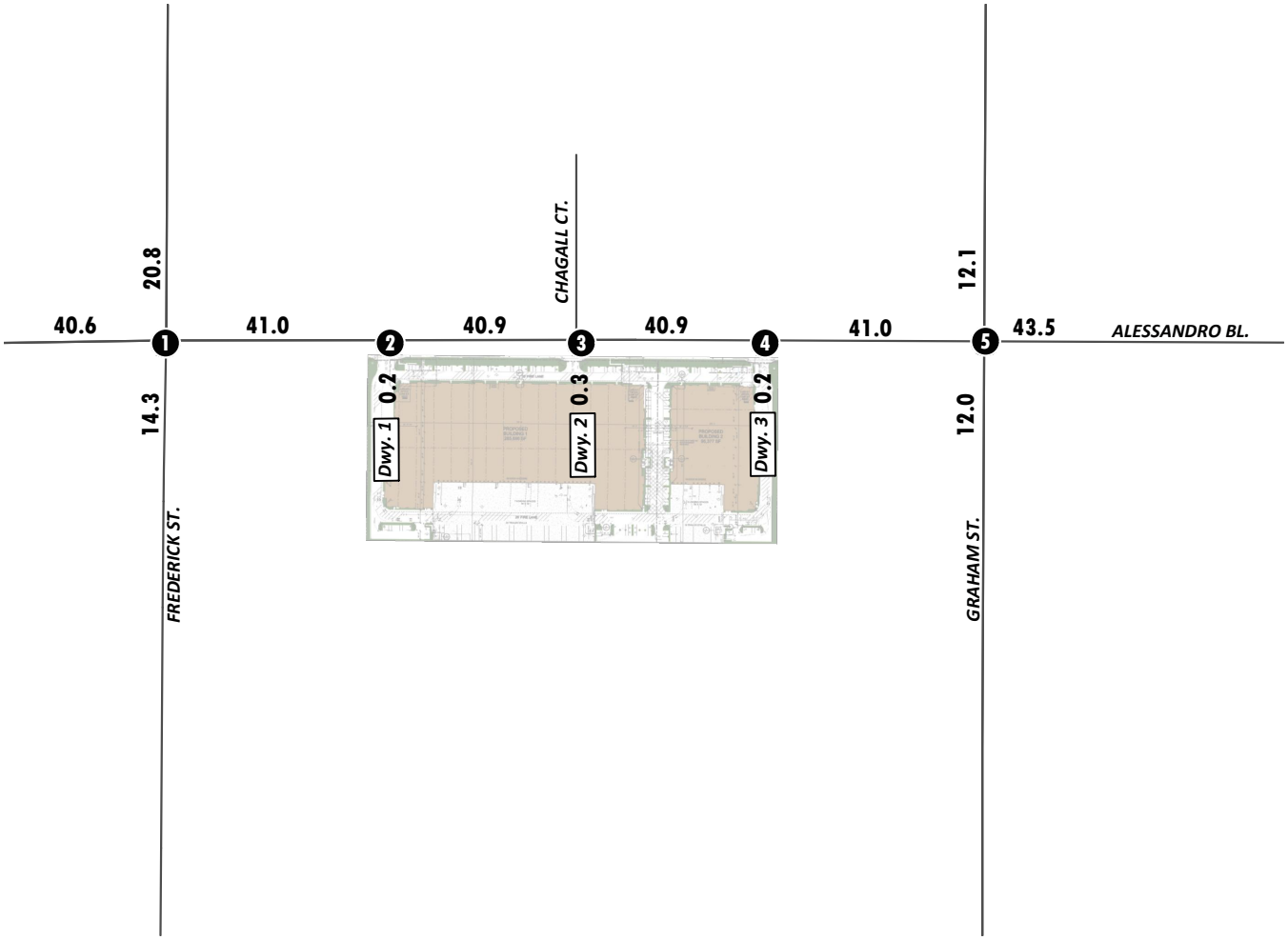
5.3 INTERSECTION OPERATIONS ANALYSIS

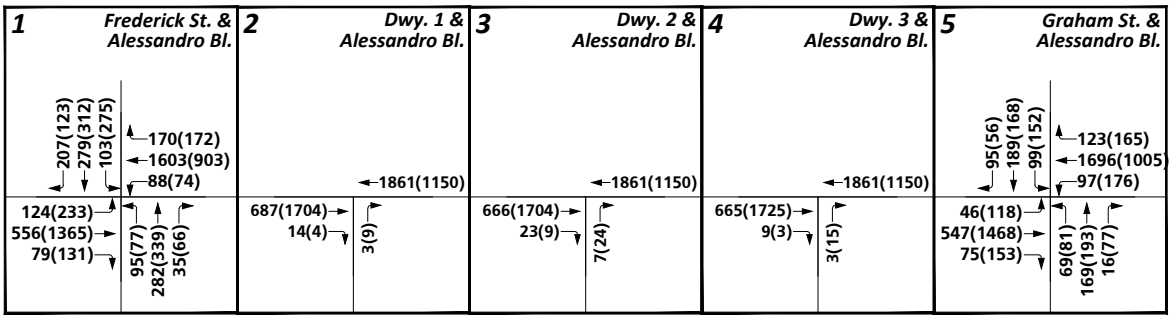
EAP peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 5-1, which indicates all of the study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours with the addition of Project traffic, consistent with Existing (2020) traffic conditions. Exhibit 5-2 summarizes the weekday AM and PM peak hour study area intersection LOS under EAP (2022) traffic conditions, consistent with the results provided in Table 5-1. The intersection operations analysis worksheets are included in Appendix 5.1 of this TA.

5.4 QUEUEING ANALYSIS

A queueing analysis has been evaluated during the morning and evening peak hours at the intersection of Graham Street and Alessandro Boulevard to determine if there is sufficient stacking in the northbound and eastbound left turn pockets to accommodate Project traffic. The northbound left turn lane on Graham Street provides 185-feet of stacking while the eastbound left turn lane on Alessandro Boulevard provides 150-feet of stacking. Based on the queueing analysis, the existing northbound left turn pocket is anticipated to accommodate the 95th percentile peak hour queues under EAP (2022) traffic conditions with at most 105-feet during the PM peak hour, however, the eastbound left turn lane should be modified to accommodate a minimum of 250-feet of storage (see Appendix 5.2).

EXHIBIT 5-1: EAP (2022) TRAFFIC VOLUMES (IN PCE)





LEGEND:

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

N

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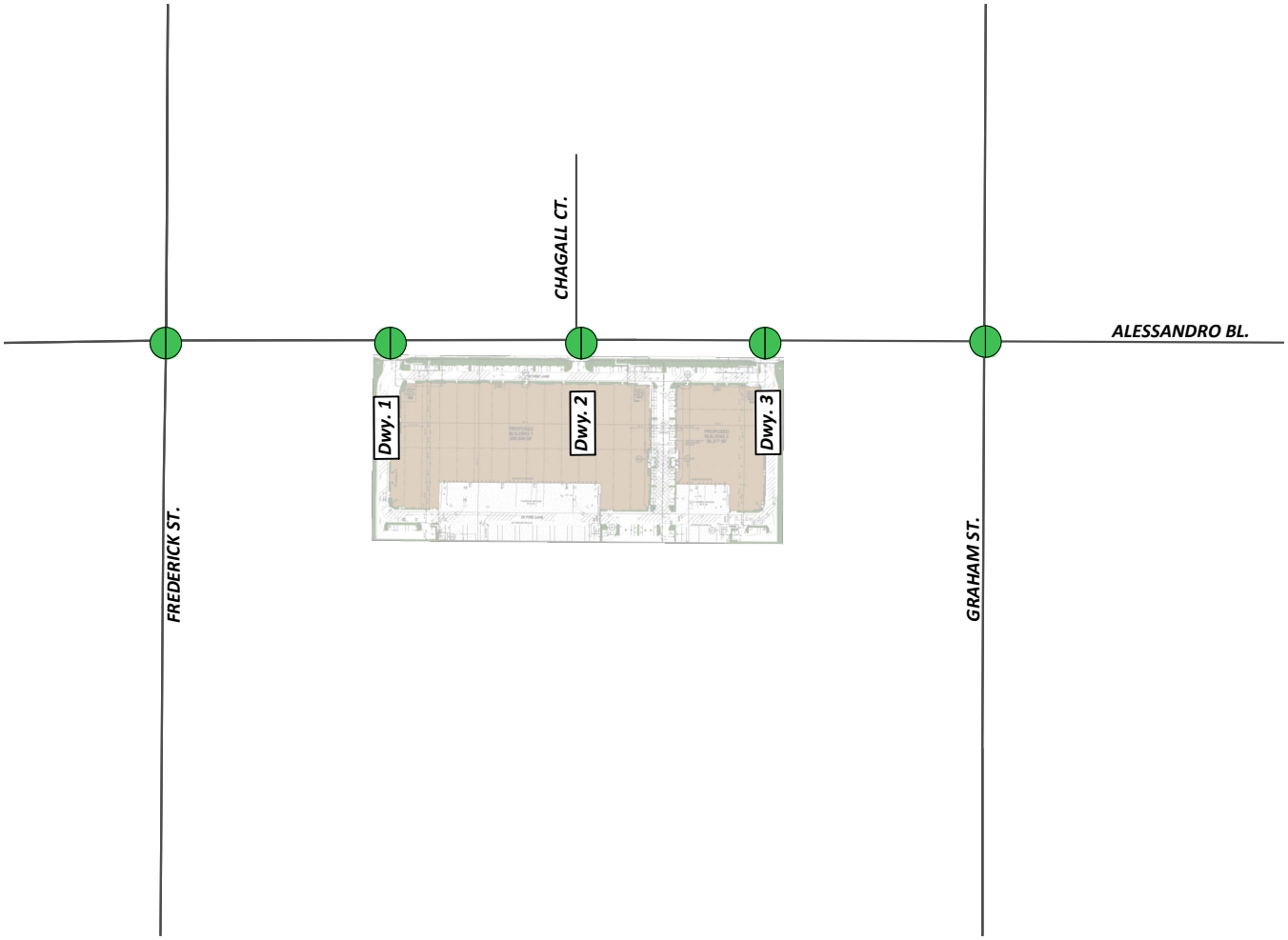
EXHIBIT 5-2: EAP (2022) SUMMARY OF LOS



LEGEND:

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

N

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Table 5-1

Intersection Analysis for EAP (2022) Conditions

#	Intersection	Traffic Control[2]	Existing (2020)				EAP (2022)			
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service	
			AM	PM	AM	PM	AM	PM	AM	PM
1	Frederick St. & Alessandro Bl.	TS	22.4	30.7	C	C	23.4	33.8	C	C
2	Driveway 1 & Alessandro Bl.	**CSS**	Future Intersection				11.8	21.0	B	C
3	Driveway 2 & Alessandro Bl.	**CSS**	Future Intersection				11.8	22.3	B	C
4	Driveway 3 & Alessandro Bl.	**CSS**	Future Intersection				11.7	21.8	B	C
5	Graham St. & Alessandro Bl.	TS	20.4	32.6	C	C	22.0	34.0	C	C

[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

5.5 RECOMMENDED IMPROVEMENTS

The study area intersections are anticipated to operate at an acceptable LOS under EAP (2022) traffic conditions. As such, no intersection improvements have been recommended.

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6 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements throughout the City of Moreno Valley are funded through a combination of project mitigation, fair share contributions or development impact fee programs, such as the Transportation Uniform Mitigation Fee (TUMF) program or the City's Development Impact Fee (DIF) program.

6.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The Western Riverside Council of Governments (WRCOG) is responsible for establishing and updating TUMF rates. The County may grant to developers a credit against the specific components of fees for the dedication of land or the construction of facilities identified in the list of improvements funded by each of these fee programs. Fees are based upon projected land uses and a related transportation need to address growth based upon a 2016 Nexus study.

TUMF is an ambitious regional program created to address cumulative impacts of growth throughout western Riverside County. Program guidelines are being handled on an iterative basis. Exemptions, credits, reimbursements and local administration are being deferred to primary agencies. The County of Riverside serves this function for the proposed Project. Fees submitted to the County are passed on to the WRCOG as the ultimate program administrator.

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.

6.2 CITY OF MORENO VALLEY DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The City of Moreno Valley has created its own local DIF program to impose and collect fees from new residential, commercial and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF program includes facilities that are not part of, or which may exceed improvements identified and covered by the TUMF program. As a result, the pairing of the regional and local fee programs provides a more comprehensive funding and implementation plan to ensure an adequate and interconnected transportation system. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list. The Project Applicant would pay requisite DIF pursuant to incumbent City ordinance requirements.

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7 REFERENCES

1. **City of Moreno Valley Transportation Engineering Division.** *Traffic Impact Analysis Preparation Guide.* Moreno Valley : s.n., June 2020.

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

3. **Riverside County Transportation Commission.** *2011 Riverside County Congestion Management Program.* County of Riverside : RCTC, December 14, 2011.

4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* s.l. : National Academy of Sciences, 2016.

5. **Institute of Transportation Engineers (ITE).** *Trip Generation Manual Supplement.* February 2020.

6. **South Coast Air Quality Management District (SCAQMD).** *Warehouse Truck Trip Study Data Results and Usage.* June 2014.

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APPENDIX 1.1:

APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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EXHIBIT A

Project Scoping Form

This scoping form shall be submitted to the Lead Agency to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Approved 9/14/20

Project Identification:

Case Number:	PPA19-0025
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Alessandro Warehouse
Project Address:	South of Alessandro Boulevard on either side of Chagall Court
Project Opening Year:	2022
Project Description:	295,236 SF warehouse building (Building 1) & 101,252 SF warehouse building (Building 2). For the purposes of the traffic study, a mix of 30% high-cube cold storage warehouse (ITE 157) and 70% warehousing (ITE 150) is proposed.

	Consultant:	**Developer:** (Representative)
Name:	Charlene So, Urban Crossroads, Inc.	MIG
Address:		1650 Spruce Street, Suite 102
		Riverside, CA 92507
Telephone:	949-861-0177	951-787-9222
Email:	cso@urbanxroads.com	

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 10th Edition (2017)

Current General Plan Land Use: Commercial

Proposed General Plan Land Use: Business Park/Light Industrial

Current Zoning: Community Commercial (CC)

Proposed Zoning: Light Industrial

	Existing Trip Generation			Proposed Trip Generation (PCE)		
	In	Out	Total	In	Out	Total
AM Trips				55	16	71
PM Trips				21	60	81

Trip Internalization: ☐ Yes ☑ No (_____% Trip Discount)

Pass-By Allowance: ☐ Yes ☑ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses (see Page 3 of the guidelines related to LOS assessment and Pages 22-23 for VMT screening criteria).

Is the project screened from LOS assessment? ☐ Yes ☑ No

LOS screening justification (see Page 3 of the guidelines): _____

Is the project screened from VMT assessment? ☐ Yes ☑ No

VMT screening justification (see Pages 22-23 of the guidelines): Although the TAZ is a low VMT generating zone, the existing RivTAM inputs indicate that the existing employment within the zone consists of non-industrial employment.

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution): See graphics

North	South	East	West
Varies %	Varies %	Varies %	Varies %

Link level of service and data collection:

X will be required Due to COVID-19, if there are no historic daily counts then we will estimate the ADT for the study area segments

____ will not be required

- Attach list of study intersections (and roadway segments if applicable) See Exhibit 2
- Attach site plan See Exhibit 1
- Other specific items to be addressed:
  - Site access
  - On-site circulation
  - Parking
  - Consistency with Plans supporting Bikes/Peds/Transit
  - Other Truck Turns at the Driveways
- Date of Traffic Counts We will obtain pre-COVID traffic counts and adjust using 2% per year
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased) No Phasing

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used RivTAM
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

Analysis scenarios:

1. Existing (2020)
2. Existing plus Ambient Growth plus Project (2022)

As shown on Table 4, the proposed Project General Plan Amendment (light industrial) is anticipated to result in a reduction in trips as compared to the current General Plan Land Use (commercial). As such, no Horizon Year (2040) traffic conditions has been added.

VMT

Although TAZ 3712 is a low VMT generating zone based on home-based work VMT per worker, the existing RivTAM socioeconomic data indicate that the existing employment within the zone consists of non-industrial employment. As such, the Project is not screened out.

Assumed Conversion Factors

1,030 sf per employee (source: County of Riverside General Plan Appendix E Socioeconomic Build-Out Assumptions and Methodology

Model Land Use Inputs

396,488 total sf / 1,030 sf per employee = 385 total employees (193 warehouse employees / 192 transportation employees)

EXHIBIT 1: PRELIMINARY SITE PLAN

LEGEND:

RIRO *= RIGHT-IN/RIGHT-OUT ONLY ACCESS*
FULL *= FULL ACCESS*
P *= PASSENGER CARS ONLY*
PT *= PASSENGER CARS AND TRUCKS*

N

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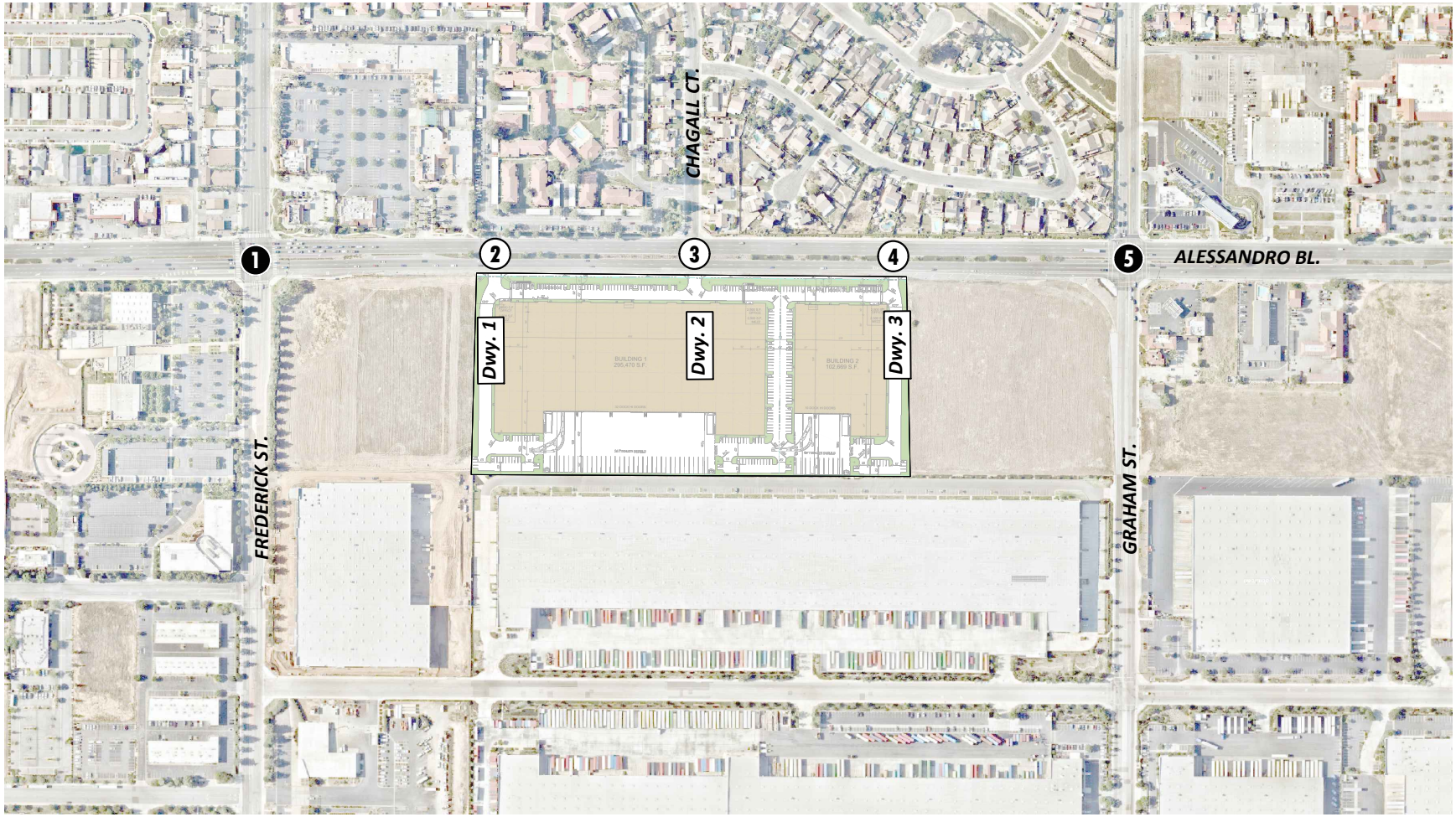
EXHIBIT 2: LOCATION MAP



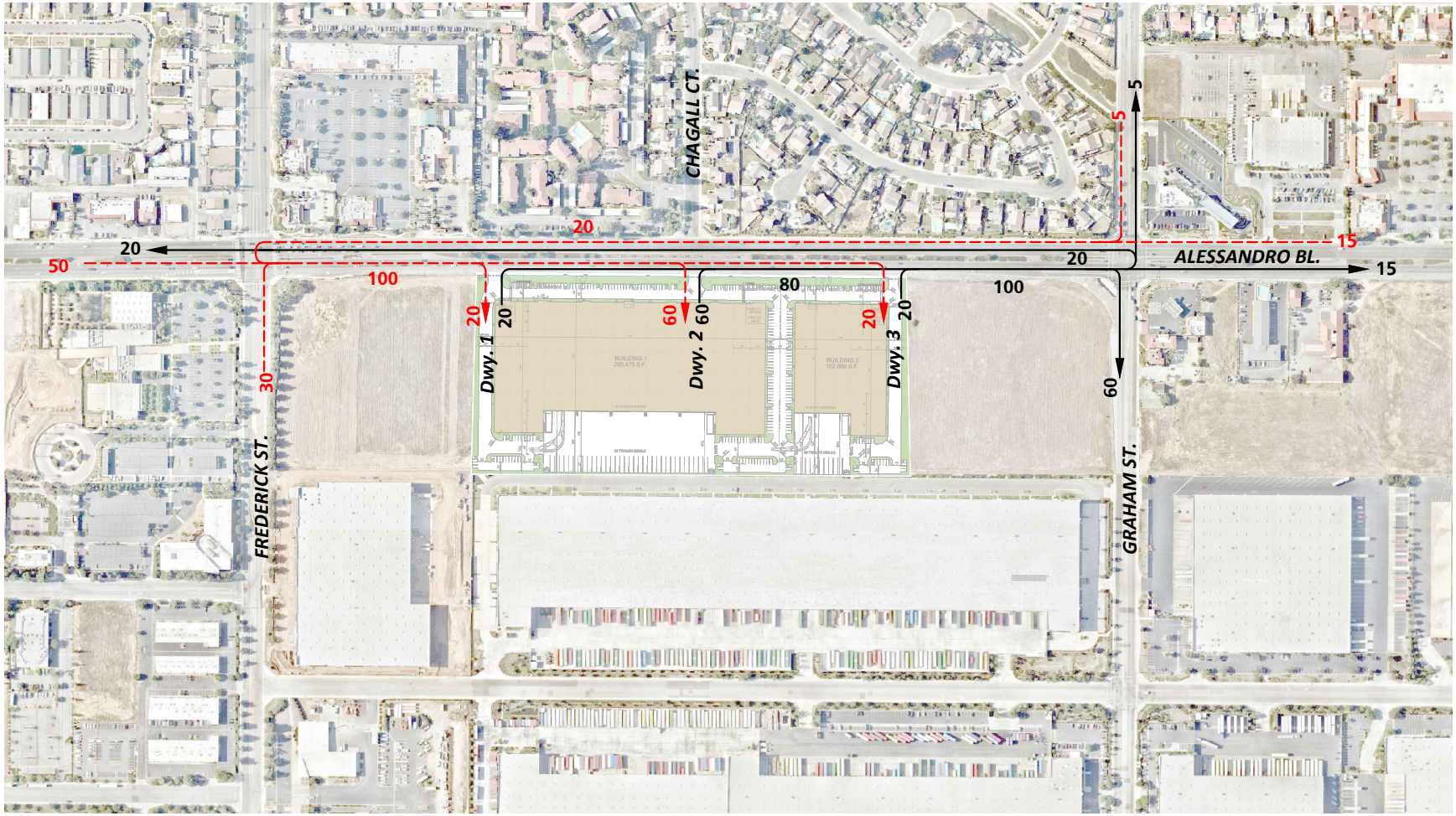
LEGEND:

0 = EXISTING INTERSECTION ANALYSIS LOCATION

(0) = FUTURE INTERSECTION ANALYSIS LOCATION

N

EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

N

EXHIBIT 4: PROJECT (TRUCK) TRIP DISTRIBUTION

LEGEND:

