

MAJESTIC FREEWAY
BUSINESS CENTER
(BUILDING 18)
PPT220003)

TRAFFIC ANALYSIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CAMUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
DIF	Development Impact Fee
EAP	Existing Plus Ambient Growth Plus Project
EAPC	Existing Plus Ambient Growth Plus Project Plus Cumulative
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
OPR	Office of Planning and Research
PHF	Peak Hour Factor
Project	Majestic Freeway Business Center (Building 18)
RCTC	Riverside County Transportation Commission
RTA	Riverside Transit Authority
SCAG	Southern California Association of Governments
sf	Square Feet
SHS	State Highway System
TA	Traffic Analysis
TUMF	Transportation Uniform Mitigation Fee
WRCOG	Western Riverside Council of Governments
v/c	Volume to Capacity
VMT	Vehicle Miles Traveled
vphgpl	Vehicles per Hour Green per Lane

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1 INTRODUCTION

This report presents the results of the Traffic Analysis (TA) for Majestic Freeway Business Center (Building 18) development ("Project"), which is located on the southwest corner of Harvill Avenue and Old Oleander Avenue in the County of Riverside, as shown on Exhibit 1-1. The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project, and where necessary recommend improvements to achieve acceptable operations consistent with the County's General Plan level of service goals and policies. This TA has been prepared in accordance with the County of Riverside's Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled (December 2020) and through consultation with County of Riverside staff during the scoping process. (1) The Project traffic study scoping agreement is provided in Appendix 1.1 of this TA, which has been reviewed and approved by the County of Riverside.

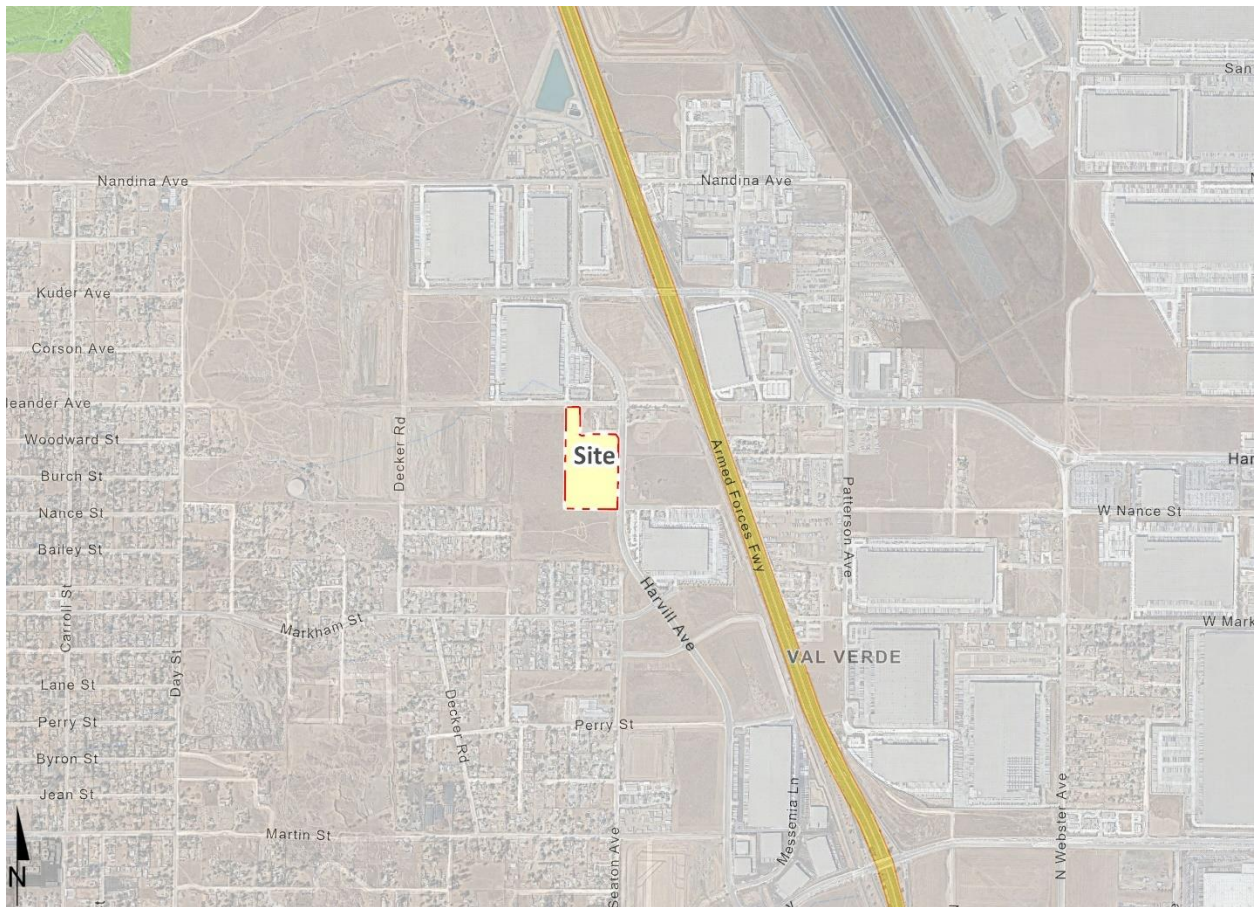
1.1 SUMMARY OF FINDINGS

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

- Harvill Avenue is currently built to its ultimate cross-section as a Major Highway (118-foot right-of-way) along the Project's frontage between the Project's northern boundary and southern boundary (America's Tire Drive) consistent with the County's standards. However, the Project should modify the existing curb-and-gutter improvements to accommodate the proposed access at Driveway 3 and Driveway 4 on Harvill Avenue. Driveway 3 should align with the proposed Building 17 driveway on the east side of Harvill Avenue and Driveway 4 should align with the existing America's Tire Drive.
- Project to construct the ultimate half-section of Old Oleander Avenue as an Industrial Collector (78-foot right-of-way) along the Project's frontage between the western Project boundary and Harvill Avenue consistent with the County's standards. Frontage improvements include pavement, curb-and-gutter, sidewalk, and landscaping improvements.
- Project to construct a minimum of one lane in each direction along Peregrine Way along the Project's frontage between the existing western terminus and Harvill Avenue consistent with the County's standards. Frontage improvements include pavement, curb-and-gutter, sidewalk, and landscaping improvements. The driveway on Peregrine Way and access for Project vehicles shall be limited to passenger cars only. Project to implement improvements to Harvill Avenue to restrict the access on Peregrine Way at Harvill Avenue to right-in/right-out access only.
- Project to install stop controls for all egress traffic from each Project driveway. All driveways will allow full turning movements. Driveway 2 on Peregrine Way and Driveway 3 on Harvill Avenue will serve passenger cars only.

Additional details and intersection lane geometrics are provided in Section 1.6 *Recommendations* of this report. The proposed Project is not anticipated to require the construction of any off-site improvements but would need to contribute to improvement needs identified at off-site intersections for future near-term cumulative traffic conditions. As such, the Project Applicant's responsibility for the Project's contributions towards deficient off-site intersections is fulfilled through payment into pre-existing fee programs (if applicable) and/or fair share contributions that would be assigned to the future construction of the identified recommended improvements. The Project Applicant would be required to pay requisite fees consistent with the County's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

EXHIBIT 1-1: LOCATION MAP



1.2 PROJECT OVERVIEW

A preliminary site plan for the proposed Project is shown on Exhibit 1-2. The proposed Project building is 317,760 square feet of building space, however, in an effort to conduct a conservative analysis a 333,648 square foot warehouse building has been evaluated in order to account for any future minor revisions in building size (approximately a 5% buffer). As indicated on Exhibit 1-2, vehicular access will be provided to Old Oleander Avenue, Peregrine Way, and Harvill Avenue. All driveways are proposed to accommodate full access and Driveway 2 on Peregrine Way and Driveway 3 on Harvill Avenue will serve passenger cars only. Regional access to the Project site is available from the I-215 Freeway via Harley Knox Boulevard and Ramona Expressway interchanges. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual for the proposed high-cube transload and short-term storage warehouse land use. (2) The Project is anticipated to generate a net total of 468 two-way trips per day with 27 AM peak hour trips and 32 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.

1.3 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 (2022) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2025) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2025) Conditions

1.3.1 EXISTING (2022) CONDITIONS

Information for Existing (2022) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared. For a detailed discussion on the existing traffic counts, see Section 3.7 *Existing Traffic Counts*.

1.3.2 EAP (2025) CONDITIONS

The EAP (2025) conditions analysis determines the potential circulation system deficiencies based on a comparison of the EAP traffic conditions to Existing conditions. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2022) conditions of 6.12% (2 percent per year, compounded over 3 years) is included for EAP (2025) traffic conditions. The assumed ambient growth factor is based on the requirements per the County of Riverside traffic study guidelines. Consistent with County traffic study guidelines, the EAP analysis is intended to identify "Opening Year" deficiencies associated with the development of the proposed Project based on the expected background growth within the study area.

EXHIBIT 1-2: PRELIMINARY SITE PLAN



1.3.3 EAPC (2025) CONDITIONS

The EAPC (2025) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. The roadway network is similar to Existing conditions except for new connections to be constructed by the Project. To account for background traffic growth, an ambient growth factor from Existing (2022) conditions of 6.12% (2 percent per year, compounded over 3 years) is included for EAPC (2025) traffic. Conservatively, this TA estimates the area ambient traffic growth and then adds traffic generated by other known or probable related projects. These related projects are at least in part already accounted for in the assumed ambient growth rates; and some of these related projects may not be implemented and operational within the 2025 Opening Year time frame assumed for the Project. The resulting traffic growth utilized in the TA (ambient growth factor plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2025 conditions.