10 = PERCENT TO/FROM PROJECT

= OUTBOUND

= INBOUND

N

EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP

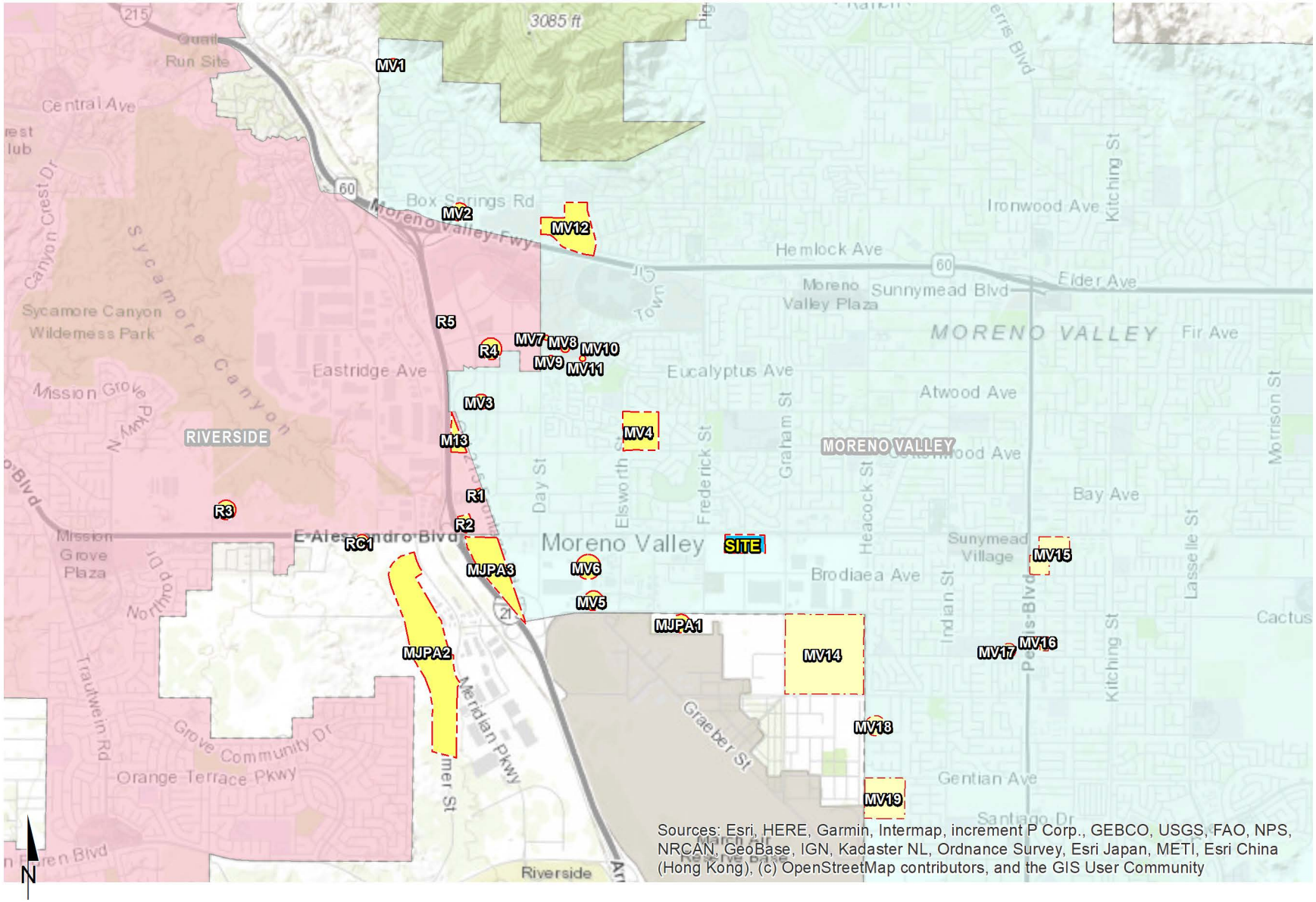


Table 1

Project Trip Generation Rates

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars (AM-87.0%; PM-85.0%; Daily-73.0%)			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (AM-2.17%; PM-2.51%; Daily-4.51%)			0.003	0.001	0.004	0.001	0.003	0.005	0.078
3-Axle Trucks (AM-2.69%; PM-3.11%; Daily-5.59%)			0.004	0.001	0.005	0.002	0.004	0.006	0.097
4-Axle+ Trucks (AM-8.14%; PM-9.39%; Daily-16.90%)			0.011	0.003	0.014	0.005	0.013	0.018	0.294
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars (AM-73.0%; PM-77.0%; Daily-65.0%)			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks (AM-9.37%; PM-7.98%; Daily-12.15%)			0.008	0.002	0.010	0.003	0.007	0.010	0.257
3-Axle Trucks (AM-2.97%; PM-2.53%; Daily-3.85%)			0.003	0.001	0.003	0.001	0.002	0.003	0.082
4-Axle+ Trucks (AM-14.66%; PM-12.49%; Daily-19.01%)			0.012	0.004	0.016	0.004	0.011	0.015	0.403
Passenger Car Equivalent (PCE) Trip Generation Rates[4]									
Warehousing[3]	TSF	150	0.131	0.039	0.170	0.051	0.139	0.190	1.740
Passenger Cars			0.114	0.034	0.148	0.044	0.118	0.162	1.270
2-Axle Trucks (PCE = 1.5)			0.004	0.001	0.006	0.002	0.005	0.007	0.118
3-Axle Trucks (PCE = 2.0)			0.007	0.002	0.009	0.003	0.009	0.012	0.194
4+-Axle Trucks (PCE = 3.0)			0.032	0.010	0.042	0.014	0.039	0.054	0.882
High-Cube Cold Storage Warehouse[3]	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars			0.062	0.018	0.080	0.025	0.067	0.092	1.378
2-Axle Trucks (PCE = 1.5)			0.012	0.004	0.016	0.004	0.010	0.014	0.386
3-Axle Trucks (PCE = 2.0)			0.005	0.002	0.007	0.002	0.004	0.006	0.163
4+-Axle Trucks (PCE = 3.0)			0.037	0.011	0.048	0.012	0.033	0.045	1.209

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

[2] TSF = thousand square feet

[3] Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

[4] PCE factors per SBCTA CMP: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

Table 2

Project Trip Generation Summary (Actual Vehicles)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1:									
Warehousing (70%)	206.665	TSF							
Passenger Cars:			24	7	31	9	24	33	264
Truck Trips:									
2-axle:			1	0	1	0	1	1	16
3-axle:			1	0	1	0	1	1	20
4+-axle:			2	1	3	1	3	4	62
- Truck Trips			4	1	5	1	5	6	98
High-Cube Cold Storage (30%)	88.571	TSF							
Passenger Cars:			5	2	7	2	6	8	122
Truck Trips:									
2-axle:			1	0	1	0	1	1	24
3-axle:			0	0	0	0	0	0	8
4+-axle:			1	0	1	0	1	1	36
- Truck Trips			2	0	2	0	2	2	68
Total Passenger Cars (Building 1)			29	9	38	11	30	41	386
Total Trucks (Building 1)			6	1	7	1	7	8	166
BUILDING 1 TOTAL TRIPS (Actual Vehicles)			***35***	***10***	***45***	***12***	***37***	***49***	***552***
Building 2:									
Warehousing (70%)	70.876	TSF							
Passenger Cars:			8	2	10	3	8	11	90
Truck Trips:									
2-axle:			0	0	0	0	0	0	6
3-axle:			0	0	0	0	0	0	8
4+-axle:			1	0	1	0	1	1	22
- Truck Trips			1	0	1	0	1	1	36
High-Cube Cold Storage (30%)	30.376	TSF							
Passenger Cars:			2	1	3	1	2	3	42
Truck Trips:									
2-axle:			0	0	0	0	0	0	8
3-axle:			0	0	0	0	0	0	2
4+-axle:			0	0	0	0	0	0	12
- Truck Trips			0	0	0	0	0	0	22
Total Passenger Cars (Building 2)			10	3	13	4	10	14	132
Total Trucks (Building 2)			1	0	1	0	1	1	58
BUILDING 2 TOTAL TRIPS (Actual Vehicles)			***11***	***3***	***14***	***4***	***11***	***15***	***190***
Total Passenger Cars (Building 1 + Building 2)			**39**	**12**	**51**	**15**	**40**	**55**	**518**
Total Trucks (Building 1 + Building 2)			**7**	**1**	**8**	**1**	**8**	**9**	**224**
TOTAL TRIPS (Building 1 + Building 2)			**46**	**13**	**59**	**16**	**48**	**64**	**742**

[1] TSF = thousand square feet

Table 3

Project Trip Generation Summary (PCE)

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Building 1:									
Warehousing (70%)	206.665	TSF							
Passenger Cars:			24	7	31	9	24	33	264
Truck Trips:									
2-axle:			1	0	1	0	1	1	24
3-axle:			1	0	1	1	2	3	40
4+-axle:			7	2	9	3	8	11	182
- Truck Trips			9	2	11	4	11	15	246
High-Cube Cold Storage (30%)	88.571	TSF							
Passenger Cars:			5	2	7	2	6	8	122
Truck Trips:									
2-axle:			1	0	1	0	1	1	34
3-axle:			0	0	0	0	0	0	14
4+-axle:			3	1	4	1	3	4	108
- Truck Trips			4	1	5	1	4	5	156
Total Passenger Cars (Building 1)			29	9	38	11	30	41	386
Total Trucks (Building 1)			13	3	16	5	15	20	402
BUILDING 1 TOTAL TRIPS (PCE)			***42***	***12***	***54***	***16***	***45***	***61***	***788***
Building 2:									
Warehousing (70%)	70.876	TSF							
Passenger Cars:			8	2	10	3	8	11	90
Truck Trips:									
2-axle:			0	0	0	0	0	0	8
3-axle:			0	0	0	0	1	1	14
4+-axle:			2	1	3	1	3	4	64
- Truck Trips			2	1	3	1	4	5	86
High-Cube Cold Storage (30%)	30.376	TSF							
Passenger Cars:			2	1	3	1	2	3	42
Truck Trips:									
2-axle:			0	0	0	0	0	0	12
3-axle:			0	0	0	0	0	0	6
4+-axle:			1	0	1	0	1	1	38
- Truck Trips			1	0	1	0	1	1	56
Total Passenger Cars (Building 2)			10	3	13	4	10	14	132
Total Trucks (Building 2)			3	1	4	1	5	6	142
BUILDING 2 TOTAL TRIPS (PCE)			***13***	***4***	***17***	***5***	***15***	***20***	***274***
Total Passenger Cars (Building 1 + Building 2)			**39**	**12**	**51**	**15**	**40**	**55**	**518**
Total Trucks (Building 1 + Building 2)			**16**	**4**	**20**	**6**	**20**	**26**	**544**
TOTAL TRIPS (Building 1 + Building 2) (PCE)			**55**	**16**	**71**	**21**	**60**	**81**	**1,062**

[1] TSF = thousand square feet

Table 4

Trip Generation Comparison

Land Use[1]	Units[2]	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Shopping Center	TSF	820	0.58	0.36	0.94	1.83	1.98	3.81	37.75

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

[2] TSF = thousand square feet

Land Use	Quantity	Units[1]	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing General Plan Land Use:									
Commercial (Shopping Center)[2]	192.426	TSF	112	69	181	352	381	733	7,264
Proposed Project (see Table 3):									
Alessandro Warehouse (PCE)	295.236	TSF	55	16	71	21	60	81	1,062
Net Reduction in Trip Generation:			**-57**	**-53**	**-110**	**-331**	**-321**	**-652**	**-6,202**

[1] TSF = thousand square feet

[2] Current General Plan land use and zoning is Commercial. Shopping Center (ITE 820) land use used to calculate trip generation. The square footage was calculated assuming a 0.25 floor-to-area ratio (FAR): 17.67 acres x 43,560 square feet/acre x 0.25 FAR

Table 5

Cumulative Development Land Use Summary

ID	Project Name	Land Use[1]	Quantity	Units[2]
City of Moreno Valley				
MV1	Kincaid Development (Tract 33626)	SFDR	25	DU
MV2	Oak Park Partners (Tract 35414)	Multifamily	266	DU
MV3	Apollo III Development Group (PEN16-0064)	Multifamily	18	DU
MV4	Scottish Village	Multifamily	194	DU
MV5	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
MV6	PA 08-0047-0052 (Komar Cactus Plaza)	Hotel	110	Rooms
		Fast Food w/ Drive Thru	8.000	TSF
		Commercial	42.400	TSF
MV7	Residence Inn	Hotel	112	RM
MV8	The Quarter	Commercial Shopping Center	420.485	TSF
MV9	Holiday Inn Express	Hotel	104	RM
MV10	Fairfield Inn & Suites	Hotel	106	RM
MV11	TownGate Square	Office / Medical	170.000	TSF
MV12	Towngate Highlands	SFDR	293	DU
		Hotel	260	Rooms
		Sit-Down Restaurant	14.000	TSF
		Fast Food w/ Drive Thru	11.500	TSF
		Gas Station w/ Car Wash	12	VFP
MV13	Old 215	General Light Industrial	130	EMP
MV14	March Lifecare Campus Specific Plan	Medical Offices	190.000	TSF
		Commercial Retail	210.000	TSF
		Research & Education	200.000	TSF
		Hospital	50	Beds
		Institutional Residential	660	Beds
MV15	PEN16-0039	Multifamily	272	DU
MV16	TM 33607	Multifamily	52	DU
MV17	TM 36708	SFDR	122	DU
MV18	TM 32556	SFDR	32	DU
MV19	TM 34748	SFDR	135	DU
County of Riverside				
RC1	PP 25422	Warehouse	814.000	TSF
City of Riverside				
R1	P15-1035/P16-0556/P16-0567	Warehouse	176.149	TSF
R2	P14-0841 to P14-0848/P16-0472/P16-0474	Warehouse	73.200	TSF
		Commercial Retail	15.000	TSF
R3	Sycamore Hills Distribution Center	Warehouse	603.100	TSF
R4	P14-0294/P14-0295/P14-0297/P16-0497	Medical	524	Beds
R5	P19-0332	Car Wash	4.333	TSF
March Joint Powers Authority (MJPA)				
MJPA1	K4 Parcel	Warehouse	718.000	TSF
MJPA2	Meridian Business Park (West Campus)	Industrial Park	2,278.852	TSF
MJPA3	Freeway Business Center	Warehouse	709.083	TSF

[1] SFDR = Single Family Detached Residential

[2] DU = Dwelling Units; TSF = Thousand Square Feet; RM = Rooms; VFP = Vehicle Fueling Positions; EMP = Employees

APPENDIX 3.1:

EXISTING TRAFFIC COUNTS

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Volume Development
AM Peak Hour

1: Frederick Street & Alessandro Boulevard

PHF: 0.981 **7:30 AM** Count Date: 5/17/2018

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:	86	263	22	98	261	196	114	478	68	75	1,478	155	3,293
2-Axle:	2	7	0	1	8	4	1	11	0	3	21	0	59
3-Axle:	0	2	0	1	1	1	2	10	0	1	17	8	44
4+-Axle:	2	1	0	0	1	0	1	7	4	0	17	0	33
Existing PCE 2020:	**92**	**271**	**22**	**99**	**268**	**199**	**119**	**508**	**76**	**77**	**1,539**	**163**	**3,433**

2: Driveway 1 & Alessandro Boulevard

PHF: 0.920 Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								597			1,708		2,305
2-Axle:								12			24		36
3-Axle:								11			26		37
4+-Axle:								7			17		24
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**629**	**0**	**0**	**1,779**	**0**	**2,408**

3: Driveway 2 & Alessandro Boulevard

PHF: 0.920 Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								597			1,708		2,305
2-Axle:								12			24		36
3-Axle:								11			26		37
4+-Axle:								7			17		24
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**629**	**0**	**0**	**1,779**	**0**	**2,408**

4: Driveway 3 & Alessandro Boulevard

PHF: 0.920 Count Date:

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								597			1,708		2,305
2-Axle:								12			24		36
3-Axle:								11			26		37
4+-Axle:								7			17		24
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**629**	**0**	**0**	**1,779**	**0**	**2,408**

5: Graham Street & Alessandro Boulevard

PHF: 0.943 **7:15 AM** Count Date: 4/26/2018

	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:	60	161	16	94	180	88	40	497	60	93	1,560	117	2,965
2-Axle:	3	2	0	3	3	2	1	10	1	0	19	2	47
3-Axle:	0	0	0	0	0	0	0	11	0	1	26	1	40
4+-Axle:	2	0	0	0	0	0	0	5	2	0	14	0	24
Existing PCE 2020:	**66**	**162**	**16**	**95**	**182**	**89**	**41**	**524**	**65**	**94**	**1,624**	**119**	**3,076**

Volume Development
PM Peak Hour

1: Frederick Street & Alessandro Boulevard

	PHF:	0.940		4:00 PM					Count Date:		5/17/2018		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:	74	325	58	262	293	117	222	1,279	125	69	852	165	3,840
2-Axle:	0	2	0	1	6	0	0	15	2	0	10	0	37
3-Axle:	0	0	0	0	1	0	0	2	0	0	1	0	4
4+-Axle:	0	0	0	1	1	1	1	7	0	0	1	0	12
Existing PCE 2020:	**74**	**326**	**58**	**265**	**300**	**119**	**224**	**1,303**	**126**	**69**	**860**	**165**	**3,888**

2: Driveway 1 & Alessandro Boulevard

	PHF:	0.920							Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								1,599			1,086		2,685
2-Axle:								16			10		27
3-Axle:								2			1		3
4+-Axle:								8			1		9
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,626**	**0**	**0**	**1,094**	**0**	**2,720**

3: Driveway 2 & Alessandro Boulevard

	PHF:	0.920							Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								1,599			1,086		2,685
2-Axle:								16			10		27
3-Axle:								2			1		3
4+-Axle:								8			1		9
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,626**	**0**	**0**	**1,094**	**0**	**2,720**

4: Driveway 3 & Alessandro Boulevard

	PHF:	0.920							Count Date:				
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:								1,599			1,086		2,685
2-Axle:								16			10		27
3-Axle:								2			1		3
4+-Axle:								8			1		9
Existing PCE 2020:	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1,626**	**0**	**0**	**1,094**	**0**	**2,720**

5: Graham Street & Alessandro Boulevard

	PHF:	0.940		4:00 PM					Count Date:		4/26/2018		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
Existing Total:	77	185	73	146	160	51	104	1,382	113	169	958	158	3,576
2-Axle:	1	1	0	1	2	3	0	10	6	0	6	0	31
3-Axle:	0	0	1	0	0	0	0	2	0	1	1	0	5
4+-Axle:	0	0	0	0	0	0	0	8	0	0	1	0	9
Existing PCE 2020:	**78**	**186**	**74**	**146**	**161**	**53**	**104**	**1,405**	**116**	**170**	**964**	**158**	**3,615**

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro AM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

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

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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	17	49	30	14	96	5	362	17	4	384	10	31	6	2	47	29	65	10	6	104	26	631	657
07:15 AM	27	73	33	18	133	20	328	23	4	371	20	40	4	1	64	21	92	4	2	117	25	685	710
07:30 AM	22	84	41	12	147	18	383	27	2	428	9	52	5	3	66	24	100	20	10	144	27	785	812
07:45 AM	31	60	52	18	143	16	331	29	6	376	30	67	6	0	103	25	118	18	11	161	35	783	818
Total	97	266	156	62	519	59	1404	96	16	1559	69	190	21	6	280	99	375	52	29	526	113	2884	2997
08:00 AM	25	50	50	15	125	15	335	45	14	395	21	59	4	3	84	38	123	14	6	175	38	779	817
08:15 AM	16	57	45	13	118	19	298	40	9	357	23	75	6	3	104	23	118	13	4	154	29	733	762
08:30 AM	33	59	38	14	130	14	243	19	6	276	15	37	6	2	58	38	108	10	5	156	27	620	647
08:45 AM	23	62	40	11	125	17	206	31	3	254	19	62	6	4	87	40	114	17	7	171	25	637	662
Total	97	228	173	53	498	65	1082	135	32	1282	78	233	22	12	333	139	463	54	22	656	119	2769	2888
Grand Total	194	494	329	115	1017	124	2486	231	48	2841	147	423	43	18	613	238	838	106	51	1182	232	5653	5885
Apprch %	19.1	48.6	32.4			4.4	87.5	8.1			24	69	7			20.1	70.9	9					
Total %	3.4	8.7	5.8		18	2.2	44	4.1		50.3	2.6	7.5	0.8		10.8	4.2	14.8	1.9		20.9	3.9	96.1	
Passenger Vehicles	190	476	320		1096	119	2405	228		2799	143	406	41		607	226	789	96		1161	0	0	5663
% Passenger Vehicles	97.9	96.4	97.3	95.7	96.8	96	96.7	98.7	97.9	96.9	97.3	96	95.3	94.4	96.2	95	94.2	90.6	98	94.2	0	0	96.2
Large 2 Axle Vehicles	3	13	6		25	4	33	1		38	2	13	1		16	4	19	3		27	0	0	106
% Large 2 Axle Vehicles	1.5	2.6	1.8	2.6	2.2	3.2	1.3	0.4	0	1.3	1.4	3.1	2.3	0	2.5	1.7	2.3	2.8	2	2.2	0	0	1.8
3 Axle Vehicles	1	4	2		9	1	24	1		26	0	2	1		4	5	21	0		26	0	0	65
% 3 Axle Vehicles	0.5	0.8	0.6	1.7	0.8	0.8	1	0.4	0	0.9	0	0.5	2.3	5.6	0.6	2.1	2.5	0	0	2.1	0	0	1.1
4+ Axle Trucks	0	1	1		2	0	24	1		26	2	2	0		4	3	9	7		19	0	0	51
% 4+ Axle Trucks	0	0.2	0.3	0	0.2	0	1	0.4	2.1	0.9	1.4	0.5	0	0	0.6	1.3	1.1	6.6	0	1.5	0	0	0.9

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM																	
07:30 AM	22	**84**	41	**147**	18	**383**	27	**428**	9	52	5	66	24	100	**20**	144	**785**
07:45 AM	**31**	60	**52**	143	16	331	29	376	**30**	67	**6**	103	25	118	18	161	783
08:00 AM	25	50	50	125	15	335	**45**	395	21	59	4	84	**38**	**123**	14	**175**	779
08:15 AM	16	57	45	118	**19**	298	40	357	23	**75**	6	**104**	23	118	13	154	733
Total Volume	94	251	188	533	68	1347	141	1556	83	253	21	357	110	459	65	634	3080
% App. Total	17.6	47.1	35.3		4.4	86.6	9.1		23.2	70.9	5.9		17.4	72.4	10.3		
PHF	.758	.747	.904	.906	.895	.879	.783	.909	.692	.843	.875	.858	.724	.933	.813	.906	.981

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
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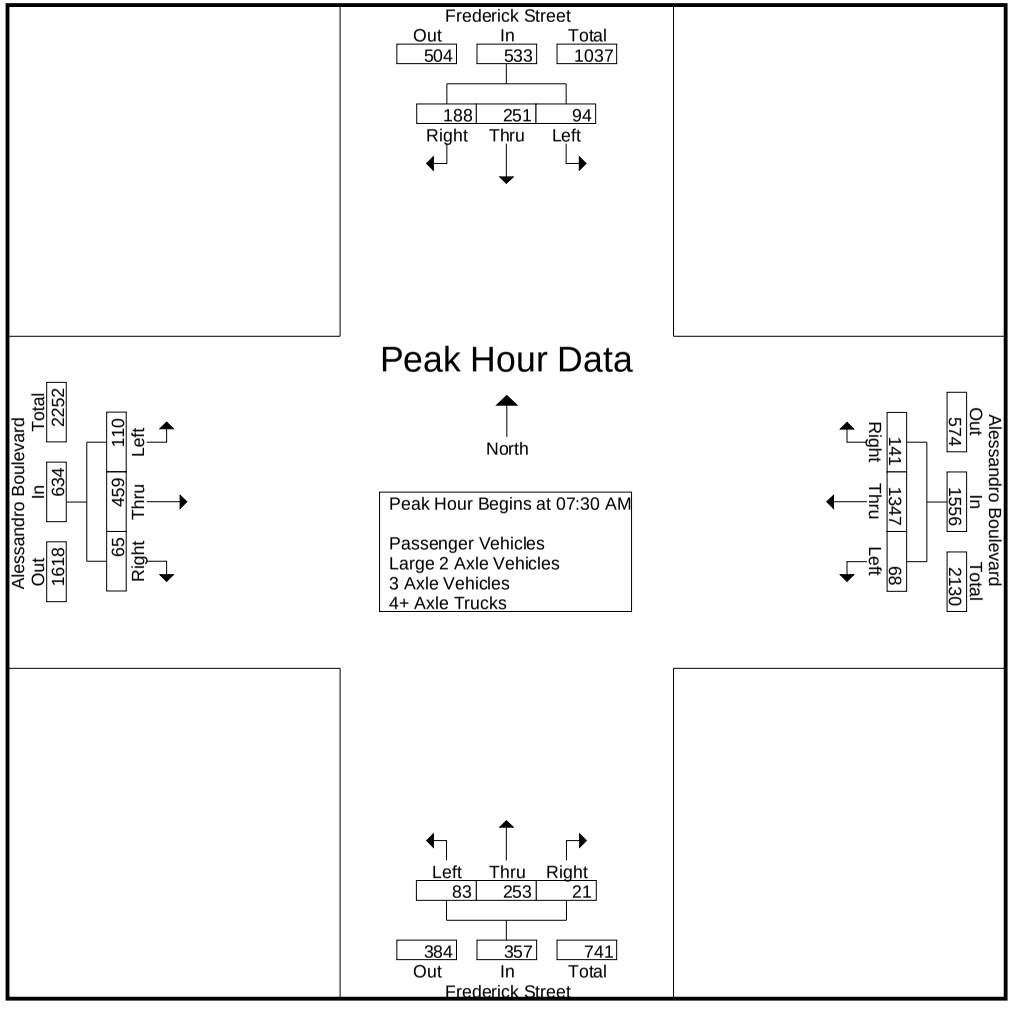
Site Code : 05118391
Start Date : 5/17/2018
Page No : 2