1.4 STUDY AREA

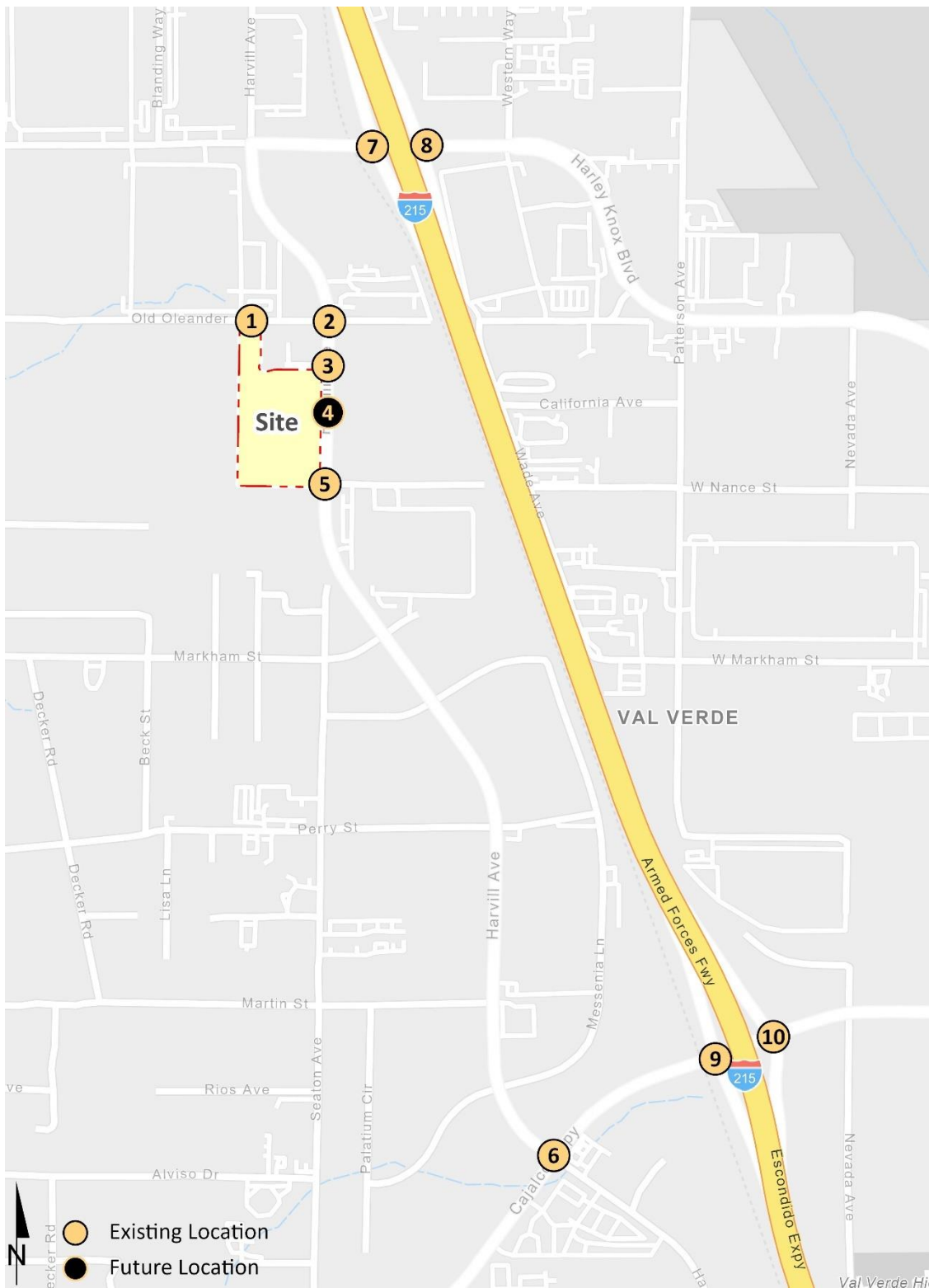
To ensure that this TA satisfies the County of Riverside’s traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by County of Riverside staff prior to the preparation of this report. This agreement provides an outline of the Project study area,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

The 10 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for evaluation in this TA based on consultation with County of Riverside staff. At a minimum, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the County’s Guidelines. (1) The “50 peak hour trip” criterion represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and used throughout the County for the purposes of estimating a potential area of influence (i.e., study area).

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	Jurisdiction	CMP?
1	Driveway 1 & Old Oleander Av.	County of Riverside	No
2	Harvill Av. & Old Oleander Av.	County of Riverside	No
3	Harvill Av. & Peregrine Wy.	County of Riverside	No
4	Harvill Av. & Driveway 3	County of Riverside	No
5	Harvill Av. & America’s Tire Dr.	County of Riverside	No
6	Harvill Av. & Cajalco Exwy.	County of Riverside	No
7	I-215 SB Ramps & Harley Knox Bl.	County, Caltrans	No
8	I-215 NB Ramps & Harley Knox Bl.	County, Caltrans	No
9	I-215 SB Ramps & Ramona Exwy.	County, Perris, Caltrans	No
10	I-215 NB Ramps & Ramona Exwy.	Perris, Caltrans	No

EXHIBIT 1-3: STUDY AREA



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. The County of Riverside CMP became effective with the passage of Proposition 111 in 1990 and most recently updated in 2019 as part of the Riverside County Long Range Transportation Study. The Riverside County Transportation Commission (RCTC) adopted the 2019 CMP for the County of Riverside in December 2019. (3) There are no study area intersections identified as a Riverside County CMP intersection.

1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *EAP (2025) Traffic Conditions* and Section 6 *EAPC (2025) Traffic Conditions* include the detailed analysis. A summary of LOS results for all analysis scenarios is presented on Table 1-2.

TABLE 1-2: SUMMARY OF LOS

# Intersection	Existing		EAP		EAPC	
	AM	PM	AM	PM	AM	PM
1 Driveway 1 & Old Oleander Av.	●	●	●	●	●	●
2 Harvill Av. & Old Oleander Av.	●	●	●	●	●	●
3 Harvill Av. & Peregrine Wy.	●	●	●	●	●	●
4 Harvill Av. & Driveway 3	N/A	N/A	●	●	●	●
5 Harvill Av. & America's Tire Dr.	●	●	●	●	●	●
6 Harvill Av. & Cajalco Exwy.	●	●	●	●	●	●
7 I-215 SB Ramps & Harley Knox Bl.	●	●	●	●	●	●
8 I-215 NB Ramps & Harley Knox Bl.	●	●	●	●	●	●
9 I-215 SB Ramps & Ramona Exwy.	●	●	●	●	●	●
10 I-215 NB Ramps & Ramona Exwy.	●	●	●	●	●	●

● = A - D ● = E ● = F

1.5.1 EXISTING (2022) CONDITIONS

Intersections

The study area intersections are currently operating at an acceptable LOS during the peak hours, with the exception of the following study area intersection:

- I-215 NB Ramps & Harley Knox Bl. (#8) – LOS F AM peak hour only

Queues

There are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows.

1.5.2 EAP (2025) CONDITIONS

Intersections

There are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of Project traffic, in addition to the locations previously identified under Existing traffic conditions.

Queues

Consistent with Existing traffic conditions, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic for EAP (2025) traffic conditions.

1.5.3 EAPC (2025) CONDITIONS

Intersections

The following study area intersections are anticipated to operate at an unacceptable LOS under EAPC (2025) traffic conditions:

- Harvill Av. & Cajalco Exwy. (#6) – LOS F AM and PM peak hours
- I-215 SB Ramps & Harley Knox Bl. (#7) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Bl. (#8) – LOS F AM and PM peak hours
- I-215 SB Ramps & Ramona Exwy. (#9) – LOS F AM and PM peak hours
- I-215 NB Ramps & Ramona Exwy. (#10) – LOS F AM and PM peak hours

Queues

The following turning movements are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAPC (2025) traffic conditions:

- I-215 SB Ramps & Ramona Exwy. (#9): Southbound Left (AM and PM peak hours, Southbound Left-Through (AM and PM peak hours), and Southbound Right (AM peak hour only)
- I-215 NB Ramps & Ramona Exwy. (#10): Northbound Right (AM peak hour only)

1.6 RECOMMENDATIONS

1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project. The site adjacent recommendations are shown on Exhibit 1-4.

Recommendation 1 – Driveway 1 & Old Oleander Avenue (#1) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the northbound approach (egress Project traffic) to implement a cross-street stop-controlled intersection. Driveway will allow full access and will serve both passenger cars and trucks.
- Project should construct and accommodate a minimum 100-foot westbound left turn lane at Driveway 1 within the existing painted median.

Recommendation 2 – Harvill Avenue & Peregrine Way (#3) – With the development of the proposed Project, the intersection of Peregrine Way at Harvill Avenue should be restricted to right-in/right-out access only which will be controlled with the construction of a raised median. Driveway 2 on Peregrine Way will serve passenger cars only.

Recommendation 3 – Harvill Avenue & Driveway 3 (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound approach (egress Project traffic) to implement a cross-street stop-controlled intersection. Driveway will allow full access and will serve passenger cars only. Driveway should align with the proposed driveway for Building 17 on the east side of Harvill Avenue.
- Project should construct and accommodate a minimum 100-foot northbound left turn lane at Driveway 3 within the existing painted median.

Recommendation 4 – Harvill Avenue & Driveway 4 (#5) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound approach (egress Project traffic) to implement a cross-street stop-controlled intersection. Driveway will allow full access and will serve both passenger cars and trucks. Driveway should align with the existing America's Tire Drive on the east side of Harvill Avenue.
- Project should construct and accommodate a minimum 100-foot northbound left turn lane at Driveway 4 within the existing painted median.

Recommendation 5 – Harvill Avenue is a north-south oriented roadway located on the Project's eastern boundary. Harvill Avenue is currently constructed to its ultimate cross-section as a Major Arterial (118-foot right-of-way) consistent with the County's standards; however, the Project should construct the driveways necessary to accommodate site access, including a 100-foot northbound left turn lane at both Driveway 3 and Driveway 4. In addition, the Project should install a raised median in order to restrict the access at Peregrine Way on Harvill Avenue to right-in/right-out access only.

EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS



1	Dwy. 1 & Old Oleander Av.	3	Harvell Av. & Peregrine Wy.	4	Harvell Av. & Dwy. 3	5	Harvell Av. & Dwy. 4/ America's Tire Dr.

- = Stop Sign
- = Stop Sign Improvement
- = Existing Lane
- = Lane Improvement
- TWLTL** = Two Way Left turn Lane
- 100'** = Minimum Turn Pocket Length

Recommendation 6 – Old Oleander Avenue is an east-west oriented roadway located along the Project's northern boundary. Project to construct Old Oleander Avenue at its ultimate half-section width as an Industrial Collector (78-foot right-of-way) between the Project's western boundary and Harvill Avenue consistent with the County's standards. Frontage improvements include pavement, curb-and-gutter, sidewalk, and landscaping improvements.

Recommendation 7 – Peregrine Way is an east-west oriented roadway located along the Project's northern boundary. Project to construct Peregrine Way with a minimum of one lane in each direction along the Project's frontage between the existing western terminus and Harvill Avenue consistent with the County's standards. Frontage improvements include pavement, curb-and-gutter, sidewalk, and landscaping improvements. The driveway on Peregrine Way and access for Project vehicles shall be limited to passenger cars only. Project to implement improvements to Harvill Avenue to restrict the access on Peregrine Way at Harvill Avenue to right-in/right-out access only.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and 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 County of Riverside sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

1.6.2 OFF-SITE RECOMMENDATIONS

The recommended improvements needed to address the deficiencies identified under Existing (2022), EAP (2025), and EAPC (2025) traffic conditions are shown in Table 1-3. Improvements that appear under EAP (2025) that are not also identified for Existing (2022) traffic conditions would be the Project's responsibility to implement/construct in order to maintain acceptable LOS. For those remaining improvements listed in Table 1-3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share or payment of fees (if applicable) that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay fair share fees and participate in pre-existing fee programs consistent with the County's requirements (see Section 7 *Local and Regional Funding Mechanisms*).

1.7 TRUCK ACCESS

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5). A WB-67 truck (53-foot trailer) has been utilized for the purposes of this analysis. As shown on Exhibit 1-5, Driveway 1 on Old Oleander Avenue and Driveway 4 on Harvill Avenue are anticipated to accommodate the ingress and egress of heavy trucks as currently designed.

TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO

#	Intersection Location	Jurisdiction	Analysis Scenario		Improvements in DIF, TUMF, etc. ¹	Project Responsibility ²	Project Fair Share ³
			EAP	EAPC			
6	Harvill Av. & Cajalco Exwy.	County	- None	- Add 3rd EB through lane	Yes (TUMF)	TUMF	--
				- Add 3rd WB through lane	Yes (TUMF)	TUMF	
7	I-215 SB Ramps & Harley Knox Bl.	County, Caltrans	- None	- Add SB left turn lane	Yes (TUMF)	Fees	--
				- Restripe the WB approach with dual lefts and one through lane	Yes (TUMF)	Fees	
8	I-215 NB Ramps & Harley Knox Bl.	County, Caltrans	- Add 2nd EB left turn lane	- Same	Yes (TUMF)	Fees	--
				- Add free WB right turn lane	Yes (TUMF)	Fees	
4	I-215 SB Ramps & Ramona Exwy.	Caltrans, Perris, County	- None	- Add 2nd WB left turn lane	Yes (TUMF)	Fees	0.4%
				- Add 3rd EB through lane	Yes (TUMF)	Fees	
				- Add 3rd WB through lane	Yes (TUMF)	Fees	
				- Add 2nd SB left turn lane	No	Fair Share	
				- Add EB right turn lane	No	Fair Share	
5	I-215 NB Ramps & Ramona Exwy.	Caltrans, Perris, County	- None	- Add 2nd EB left turn lane	Yes (TUMF)	Fees	0.3%
				- Add 3rd EB through lane	Yes (TUMF)	Fees	
				- Add 3rd WB through lane	Yes (TUMF)	Fees	
				- Add WB free-right turn lane	No	Fair Share	

¹ Improvements included in TUMF Nexus or County DIF programs have been identified as such.

² Program improvements constructed by Project may be eligible for fee credit. In lieu fee payment is at discretion of County.

Represents the fair share percentage for the Project during the most impacted peak hour. Identifies the Project's responsibility to construct an off-site improvement, contribute fair share, or fee payment towards the improvements shown. If identified as a Project construct obligation/in a fee program, then no fair share percentage has been identified.

³ Total project fair share is applicable to the improvements which are not already included in the County DIF/TUMF for those intersections wholly or partially within the County.

1.8 QUEUING ANALYSIS

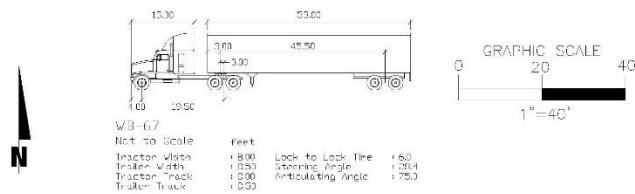
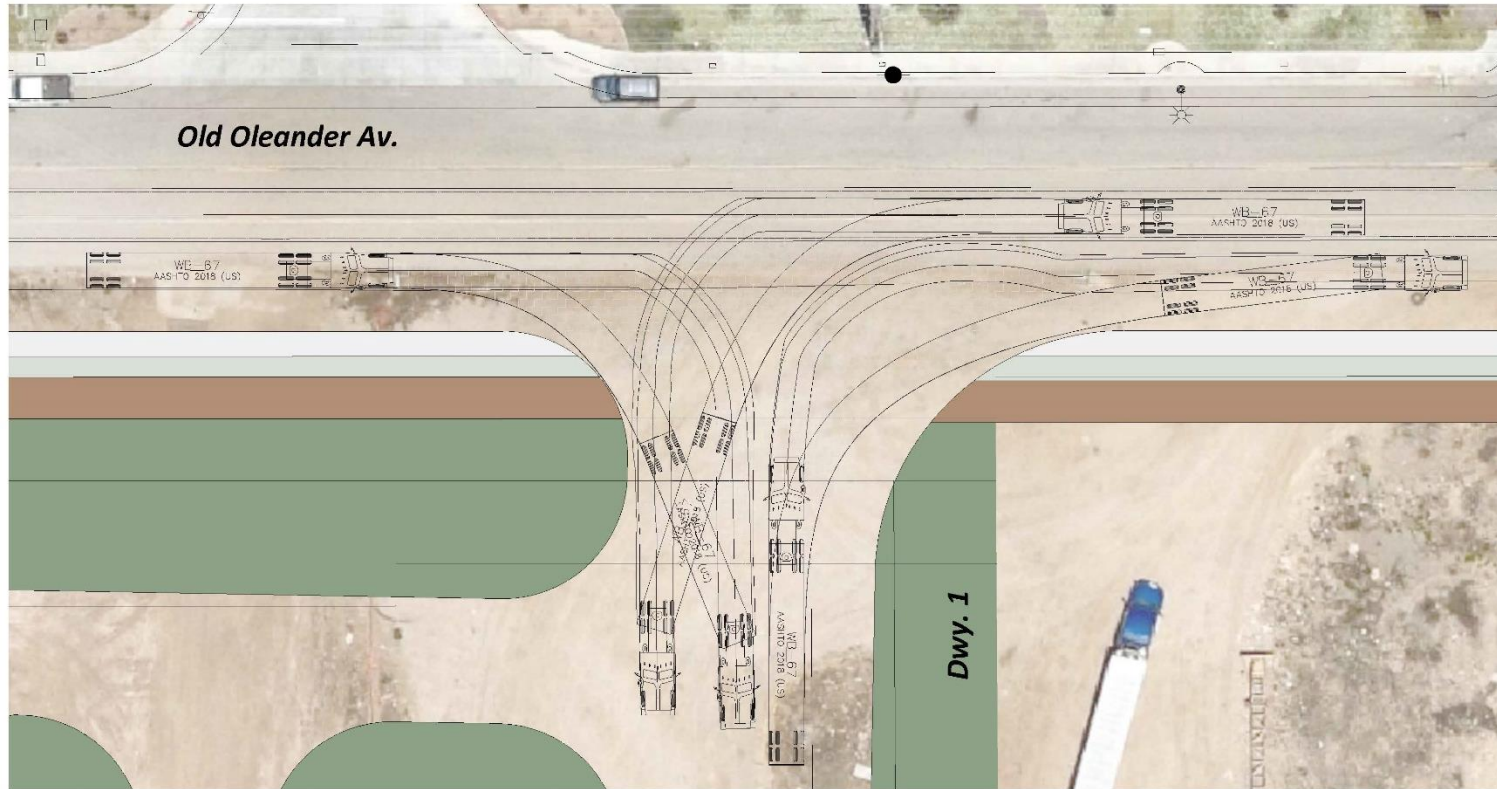
The traffic modeling and signal timing optimization software package SimTraffic has been utilized to assess the queues. SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. These random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each applicable turn lane. A SimTraffic simulation has been recorded up to 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 15-minute periods with 60-minute recording intervals. The results of the queuing analysis are shown in Table 1-4 and the worksheets for the weekday AM and PM peak hours are provided in Appendix 1.2 of this report for EAPC (2025) traffic conditions. No site adjacent queues are anticipated with the proposed improvements.

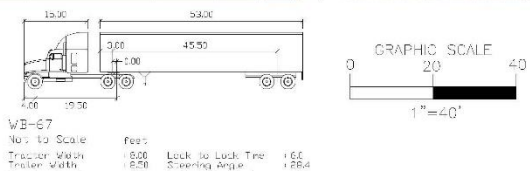
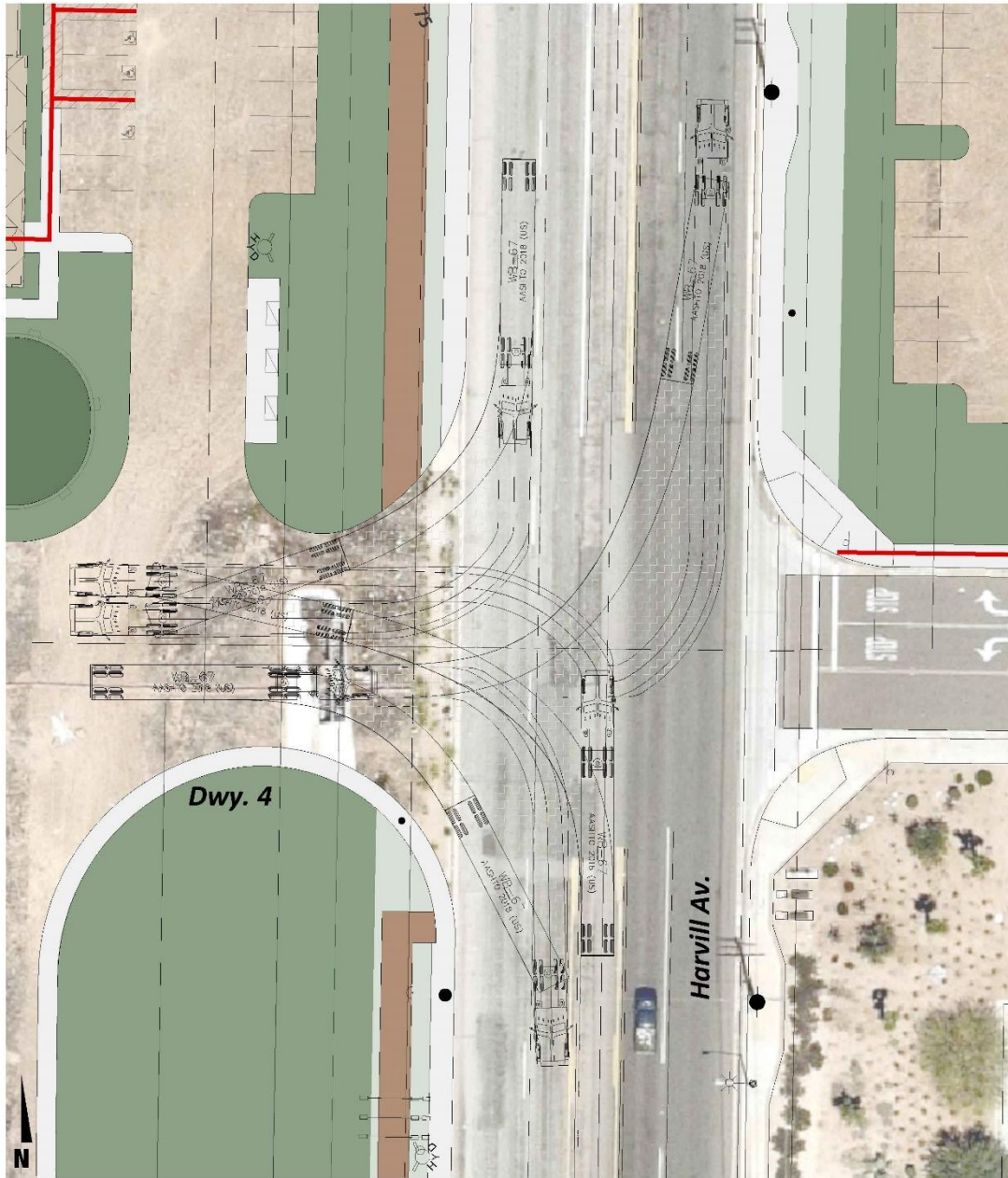
TABLE 1-4: PEAK HOUR QUEUING ANALYSIS FOR SITE ADJACENT INTERSECTIONS

Intersection	Movement	Available Stacking Distance (Feet) ³	95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM
Driveway 1 & Old Oleander Av.	NBL/T/R	300	21	16	Yes	Yes
	WBL	100	7	7	Yes	Yes
Harvill Av. & Peregrine Wy.	EBR	380	3	26	Yes	Yes
Harvill Av. & Driveway 3	NBL	100	7	8	Yes	Yes
	SBL	100	11	14	Yes	Yes
	EBL/T/R	60	15	26	Yes	Yes
Harvill Av. & America's Tire	NBL	100	23	17	Yes	Yes
	SBL	130	19	8	Yes	Yes
	EBL/T/R	550	36	56	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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 County of Riverside's Traffic Study Guidelines.