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Start Date : 5/17/2018

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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:																	
	07:15 AM				07:15 AM				07:30 AM				08:00 AM				
+0 mins.	27	73	33	133	**20**	328	23	371	9	52	5	66	38	**123**	14	**175**	
+15 mins.	22	**84**	41	**147**	18	**383**	27	**428**	**30**	67	**6**	103	23	118	13	154	
+30 mins.	**31**	60	**52**	143	16	331	29	376	21	59	4	84	38	108	10	156	
+45 mins.	25	50	50	125	15	335	**45**	395	23	**75**	6	**104**	**40**	114	**17**	171	
Total Volume	105	267	176	548	69	1377	124	1570	83	253	21	357	139	463	54	656	
% App. Total	19.2	48.7	32.1		4.4	87.7	7.9		23.2	70.9	5.9		21.2	70.6	8.2		
PHF	.847	.795	.846	.932	.863	.899	.689	.917	.692	.843	.875	.858	.869	.941	.794	.937	

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Site Code : 05118391
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Page No : 1

Groups Printed- Passenger Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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	17	48	29	14	94	5	352	17	4	374	10	30	6	2	46	26	59	8	6	93	26	607	633
07:15 AM	26	70	32	17	128	19	325	21	3	365	20	39	4	1	63	20	87	4	2	111	23	667	690
07:30 AM	21	83	38	11	142	18	375	27	2	420	8	51	5	3	64	24	90	18	10	132	26	758	784
07:45 AM	31	59	52	18	142	16	316	29	6	361	29	64	6	0	99	24	114	17	11	155	35	757	792
Total	95	260	151	60	506	58	1368	94	15	1520	67	184	21	6	272	94	350	47	29	491	110	2789	2899
08:00 AM	25	46	48	13	119	14	317	45	14	376	21	58	4	3	83	36	116	14	6	166	36	744	780
08:15 AM	15	53	45	13	113	16	287	40	9	343	21	70	6	3	97	22	113	12	4	147	29	700	729
08:30 AM	33	56	38	14	127	14	236	19	6	269	15	35	5	2	55	35	103	8	5	146	27	597	624
08:45 AM	22	61	38	10	121	17	197	30	3	244	19	59	5	3	83	39	107	15	6	161	22	609	631
Total	95	216	169	50	480	61	1037	134	32	1232	76	222	20	11	318	132	439	49	21	620	114	2650	2764
Grand Total	190	476	320	110	986	119	2405	228	47	2752	143	406	41	17	590	226	789	96	50	1111	224	5439	5663
Apprch %	19.3	48.3	32.5			4.3	87.4	8.3			24.2	68.8	6.9			20.3	71	8.6					
Total %	3.5	8.8	5.9		18.1	2.2	44.2	4.2		50.6	2.6	7.5	0.8		10.8	4.2	14.5	1.8		20.4	4	96	

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	21	**83**	38	**142**	**18**	**375**	27	**420**	8	51	5	64	24	90	**18**	132	**758**
07:45 AM	**31**	59	**52**	142	16	316	29	361	**29**	64	**6**	**99**	24	114	17	155	757
08:00 AM	25	46	48	119	14	317	**45**	376	21	58	4	83	**36**	**116**	14	**166**	744
08:15 AM	15	53	45	113	16	287	40	343	21	**70**	6	97	22	113	12	147	700
Total Volume	92	241	183	516	64	1295	141	1500	79	243	21	343	106	433	61	600	2959
% App. Total	17.8	46.7	35.5		4.3	86.3	9.4		23	70.8	6.1		17.7	72.2	10.2		
PHF	.742	.726	.880	.908	.889	.863	.783	.893	.681	.868	.875	.866	.736	.933	.847	.904	.976

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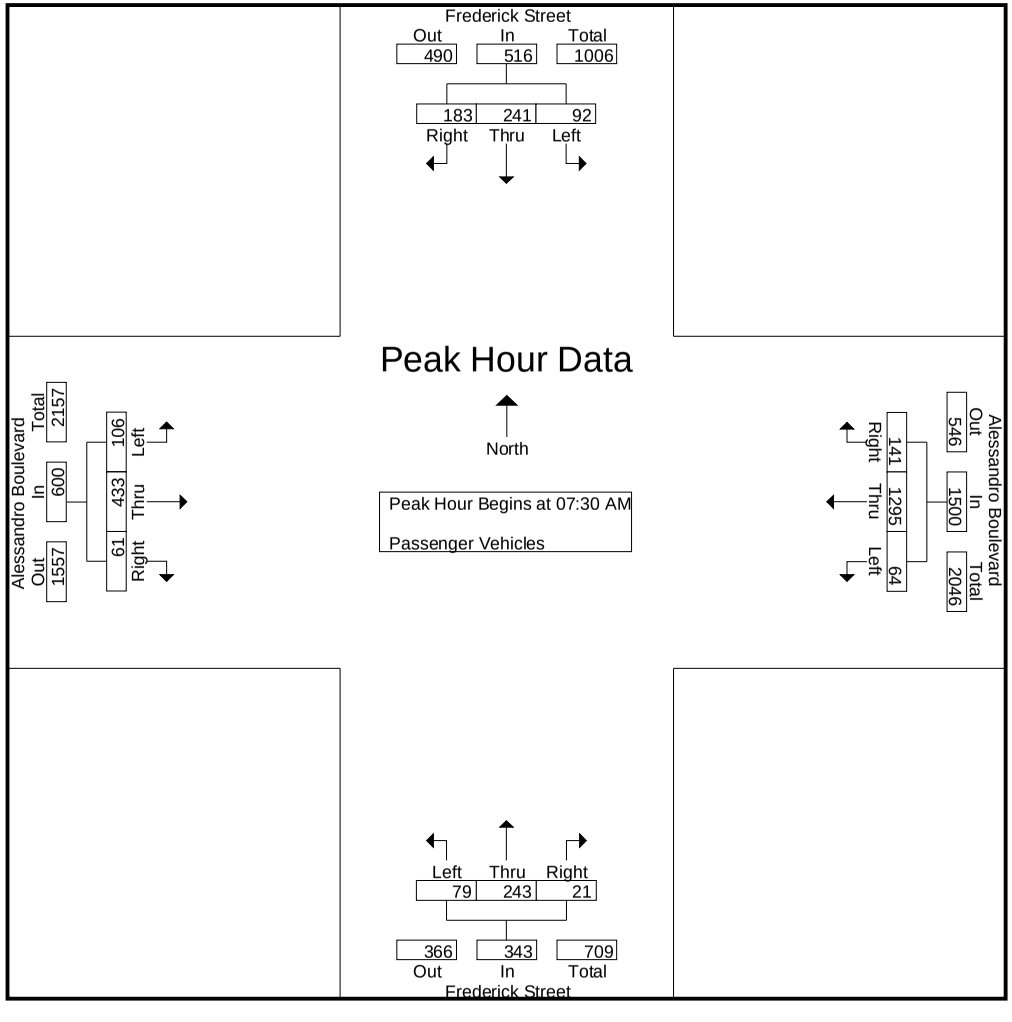
Page No : 2



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City of Moreno Valley
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File Name : 06_MRV_Frederick_Alessandro AM
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Page No : 3

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	21	**83**	38	**142**	**18**	**375**	27	**420**	8	51	5	64	24	90	**18**	132	
+15 mins.	**31**	59	**52**	142	16	316	29	361	**29**	64	**6**	**99**	24	114	17	155	
+30 mins.	25	46	48	119	14	317	**45**	376	21	58	4	83	**36**	**116**	14	**166**	
+45 mins.	15	53	45	113	16	287	40	343	21	**70**	6	97	22	113	12	147	
Total Volume	92	241	183	516	64	1295	141	1500	79	243	21	343	106	433	61	600	
% App. Total	17.8	46.7	35.5		4.3	86.3	9.4		23	70.8	6.1		17.7	72.2	10.2		
PHF	.742	.726	.880	.908	.889	.863	.783	.893	.681	.868	.875	.866	.736	.933	.847	.904	

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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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	1	0	0	1	0	5	0	0	5	0	0	0	0	0	1	1	1	0	3	0	9	9
07:15 AM	1	2	1	1	4	1	1	0	0	2	0	1	0	0	1	0	1	0	0	1	1	8	9
07:30 AM	0	1	3	1	4	0	1	0	0	1	1	1	0	0	2	0	4	0	0	4	1	11	12
07:45 AM	0	1	0	0	1	0	7	0	0	7	1	2	0	0	3	1	1	0	0	2	0	13	13
Total	1	5	4	2	10	1	14	0	0	15	2	4	0	0	6	2	7	1	0	10	2	41	43
08:00 AM	0	3	1	1	4	0	7	0	0	7	0	1	0	0	1	0	5	0	0	5	1	17	18
08:15 AM	1	3	0	0	4	3	5	0	0	8	0	3	0	0	3	0	1	0	0	1	0	16	16
08:30 AM	0	2	0	0	2	0	2	0	0	2	0	2	1	0	3	1	3	1	0	5	0	12	12
08:45 AM	1	0	1	0	2	0	5	1	0	6	0	3	0	0	3	1	3	1	1	5	1	16	17
Total	2	8	2	1	12	3	19	1	0	23	0	9	1	0	10	2	12	2	1	16	2	61	63
Grand Total	3	13	6	3	22	4	33	1	0	38	2	13	1	0	16	4	19	3	1	26	4	102	106
Apprch %	13.6	59.1	27.3			10.5	86.8	2.6			12.5	81.2	6.2			15.4	73.1	11.5					
Total %	2.9	12.7	5.9		21.6	3.9	32.4	1		37.3	2	12.7	1		15.7	3.9	18.6	2.9		25.5	3.8	96.2	

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	**3**	**4**	0	1	0	1	**1**	1	0	2	0	4	0	4	11
07:45 AM	0	1	0	1	0	**7**	0	7	1	2	0	**3**	**1**	1	0	2	13
08:00 AM	0	**3**	1	4	0	7	0	7	0	1	0	1	0	**5**	0	**5**	**17**
08:15 AM	**1**	3	0	4	**3**	5	0	**8**	0	**3**	0	3	0	1	0	1	16
Total Volume	1	8	4	13	3	20	0	23	2	7	0	9	1	11	0	12	57
% App. Total	7.7	61.5	30.8		13	87	0		22.2	77.8	0		8.3	91.7	0		
PHF	.250	.667	.333	.813	.250	.714	.000	.719	.500	.583	.000	.750	.250	.550	.000	.600	.838

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro AM
Site Code : 05118391
Start Date : 5/17/2018
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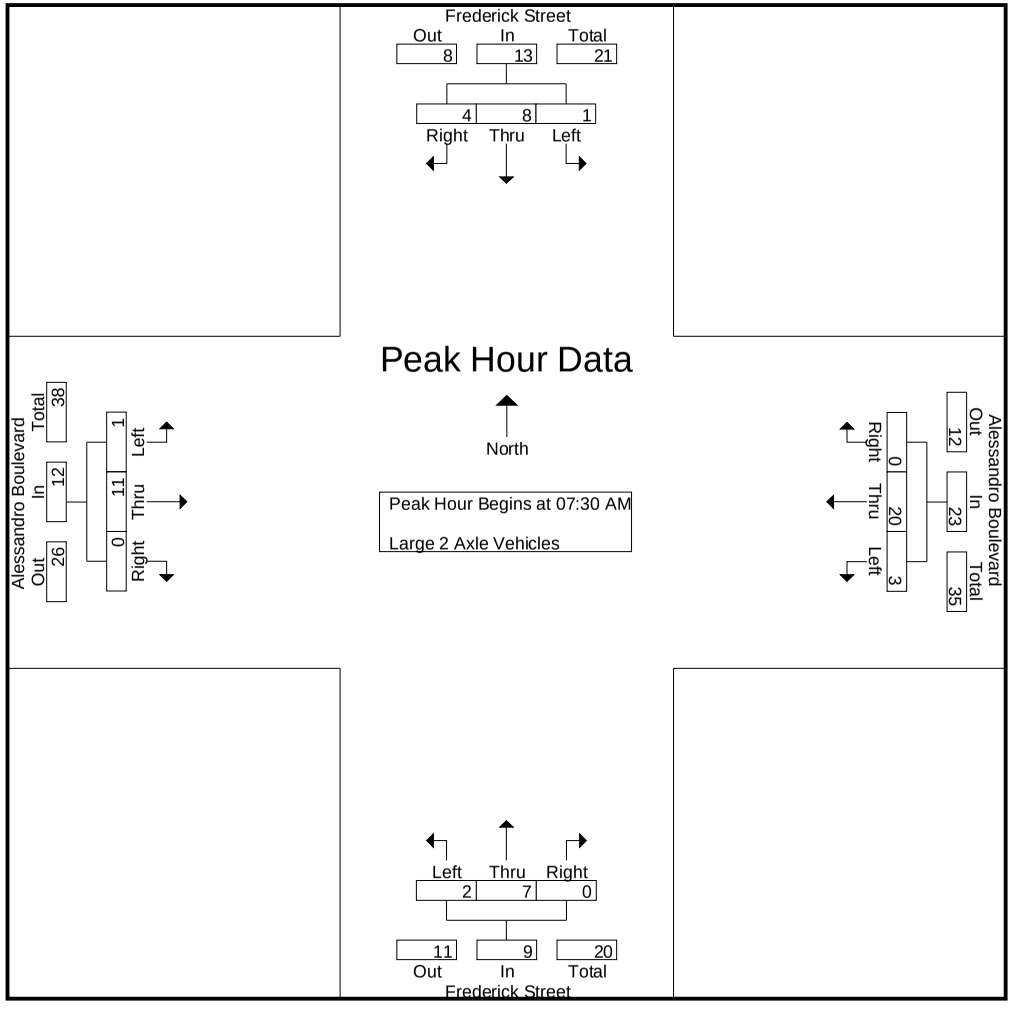

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City of Moreno Valley
N/S: Frederick Street
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File Name : 06_MRV_Frederick_Alessandro AM
Site Code : 05118391
Start Date : 5/17/2018
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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	1	**3**	**4**	0	1	0	1	**1**	1	0	2	0	4	0	4	
+15 mins.	0	1	0	1	0	**7**	0	7	1	2	0	**3**	**1**	1	0	2	
+30 mins.	0	**3**	1	4	0	7	0	7	0	1	0	1	0	**5**	0	**5**	
+45 mins.	**1**	3	0	4	**3**	5	0	**8**	0	**3**	0	3	0	1	0	1	
Total Volume	1	8	4	13	3	20	0	23	2	7	0	9	1	11	0	12	
% App. Total	7.7	61.5	30.8		13	87	0		22.2	77.8	0		8.3	91.7	0		
PHF	.250	.667	.333	.813	.250	.714	.000	.719	.500	.583	.000	.750	.250	.550	.000	.600	

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File Name : 06_MRV_Frederick_Alessandro AM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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	0	0	0	0	4	0	0	4	0	8	8
07:15 AM	0	1	0	0	1	0	1	1	0	2	0	0	0	0	0	1	3	0	0	4	0	7	7
07:30 AM	1	0	0	0	1	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	10	10
07:45 AM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	5	5
Total	1	1	0	0	2	0	11	1	0	12	0	1	0	0	1	1	14	0	0	15	0	30	30
08:00 AM	0	0	1	1	1	1	5	0	0	6	0	0	0	0	0	1	1	0	0	2	1	9	10
08:15 AM	0	1	0	0	1	0	5	0	0	5	0	1	0	0	1	1	2	0	0	3	0	10	10
08:30 AM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	2	2	0	0	4	0	7	7
08:45 AM	0	1	1	1	2	0	1	0	0	1	0	0	1	1	1	0	2	0	0	2	2	6	8
Total	0	3	2	2	5	1	13	0	0	14	0	1	1	1	2	4	7	0	0	11	3	32	35
Grand Total	1	4	2	2	7	1	24	1	0	26	0	2	1	1	3	5	21	0	0	26	3	62	65
Apprch %	14.3	57.1	28.6			3.8	92.3	3.8			0	66.7	33.3			19.2	80.8	0					
Total %	1.6	6.5	3.2		11.3	1.6	38.7	1.6		41.9	0	3.2	1.6		4.8	8.1	33.9	0		41.9	4.6	95.4	

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	0	**1**	0	4	0	4	0	0	0	0	0	**5**	0	**5**	**10**
07:45 AM	0	0	0	0	0	2	0	2	0	**1**	0	**1**	0	2	0	2	5
08:00 AM	0	0	**1**	1	**1**	**5**	0	**6**	0	0	0	0	**1**	1	0	2	9
08:15 AM	0	**1**	0	1	0	5	0	5	0	1	0	1	1	2	0	3	10
Total Volume	1	1	1	3	1	16	0	17	0	2	0	2	2	10	0	12	34
% App. Total	33.3	33.3	33.3		5.9	94.1	0		0	100	0		16.7	83.3	0		
PHF	.250	.250	.250	.750	.250	.800	.000	.708	.000	.500	.000	.500	.500	.500	.000	.600	.850

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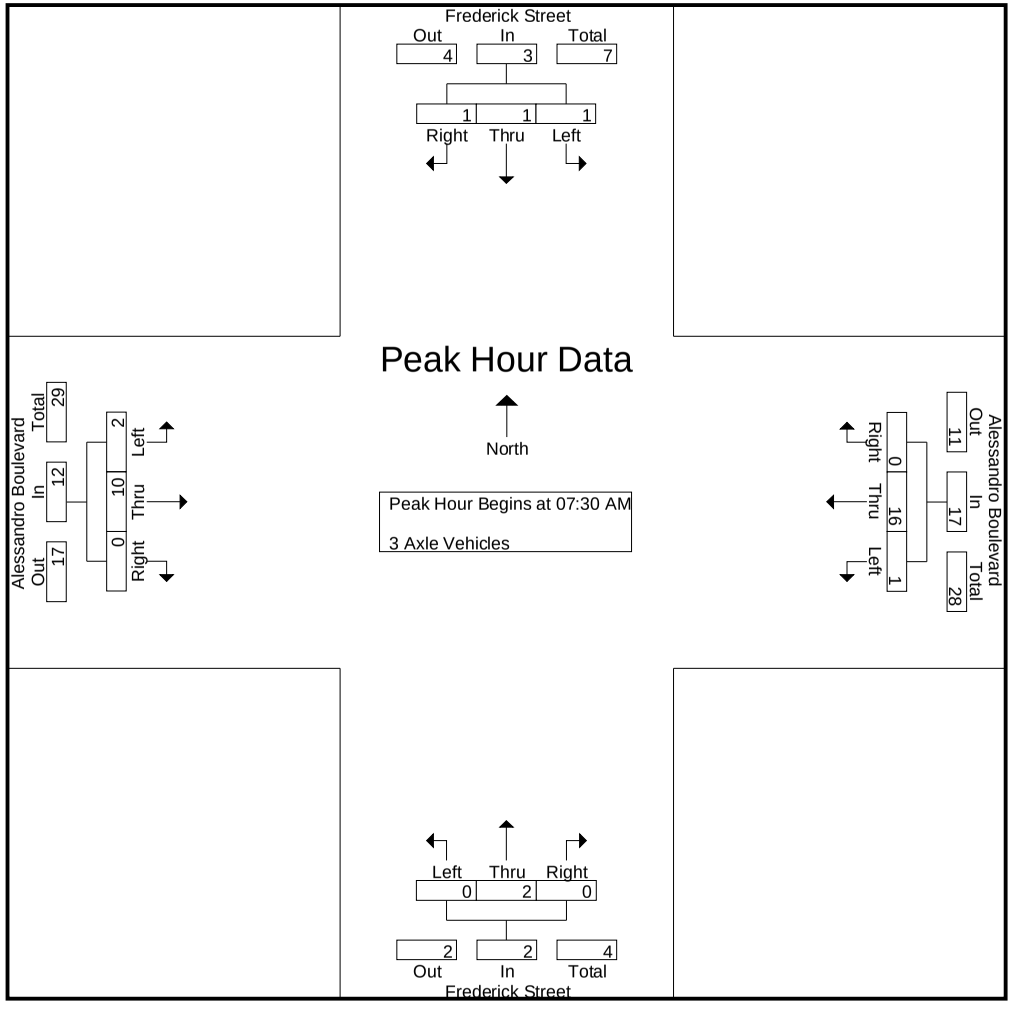

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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	**1**	0	0	**1**	0	4	0	4	0	0	0	0	0	**5**	0	**5**	
+15 mins.	0	0	0	0	0	2	0	2	0	**1**	0	**1**	0	2	0	2	
+30 mins.	0	0	**1**	1	**1**	**5**	0	**6**	0	0	0	0	**1**	1	0	2	
+45 mins.	0	**1**	0	1	0	5	0	5	0	1	0	1	1	2	0	3	
Total Volume	1	1	1	3	1	16	0	17	0	2	0	2	2	10	0	12	
% App. Total	33.3	33.3	33.3		5.9	94.1	0		0	100	0		16.7	83.3	0		
PHF	.250	.250	.250	.750	.250	.800	.000	.708	.000	.500	.000	.500	.500	.500	.000	.600	

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File Name : 06_MRV_Frederick_Alessandro AM
Site Code : 05118391
Start Date : 5/17/2018
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Groups Printed- 4+ Axle Trucks

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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	1	0	1	0	1	0	0	1	0	1	0	0	1	2	1	1	0	4	0	7	7
07:15 AM	0	0	0	0	0	0	1	1	1	2	0	0	0	0	0	0	1	0	0	1	1	3	4
07:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	2	0	3	0	6	6
07:45 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	1	1	0	2	0	8	8
Total	0	0	1	0	1	0	11	1	1	12	0	1	0	0	1	2	4	4	0	10	1	24	25
08:00 AM	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	1	1	0	0	2	0	9	9
08:15 AM	0	0	0	0	0	0	1	0	0	1	2	1	0	0	3	0	2	1	0	3	0	7	7
08:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	0	1	0	4	4
08:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	1	0	3	0	6	6
Total	0	1	0	0	1	0	13	0	0	13	2	1	0	0	3	1	5	3	0	9	0	26	26
Grand Total	0	1	1	0	2	0	24	1	1	25	2	2	0	0	4	3	9	7	0	19	1	50	51
Apprch %	0	50	50			0	96	4			50	50	0			15.8	47.4	36.8					
Total %	0	2	2		4	0	48	2		50	4	4	0		8	6	18	14		38	2	98	

3.1-15

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	**2**	**3**	6
07:45 AM	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	1	1	2	8
08:00 AM	0	**1**	0	**1**	0	6	0	6	0	0	0	0	**1**	1	0	2	**9**
08:15 AM	0	0	0	0	0	1	0	1	**2**	**1**	0	**3**	0	**2**	1	3	7
Total Volume	0	1	0	1	0	16	0	16	2	1	0	3	1	5	4	10	30
% App. Total	0	100	0		0	100	0		66.7	33.3	0		10	50	40		
PHF	.000	.250	.000	.250	.000	.667	.000	.667	.250	.250	.000	.250	.250	.625	.500	.833	.833

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Site Code : 05118391
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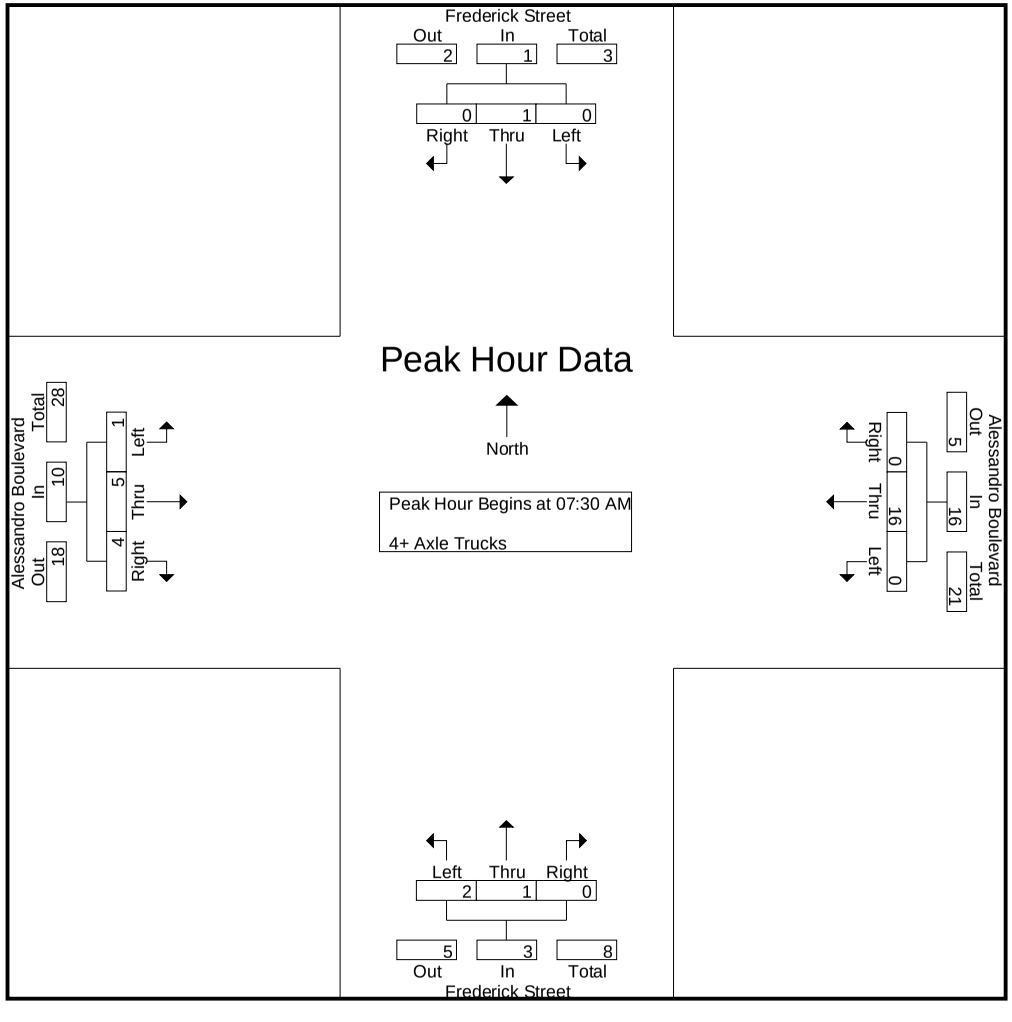