2.1 LEVEL OF SERVICE

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

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition 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 County of Riverside, City of Perris, and California Department of Transportation (Caltrans) require 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 related to the average control delay per vehicle and is correlated to a LOS designation as described on Table 2-1.

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections. 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), $V/C \leq 1.0$	Level of Service, $V/C \leq 1.0^1$
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
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
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
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
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 6th Edition

¹ If V/C is greater than 1.0 then LOS is F per HCM.

A saturation flow rate of 1900 has been utilized for all study area intersections. The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Customary 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., $PHF = [Hourly Volume] / [4 \times Peak\ 15\text{-minute\ Flow\ Rate}]$). 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 County of Riverside 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). 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. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), $V/C \leq 1.0$	Level of Service, $V/C \leq 1.0^1$
Little or no delays.	0 to 10.00	A
Short traffic delays.	10.01 to 15.00	B
Average traffic delays.	15.01 to 25.00	C
Long traffic delays.	25.01 to 35.00	D
Very long traffic delays.	35.01 to 50.00	E
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F

Source: HCM, 6th Edition

¹ If V/C is greater than 1.0 then LOS is F per HCM.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term “signal warrants” refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (5)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (5) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions and for all future analysis scenarios for existing unsignalized intersections. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics. For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. Rural warrants have been used as posted speed limits on the major roadways with unsignalized intersections are over 40 miles per hour while urban warrants have been used where speeds are 40 miles per hour or below.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Similarly, the speed limit has been used as the basis for determining the use of Urban and Rural warrants. Traffic signal warrant analyses were performed for the following study area intersection shown on Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

#	Intersection
1	Driveway 1 & Old Oleander Av.
4	Harvill Av. & Driveway 3
5	Harvill Av. & America's Tire Dr.

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *EAP (2025) Traffic Conditions* and Section 6 *EAPC (2025) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-215 Freeway at the existing Harley Knox Boulevard and Ramona Expressway interchanges. Specifically, the off-ramp queuing analysis is utilized to identify any potential queuing and “spill back” onto the I-215 Freeway mainline from the off-ramps. The 95th percentile queue has also been utilized to assess the queues at both Harley Knox Boulevard and Ramona Expressway to identify any potential queuing.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. The footnote from the Synchro output sheets indicates if the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays. The 95th percentile queue is derived from the average queue plus 1.65 standard deviations.

2.5 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies has been obtained from each of the applicable surrounding jurisdictions.

2.5.1 COUNTY OF RIVERSIDE

The definition of an intersection deficiency has been obtained from the County of Riverside General Plan. Riverside County General Plan Policy C 2.1 states that the County will maintain the following County-wide target LOS:

The following minimum target levels of service have been designated for the review of development proposals in the unincorporated areas of Riverside County with respect to transportation impacts on roadways designated in the Riverside County Circulation Plan which are currently County maintained, or are intended to be accepted into the County maintained roadway system:

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

The applicable minimum LOS utilized for the purposes of this analysis is LOS D per the County-wide target LOS for projects located within the Mead Valley Area Plan.

2.5.2 CITY OF PERRIS

Required LOS for roadway segments and intersections within the City of Perris is LOS D. An exception to the local road standard is LOS E, at intersections of any Arterials and Expressways with SR-74, the Ramona-Cajalco Expressway or at I-215 Freeway ramps. For the purposes of this traffic impact analysis, LOS D has also been considered the acceptable threshold for all intersections within the study area.

2.5.3 CALTRANS

Senate Bill 743 (SB 743), approved in 2013, endeavors to change the way transportation impacts will be determined according to the California Environmental Quality Act (CEQA). The Office of Planning and Research (OPR) has recommended the use of vehicle miles traveled (VMT) as the replacement for automobile delay-based LOS. Caltrans acknowledges automobile delay will no longer be considered a CEQA impact for development projects and will use VMT as the metric for determining impacts on the State Highway System (SHS). However, LOS D has been utilized as the target LOS for Caltrans facilities, consistent with the County of Riverside.

2.6 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the County of Riverside. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency, the following will be utilized:

- A deficiency occurs at study area intersections if the pre-Project condition is at or better than LOS D (i.e., acceptable LOS), and the addition of project trips causes the peak hour LOS of the study area intersection to operate at unacceptable LOS (i.e., LOS E or F). Per the County of Riverside traffic study guidelines, for intersections currently operating at unacceptable LOS (LOS E or F), a deficiency will occur if the Project contributes peak hour trips to pre-project traffic conditions.

2.7 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the TUMF and/or DIF will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share contribution based on the Project's proportional share may be imposed in order to address the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the County Traffic Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval). The Project's fair share contribution is determined based on the following equations, which are the ratio of Project traffic to net new traffic (where net new traffic is the future traffic less existing traffic):

$$\text{Project Fair Share \%} = \text{Project (EAPC) Traffic} / (\text{EAPC Total Traffic} - \text{Existing Traffic})$$

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the County of Riverside General Plan Circulation Network, and a review of existing peak hour intersection operations, traffic signal warrant, and off-ramp queuing analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with County of Riverside staff (Appendix 1.1), the study area includes a total of 10 existing and future intersections as shown previously on Exhibit 1-3, where the Project is anticipated to contribute 50 or more peak hour trips or were added at the County's request during the scoping process. 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 COUNTY OF RIVERSIDE GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the County of Riverside. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on County of Riverside General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the County of Riverside General Plan Circulation Element and Exhibit 3-3 illustrates the County of Riverside General Plan roadway cross-sections.

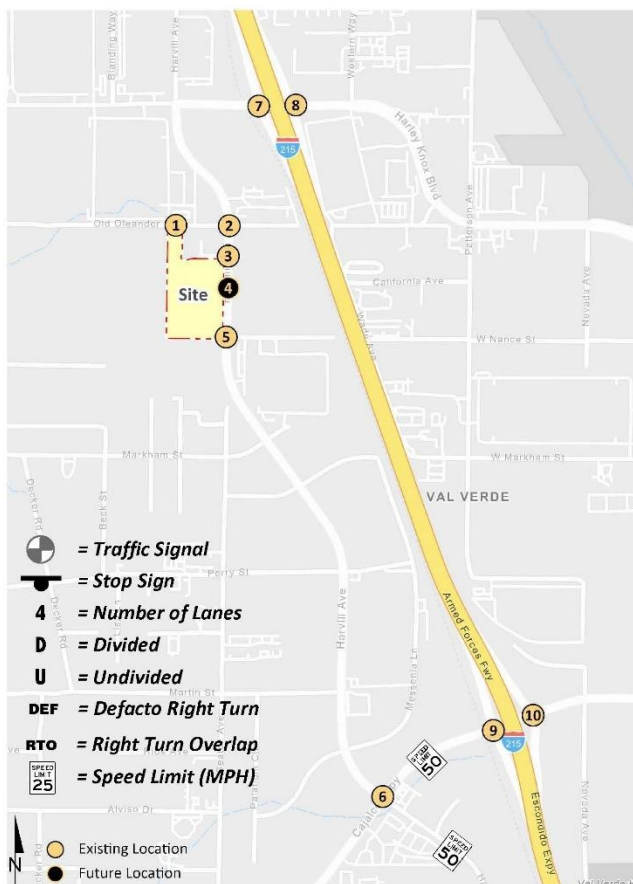
Expressways are six to eight-lane divided roadways (typically divided by a raised median) with a 220-foot right-of-way and a 134-foot curb-to-curb measurement. These roadways serve regional through-traffic. The following study area roadway within the County of Riverside is classified as an Expressway:

- Ramona Expressway/Cajalco Expressway

Major Highways are four-lane roadways and may include a painted median. These roadways typically have a 118-foot right-of-way and a 76-foot curb-to-curb measurement. These roadways typically direct traffic through major development areas. The following study area roadways within the County of Riverside are classified as a Major Highway:

- Harvill Avenue
- Harley Knox Boulevard

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



1	2	3	4	5
Dwy. 1 & Old Oleander Av.	Harvell Av. & Old Oleander Av.	Harvell Av. & Peregrine Wy.	Harvell Av. & Dwy. 2	Harvell Av. & Dwy. 4 / America's Tire Dr.
			Future Intersection	
6	7	8	9	10
Harvell Av. & Cajalco Expy	I-215 SB Ramps & Harvelly Knox Bl.	I-215 NB Ramps & Harvelly Knox Bl.	I-215 SB Ramps & Ramona Expy.	I-215 NB Ramps & Ramona Expy.