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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	1	**2**	**3**	
+15 mins.	0	0	0	0	0	**6**	0	**6**	0	0	0	0	0	1	1	2	
+30 mins.	0	**1**	0	**1**	0	6	0	6	0	0	0	0	**1**	1	0	2	
+45 mins.	0	0	0	0	0	1	0	1	**2**	**1**	0	**3**	0	**2**	1	3	
Total Volume	0	1	0	1	0	16	0	16	2	1	0	3	1	5	4	10	
% App. Total	0	100	0		0	100	0		66.7	33.3	0		10	50	40		
PHF	.000	.250	.000	.250	.000	.667	.000	.667	.250	.250	.000	.250	.250	.625	.500	.833	

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Site Code : 05118391
Start Date : 5/17/2018

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

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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
04:00 PM	64	63	28	19	155	17	235	44	24	296	17	88	18	3	123	58	317	33	7	408	53	982	1035
04:15 PM	73	75	33	14	181	14	190	29	12	233	21	70	21	7	112	49	265	24	1	338	34	864	898
04:30 PM	59	81	21	16	161	20	194	52	31	266	18	73	10	6	101	50	339	27	6	416	59	944	1003
04:45 PM	56	63	30	25	149	15	200	34	19	249	15	81	7	1	103	56	308	36	1	400	46	901	947
Total	252	282	112	74	646	66	819	159	86	1044	71	312	56	17	439	213	1229	120	15	1562	192	3691	3883
05:00 PM	81	96	23	14	200	14	176	45	21	235	14	67	21	7	102	47	288	25	5	360	47	897	944
05:15 PM	51	63	28	18	142	14	175	35	26	224	10	68	6	2	84	34	309	33	3	376	49	826	875
05:30 PM	77	102	28	23	207	14	166	42	25	222	21	66	9	4	96	47	299	35	6	381	58	906	964
05:45 PM	58	87	17	11	162	26	165	31	23	222	13	41	10	3	64	35	344	32	4	411	41	859	900
Total	267	348	96	66	711	68	682	153	95	903	58	242	46	16	346	163	1240	125	18	1528	195	3488	3683
Grand Total	519	630	208	140	1357	134	1501	312	181	1947	129	554	102	33	785	376	2469	245	33	3090	387	7179	7566
Apprch %	38.2	46.4	15.3			6.9	77.1	16			16.4	70.6	13			12.2	79.9	7.9					
Total %	7.2	8.8	2.9		18.9	1.9	20.9	4.3		27.1	1.8	7.7	1.4		10.9	5.2	34.4	3.4		43	5.1	94.9	
Passenger Vehicles	516	615	206		1477	133	1488	311		2113	127	549	102		811	373	2437	242		3085	0	0	7486
% Passenger Vehicles	99.4	97.6	99	100	98.7	99.3	99.1	99.7	100	99.3	98.4	99.1	100	100	99.1	99.2	98.7	98.8	100	98.8	0	0	98.9
Large 2 Axle Vehicles	2	12	1		15	1	8	0		9	0	4	0		4	2	18	2		22	0	0	50
% Large 2 Axle Vehicles	0.4	1.9	0.5	0	1	0.7	0.5	0	0	0.4	0	0.7	0	0	0.5	0.5	0.7	0.8	0	0.7	0	0	0.7
3 Axle Vehicles	0	1	0		1	0	1	0		1	2	0	0		2	0	3	0		3	0	0	7
% 3 Axle Vehicles	0	0.2	0	0	0.1	0	0.1	0	0	0	1.6	0	0	0	0.2	0	0.1	0	0	0.1	0	0	0.1
4+ Axle Trucks	1	2	1		4	0	4	1		5	0	1	0		1	1	11	1		13	0	0	23
% 4+ Axle Trucks	0.2	0.3	0.5	0	0.3	0	0.3	0.3	0	0.2	0	0.2	0	0	0.1	0.3	0.4	0.4	0	0.4	0	0	0.3

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	64	63	28	155	17	**235**	44	**296**	17	**88**	18	**123**	**58**	317	33	408	**982**
04:15 PM	**73**	75	**33**	**181**	14	190	29	233	**21**	70	**21**	112	49	265	24	338	864
04:30 PM	59	**81**	21	161	**20**	194	**52**	266	18	73	10	101	50	**339**	27	**416**	944
04:45 PM	56	63	30	149	15	200	34	249	15	81	7	103	56	308	**36**	400	901
Total Volume	252	282	112	646	66	819	159	1044	71	312	56	439	213	1229	120	1562	3691
% App. Total	39	43.7	17.3		6.3	78.4	15.2		16.2	71.1	12.8		13.6	78.7	7.7		
PHF	.863	.870	.848	.892	.825	.871	.764	.882	.845	.886	.667	.892	.918	.906	.833	.939	.940

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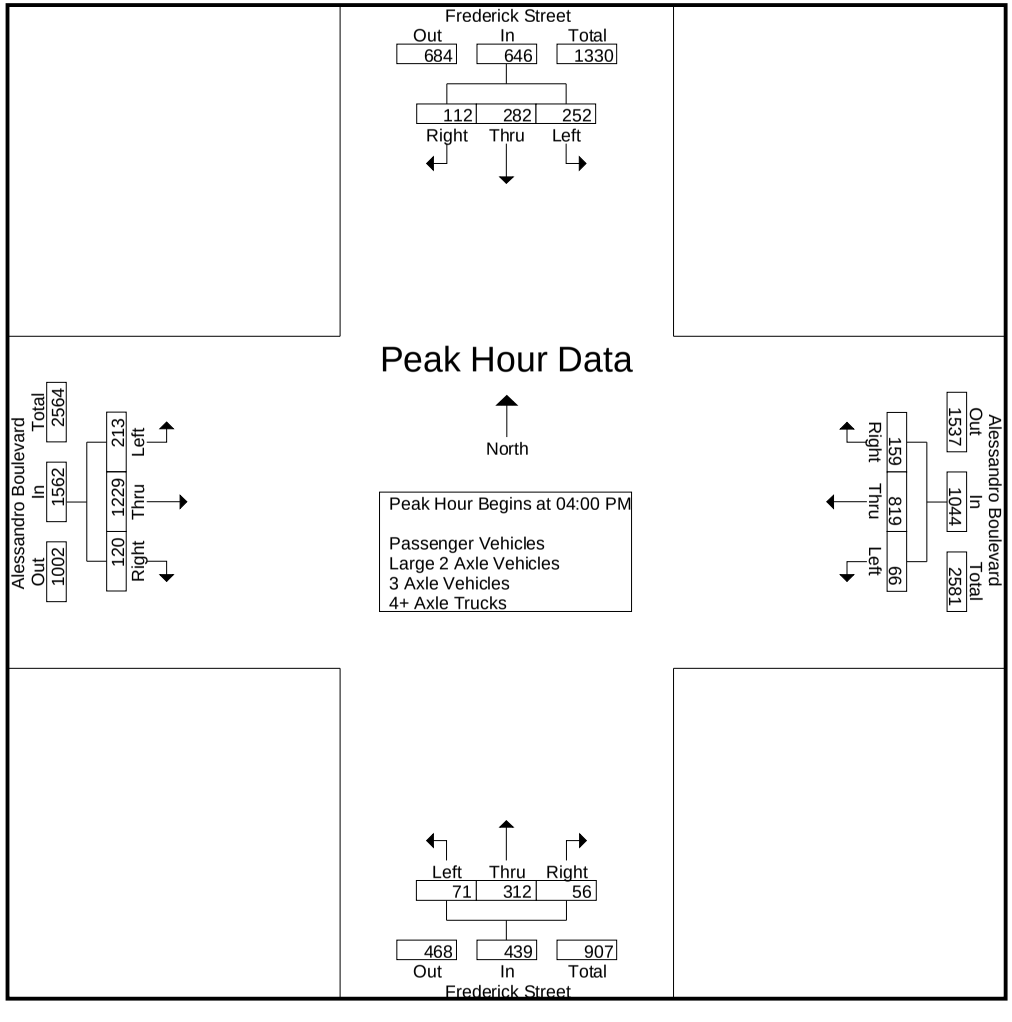

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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick Street Northbound				Alessandro Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	**81**	96	23	200	17	**235**	44	**296**	17	**88**	18	**123**	**58**	317	33	408	
+15 mins.	51	63	**28**	142	14	190	29	233	**21**	70	**21**	112	49	265	24	338	
+30 mins.	77	**102**	28	**207**	**20**	194	**52**	266	18	73	10	101	50	**339**	27	**416**	
+45 mins.	58	87	17	162	15	200	34	249	15	81	7	103	56	308	**36**	400	
Total Volume	267	348	96	711	66	819	159	1044	71	312	56	439	213	1229	120	1562	
% App. Total	37.6	48.9	13.5		6.3	78.4	15.2		16.2	71.1	12.8		13.6	78.7	7.7		
PHF	.824	.853	.857	.859	.825	.871	.764	.882	.845	.886	.667	.892	.918	.906	.833	.939	

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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
04:00 PM	63	59	27	19	149	17	234	44	24	295	17	87	18	3	122	58	314	33	7	405	53	971	1024
04:15 PM	73	73	33	14	179	14	188	29	12	231	21	70	21	7	112	48	261	24	1	333	34	855	889
04:30 PM	59	79	21	16	159	20	193	52	31	265	18	72	10	6	100	50	332	27	6	409	59	933	992
04:45 PM	55	63	30	25	148	15	200	34	19	249	15	81	7	1	103	56	302	34	1	392	46	892	938
Total	250	274	111	74	635	66	815	159	86	1040	71	310	56	17	437	212	1209	118	15	1539	192	3651	3843
05:00 PM	81	95	23	14	199	14	175	44	21	233	14	67	21	7	102	46	282	24	5	352	47	886	933
05:15 PM	51	61	27	18	139	14	173	35	26	222	9	66	6	2	81	33	307	33	3	373	49	815	864
05:30 PM	76	99	28	23	203	14	163	42	25	219	20	66	9	4	95	47	297	35	6	379	58	896	954
05:45 PM	58	86	17	11	161	25	162	31	23	218	13	40	10	3	63	35	342	32	4	409	41	851	892
Total	266	341	95	66	702	67	673	152	95	892	56	239	46	16	341	161	1228	124	18	1513	195	3448	3643
Grand Total	516	615	206	140	1337	133	1488	311	181	1932	127	549	102	33	778	373	2437	242	33	3052	387	7099	7486
Apprch %	38.6	46	15.4			6.9	77	16.1			16.3	70.6	13.1			12.2	79.8	7.9					
Total %	7.3	8.7	2.9		18.8	1.9	21	4.4		27.2	1.8	7.7	1.4		11	5.3	34.3	3.4		43	5.2	94.8	

3.1-21

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	63	59	27	149	17	**234**	44	**295**	17	**87**	18	**122**	**58**	314	33	405	**971**
04:15 PM	**73**	73	**33**	**179**	14	188	29	231	**21**	70	**21**	112	48	261	24	333	855
04:30 PM	59	**79**	21	159	**20**	193	**52**	265	18	72	10	100	50	**332**	27	**409**	933
04:45 PM	55	63	30	148	15	200	34	249	15	81	7	103	56	302	**34**	392	892
Total Volume	250	274	111	635	66	815	159	1040	71	310	56	437	212	1209	118	1539	3651
% App. Total	39.4	43.1	17.5		6.3	78.4	15.3		16.2	70.9	12.8		13.8	78.6	7.7		
PHF	.856	.867	.841	.887	.825	.871	.764	.881	.845	.891	.667	.895	.914	.910	.868	.941	.940

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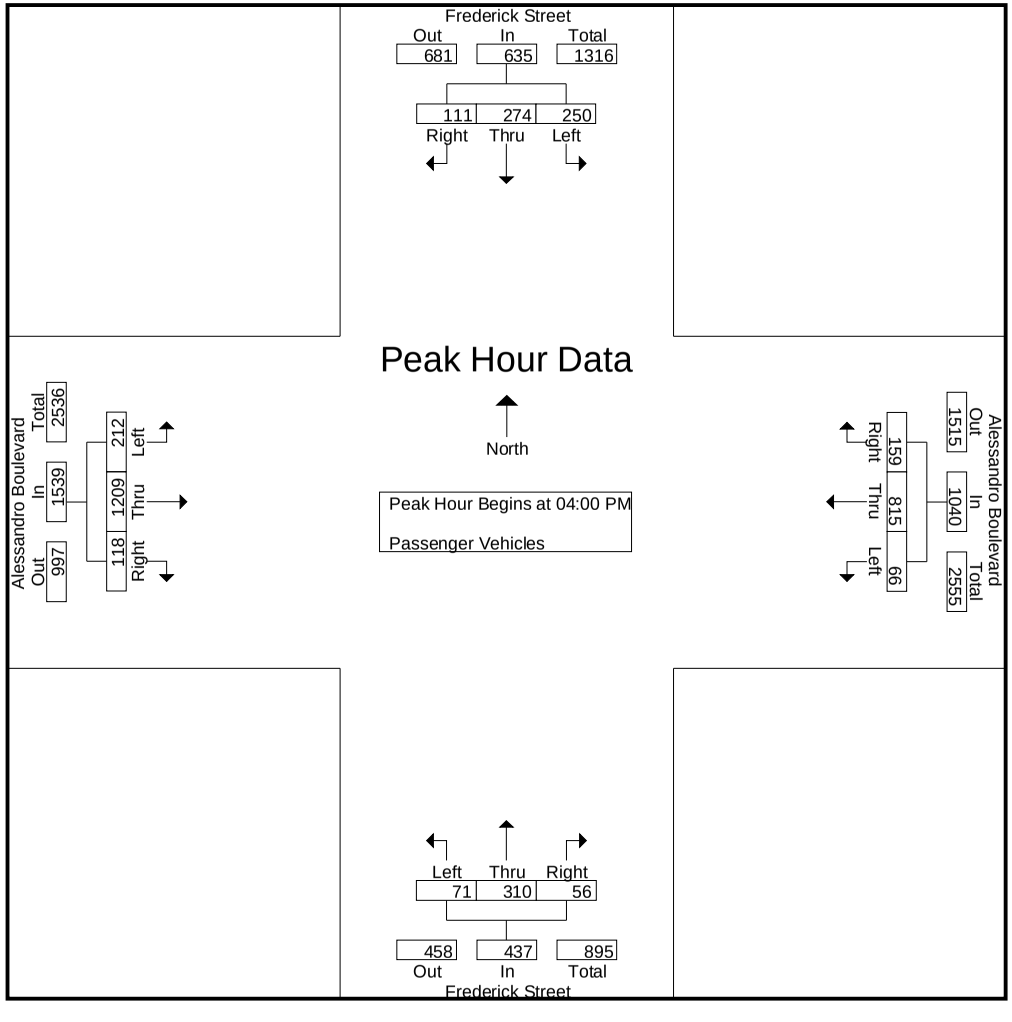
City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 2



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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 3

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	63	59	27	149	17	**234**	44	**295**	17	**87**	18	**122**	**58**	314	33	405	
+15 mins.	**73**	73	**33**	**179**	14	188	29	231	**21**	70	**21**	112	48	261	24	333	
+30 mins.	59	**79**	21	159	**20**	193	**52**	265	18	72	10	100	50	**332**	27	**409**	
+45 mins.	55	63	30	148	15	200	34	249	15	81	7	103	56	302	**34**	392	
Total Volume	250	274	111	635	66	815	159	1040	71	310	56	437	212	1209	118	1539	
% App. Total	39.4	43.1	17.5		6.3	78.4	15.3		16.2	70.9	12.8		13.8	78.6	7.7		
PHF	.856	.867	.841	.887	.825	.871	.764	.881	.845	.891	.667	.895	.914	.910	.868	.941	

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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
04:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	5	5
04:15 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	6	6
04:30 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	3	0	0	3	0	7	7
04:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	2	0	6	0	7	7
Total	1	6	0	0	7	0	3	0	0	3	0	2	0	0	2	0	11	2	0	13	0	25	25
05:00 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	1	3	0	0	4	0	6	6
05:15 PM	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	1	1	0	0	2	0	6	6
05:30 PM	1	3	0	0	4	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	7	7
05:45 PM	0	1	0	0	1	1	2	0	0	3	0	1	0	0	1	0	1	0	0	1	0	6	6
Total	1	6	1	0	8	1	5	0	0	6	0	2	0	0	2	2	7	0	0	9	0	25	25
Grand Total	2	12	1	0	15	1	8	0	0	9	0	4	0	0	4	2	18	2	0	22	0	50	50
Apprch %	13.3	80	6.7			11.1	88.9	0			0	100	0			9.1	81.8	9.1					
Total %	4	24	2		30	2	16	0		18	0	8	0		8	4	36	4		44	0	100	

3.1-24

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**3**	0	**3**	0	0	0	0	0	**1**	0	**1**	0	1	0	1	5
04:15 PM	0	1	0	1	0	**2**	0	**2**	0	0	0	0	0	3	0	3	6
04:30 PM	0	2	0	2	0	1	0	1	0	1	0	1	0	3	0	3	**7**
04:45 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	0	**4**	**2**	**6**	7
Total Volume	1	6	0	7	0	3	0	3	0	2	0	2	0	11	2	13	25
% App. Total	14.3	85.7	0		0	100	0		0	100	0		0	84.6	15.4		
PHF	.250	.500	.000	.583	.000	.375	.000	.375	.000	.500	.000	.500	.000	.688	.250	.542	.893

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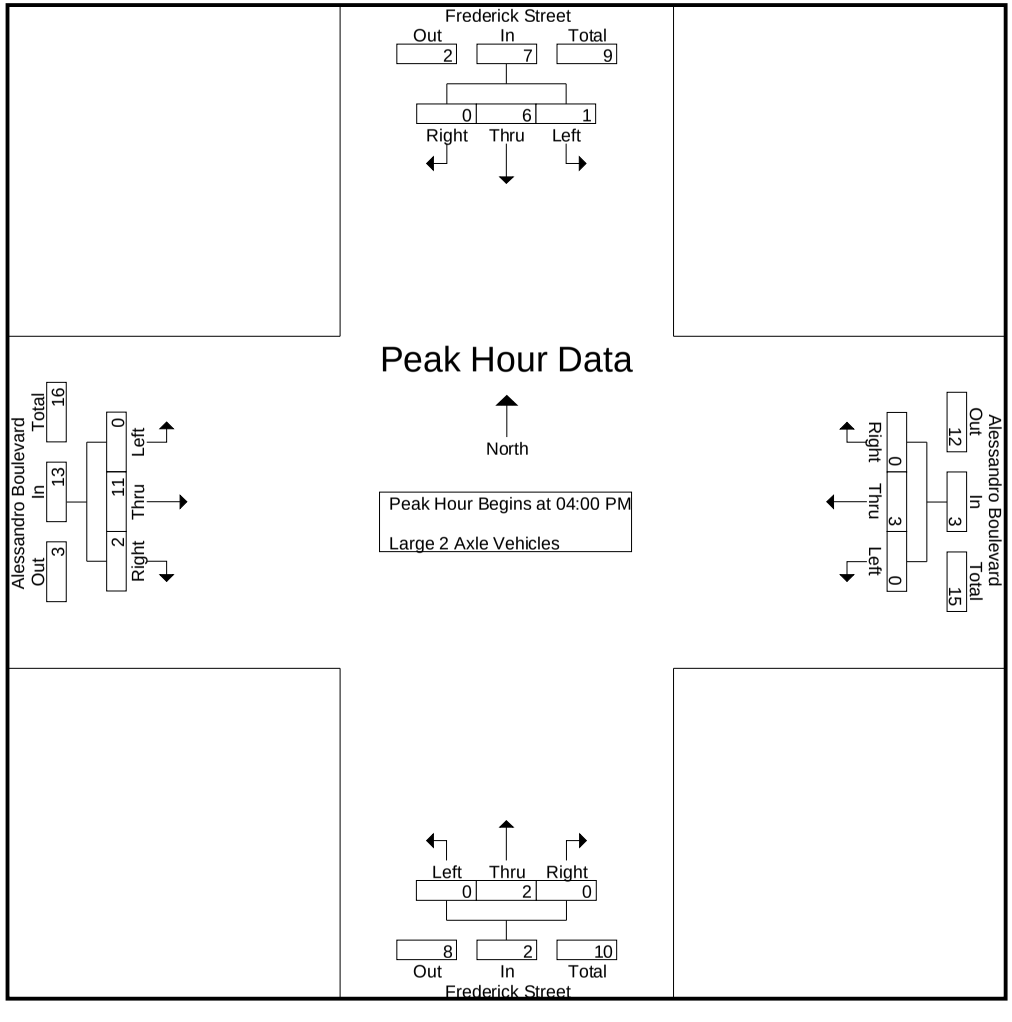
City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 2



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City of Moreno Valley
N/S: Frederick Street
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Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	**3**	0	**3**	0	0	0	0	0	**1**	0	**1**	0	1	0	1	
+15 mins.	0	1	0	1	0	**2**	0	**2**	0	0	0	0	0	3	0	3	
+30 mins.	0	2	0	2	0	1	0	1	0	1	0	1	0	3	0	3	
+45 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	0	**4**	**2**	**6**	
Total Volume	1	6	0	7	0	3	0	3	0	2	0	2	0	11	2	13	
% App. Total	14.3	85.7	0		0	100	0		0	100	0		0	84.6	15.4		
PHF	.250	.500	.000	.583	.000	.375	.000	.375	.000	.500	.000	.500	.000	.688	.250	.542	

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City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

Groups Printed- 3 Axle Vehicles

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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
04:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	3	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	1	0	0	1	0	4	4
Grand Total	0	1	0	0	1	0	1	0	0	1	2	0	0	0	2	0	3	0	0	3	0	7	7
Apprch %	0	100	0			0	100	0			100	0	0			0	100	0					
Total %	0	14.3	0		14.3	0	14.3	0		14.3	28.6	0	0		28.6	0	42.9	0		42.9	0	100	

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	3
% App. Total	0	100	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.750

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City of Moreno Valley
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E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
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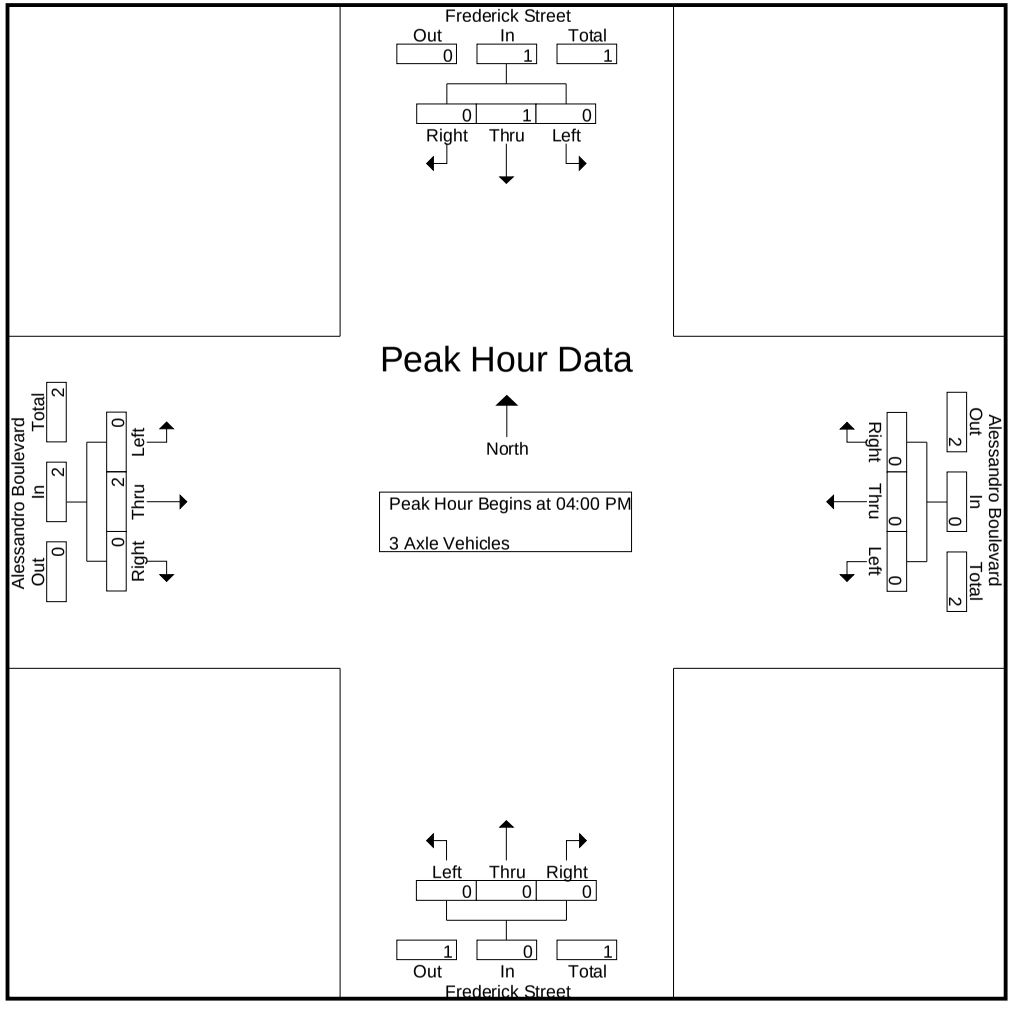

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File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
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	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick Street Northbound				Alessandro 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	
% App. Total	0	100	0		0	0	0		0	0	0		0	100	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	

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City of Moreno Valley
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E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 1

Groups Printed- 4+ Axle Trucks

	Frederick Street Southbound					Alessandro Boulevard Westbound					Frederick 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
04:00 PM	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	5	5
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2
Total	1	1	1	0	3	0	1	0	0	1	0	0	0	0	0	1	7	0	0	8	0	12	12
05:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	1	0	3	0	4	4
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	3	3
05:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
Total	0	1	0	0	1	0	3	1	0	4	0	1	0	0	1	0	4	1	0	5	0	11	11
Grand Total	1	2	1	0	4	0	4	1	0	5	0	1	0	0	1	1	11	1	0	13	0	23	23
Apprch %	25	50	25			0	80	20			0	100	0			7.7	84.6	7.7					
Total %	4.3	8.7	4.3		17.4	0	17.4	4.3		21.7	0	4.3	0		4.3	4.3	47.8	4.3		56.5	0	100	

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**1**	0	**1**	**2**	0	**1**	0	**1**	0	0	0	0	0	2	0	2	**5**
04:15 PM	0	**1**	0	1	0	0	0	0	0	0	0	0	**1**	0	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total Volume	1	1	1	3	0	1	0	1	0	0	0	0	1	7	0	8	12
% App. Total	33.3	33.3	33.3		0	100	0		0	0	0		12.5	87.5	0		
PHF	.250	.250	.250	.375	.000	.250	.000	.250	.000	.000	.000	.000	.250	.583	.000	.667	.600

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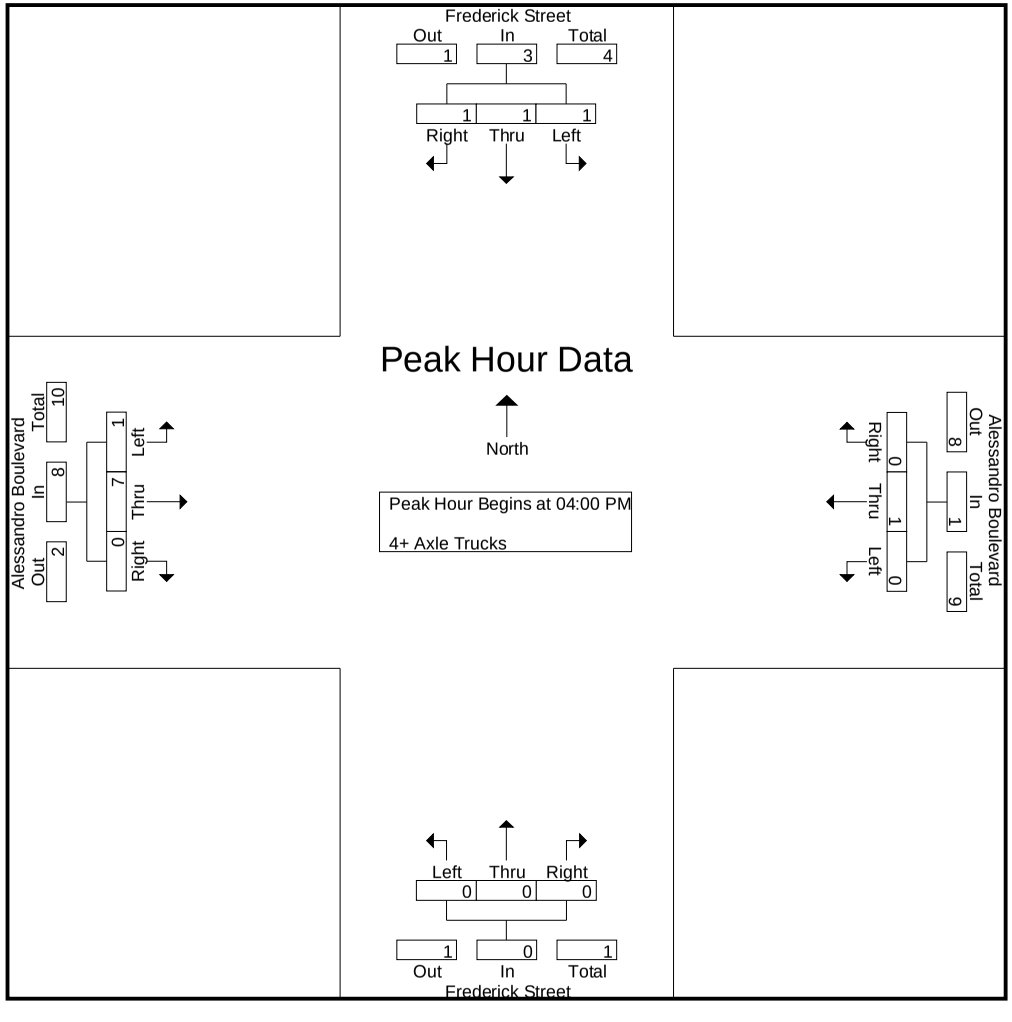
City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 2



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City of Moreno Valley
N/S: Frederick Street
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Weather: Clear

File Name : 06_MRV_Frederick_Alessandro PM
Site Code : 05118391
Start Date : 5/17/2018
Page No : 3

	Frederick Street Southbound				Alessandro Boulevard Westbound				Frederick 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	**1**	0	**1**	**2**	0	**1**	0	**1**	0	0	0	0	0	2	0	2	
+15 mins.	0	**1**	0	1	0	0	0	0	0	0	0	0	**1**	0	0	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**	0	**3**	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
Total Volume	1	1	1	3	0	1	0	1	0	0	0	0	1	7	0	8	
% App. Total	33.3	33.3	33.3		0	100	0		0	0	0		12.5	87.5	0		
PHF	.250	.250	.250	.375	.000	.250	.000	.250	.000	.000	.000	.000	.250	.583	.000	.667	

Location: City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard

Date: 5/17/2018
Day: Thursday

PEDESTRIANS

	North Leg Frederick Street	East Leg Alessandro Boulevard	South Leg Frederick Street	West Leg Alessandro Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	2	1	0	3
7:15 AM	1	1	0	1	3
7:30 AM	2	0	0	0	2
7:45 AM	1	0	0	0	1
8:00 AM	1	0	0	1	2
8:15 AM	6	1	0	2	9
8:30 AM	2	0	1	0	3
8:45 AM	0	1	0	3	4
TOTAL VOLUMES:	13	5	2	7	27

	North Leg Frederick Street	East Leg Alessandro Boulevard	South Leg Frederick Street	West Leg Alessandro Boulevard	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	1	1	0	2
4:15 PM	0	1	0	1	2
4:30 PM	0	1	2	1	4
4:45 PM	1	2	0	2	5
5:00 PM	3	3	0	1	7
5:15 PM	0	0	0	0	0
5:30 PM	3	0	0	3	6
5:45 PM	1	0	0	0	1
TOTAL VOLUMES:	8	8	3	8	27

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Location: City of Moreno Valley
N/S: Frederick Street
E/W: Alessandro Boulevard

Date: 5/17/2018
Day: Thursday

BICYCLES

	Southbound Frederick Street			Westbound Alessandro Boulevard			Northbound Frederick 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	1	0	1
7:15 AM	0	0	0	0	2	0	0	0	0	0	0	0	2
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	1	0	0	0	0	1	1	4
8:45 AM	3	2	0	0	1	0	0	0	0	0	0	0	6
TOTAL VOLUMES:	3	3	0	0	5	1	0	1	0	0	2	1	16

	Southbound Frederick Street			Westbound Alessandro Boulevard			Northbound Frederick Street			Eastbound Alessandro Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	1	0	0	0	1	0	0	0	0	6	0	8

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro AM
Site Code : 05118347
Start Date : 4/26/2018
Page No : 1

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

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
07:00 AM	14	34	22	70	8	370	14	392	12	18	4	34	4	69	11	84	580
07:15 AM	23	33	21	77	14	396	26	436	18	24	2	44	9	79	12	100	657
07:30 AM	16	50	22	88	18	373	19	410	14	43	2	59	11	117	13	141	698
07:45 AM	32	50	22	104	33	350	37	420	11	58	4	73	9	123	16	148	745
Total	85	167	87	339	73	1489	96	1658	55	143	12	210	33	388	52	473	2680
08:00 AM	19	40	20	79	24	380	30	434	15	30	7	52	7	124	13	144	709
08:15 AM	24	38	11	73	23	315	30	368	18	39	7	64	15	125	6	146	651
08:30 AM	31	36	16	83	22	262	20	304	9	37	11	57	9	144	12	165	609
08:45 AM	25	25	21	71	25	281	26	332	12	30	7	49	12	129	18	159	611
Total	99	139	68	306	94	1238	106	1438	54	136	32	222	43	522	49	614	2580
Grand Total	184	306	155	645	167	2727	202	3096	109	279	44	432	76	910	101	1087	5260
Apprch %	28.5	47.4	24		5.4	88.1	6.5		25.2	64.6	10.2		7	83.7	9.3		
Total %	3.5	5.8	2.9	12.3	3.2	51.8	3.8	58.9	2.1	5.3	0.8	8.2	1.4	17.3	1.9	20.7	
Passenger Vehicles	180	296	152	628	166	2661	196	3023	101	274	43	418	72	863	96	1031	5100
% Passenger Vehicles	97.8	96.7	98.1	97.4	99.4	97.6	97	97.6	92.7	98.2	97.7	96.8	94.7	94.8	95	94.8	97
Large 2 Axle Vehicles	3	9	3	15	0	37	4	41	4	5	1	10	3	23	2	28	94
% Large 2 Axle Vehicles	1.6	2.9	1.9	2.3	0	1.4	2	1.3	3.7	1.8	2.3	2.3	3.9	2.5	2	2.6	1.8
3 Axle Vehicles	0	0	0	0	1	14	1	16	0	0	0	0	0	17	0	17	33
% 3 Axle Vehicles	0	0	0	0	0.6	0.5	0.5	0.5	0	0	0	0	0	1.9	0	1.6	0.6
4+ Axle Trucks	1	1	0	2	0	15	1	16	4	0	0	4	1	7	3	11	33
% 4+ Axle Trucks	0.5	0.3	0	0.3	0	0.6	0.5	0.5	3.7	0	0	0.9	1.3	0.8	3	1	0.6

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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	23	33	21	77	14	**396**	26	**436**	**18**	24	2	44	9	79	12	100	657
07:30 AM	16	**50**	**22**	88	18	373	19	410	14	43	2	59	**11**	117	13	141	698
07:45 AM	**32**	50	22	**104**	**33**	350	**37**	420	11	**58**	4	**73**	9	123	**16**	**148**	**745**
08:00 AM	19	40	20	79	24	380	30	434	15	30	**7**	52	7	**124**	13	144	709
Total Volume	90	173	85	348	89	1499	112	1700	58	155	15	228	36	443	54	533	2809
% App. Total	25.9	49.7	24.4		5.2	88.2	6.6		25.4	68	6.6		6.8	83.1	10.1		
PHF	.703	.865	.966	.837	.674	.946	.757	.975	.806	.668	.536	.781	.818	.893	.844	.900	.943

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro AM
Site Code : 05118347
Start Date : 4/26/2018
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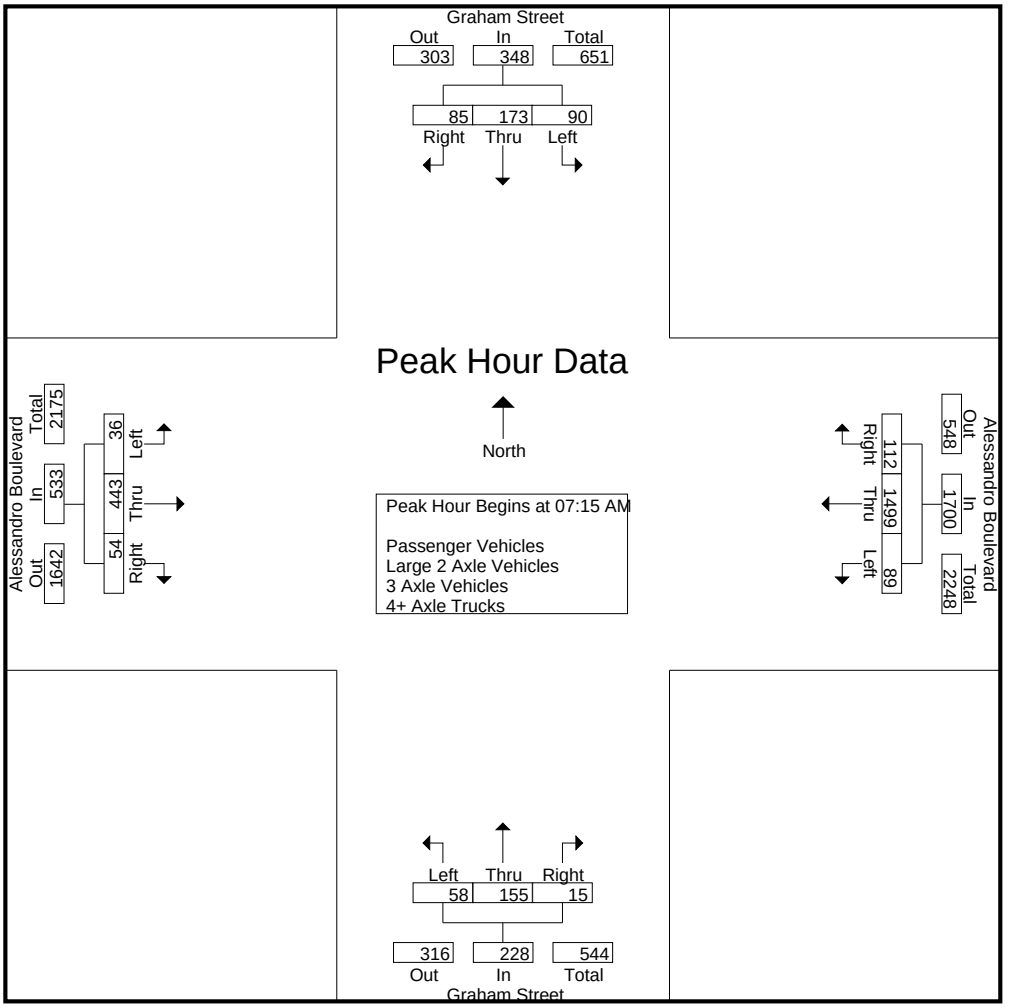

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:30 AM				08:00 AM			
+0 mins.	23	33	21	77	14	**396**	26	**436**	14	43	2	59	7	124	13	144
+15 mins.	16	**50**	**22**	88	18	373	19	410	11	**58**	4	**73**	**15**	125	6	146
+30 mins.	**32**	50	22	**104**	**33**	350	**37**	420	15	30	**7**	52	9	**144**	12	**165**
+45 mins.	19	40	20	79	24	380	30	434	**18**	39	7	64	12	129	**18**	159
Total Volume	90	173	85	348	89	1499	112	1700	58	170	20	248	43	522	49	614
% App. Total	25.9	49.7	24.4		5.2	88.2	6.6		23.4	68.5	8.1		7	85	8	
PHF	.703	.865	.966	.837	.674	.946	.757	.975	.806	.733	.714	.849	.717	.906	.681	.930

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro AM
Site Code : 05118347
Start Date : 4/26/2018
Page No : 1

Groups Printed- Passenger Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
07:00 AM	13	30	22	65	8	362	14	384	9	18	4	31	3	61	11	75	555
07:15 AM	21	33	21	75	14	393	25	432	16	23	2	41	9	75	12	96	644
07:30 AM	15	50	22	87	18	367	18	403	14	42	2	58	10	111	13	134	682
07:45 AM	32	49	21	102	33	340	36	409	9	58	4	71	9	121	13	143	725
Total	81	162	86	329	73	1462	93	1628	48	141	12	201	31	368	49	448	2606
08:00 AM	19	38	19	76	23	365	30	418	14	30	7	51	7	119	13	139	684
08:15 AM	24	37	10	71	23	305	29	357	18	36	7	61	14	115	6	135	624
08:30 AM	31	34	16	81	22	256	20	298	9	37	11	57	8	139	11	158	594
08:45 AM	25	25	21	71	25	273	24	322	12	30	6	48	12	122	17	151	592
Total	99	134	66	299	93	1199	103	1395	53	133	31	217	41	495	47	583	2494
Grand Total	180	296	152	628	166	2661	196	3023	101	274	43	418	72	863	96	1031	5100
Apprch %	28.7	47.1	24.2		5.5	88	6.5		24.2	65.6	10.3		7	83.7	9.3		
Total %	3.5	5.8	3	12.3	3.3	52.2	3.8	59.3	2	5.4	0.8	8.2	1.4	16.9	1.9	20.2	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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	21	33	21	75	14	**393**	25	**432**	**16**	23	2	41	9	75	12	96	644
07:30 AM	15	**50**	**22**	87	18	367	18	403	14	42	2	58	**10**	111	**13**	134	682
07:45 AM	**32**	49	21	**102**	**33**	340	**36**	409	9	**58**	4	**71**	9	**121**	13	**143**	**725**
08:00 AM	19	38	19	76	23	365	30	418	14	30	**7**	51	7	119	13	139	684
Total Volume	87	170	83	340	88	1465	109	1662	53	153	15	221	35	426	51	512	2735
% App. Total	25.6	50	24.4		5.3	88.1	6.6		24	69.2	6.8		6.8	83.2	10		
PHF	.680	.850	.943	.833	.667	.932	.757	.962	.828	.659	.536	.778	.875	.880	.981	.895	.943

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City of Moreno Valley
N/S: Graham Street
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Weather: Clear

File Name : 03C_MRV_Graham_Alessandro AM
Site Code : 05118347
Start Date : 4/26/2018
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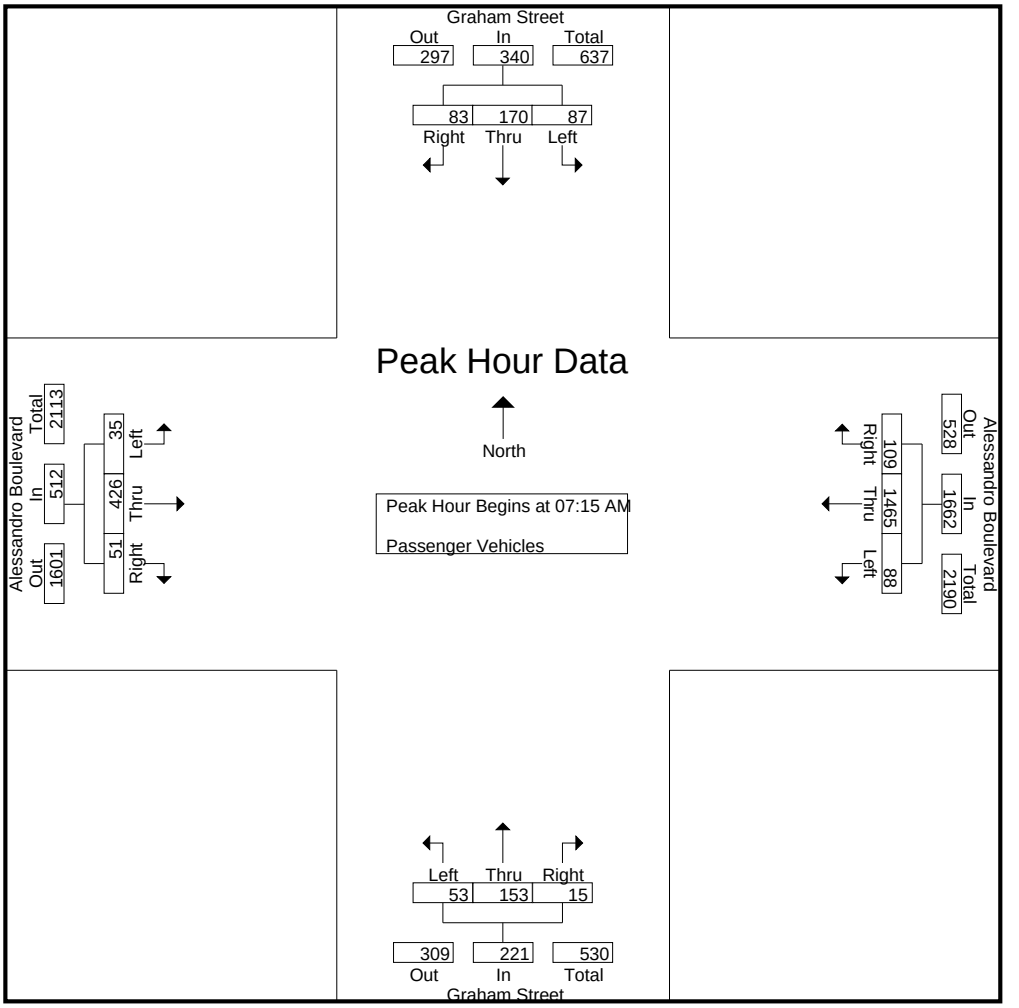

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	21	33	21	75	14	**393**	25	**432**	**16**	23	2	41	9	75	12	96
+15 mins.	15	**50**	**22**	87	18	367	18	403	14	42	2	58	**10**	111	**13**	134
+30 mins.	**32**	49	21	**102**	**33**	340	**36**	409	9	**58**	4	**71**	9	**121**	13	**143**
+45 mins.	19	38	19	76	23	365	30	418	14	30	**7**	51	7	119	13	139
Total Volume	87	170	83	340	88	1465	109	1662	53	153	15	221	35	426	51	512
% App. Total	25.6	50	24.4		5.3	88.1	6.6		24	69.2	6.8		6.8	83.2	10	
PHF	.680	.850	.943	.833	.667	.932	.757	.962	.828	.659	.536	.778	.875	.880	.981	.895

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City of Moreno Valley
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Weather: Clear

File Name : 03C_MRV_Graham_Alessandro AM
Site Code : 05118347
Start Date : 4/26/2018
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
07:00 AM	0	3	0	3	0	7	0	7	1	0	0	1	1	4	0	5	16
07:15 AM	2	0	0	2	0	2	1	3	2	1	0	3	0	2	0	2	10
07:30 AM	1	0	0	1	0	4	0	4	0	1	0	1	1	1	0	2	8
07:45 AM	0	1	1	2	0	4	1	5	0	0	0	0	0	0	1	1	8
Total	3	4	1	8	0	17	2	19	3	2	0	5	2	7	1	10	42
08:00 AM	0	2	1	3	0	7	0	7	1	0	0	1	0	5	0	5	16
08:15 AM	0	1	1	2	0	5	1	6	0	3	0	3	1	5	0	6	17
08:30 AM	0	2	0	2	0	3	0	3	0	0	0	0	0	3	0	3	8
08:45 AM	0	0	0	0	0	5	1	6	0	0	1	1	0	3	1	4	11
Total	0	5	2	7	0	20	2	22	1	3	1	5	1	16	1	18	52
Grand Total	3	9	3	15	0	37	4	41	4	5	1	10	3	23	2	28	94
Apprch %	20	60	20		0	90.2	9.8		40	50	10		10.7	82.1	7.1		
Total %	3.2	9.6	3.2	16	0	39.4	4.3	43.6	4.3	5.3	1.1	10.6	3.2	24.5	2.1	29.8	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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	**2**	0	0	2	0	2	**1**	3	**2**	**1**	0	**3**	0	2	0	2	10
07:30 AM	1	0	0	1	0	4	0	4	0	1	0	1	**1**	1	0	2	8
07:45 AM	0	1	**1**	2	0	4	1	5	0	0	0	0	0	0	**1**	1	8
08:00 AM	0	**2**	1	**3**	0	**7**	0	**7**	1	0	0	1	0	**5**	0	**5**	**16**
Total Volume	3	3	2	8	0	17	2	19	3	2	0	5	1	8	1	10	42
% App. Total	37.5	37.5	25		0	89.5	10.5		60	40	0		10	80	10		
PHF	.375	.375	.500	.667	.000	.607	.500	.679	.375	.500	.000	.417	.250	.400	.250	.500	.656