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

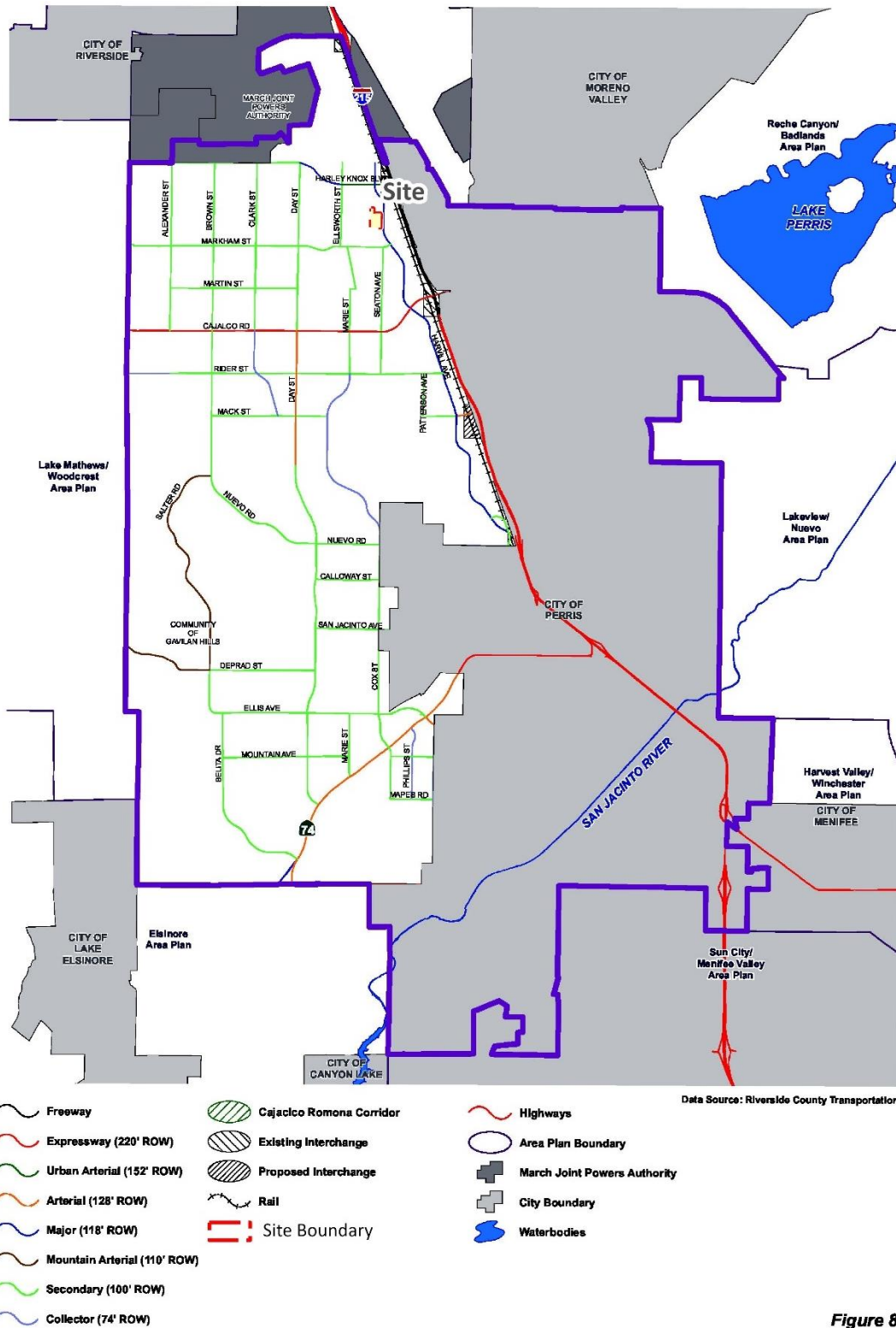
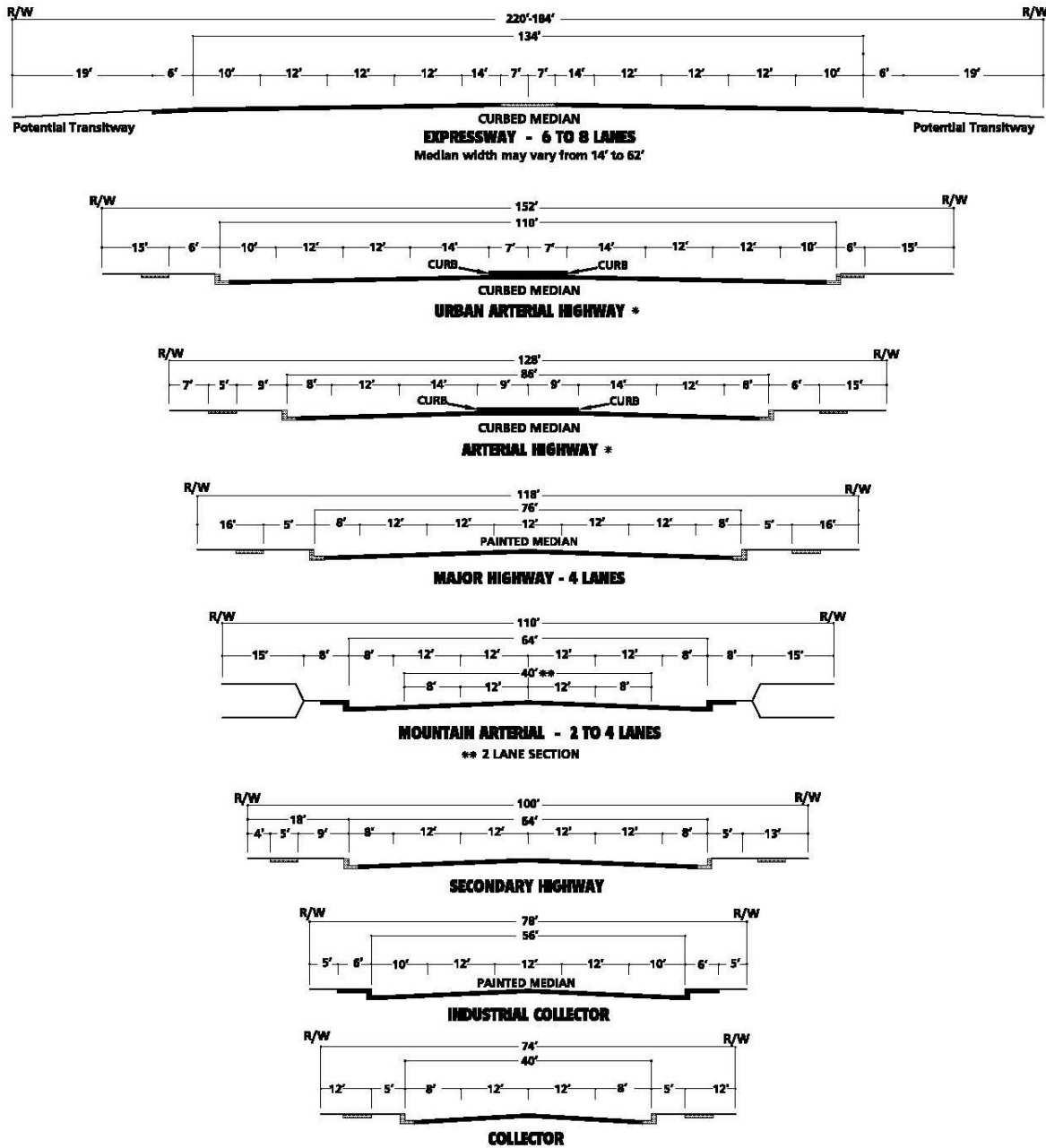


Figure 8

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



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

NOT TO SCALE

SOURCE: COUNTY OF RIVERSIDE
 July 7, 2020

3.3 CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT

Exhibits 3-4 and 3-5 show the City of Perris General Plan Circulation Element and roadway cross-sections, respectively.

3.4 BICYCLE & PEDESTRIAN FACILITIES

The County of Riverside and City of Perris bike networks are shown on Exhibit 3-6 and Exhibit 3-7, respectively. As shown on Exhibit 3-6, there is a planned Regional Trail (Urban/Suburban) trail proposed along Harvill Avenue south of the Project, a Community Trail along portions of Harvill Avenue, Old Oleander Avenue and Harley Knox Boulevard, and a Class II (on-street, striped) bike lane along Ramona Expressway/Cajalco Expressway. Exhibit 3-8 illustrates the existing crosswalks throughout the study area. As shown on Exhibit 3-8, there are pedestrian facilities in place in the vicinity of the Project site on either side of Harvill Avenue. Development of the proposed Project would connect to these existing pedestrian facilities to those to be constructed by the Project along its frontages on Old Oleander Avenue and Harvill Avenue.

3.5 TRANSIT SERVICE

The study area is currently served by Riverside Transit Agency (RTA) with bus service along the I-215 Freeway and Cajalco Expressway/Ramona Expressway. RTA Route 27 runs along the I-215 Freeway and stops at Perris High School (on Nuevo Road) and runs between the Perris Station Transit Center and the Galleria at Tyler in the City of Riverside. RTA Route 41 runs along Ramona/Cajalco Expressway and has existing bus stops to the west and east of Harvill Avenue, which is located approximately ¼ mile from the Project. There are currently no transit routes or stops along the Harvill Avenue corridor near the proposed Project. The transit services are illustrated on Exhibit 3-9. As shown, the closest existing transit route that could potentially serve the site is along Cajalco Expressway. Transit service is reviewed and updated by RTA periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.6 TRUCK ROUTES

The County of Riverside's General Plan does not provide designated truck routes, and the City of Perris' truck routes are shown on Exhibit 3-10. Trucks are prohibited on certain County roadways through the Municipal Code through weight restrictions. Truck routes for the proposed Project have been determined based on discussions with County staff and takes into consideration the approved truck routes within the adjacent City of Perris. These truck routes serve both the proposed Project and future cumulative development projects throughout the study area. Sensitive land uses have also been taken into consideration as part of determining the best routes for future trucks.

EXHIBIT 3-4: CITY OF PERRIS GENERAL PLAN CIRCULATION ELEMENT

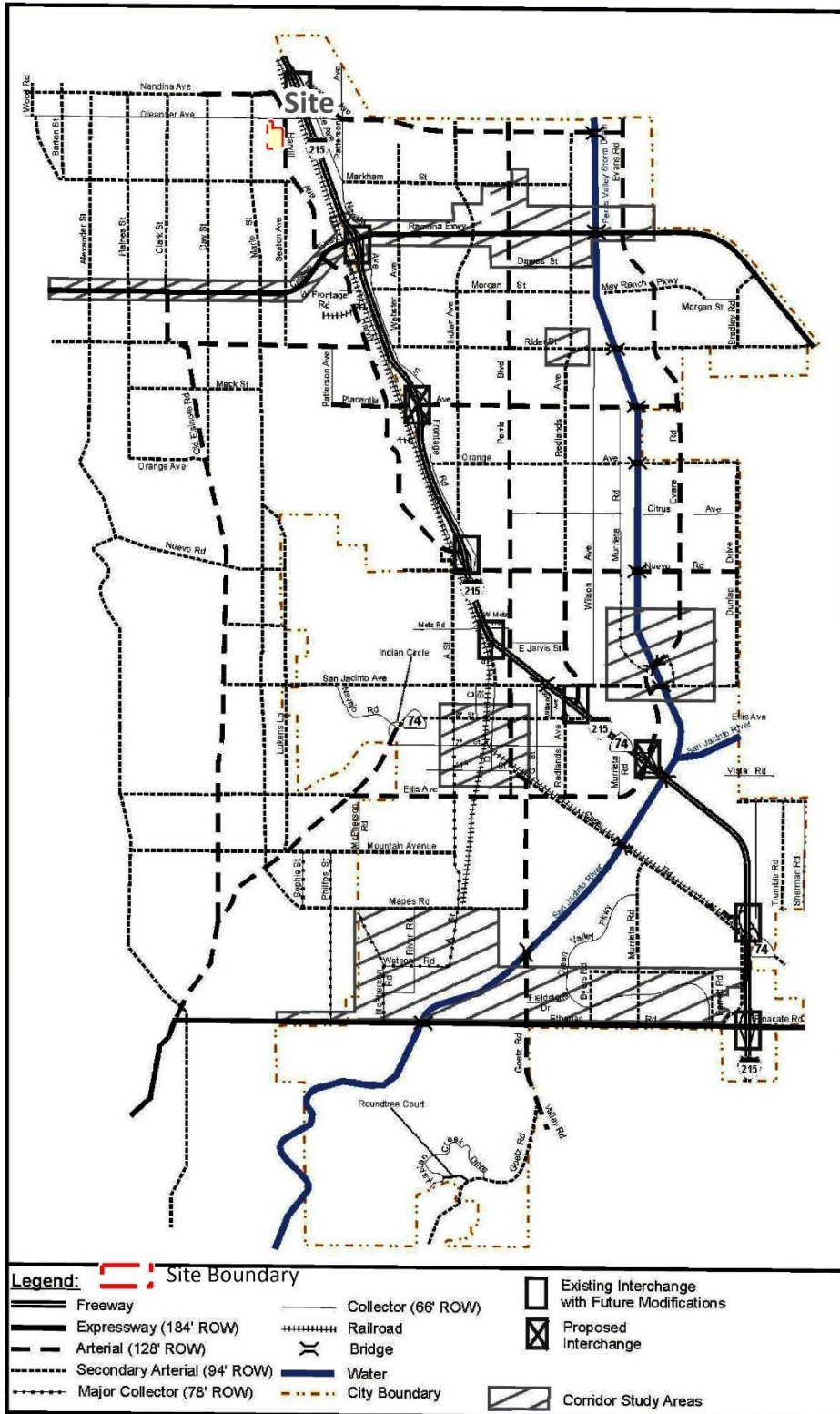
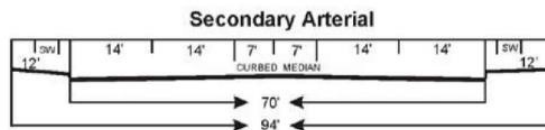
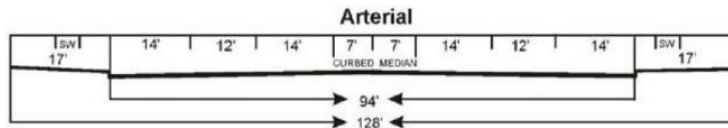
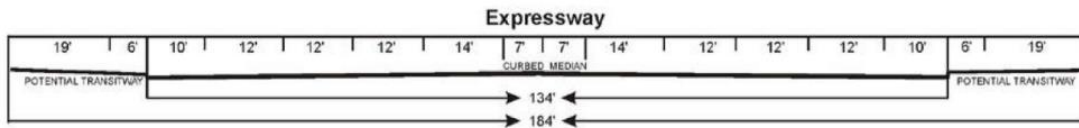
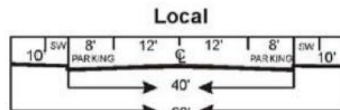
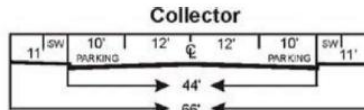
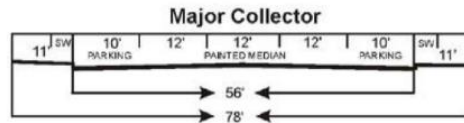
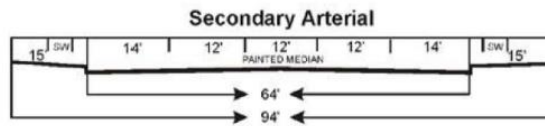