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City of Moreno Valley
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File Name : 03C_MRV_Graham_Alessandro AM
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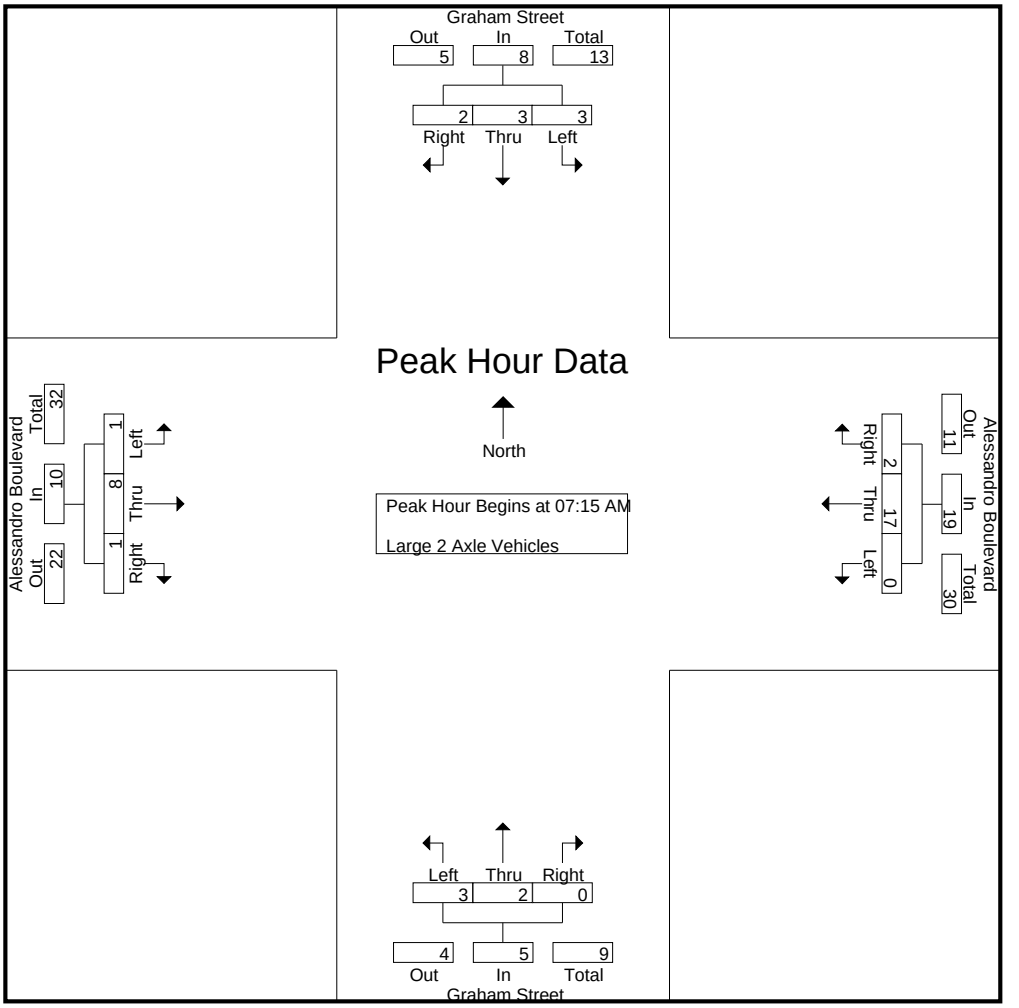

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**2**	0	0	2	0	2	**1**	3	**2**	**1**	0	**3**	0	2	0	2
+15 mins.	1	0	0	1	0	4	0	4	0	1	0	1	**1**	1	0	2
+30 mins.	0	1	**1**	2	0	4	1	5	0	0	0	0	0	0	**1**	1
+45 mins.	0	**2**	1	**3**	0	**7**	0	**7**	1	0	0	1	0	**5**	0	**5**
Total Volume	3	3	2	8	0	17	2	19	3	2	0	5	1	8	1	10
% App. Total	37.5	37.5	25		0	89.5	10.5		60	40	0		10	80	10	
PHF	.375	.375	.500	.667	.000	.607	.500	.679	.375	.500	.000	.417	.250	.400	.250	.500

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

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Groups Printed- 3 Axle Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
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	1	2	0	0	0	0	0	3	0	3	5
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	0	0	0	0	0	4	1	5	0	0	0	0	0	8	0	8	13
08:00 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	0	0	0	5
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
08:45 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	4	0	4	7
Total	0	0	0	0	1	10	0	11	0	0	0	0	0	9	0	9	20
Grand Total	0	0	0	0	1	14	1	16	0	0	0	0	0	17	0	17	33
Apprch %	0	0	0		6.2	87.5	6.2		0	0	0		0	100	0		
Total %	0	0	0	0	3	42.4	3	48.5	0	0	0	0	0	51.5	0	51.5	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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	**1**	2	0	0	0	0	0	**3**	0	**3**	**5**
07:45 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	**1**	**4**	0	**5**	0	0	0	0	0	0	0	0	5
Total Volume	0	0	0	0	1	7	1	9	0	0	0	0	0	4	0	4	13
% App. Total	0	0	0		11.1	77.8	11.1		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.438	.250	.450	.000	.000	.000	.000	.000	.333	.000	.333	.650

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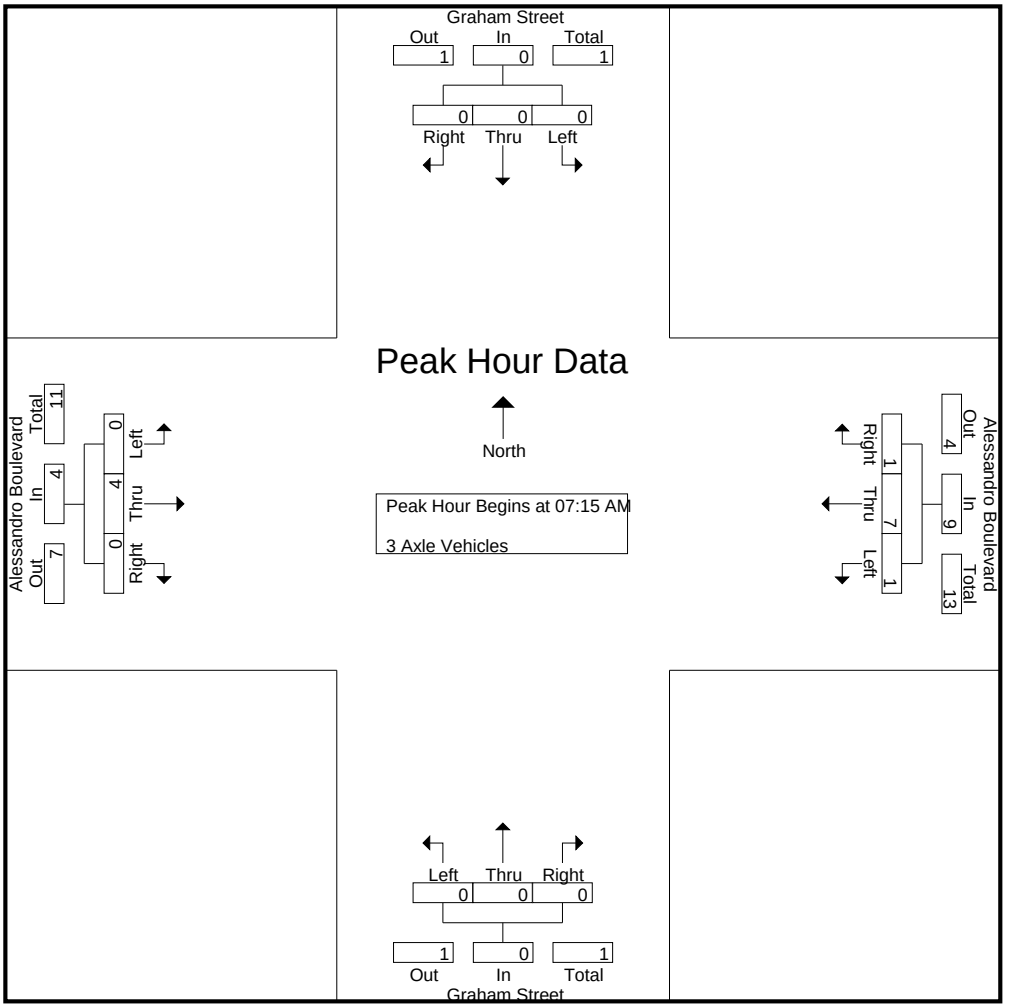

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	**1**	2	0	0	0	0	0	**3**	0	**3**
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	**1**	**4**	0	**5**	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	7	1	9	0	0	0	0	0	4	0	4
% App. Total	0	0	0		11.1	77.8	11.1		0	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.438	.250	.450	.000	.000	.000	.000	.000	.333	.000	.333

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Weather: Clear

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Groups Printed- 4+ Axle Trucks

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
07:00 AM	1	1	0	2	0	0	0	0	2	0	0	2	0	0	0	0	4
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:45 AM	0	0	0	0	0	4	0	4	2	0	0	2	0	1	2	3	9
Total	1	1	0	2	0	6	0	6	4	0	0	4	0	5	2	7	19
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	4
08:15 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	2	3
08:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	9	1	10	0	0	0	0	1	2	1	4	14
Grand Total	1	1	0	2	0	15	1	16	4	0	0	4	1	7	3	11	33
Apprch %	50	50	0		0	93.8	6.2		100	0	0		9.1	63.6	27.3		
Total %	3	3	0	6.1	0	45.5	3	48.5	12.1	0	0	12.1	3	21.2	9.1	33.3	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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	1	0	1	0	0	0	0	0	**2**	0	2	3
07:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:45 AM	0	0	0	0	0	**4**	0	**4**	**2**	0	0	**2**	0	1	**2**	**3**	**9**
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	10	0	10	2	0	0	2	0	5	2	7	19
% App. Total	0	0	0		0	100	0		100	0	0		0	71.4	28.6		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.250	.000	.000	.250	.000	.625	.250	.583	.528

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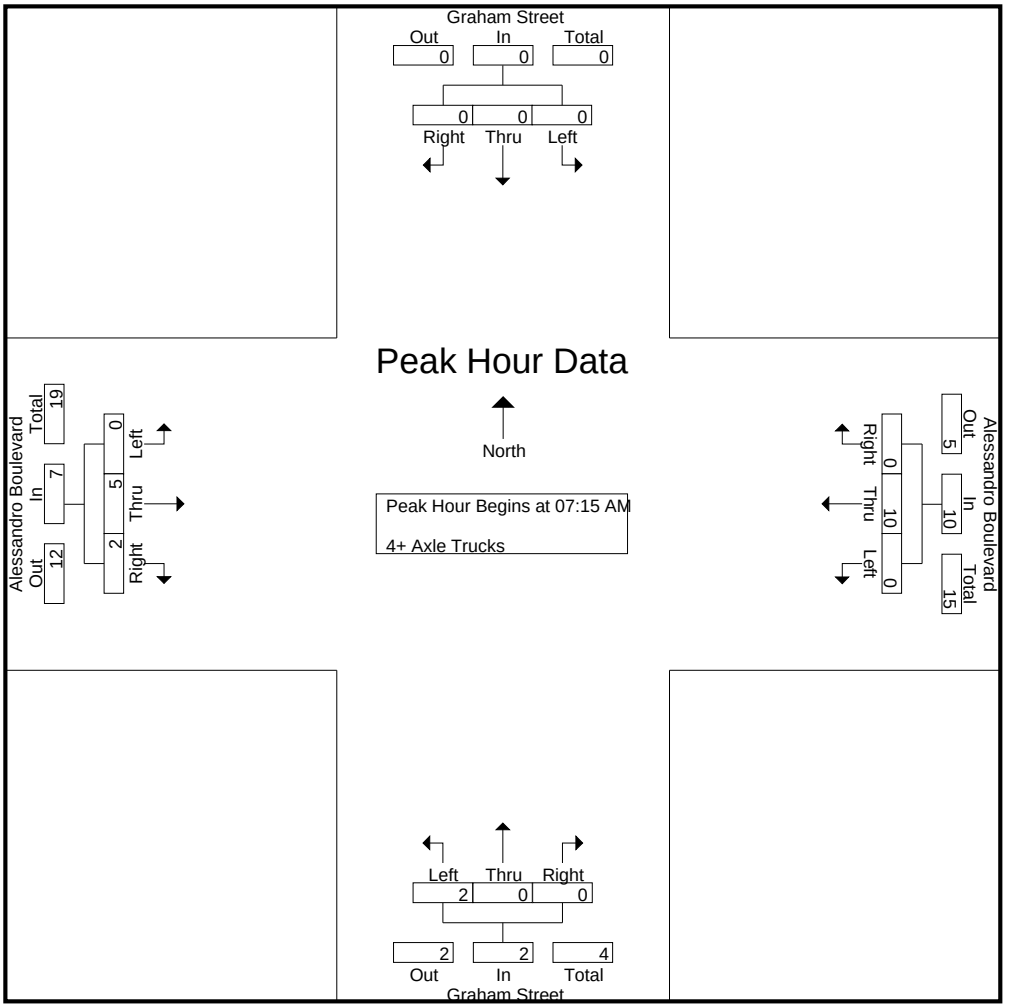

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	**2**	0	2
+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	**4**	0	**4**	**2**	0	0	**2**	0	1	**2**	**3**
+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	10	0	10	2	0	0	2	0	5	2	7
% App. Total	0	0	0		0	100	0		100	0	0		0	71.4	28.6	
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.250	.000	.000	.250	.000	.625	.250	.583

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

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
04:00 PM	39	34	17	90	39	240	44	323	24	60	21	105	21	325	36	382	900
04:15 PM	35	42	15	92	46	237	29	312	17	37	13	67	24	307	21	352	823
04:30 PM	34	32	9	75	40	243	46	329	15	36	12	63	27	334	26	387	854
04:45 PM	32	46	8	86	37	195	33	265	18	45	24	87	25	322	23	370	808
Total	140	154	49	343	162	915	152	1229	74	178	70	322	97	1288	106	1491	3385
05:00 PM	26	29	15	70	43	226	41	310	15	39	11	65	22	334	31	387	832
05:15 PM	33	35	19	87	35	186	27	248	15	53	14	82	19	325	31	375	792
05:30 PM	24	37	13	74	28	175	26	229	11	41	11	63	14	319	39	372	738
05:45 PM	29	30	14	73	21	180	27	228	8	19	10	37	18	350	27	395	733
Total	112	131	61	304	127	767	121	1015	49	152	46	247	73	1328	128	1529	3095
Grand Total	252	285	110	647	289	1682	273	2244	123	330	116	569	170	2616	234	3020	6480
Apprch %	38.9	44	17		12.9	75	12.2		21.6	58	20.4		5.6	86.6	7.7		
Total %	3.9	4.4	1.7	10	4.5	26	4.2	34.6	1.9	5.1	1.8	8.8	2.6	40.4	3.6	46.6	
Passenger Vehicles	251	282	107	640	288	1667	273	2228	121	327	115	563	170	2597	226	2993	6424
% Passenger Vehicles	99.6	98.9	97.3	98.9	99.7	99.1	100	99.3	98.4	99.1	99.1	98.9	100	99.3	96.6	99.1	99.1
Large 2 Axle Vehicles	1	3	3	7	0	11	0	11	2	3	0	5	0	16	6	22	45
% Large 2 Axle Vehicles	0.4	1.1	2.7	1.1	0	0.7	0	0.5	1.6	0.9	0	0.9	0	0.6	2.6	0.7	0.7
3 Axle Vehicles	0	0	0	0	1	2	0	3	0	0	1	1	0	1	0	1	5
% 3 Axle Vehicles	0	0	0	0	0.3	0.1	0	0.1	0	0	0.9	0.2	0	0	0	0	0.1
4+ Axle Trucks	0	0	0	0	0	2	0	2	0	0	0	0	0	2	2	4	6
% 4+ Axle Trucks	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0	0.1	0.9	0.1	0.1

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**39**	34	**17**	90	39	240	44	323	**24**	**60**	21	**105**	21	325	**36**	382	**900**
04:15 PM	35	42	15	**92**	**46**	237	29	312	17	37	13	67	24	307	21	352	823
04:30 PM	34	32	9	75	40	**243**	**46**	**329**	15	36	12	63	**27**	**334**	26	**387**	854
04:45 PM	32	**46**	8	86	37	195	33	265	18	45	**24**	87	25	322	23	370	808
Total Volume	140	154	49	343	162	915	152	1229	74	178	70	322	97	1288	106	1491	3385
% App. Total	40.8	44.9	14.3		13.2	74.5	12.4		23	55.3	21.7		6.5	86.4	7.1		
PHF	.897	.837	.721	.932	.880	.941	.826	.934	.771	.742	.729	.767	.898	.964	.736	.963	.940

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Weather: Clear

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Site Code : 05118347
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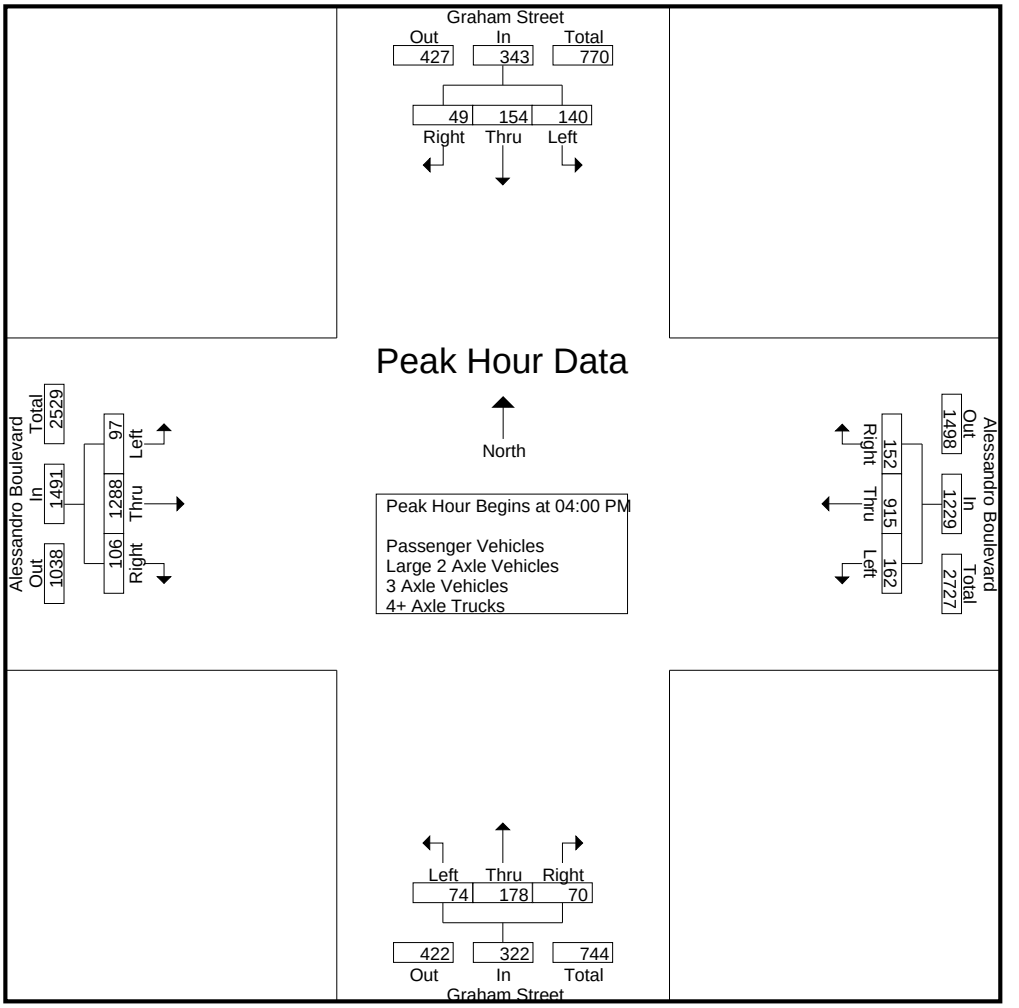

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	**39**	34	**17**	90	39	240	44	323	**24**	**60**	21	**105**	**22**	334	31	387
+15 mins.	35	42	15	**92**	**46**	237	29	312	17	37	13	67	19	325	31	375
+30 mins.	34	32	9	75	40	**243**	**46**	**329**	15	36	12	63	14	319	**39**	372
+45 mins.	32	**46**	8	86	37	195	33	265	18	45	**24**	87	18	**350**	27	**395**
Total Volume	140	154	49	343	162	915	152	1229	74	178	70	322	73	1328	128	1529
% App. Total	40.8	44.9	14.3		13.2	74.5	12.4		23	55.3	21.7		4.8	86.9	8.4	
PHF	.897	.837	.721	.932	.880	.941	.826	.934	.771	.742	.729	.767	.830	.949	.821	.968

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Groups Printed- Passenger Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
04:00 PM	39	33	17	89	39	236	44	319	23	59	20	102	21	320	34	375	885
04:15 PM	34	42	13	89	45	235	29	309	17	37	13	67	24	305	19	348	813
04:30 PM	34	32	9	75	40	242	46	328	15	36	12	63	27	331	25	383	849
04:45 PM	32	45	7	84	37	194	33	264	18	45	24	87	25	321	22	368	803
Total	139	152	46	337	161	907	152	1220	73	177	69	319	97	1277	100	1474	3350
05:00 PM	26	29	15	70	43	225	41	309	15	39	11	65	22	334	30	386	830
05:15 PM	33	34	19	86	35	184	27	246	15	51	14	80	19	320	30	369	781
05:30 PM	24	37	13	74	28	173	26	227	11	41	11	63	14	319	39	372	736
05:45 PM	29	30	14	73	21	178	27	226	7	19	10	36	18	347	27	392	727
Total	112	130	61	303	127	760	121	1008	48	150	46	244	73	1320	126	1519	3074
Grand Total	251	282	107	640	288	1667	273	2228	121	327	115	563	170	2597	226	2993	6424
Apprch %	39.2	44.1	16.7		12.9	74.8	12.3		21.5	58.1	20.4		5.7	86.8	7.6		
Total %	3.9	4.4	1.7	10	4.5	25.9	4.2	34.7	1.9	5.1	1.8	8.8	2.6	40.4	3.5	46.6	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**39**	33	**17**	**89**	39	236	44	319	**23**	**59**	20	**102**	21	320	**34**	375	**885**
04:15 PM	34	42	13	89	**45**	235	29	309	17	37	13	67	24	305	19	348	813
04:30 PM	34	32	9	75	40	**242**	**46**	**328**	15	36	12	63	**27**	**331**	25	**383**	849
04:45 PM	32	**45**	7	84	37	194	33	264	18	45	**24**	87	25	321	22	368	803
Total Volume	139	152	46	337	161	907	152	1220	73	177	69	319	97	1277	100	1474	3350
% App. Total	41.2	45.1	13.6		13.2	74.3	12.5		22.9	55.5	21.6		6.6	86.6	6.8		
PHF	.891	.844	.676	.947	.894	.937	.826	.930	.793	.750	.719	.782	.898	.965	.735	.962	.946

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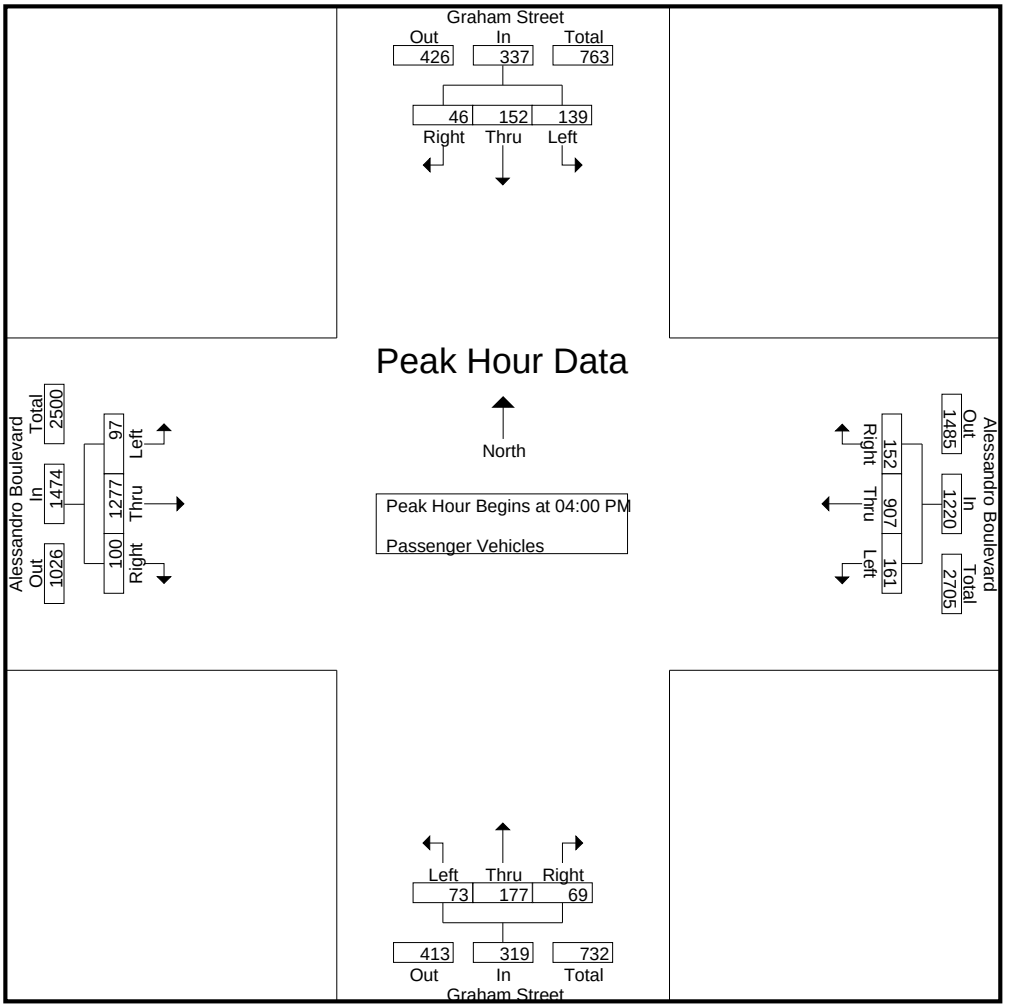

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	**39**	33	**17**	**89**	39	236	44	319	**23**	**59**	20	**102**	21	320	**34**	375
+15 mins.	34	42	13	89	**45**	235	29	309	17	37	13	67	24	305	19	348
+30 mins.	34	32	9	75	40	**242**	**46**	**328**	15	36	12	63	**27**	**331**	25	**383**
+45 mins.	32	**45**	7	84	37	194	33	264	18	45	**24**	87	25	321	22	368
Total Volume	139	152	46	337	161	907	152	1220	73	177	69	319	97	1277	100	1474
% App. Total	41.2	45.1	13.6		13.2	74.3	12.5		22.9	55.5	21.6		6.6	86.6	6.8	
PHF	.891	.844	.676	.947	.894	.937	.826	.930	.793	.750	.719	.782	.898	.965	.735	.962

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Groups Printed- Large 2 Axle Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
04:00 PM	0	1	0	1	0	3	0	3	1	1	0	2	0	4	2	6	12
04:15 PM	1	0	2	3	0	2	0	2	0	0	0	0	0	2	2	4	9
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
04:45 PM	0	1	1	2	0	1	0	1	0	0	0	0	0	1	1	2	5
Total	1	2	3	6	0	6	0	6	1	1	0	2	0	10	6	16	30
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	1	0	1	0	1	0	1	0	2	0	2	0	5	0	5	9
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	1	0	1	4
Total	0	1	0	1	0	5	0	5	1	2	0	3	0	6	0	6	15
Grand Total	1	3	3	7	0	11	0	11	2	3	0	5	0	16	6	22	45
Apprch %	14.3	42.9	42.9		0	100	0		40	60	0		0	72.7	27.3		
Total %	2.2	6.7	6.7	15.6	0	24.4	0	24.4	4.4	6.7	0	11.1	0	35.6	13.3	48.9	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	**1**	0	1	0	**3**	0	**3**	**1**	**1**	0	**2**	0	**4**	**2**	**6**	**12**
04:15 PM	**1**	0	**2**	**3**	0	2	0	2	0	0	0	0	0	2	2	4	9
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	4
04:45 PM	0	1	1	2	0	1	0	1	0	0	0	0	0	1	1	2	5
Total Volume	1	2	3	6	0	6	0	6	1	1	0	2	0	10	6	16	30
% App. Total	16.7	33.3	50		0	100	0		50	50	0		0	62.5	37.5		
PHF	.250	.500	.375	.500	.000	.500	.000	.500	.250	.250	.000	.250	.000	.625	.750	.667	.625

Counts Unlimited
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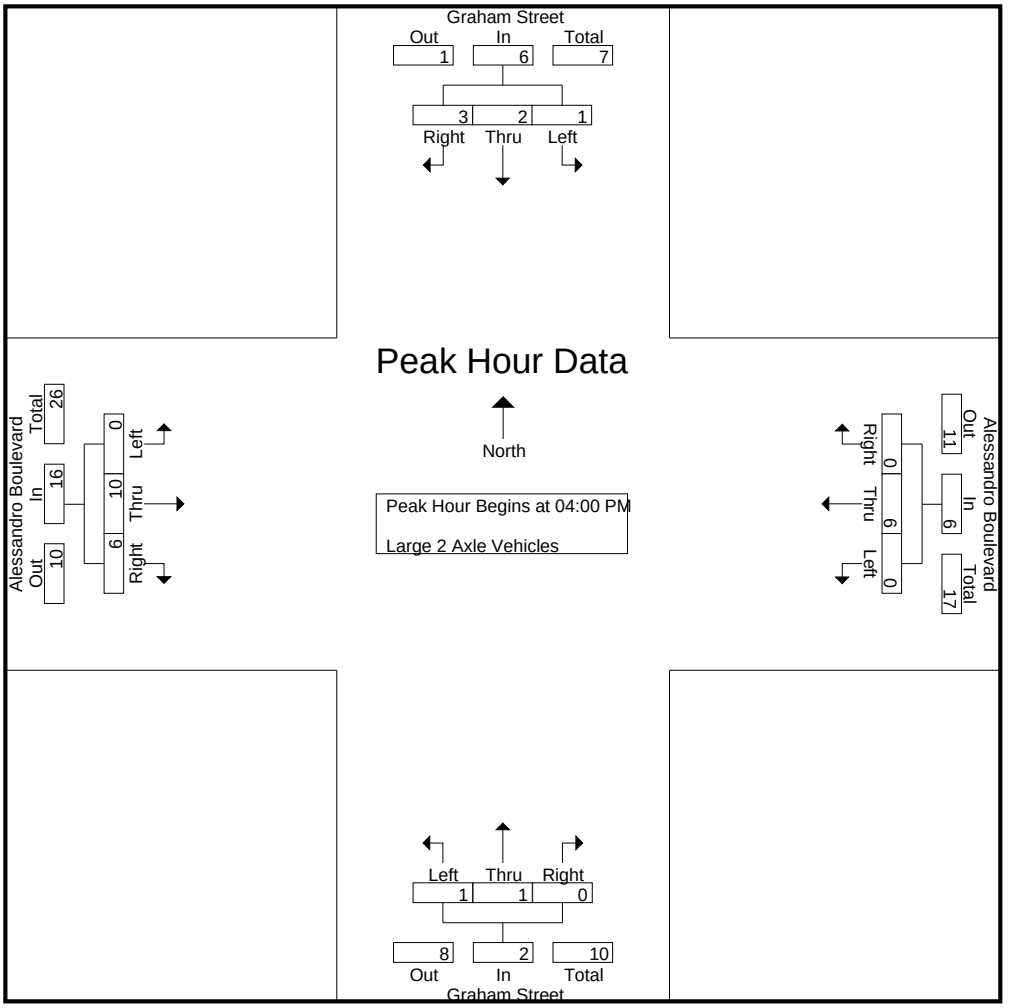
City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro PM
Site Code : 05118347
Start Date : 4/26/2018
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	**1**	0	1	0	**3**	0	**3**	**1**	**1**	0	**2**	0	**4**	**2**	**6**
+15 mins.	**1**	0	**2**	**3**	0	2	0	2	0	0	0	0	0	2	2	4
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4
+45 mins.	0	1	1	2	0	1	0	1	0	0	0	0	0	1	1	2
Total Volume	1	2	3	6	0	6	0	6	1	1	0	2	0	10	6	16
% App. Total	16.7	33.3	50		0	100	0		50	50	0		0	62.5	37.5	
PHF	.250	.500	.375	.500	.000	.500	.000	.500	.250	.250	.000	.250	.000	.625	.750	.667

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro PM
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Groups Printed- 3 Axle Vehicles

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
04:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
04:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Grand Total	0	0	0	0	1	2	0	3	0	0	1	1	0	1	0	1	5
Apprch %	0	0	0		33.3	66.7	0		0	0	100		0	100	0		
Total %	0	0	0	0	20	40	0	60	0	0	20	20	0	20	0	20	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	0	0	0	0	**2**
04:15 PM	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
% App. Total	0	0	0		50	50	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.250	.250	.000	.000	.000	.000	.375

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Weather: Clear

File Name : 03C_MRV_Graham_Alessandro PM
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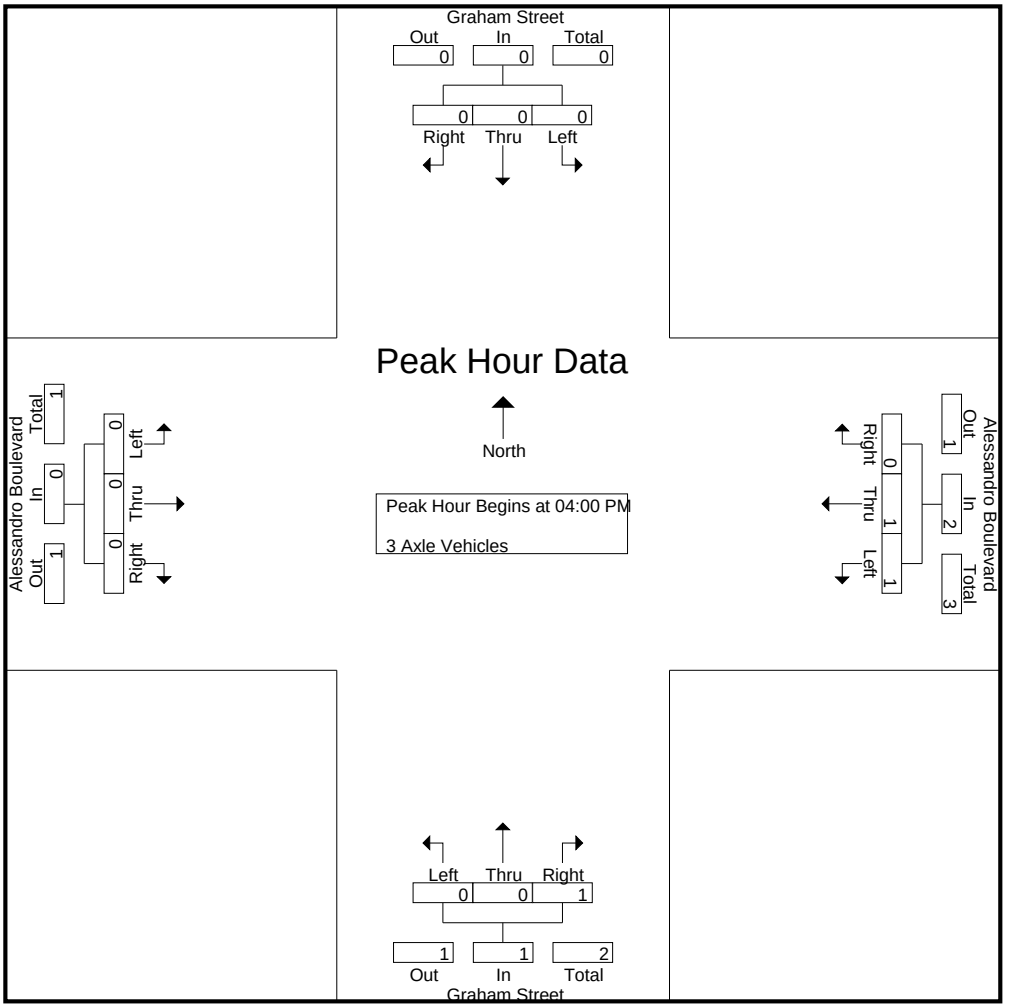

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	0	0	0	**1**	0	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0
% App. Total	0	0	0		50	50	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.250	.250	.000	.000	.000	.000

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City of Moreno Valley
N/S: Graham Street
E/W: Alessandro Boulevard
Weather: Clear

File Name : 03C_MRV_Graham_Alessandro PM
Site Code : 05118347
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Groups Printed- 4+ Axle Trucks

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	2	3	4
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	2	2	4	6
Apprch %	0	0	0		0	100	0		0	0	0		0	50	50		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	0	0	0	33.3	33.3	66.7	

	Graham Street Southbound				Alessandro Boulevard Westbound				Graham 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 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
% 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	.250	.000	.250	.500

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Weather: Clear

File Name : 03C_MRV_Graham_Alessandro PM
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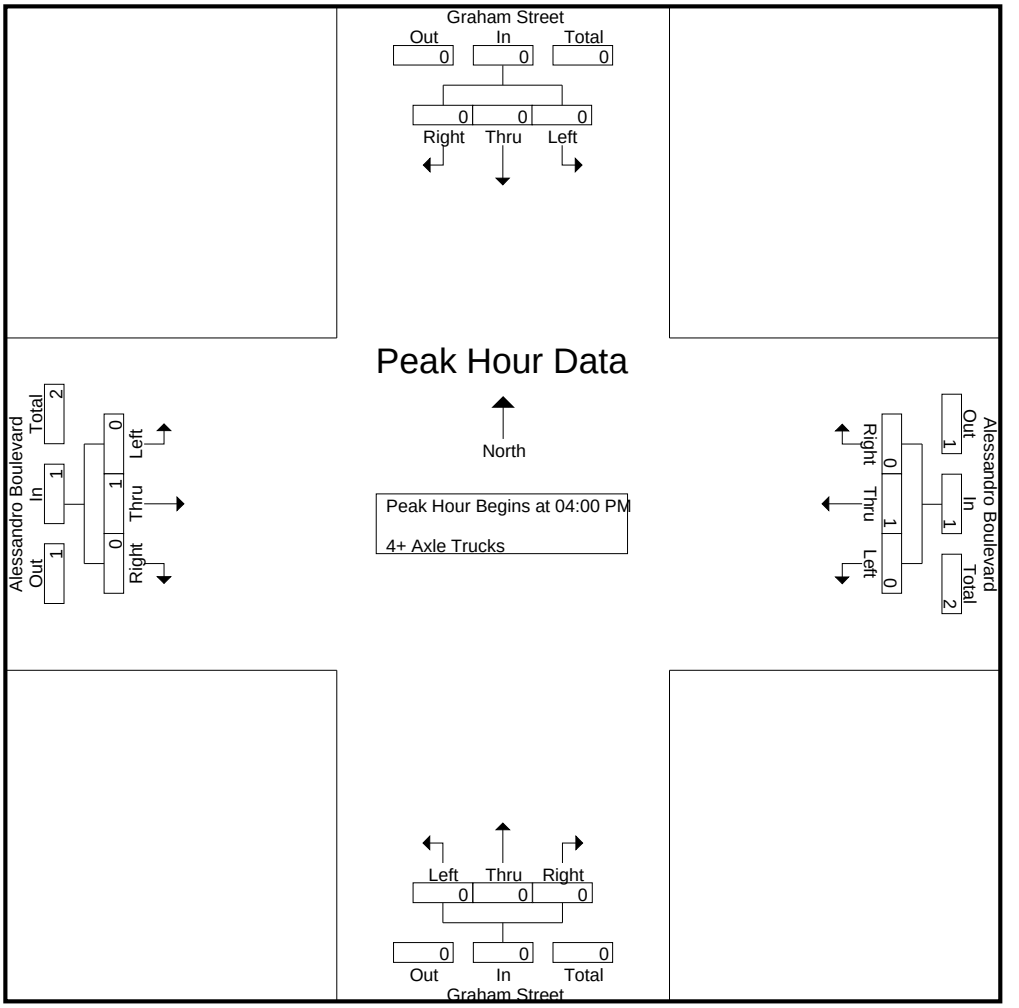

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 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	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	1	0	1	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	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.250

APPENDIX 3.2:

EXISTING (2020) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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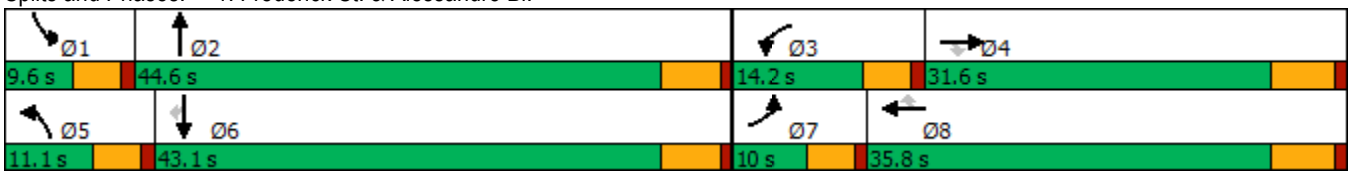
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	119	508	76	77	1539	163	92	271	99	268	199
Future Volume (vph)	119	508	76	77	1539	163	92	271	99	268	199
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	35.8	35.8	9.6	44.4	9.6	42.4	42.4
Total Split (s)	10.0	31.6	31.6	14.2	35.8	35.8	11.1	44.6	9.6	43.1	43.1
Total Split (%)	10.0%	31.6%	31.6%	14.2%	35.8%	35.8%	11.1%	44.6%	9.6%	43.1%	43.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 76.1
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Frederick St. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	508	76	77	1539	163	92	271	22	99	268	199
Future Volume (veh/h)	119	508	76	77	1539	163	92	271	22	99	268	199
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	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	121	518	46	79	1570	134	94	277	13	101	273	144
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	143	1514	667	103	2060	627	214	570	27	219	592	263
Arrive On Green	0.08	0.42	0.42	0.06	0.40	0.40	0.06	0.16	0.16	0.06	0.16	0.16
Sat Flow, veh/h	1810	3610	1590	1810	5187	1578	3510	3509	164	3510	3610	1601
Grp Volume(v), veh/h	121	518	46	79	1570	134	94	142	148	101	273	144
Grp Sat Flow(s),veh/h/ln	1810	1805	1590	1810	1729	1578	1755	1805	1868	1755	1805	1601
Q Serve(g_s), s	4.5	6.6	1.2	2.9	17.9	3.8	1.8	4.9	4.9	1.9	4.7	5.6
Cycle Q Clear(g_c), s	4.5	6.6	1.2	2.9	17.9	3.8	1.8	4.9	4.9	1.9	4.7	5.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	143	1514	667	103	2060	627	214	293	304	219	592	263
V/C Ratio(X)	0.85	0.34	0.07	0.77	0.76	0.21	0.44	0.48	0.49	0.46	0.46	0.55
Avail Cap(c_a), veh/h	143	1514	667	254	2279	693	334	1036	1072	257	1993	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	13.4	11.9	31.8	17.8	13.6	30.9	26.0	26.0	30.9	25.8	26.2
Incr Delay (d2), s/veh	33.3	0.1	0.0	4.5	1.4	0.2	0.5	1.2	1.2	0.6	0.6	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	2.3	0.4	1.3	6.2	1.2	0.7	2.0	2.1	0.8	1.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.3	13.6	11.9	36.2	19.2	13.7	31.5	27.2	27.2	31.5	26.4	28.0
LnGrp LOS	E	B	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		685			1783			384			518	
Approach Delay, s/veh		22.4			19.6			28.3			27.8	
Approach LOS		C			B			C			C	

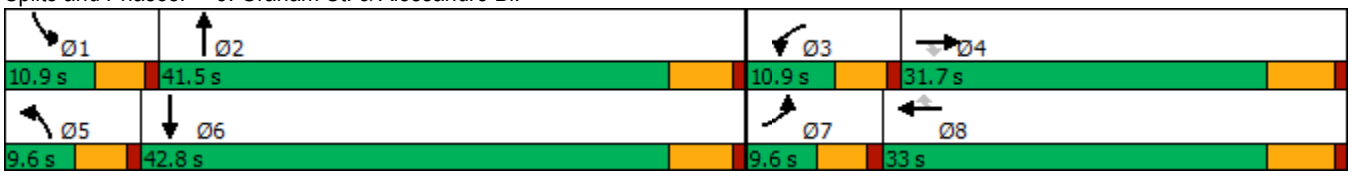
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	16.5	8.5	34.4	8.8	16.6	10.0	32.9
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	5.0	39.2	9.6	25.8	6.5	37.7	5.4	30.0
Max Q Clear Time (g_c+I1), s	3.9	6.9	4.9	8.6	3.8	7.6	6.5	19.9
Green Ext Time (p_c), s	0.0	1.6	0.0	3.0	0.0	2.2	0.0	7.0

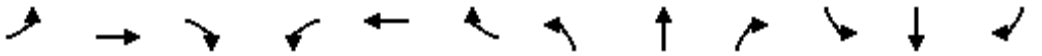
Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	41	524	65	94	1624	119	66	162	95	182
Future Volume (vph)	41	524	65	94	1624	119	66	162	95	182
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	30.8	30.8	9.6	40.4	9.6	42.4
Total Split (s)	9.6	31.7	31.7	10.9	33.0	33.0	9.6	41.5	10.9	42.8
Total Split (%)	10.1%	33.4%	33.4%	11.5%	34.7%	34.7%	10.1%	43.7%	11.5%	45.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 70.2
Natural Cycle: 95
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Graham St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	524	65	94	1624	119	66	162	16	95	182	89
Future Volume (veh/h)	41	524	65	94	1624	119	66	162	16	95	182	89
Initial Q (Qb), veh	0	0	0	0	0	0	0	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	44	557	69	100	1728	127	70	172	17	101	194	95
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	1365	609	129	2111	655	101	523	51	130	412	193
Arrive On Green	0.04	0.38	0.38	0.07	0.41	0.41	0.06	0.16	0.16	0.07	0.17	0.17
Sat Flow, veh/h	1810	3610	1610	1810	5187	1610	1810	3322	325	1810	2374	1112
Grp Volume(v), veh/h	44	557	69	100	1728	127	70	93	96	101	145	144
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1729	1610	1810	1805	1842	1810	1805	1680
Q Serve(g_s), s	1.5	7.2	1.8	3.5	18.8	3.2	2.4	2.9	3.0	3.5	4.6	4.9
Cycle Q Clear(g_c), s	1.5	7.2	1.8	3.5	18.8	3.2	2.4	2.9	3.0	3.5	4.6	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.18	1.00		0.66
Lane Grp Cap(c), veh/h	77	1365	609	129	2111	655	101	284	290	130	313	292
V/C Ratio(X)	0.57	0.41	0.11	0.78	0.82	0.19	0.69	0.33	0.33	0.78	0.46	0.49
Avail Cap(c_a), veh/h	142	1472	657	180	2222	690	142	1026	1047	180	1063	990
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	14.5	12.8	29.0	16.8	12.1	29.4	23.8	23.8	29.0	23.6	23.7
Incr Delay (d2), s/veh	2.5	0.2	0.1	8.3	2.4	0.1	3.2	0.7	0.7	8.6	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.5	0.5	1.7	6.4	1.0	1.1	1.2	1.2	1.7	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	14.7	12.9	37.3	19.2	12.3	32.6	24.4	24.5	37.6	24.7	25.0
LnGrp LOS	C	B	B	D	B	B	C	C	C	D	C	C
Approach Vol, veh/h		670			1955			259			390	
Approach Delay, s/veh		15.7			19.7			26.6			28.1	
Approach LOS		B			B			C			C	

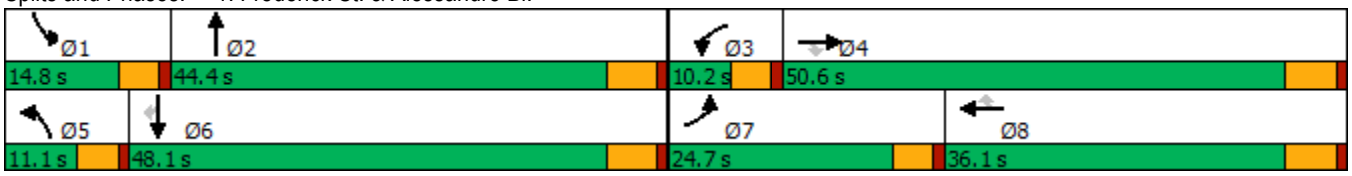
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	15.4	9.1	29.8	8.1	16.4	7.3	31.6
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	6.3	36.1	6.3	25.9	5.0	37.4	5.0	27.2
Max Q Clear Time (g_c+I1), s	5.5	5.0	5.5	9.2	4.4	6.9	3.5	20.8
Green Ext Time (p_c), s	0.0	1.0	0.0	3.3	0.0	1.6	0.0	5.0

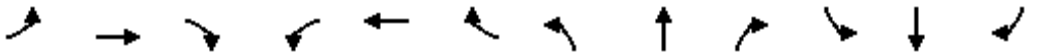
Intersection Summary	
HCM 6th Ctrl Delay	20.4
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	224	1303	126	69	860	165	74	326	265	300	119
Future Volume (vph)	224	1303	126	69	860	165	74	326	265	300	119
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	35.8	35.8	9.6	44.4	9.6	42.4	42.4
Total Split (s)	24.7	50.6	50.6	10.2	36.1	36.1	11.1	44.4	14.8	48.1	48.1
Total Split (%)	20.6%	42.2%	42.2%	8.5%	30.1%	30.1%	9.3%	37.0%	12.3%	40.1%	40.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 100.7
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Frederick St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	1303	126	69	860	165	74	326	58	265	300	119
Future Volume (veh/h)	224	1303	126	69	860	165	74	326	58	265	300	119
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	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	238	1386	118	73	915	85	79	347	44	282	319	48
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	275	1606	715	94	1789	548	167	571	72	355	834	370
Arrive On Green	0.15	0.44	0.44	0.05	0.34	0.34	0.05	0.18	0.18	0.10	0.23	0.23
Sat Flow, veh/h	1810	3610	1607	1810	5187	1588	3510	3217	404	3510	3610	1602
Grp Volume(v), veh/h	238	1386	118	73	915	85	79	193	198	282	319	48
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1729	1588	1755	1805	1817	1755	1805	1602
Q Serve(g_s), s	11.7	31.4	4.0	3.6	12.7	3.4	2.0	9.0	9.1	7.1	6.8	2.2
Cycle Q Clear(g_c), s	11.7	31.4	4.0	3.6	12.7	3.4	2.0	9.0	9.1	7.1	6.8	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.22	1.00		1.00
Lane Grp Cap(c), veh/h	275	1606	715	94	1789	548	167	320	322	355	834	370
V/C Ratio(X)	0.87	0.86	0.17	0.77	0.51	0.16	0.47	0.60	0.61	0.79	0.38	0.13
Avail Cap(c_a), veh/h	400	1780	792	112	1789	548	251	775	780	394	1696	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	22.7	15.1	42.5	23.7	20.6	42.2	34.4	34.5	39.9	29.5	27.7
Incr Delay (d2), s/veh	9.3	4.3	0.1	20.0	0.2	0.1	0.8	1.8	1.9	8.5	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	12.7	1.3	2.1	4.9	1.2	0.9	3.9	4.0	3.4	2.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	27.0	15.2	62.6	23.9	20.7	42.9	36.3	36.4	48.4	29.8	27.9
LnGrp LOS	D	C	B	E	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1742			1073			470			649	
Approach Delay, s/veh		28.9			26.3			37.4			37.7	
Approach LOS		C			C			D			D	