EXHIBIT 3-5: CITY OF PERRIS GENERAL PLAN ROADWAY CROSS-SECTIONS



or



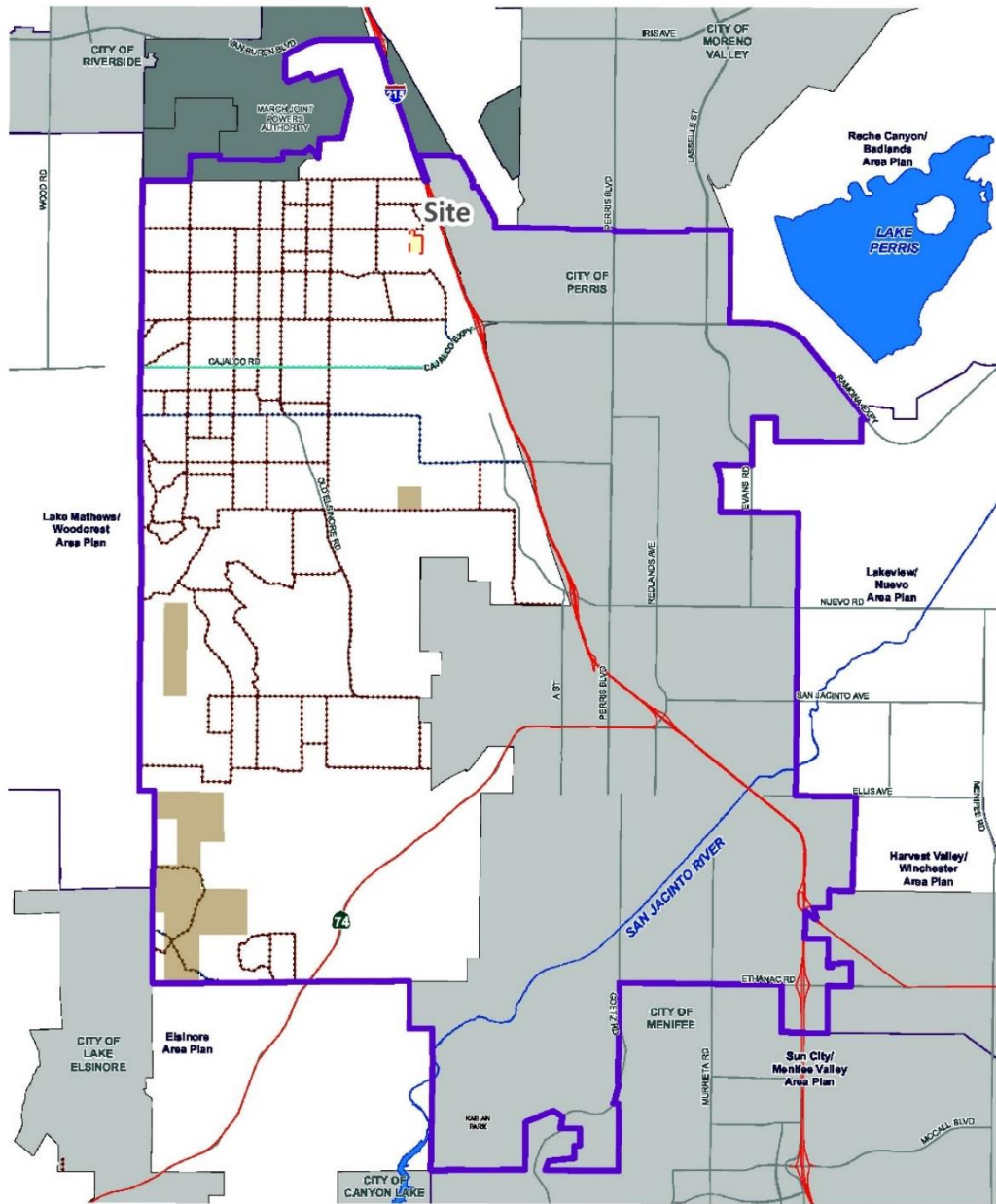
Specific details for each cross-section follow in Figures 4.1 A - 4.1 F

Legend

- SW Sidewalk or Trail (at least 4 feet)
- PARKING Parking or Bike Lane
- PAINTED MEDIAN Center Median and/or Continuous Left Turning Lane
- CURBED MEDIAN Landscaped Center Median

Source: City of Perris
General Plan
1-11-2022

EXHIBIT 3-6: COUNTY OF RIVERSIDE GENERAL PLAN BIKE NETWORK



Data Source: Riverside County Parks

- Regional Trail: Urban/Suburban
- Community Trail
- Class II Bike Path
- Non-County Trail (Public and Quasi-Public Lands)
- Site Boundary
- Highways
- Area Plan Boundary
- March Joint Powers Authority
- City Boundary
- Waterbodies
- Bureau of Land Management (BLM) Lands

Note: Trails shown in this map are a general representation for informational purposes only. This document is not intended to constitute any legal agreement between the user and the County of Riverside. The County of Riverside is not responsible for the accuracy or completeness of the information contained herein. The County of Riverside is not responsible for any errors or omissions in this map. The County of Riverside is not responsible for any damages or liabilities arising from the use of this map. The County of Riverside is not responsible for any claims or lawsuits arising from the use of this map. The County of Riverside is not responsible for any claims or lawsuits arising from the use of this map.

Figure 9

EXHIBIT 3-7: CITY OF PERRIS BIKE PLAN

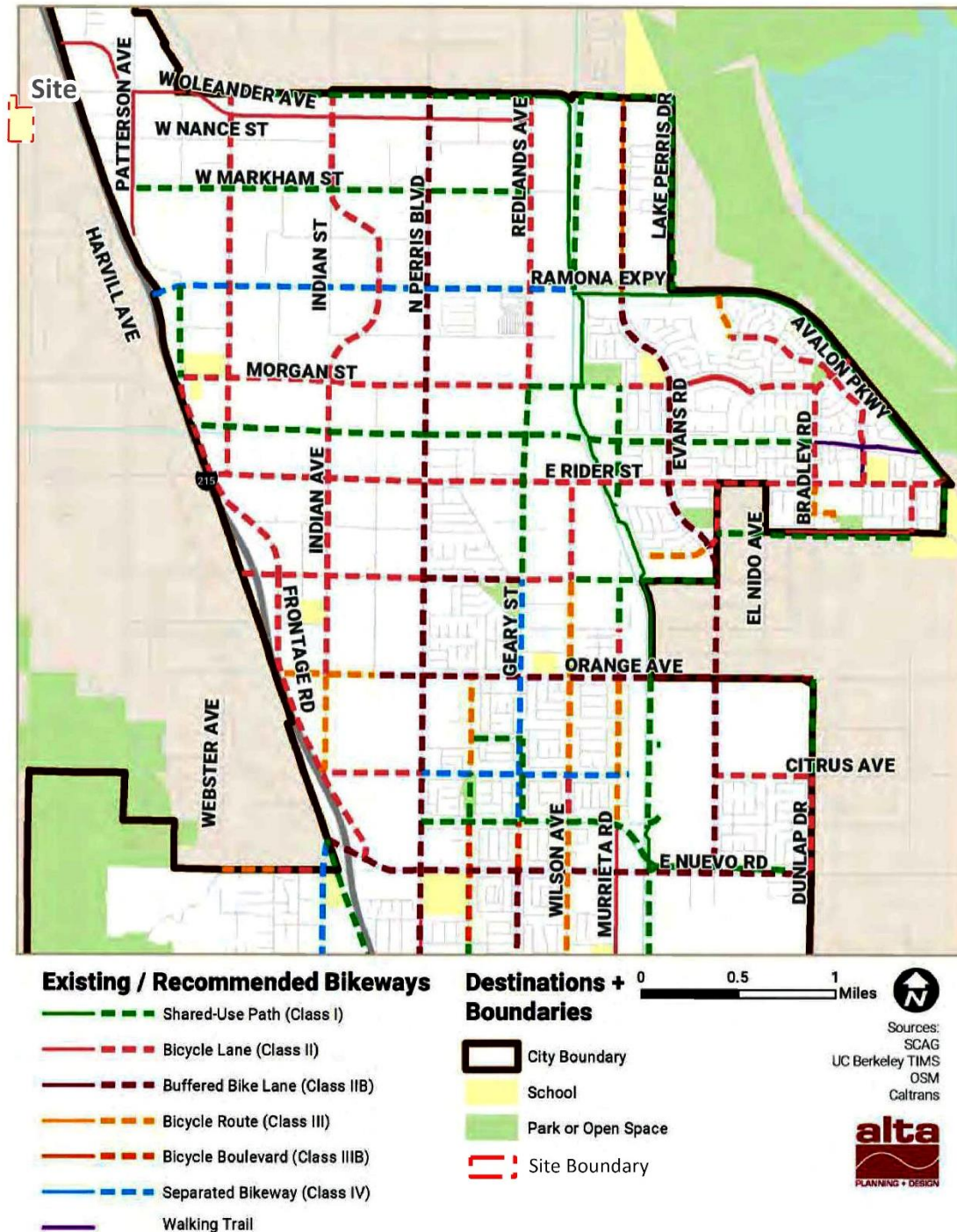


EXHIBIT 3-8: EXISTING PEDESTRIAN FACILITIES



EXHIBIT 3-9: EXISTING TRANSIT ROUTES

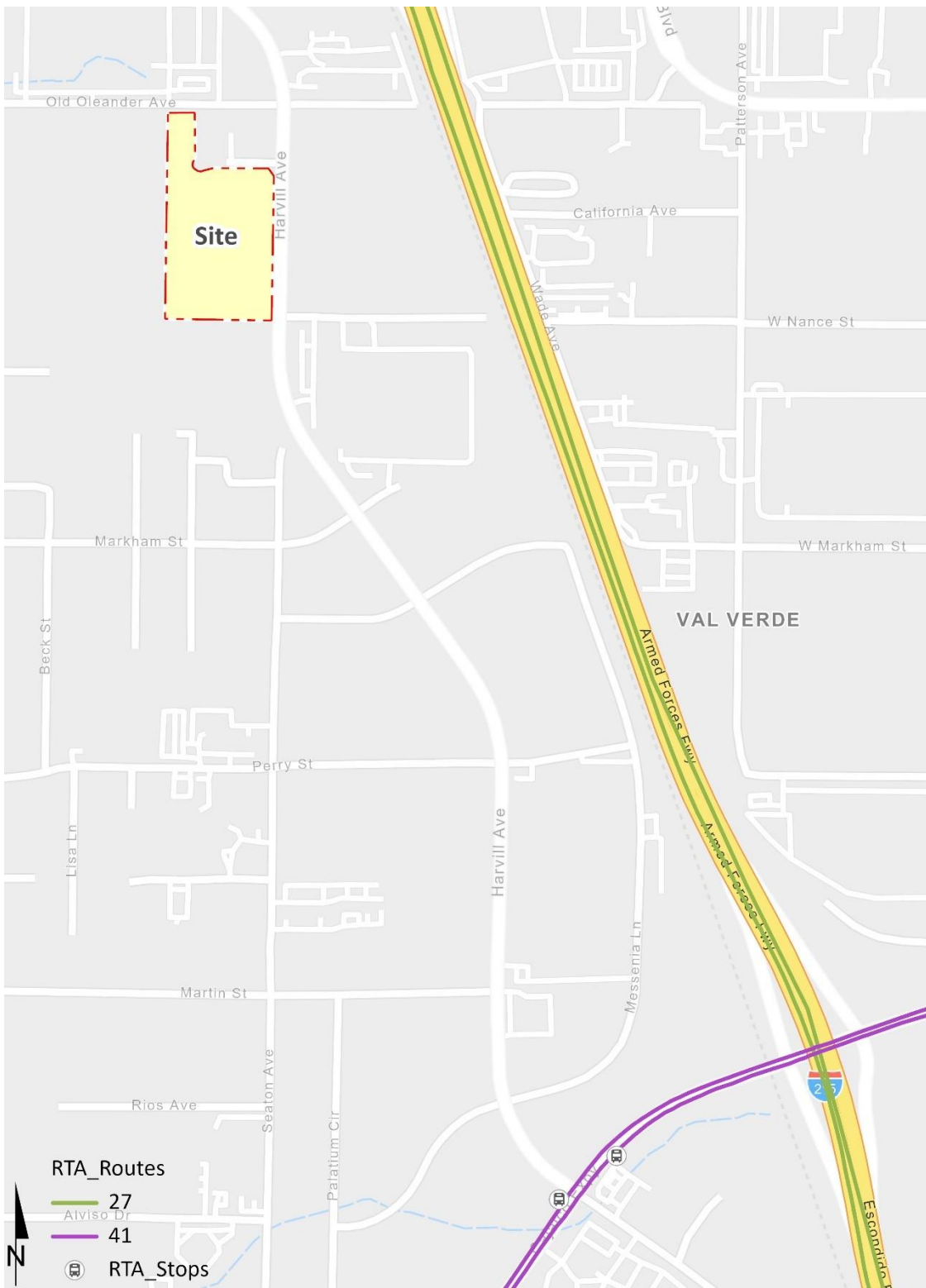
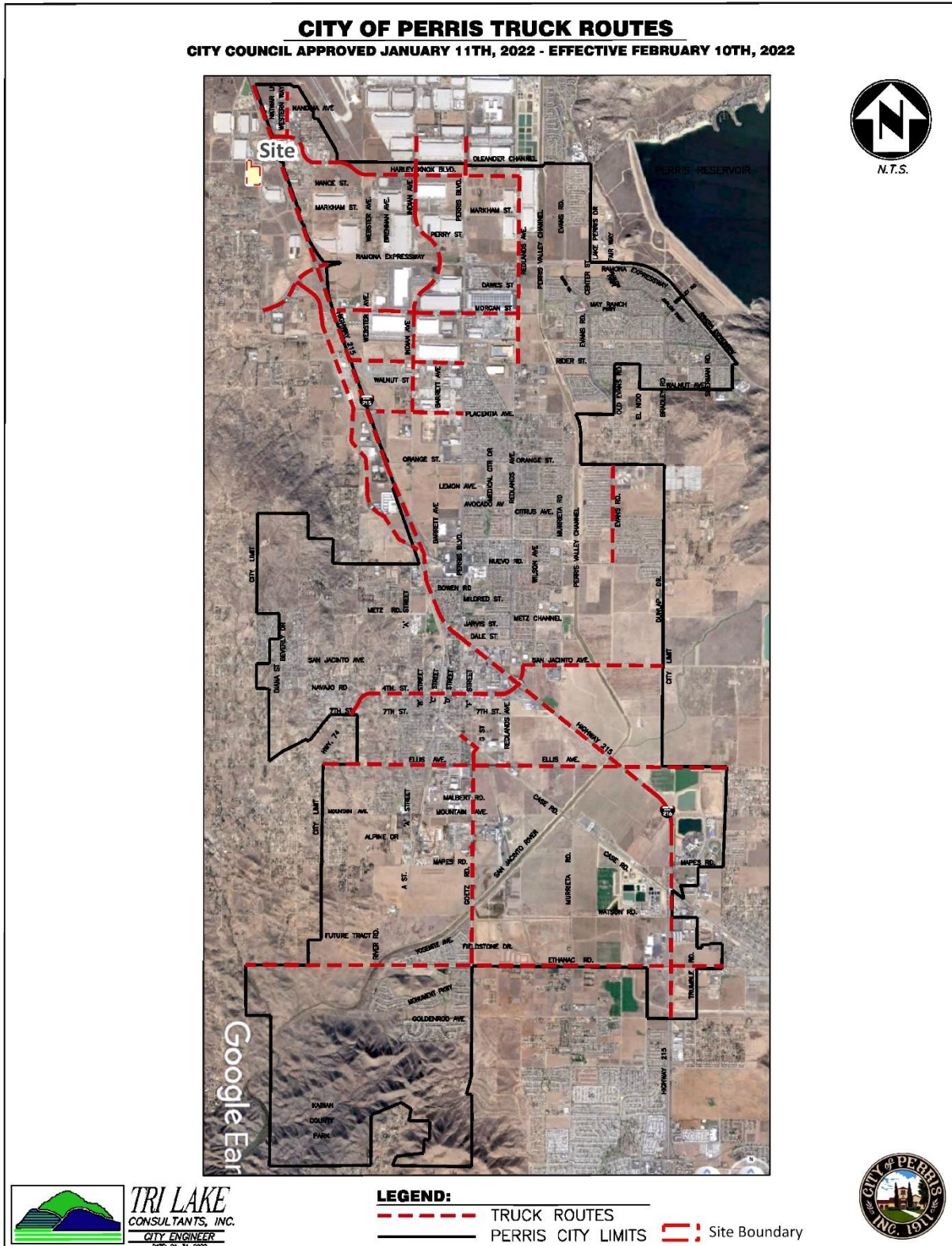


EXHIBIT 3-10: CITY OF PERRIS TRUCK ROUTES



3.7 EXISTING (2022) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in January and February 2022 when local schools were in session and operating on normal bell schedules. 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)

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.

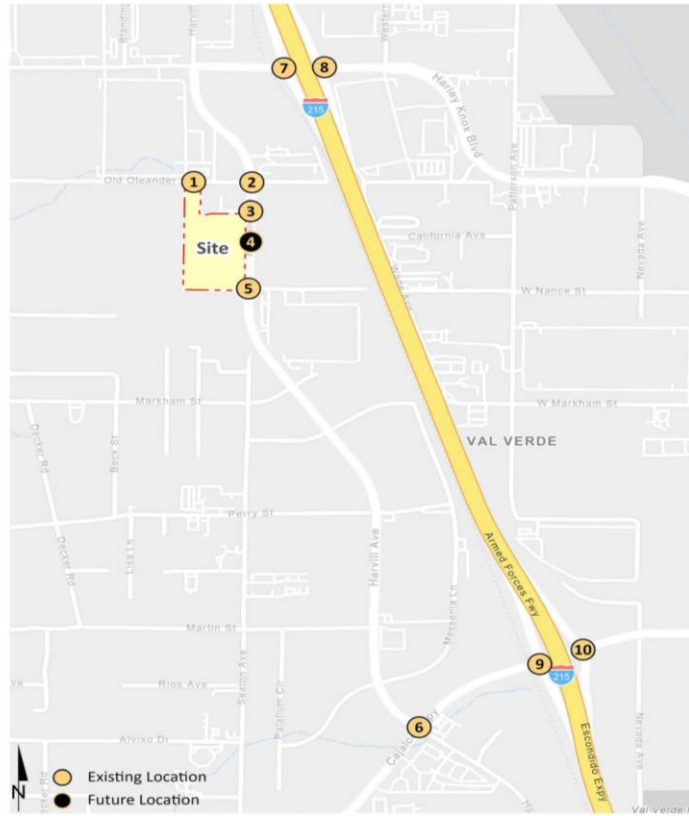
Existing weekday ADT volumes on arterial highways throughout the study area are shown on Exhibit 3-11. Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 14.29 = \text{Leg Volume}$$

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 7.0 percent. As such, the above equation utilizing a factor of 14.29 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.0 percent (i.e., $1/0.07 = 14.29$) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. This factor is consistent with that used for other traffic studies within the study area. Existing weekday AM and weekday PM peak hour intersection volumes are shown on Exhibit 3-11.

Volumes reported on the exhibits are expressed in actual vehicles. However, consistent with the County's guidelines, the peak hour intersection operations analysis utilizes passenger car equivalent (PCE) volumes. 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 County's Guidelines. PCE volumes can be found in Appendix 3.1.

EXHIBIT 3-11: EXISTING (2022) TRAFFIC VOLUMES



1 Driveway 1 & Old Oleander Av.	2 Harvill Av. & Old Oleander Av.	3 Harvill Av. & Peregrine Wy.	4 Harvill Av. & Driveway 2																																			
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12,850	47,650	15,750	22,550																																			
144(135) ↓ 1(4) ↓ 619(760) ↓	9,800 599(583) ↓ 910(848) ↓	15,750 247(180) ↓ 129(302) ↓	22,550 1081(502) ↑ 369(469) ↓																																			
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3.8 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized on Table 3-1, which indicates that all existing study area intersections are currently operating at acceptable LOS during the peak hours, with the exception of the following intersection:

- I-215 NB Ramps & Harley Knox Bl. (#8) – LOS F AM peak hour only

The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2022) CONDITIONS

# Intersection	Traffic Control ²	Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM
1 Driveway 1 & Old Oleander Av.	CSS	9.0	9.1	A	A
2 Harvill Av. & Old Oleander Av.	TS	7.3	7.7	A	A
3 Harvill Av. & Peregrine Wy.	CSS	9.9	9.5	A	A
4 Harvill Av. & Driveway 3		Future Intersection			
5 Harvill Av. & America's Tire Dr.	CSS	8.3	9.4	A	A
6 Harvill Av. & Cajalco Exwy.	TS	38.4	37.8	D	D
7 I-215 SB Ramps & Harley Knox Bl.	TS	31.8	29.4	C	C
8 I-215 NB Ramps & Harley Knox Bl.	TS	85.1	15.6	F	B
9 I-215 SB Ramps & Ramona Exwy.	TS	36.7	43.9	D	D
10 I-215 NB Ramps & Ramona Exwy.	TS	25.5	18.4	C	B

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

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

² TS = Traffic Signal; CSS = Cross-street Stop

3.9 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. There are no unsignalized study area intersections that currently warrant a traffic signal for Existing traffic conditions. Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

3.10 QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-215 Freeway at the Harley Knox Boulevard and Ramona Expressway interchanges. Queuing analysis findings are presented in Table 3-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 3-2, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing (2022) traffic conditions off-ramp queuing analysis are provided in Appendix 3.4.