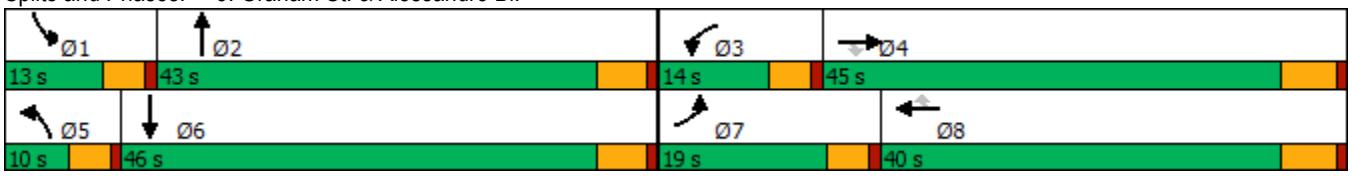
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.8	21.5	9.3	46.2	8.9	26.4	18.4	37.2
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	10.2	39.0	5.6	44.8	6.5	42.7	20.1	30.3
Max Q Clear Time (g_c+I1), s	9.1	11.1	5.6	33.4	4.0	8.8	13.7	14.7
Green Ext Time (p_c), s	0.1	2.2	0.0	7.0	0.0	2.2	0.2	5.5

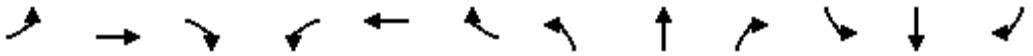
Intersection Summary	
HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	104	1405	116	170	964	158	78	186	146	161
Future Volume (vph)	104	1405	116	170	964	158	78	186	146	161
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	30.8	30.8	9.6	40.4	9.6	42.4
Total Split (s)	19.0	45.0	45.0	14.0	40.0	40.0	10.0	43.0	13.0	46.0
Total Split (%)	16.5%	39.1%	39.1%	12.2%	34.8%	34.8%	8.7%	37.4%	11.3%	40.0%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 93.1
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Graham St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	1405	116	170	964	158	78	186	74	146	161	53
Future Volume (veh/h)	104	1405	116	170	964	158	78	186	74	146	161	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	111	1495	123	181	1026	168	83	198	79	155	171	56
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	142	1601	714	195	2455	762	107	300	116	175	418	133
Arrive On Green	0.08	0.44	0.44	0.11	0.47	0.47	0.06	0.12	0.12	0.10	0.16	0.16
Sat Flow, veh/h	1810	3610	1610	1810	5187	1610	1810	2547	982	1810	2696	855
Grp Volume(v), veh/h	111	1495	123	181	1026	168	83	138	139	155	113	114
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1729	1610	1810	1805	1723	1810	1805	1746
Q Serve(g_s), s	5.2	34.2	4.0	8.6	11.3	5.3	3.9	6.4	6.7	7.4	4.9	5.2
Cycle Q Clear(g_c), s	5.2	34.2	4.0	8.6	11.3	5.3	3.9	6.4	6.7	7.4	4.9	5.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.49
Lane Grp Cap(c), veh/h	142	1601	714	195	2455	762	107	212	203	175	280	271
V/C Ratio(X)	0.78	0.93	0.17	0.93	0.42	0.22	0.78	0.65	0.68	0.89	0.40	0.42
Avail Cap(c_a), veh/h	299	1626	725	195	2455	762	112	780	744	175	842	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	23.0	14.6	38.5	15.1	13.5	40.4	36.7	36.8	38.9	33.1	33.2
Incr Delay (d2), s/veh	3.6	10.3	0.1	43.3	0.1	0.1	24.5	3.3	4.0	37.2	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	14.9	1.3	6.0	3.9	1.7	2.4	2.9	2.9	4.9	2.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	33.3	14.7	81.8	15.2	13.6	64.9	40.0	40.9	76.0	34.1	34.3
LnGrp LOS	D	C	B	F	B	B	E	D	D	E	C	C
Approach Vol, veh/h		1729			1375			360			382	
Approach Delay, s/veh		32.6			23.8			46.1			51.2	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	15.6	14.0	44.4	9.7	18.9	11.4	47.0
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	8.4	37.6	9.4	39.2	5.4	40.6	14.4	34.2
Max Q Clear Time (g_c+I1), s	9.4	8.7	10.6	36.2	5.9	7.2	7.2	13.3
Green Ext Time (p_c), s	0.0	1.5	0.0	2.4	0.0	1.2	0.1	7.3

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C

APPENDIX 5.1:

EAP (2022) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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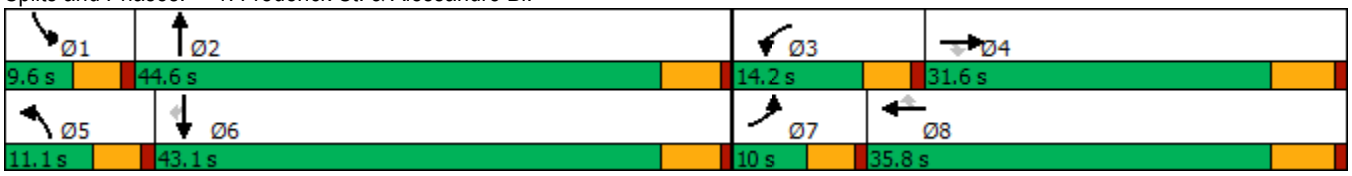
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	124	556	79	88	1603	170	95	282	103	279	207
Future Volume (vph)	124	556	79	88	1603	170	95	282	103	279	207
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	35.8	35.8	9.6	44.4	9.6	42.4	42.4
Total Split (s)	10.0	31.6	31.6	14.2	35.8	35.8	11.1	44.6	9.6	43.1	43.1
Total Split (%)	10.0%	31.6%	31.6%	14.2%	35.8%	35.8%	11.1%	44.6%	9.6%	43.1%	43.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 76.2
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Frederick St. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	556	79	88	1603	170	95	282	35	103	279	207
Future Volume (veh/h)	124	556	79	88	1603	170	95	282	35	103	279	207
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	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	127	567	49	90	1636	141	97	288	27	105	285	152
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	141	1499	660	117	2084	634	214	542	50	220	593	263
Arrive On Green	0.08	0.42	0.42	0.06	0.40	0.40	0.06	0.16	0.16	0.06	0.16	0.16
Sat Flow, veh/h	1810	3610	1590	1810	5187	1578	3510	3334	310	3510	3610	1601
Grp Volume(v), veh/h	127	567	49	90	1636	141	97	155	160	105	285	152
Grp Sat Flow(s),veh/h/ln	1810	1805	1590	1810	1729	1578	1755	1805	1839	1755	1805	1601
Q Serve(g_s), s	4.8	7.5	1.3	3.4	19.1	4.1	1.8	5.4	5.5	2.0	5.0	6.1
Cycle Q Clear(g_c), s	4.8	7.5	1.3	3.4	19.1	4.1	1.8	5.4	5.5	2.0	5.0	6.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	141	1499	660	117	2084	634	214	293	299	220	593	263
V/C Ratio(X)	0.90	0.38	0.07	0.77	0.79	0.22	0.45	0.53	0.54	0.48	0.48	0.58
Avail Cap(c_a), veh/h	141	1499	660	251	2250	685	330	1023	1042	254	1968	873
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	14.0	12.2	31.8	18.1	13.6	31.3	26.5	26.6	31.3	26.2	26.7
Incr Delay (d2), s/veh	45.9	0.2	0.0	4.0	1.8	0.2	0.6	1.5	1.5	0.6	0.6	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	2.6	0.4	1.5	6.6	1.3	0.7	2.3	2.4	0.8	2.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	14.2	12.2	35.9	19.9	13.8	31.9	28.0	28.1	31.9	26.8	28.7
LnGrp LOS	E	B	B	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		743			1867			412			542	
Approach Delay, s/veh		24.9			20.2			28.9			28.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	16.6	9.1	34.5	8.8	16.8	10.0	33.6
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	5.0	39.2	9.6	25.8	6.5	37.7	5.4	30.0
Max Q Clear Time (g_c+I1), s	4.0	7.5	5.4	9.5	3.8	8.1	6.8	21.1
Green Ext Time (p_c), s	0.0	1.7	0.0	3.2	0.0	2.3	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	687	14	0	1861	0	3
Future Vol, veh/h	687	14	0	1861	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	747	15	0	2023	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	381
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	531
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	531
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	531	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	11.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	666	23	0	1861	0	7
Future Vol, veh/h	666	23	0	1861	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
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	724	25	0	2023	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	375
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	536
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	536
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	536	-	-	-
HCM Lane V/C Ratio	0.014	-	-	-
HCM Control Delay (s)	11.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	665	9	0	1861	0	3
Future Vol, veh/h	665	9	0	1861	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	723	10	0	2023	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	367
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	542
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	542
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

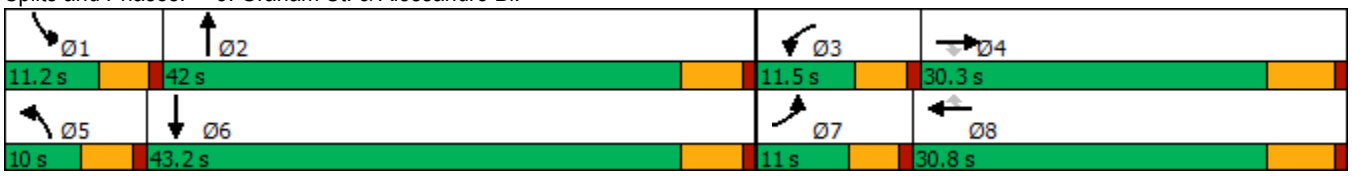
Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

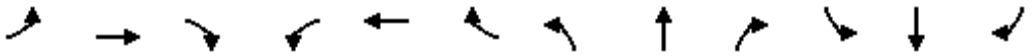
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	542	-	-	-
HCM Lane V/C Ratio	0.006	-	-	-
HCM Control Delay (s)	11.7	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	46	547	75	97	1696	123	69	169	99	189
Future Volume (vph)	46	547	75	97	1696	123	69	169	99	189
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	30.8	30.8	9.6	40.4	9.6	42.4
Total Split (s)	11.0	30.3	30.3	11.5	30.8	30.8	10.0	42.0	11.2	43.2
Total Split (%)	11.6%	31.9%	31.9%	12.1%	32.4%	32.4%	10.5%	44.2%	11.8%	45.5%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 95
Actuated Cycle Length: 69.2
Natural Cycle: 105
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Graham St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	547	75	97	1696	123	69	169	16	99	189	95
Future Volume (veh/h)	46	547	75	97	1696	123	69	169	16	99	189	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	49	582	80	103	1804	131	73	180	17	105	201	101
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	1321	589	133	2041	634	104	533	50	135	418	202
Arrive On Green	0.05	0.37	0.37	0.07	0.39	0.39	0.06	0.16	0.16	0.07	0.18	0.18
Sat Flow, veh/h	1810	3610	1610	1810	5187	1610	1810	3337	312	1810	2360	1140
Grp Volume(v), veh/h	49	582	80	103	1804	131	73	97	100	105	152	150
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1810	1729	1610	1810	1805	1844	1810	1805	1695
Q Serve(g_s), s	1.7	7.6	2.1	3.5	20.2	3.4	2.5	3.0	3.0	3.6	4.7	5.0
Cycle Q Clear(g_c), s	1.7	7.6	2.1	3.5	20.2	3.4	2.5	3.0	3.0	3.6	4.7	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.17	1.00		0.67
Lane Grp Cap(c), veh/h	83	1321	589	133	2041	634	104	289	295	135	320	300
V/C Ratio(X)	0.59	0.44	0.14	0.78	0.88	0.21	0.70	0.33	0.34	0.78	0.47	0.50
Avail Cap(c_a), veh/h	185	1414	631	200	2073	644	156	1056	1079	191	1091	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	15.0	13.2	28.5	17.6	12.5	29.0	23.3	23.3	28.4	23.1	23.2
Incr Delay (d2), s/veh	2.5	0.2	0.1	4.9	4.9	0.2	3.2	0.7	0.7	7.4	1.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.6	0.6	1.5	7.4	1.0	1.1	1.2	1.3	1.7	1.9	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	15.2	13.3	33.4	22.5	12.7	32.2	24.0	24.0	35.8	24.2	24.5
LnGrp LOS	C	B	B	C	C	B	C	C	C	D	C	C
Approach Vol, veh/h		711			2038			270			407	
Approach Delay, s/veh		16.2			22.5			26.2			27.3	
Approach LOS		B			C			C			C	

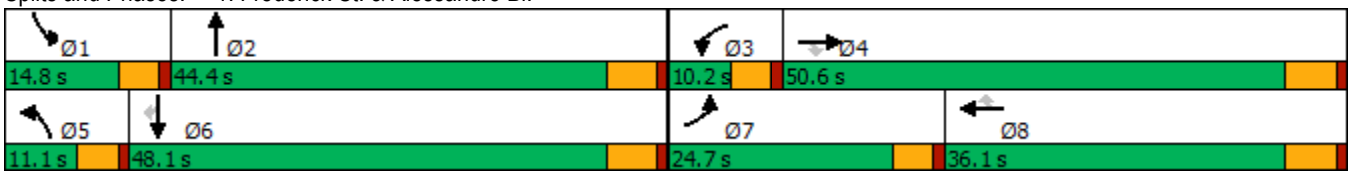
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	15.4	9.2	28.7	8.2	16.5	7.5	30.4
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	6.6	36.6	6.9	24.5	5.4	37.8	6.4	25.0
Max Q Clear Time (g_c+I1), s	5.6	5.0	5.5	9.6	4.5	7.0	3.7	22.2
Green Ext Time (p_c), s	0.0	1.0	0.0	3.3	0.0	1.7	0.0	2.4

Intersection Summary			
HCM 6th Ctrl Delay		22.0	
HCM 6th LOS		C	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	233	1365	131	74	903	172	77	339	275	312	123
Future Volume (vph)	233	1365	131	74	903	172	77	339	275	312	123
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2	1	6	
Permitted Phases			4			8					6
Detector Phase	7	4	4	3	8	8	5	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	35.8	35.8	9.6	44.4	9.6	42.4	42.4
Total Split (s)	24.7	50.6	50.6	10.2	36.1	36.1	11.1	44.4	14.8	48.1	48.1
Total Split (%)	20.6%	42.2%	42.2%	8.5%	30.1%	30.1%	9.3%	37.0%	12.3%	40.1%	40.1%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min	Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 101.2
Natural Cycle: 120
Control Type: Actuated-Uncoordinated

Splits and Phases: 1: Frederick St. & Alessandro Bl.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	233	1365	131	74	903	172	77	339	66	275	312	123
Future Volume (veh/h)	233	1365	131	74	903	172	77	339	66	275	312	123
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.98	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	248	1452	123	79	961	92	82	361	52	293	332	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	283	1612	717	102	1796	550	163	573	82	361	858	381
Arrive On Green	0.16	0.45	0.45	0.06	0.35	0.35	0.05	0.18	0.18	0.10	0.24	0.24
Sat Flow, veh/h	1810	3610	1607	1810	5187	1588	3510	3161	451	3510	3610	1602
Grp Volume(v), veh/h	248	1452	123	79	961	92	82	205	208	293	332	52
Grp Sat Flow(s),veh/h/ln	1810	1805	1607	1810	1729	1588	1755	1805	1807	1755	1805	1602
Q Serve(g_s), s	12.8	35.6	4.4	4.1	14.2	3.8	2.2	10.0	10.2	7.8	7.4	2.4
Cycle Q Clear(g_c), s	12.8	35.6	4.4	4.1	14.2	3.8	2.2	10.0	10.2	7.8	7.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	283	1612	717	102	1796	550	163	327	327	361	858	381
V/C Ratio(X)	0.88	0.90	0.17	0.78	0.54	0.17	0.50	0.63	0.64	0.81	0.39	0.14
Avail Cap(c_a), veh/h	380	1691	753	106	1796	550	239	736	737	374	1612	715
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	24.5	15.9	44.5	25.1	21.7	44.5	36.2	36.2	42.0	30.6	28.7
Incr Delay (d2), s/veh	13.1	6.8	0.1	26.1	0.3	0.1	0.9	2.0	2.1	11.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	15.1	1.5	2.5	5.5	1.4	0.9	4.4	4.5	3.8	3.1	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.5	31.3	16.0	70.6	25.4	21.8	45.4	38.1	38.3	53.3	30.9	28.9
LnGrp LOS	D	C	B	E	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1823			1132			495			677	
Approach Delay, s/veh		33.2			28.3			39.4			40.4	
Approach LOS		C			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.4	22.7	10.0	48.5	9.0	28.1	19.6	38.9
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	10.2	39.0	5.6	44.8	6.5	42.7	20.1	30.3
Max Q Clear Time (g_c+I1), s	9.8	12.2	6.1	37.6	4.2	9.4	14.8	16.2
Green Ext Time (p_c), s	0.0	2.3	0.0	5.1	0.0	2.3	0.2	5.5

Intersection Summary	
HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1704	4	0	1150	0	9
Future Vol, veh/h	1704	4	0	1150	0	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	-	-	-	-	-	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	1852	4	0	1250	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	928
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	235
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	235
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	235	-	-	-
HCM Lane V/C Ratio	0.042	-	-	-
HCM Control Delay (s)	21	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1704	9	0	1150	0	24
Future Vol, veh/h	1704	9	0	1150	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1852	10	0	1250	0	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	931
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	234
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	234
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	234	-	-	-
HCM Lane V/C Ratio	0.111	-	-	-
HCM Control Delay (s)	22.3	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1725	3	0	1150	0	15
Future Vol, veh/h	1725	3	0	1150	0	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	-	-	-	-	-	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	1875	3	0	1250	0	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	939
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.9
Pot Cap-1 Maneuver	-	-	0	-	0	231
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	231
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

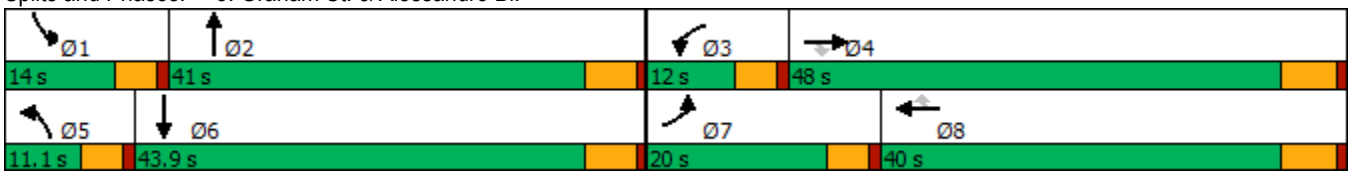
Approach	EB	WB	NB
HCM Control Delay, s	0	0	21.8
HCM LOS			C

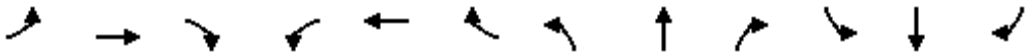
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	231	-	-	-
HCM Lane V/C Ratio	0.071	-	-	-
HCM Control Delay (s)	21.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	118	1468	153	176	1005	165	81	193	152	168
Future Volume (vph)	118	1468	153	176	1005	165	81	193	152	168
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4		3	8		5	2	1	6
Permitted Phases			4			8				
Detector Phase	7	4	4	3	8	8	5	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	29.8	29.8	9.6	30.8	30.8	9.6	40.4	9.6	42.4
Total Split (s)	20.0	48.0	48.0	12.0	40.0	40.0	11.1	41.0	14.0	43.9
Total Split (%)	17.4%	41.7%	41.7%	10.4%	34.8%	34.8%	9.7%	35.7%	12.2%	38.2%
Yellow Time (s)	3.6	4.8	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 115
Actuated Cycle Length: 95.3
Natural Cycle: 115
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Graham St. & Alessandro Bl.





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	1468	153	176	1005	165	81	193	77	152	168	56
Future Volume (veh/h)	118	1468	153	176	1005	165	81	193	77	152	168	56
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1976	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	126	1562	163	187	1069	176	86	205	82	162	179	60
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	159	1794	731	153	2339	726	111	307	119	194	447	145
Arrive On Green	0.09	0.45	0.45	0.08	0.45	0.45	0.06	0.12	0.12	0.11	0.17	0.17
Sat Flow, veh/h	1810	3952	1610	1810	5187	1610	1810	2544	984	1810	2679	870
Grp Volume(v), veh/h	126	1562	163	187	1069	176	86	143	144	162	119	120
Grp Sat Flow(s),veh/h/ln	1810	1976	1610	1810	1729	1610	1810	1805	1723	1810	1805	1743
Q Serve(g_s), s	6.0	31.2	5.4	7.4	12.5	5.9	4.1	6.6	7.0	7.7	5.1	5.4
Cycle Q Clear(g_c), s	6.0	31.2	5.4	7.4	12.5	5.9	4.1	6.6	7.0	7.7	5.1	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.57	1.00		0.50
Lane Grp Cap(c), veh/h	159	1794	731	153	2339	726	111	218	208	194	301	291
V/C Ratio(X)	0.79	0.87	0.22	1.22	0.46	0.24	0.78	0.66	0.69	0.83	0.39	0.41
Avail Cap(c_a), veh/h	319	1907	777	153	2339	726	134	735	701	194	795	767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	21.6	14.5	40.0	16.6	14.8	40.5	36.7	36.9	38.3	32.5	32.6
Incr Delay (d2), s/veh	3.4	4.5	0.2	144.4	0.1	0.2	16.5	3.4	4.1	24.2	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	13.6	1.8	9.3	4.4	2.0	2.3	3.0	3.1	4.6	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	26.0	14.7	184.4	16.7	15.0	56.9	40.1	41.0	62.4	33.3	33.5
LnGrp LOS	D	C	B	F	B	B	E	D	D	E	C	C
Approach Vol, veh/h		1851			1432			373			401	
Approach Delay, s/veh		26.2			38.4			44.3			45.1	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	15.9	12.0	45.5	9.9	20.0	12.3	45.2
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8
Max Green Setting (Gmax), s	9.4	35.6	7.4	42.2	6.5	38.5	15.4	34.2
Max Q Clear Time (g_c+I1), s	9.7	9.0	9.4	33.2	6.1	7.4	8.0	14.5
Green Ext Time (p_c), s	0.0	1.6	0.0	6.5	0.0	1.3	0.1	7.5

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C

APPENDIX 5.2:

EAP (2022) CONDITIONS QUEUING ANALYSIS WORKSHEETS

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Intersection: 5: Graham St. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	T	R	L	T	TR
Maximum Queue (ft)	94	190	197	63	289	440	381	340	54	106	109	51
Average Queue (ft)	34	100	116	29	88	250	229	192	29	47	52	17
95th Queue (ft)	75	178	196	55	214	374	346	307	52	94	94	41
Link Distance (ft)		649	649	649		1270	1270	1270	1270		663	663
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150				210					185		
Storage Blk Time (%)		2				17						
Queuing Penalty (veh)		1				16						

Intersection: 5: Graham St. & Alessandro Bl.

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	134	117	104
Average Queue (ft)	59	49	42
95th Queue (ft)	111	92	86
Link Distance (ft)		739	739
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	180		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 5: Graham St. & Alessandro Bl.

Movement	EB	EB	EB	EB	WB	WB	WB	WB	WB	NB	NB	NB
Directions Served	L	T	T	R	L	T	T	T	R	L	T	TR
Maximum Queue (ft)	235	596	607	72	290	1101	1058	710	62	126	146	138
Average Queue (ft)	125	368	376	34	285	743	689	215	34	56	67	51
95th Queue (ft)	247	579	586	63	317	1239	1205	616	58	105	121	108
Link Distance (ft)		649	649	649		1270	1270	1270	1270		659	659
Upstream Blk Time (%)		0	0			5	0					
Queuing Penalty (veh)		1	1			0	0					
Storage Bay Dist (ft)	150				210					185		
Storage Blk Time (%)	0	35			95	0					0	
Queuing Penalty (veh)	3	41			320	0					0	

Intersection: 5: Graham St. & Alessandro Bl.

Movement	SB	SB	SB
Directions Served	L	T	TR
Maximum Queue (ft)	224	180	115
Average Queue (ft)	108	68	42
95th Queue (ft)	192	138	88
Link Distance (ft)		739	739
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	180		
Storage Blk Time (%)	4	0	
Queuing Penalty (veh)	3	0	