TABLE 3-2: PEAK HOUR QUEUING SUMMARY FOR EXISTING (2022) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM
I-215 SB Ramps & Harley Knox Bl.	SBL/T	1,330	425	304	Yes	Yes
	SBR	270	36	45	Yes	Yes
I-215 NB Ramps & Harley Knox Bl.	NBL/T	1,120	26	32	Yes	Yes
	NBR	265	13	64	Yes	Yes
I-215 SB Ramps & Ramona Exwy.	SBL	530	445 ²	468 ²	Yes	Yes
	SBT	1,100	448 ²	481 ²	Yes	Yes
	SBR	530	138	78	Yes	Yes
I-215 NB Ramps & Ramona Exwy.	NBL	520	184	176	Yes	Yes
	NBT	1,120	187	181	Yes	Yes
	NBR	520	685 ^{2,3}	457 ²	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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

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

4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The proposed Project building is 317,760 square feet of building space, however, in an effort to conduct a conservative analysis a 333,648 square foot warehouse building has been evaluated in order to account for any future minor revisions in building size (approximately a 5% buffer). For the purposes of this TA, the building has been evaluated assuming high-cube short-term storage and transload warehouse use. Access to the Project site will be accommodated via Old Oleander Avenue, Peregrine Way, and Harvill Avenue. Regional access to the Project site is available from the I-215 Freeway via the existing Harley Knox Boulevard and Ramona Expressway interchanges.

4.1 PROJECT TRIP GENERATION

4.1.1 PROPOSED PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the ITE Trip Generation Manual (11th Edition, 2021) was used to calculate the trip generation. (2) The following trip generation rates and vehicle mix were utilized for calculating the trip generation for the proposed Project:

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for the Project. High-cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has also been obtained from the latest Trip Generation Manual. The SCAQMD recommended truck mix, by axle type for high-cube warehouses has been utilized for the 2-axle, 3-axle, and 4+-axle trucks: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

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 LOS analyses. The PCE factors are consistent with the recommended PCE factors In the County's Guidelines. Trip generation rates are summarized on Table 4-1 for actual vehicles and PCE.

TABLE 4-1: 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									
High-Cube Transload and Short-Term Storage	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks			0.002	0.001	0.003	0.001	0.001	0.002	0.037
3-Axle Trucks			0.002	0.002	0.004	0.001	0.001	0.002	0.046
4+-Axle Trucks			0.006	0.007	0.013	0.003	0.003	0.006	0.138
Passenger Car Equivalent (PCE) Trip Generation Rates⁴									
High-Cube Transload and Short-Term Storage	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks (PCE = 1.5)			0.003	0.002	0.005	0.002	0.001	0.003	0.055
3-Axle Trucks (PCE = 2.0)			0.004	0.004	0.008	0.002	0.002	0.004	0.091
4+-Axle Trucks (PCE = 3.0)			0.018	0.020	0.038	0.009	0.010	0.019	0.413

¹ Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

² TSF = thousand square feet

³ 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.

⁴ PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

Per the County's Guidelines, peak hour intersection operations analyses are to utilize the PCE trip generation. The trip generation summary illustrating daily and peak hour trip generation estimates for the Project in actual vehicles are shown on Table 4-2. The proposed Project is anticipated to generate 468 two-way trip-ends per day with 27 AM peak hour trips and 32 PM peak hour trips (see Table 4-2, in actual vehicles). PCE based trip generation for the Project are also summarized on Table 4-2.

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
Warehousing (Building18)	333.648 TSF							
Passenger Cars:		17	3	20	8	22	30	394
2-axle Trucks:		1	0	1	0	0	0	12
3-axle Trucks:		1	1	2	0	0	0	16
4+-axle Trucks:		2	2	4	1	1	2	46
Total Truck Trips (Actual Vehicles):		4	3	7	1	1	2	74
Total Trips (Actual Vehicles)²		21	6	27	9	23	32	468
Passenger Car Equivalent (PCE):								
Warehousing (Building18)	333.648 TSF							
Passenger Cars:		17	3	20	8	22	30	394
2-axle Trucks:		1	1	2	1	0	1	18
3-axle Trucks:		1	1	2	1	1	2	30
4+-axle Trucks:		6	7	13	3	3	6	138
Total Truck Trips (PCE):		8	9	17	5	4	9	186
Total Trips (PCE)²		25	12	37	13	26	39	580

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. In addition, truck routes for neighboring agencies have been taken into consideration in the development of the trip distribution patterns for heavy trucks. Exhibits 4-1 and 4-2 show the Project truck and passenger car trip distribution patterns, respectively. Note that the Project Truck distribution shows two alternatives that have been evaluated in this TA.

4.3 MODAL SPLIT

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

EXHIBIT 4-1: PROJECT (TRUCK) TRIP DISTRIBUTION

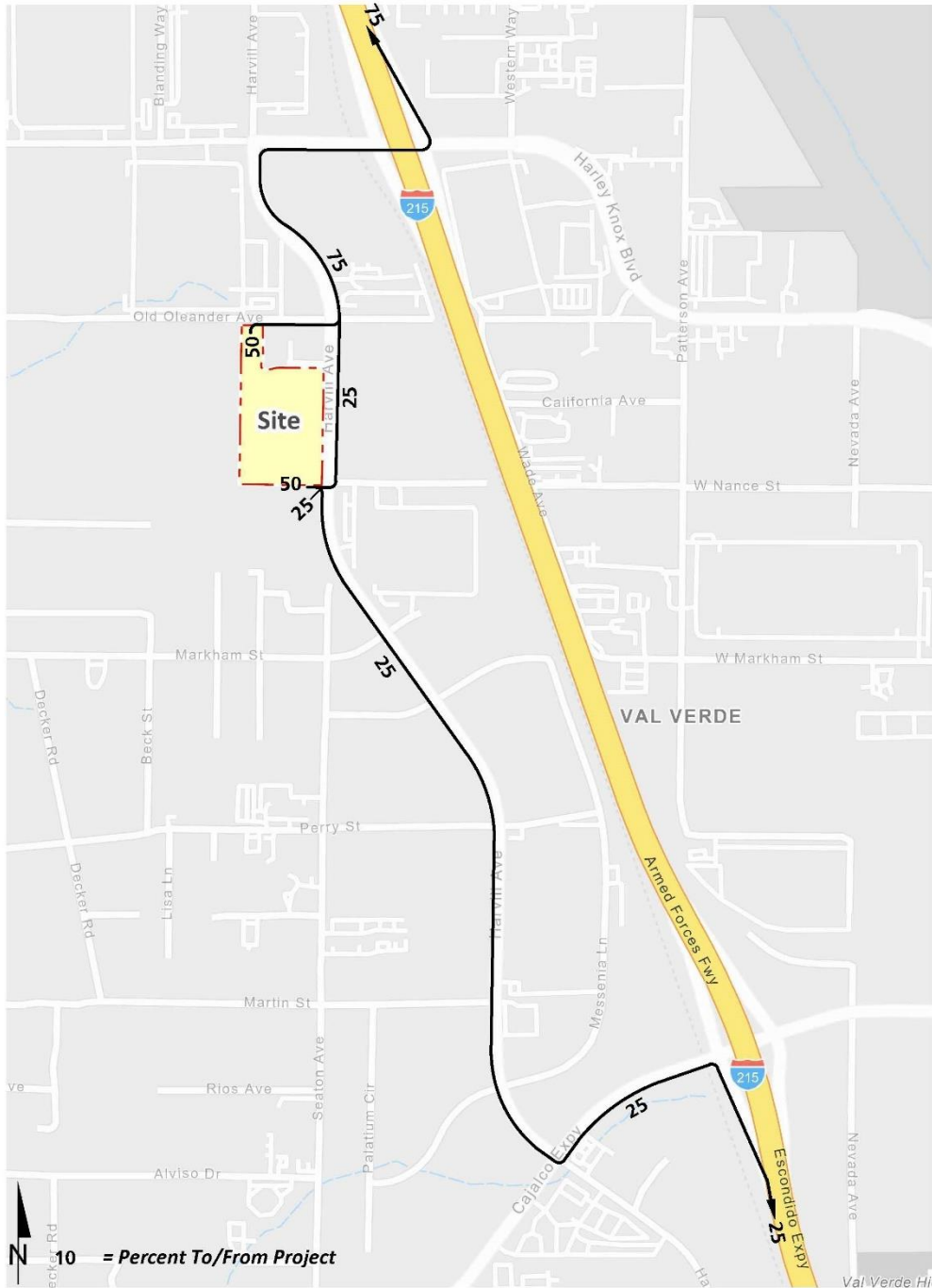


EXHIBIT 4-2: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



4.4 PROJECT TRIP ASSIGNMENT

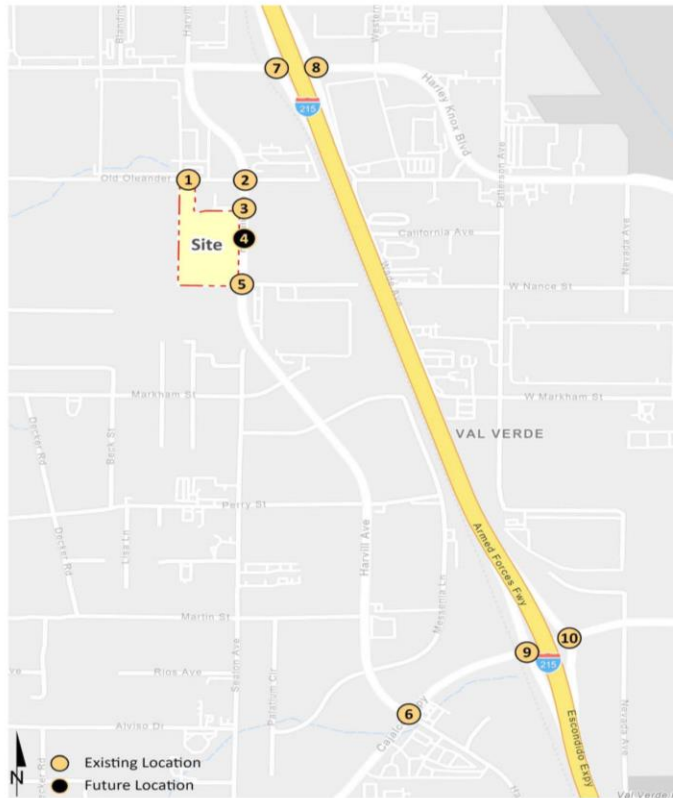
The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project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

4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2% per year, compounded annually, for 2025 conditions. The total ambient growth is 6.12% for 2025 traffic conditions (compounded growth of 2 percent per year over 3 years or $1.02^{3\text{years}}$). The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The currently adopted Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) growth forecasts for the County of Riverside identifies projected growth in population of 370,500 in 2016 to 525,600 in 2045, or a 41.9 percent increase over the 29-year period. (6) The change in population equates to roughly a 1.21 percent growth rate, compounded annually. Similarly, growth over the same 29-year period in households is projected to increase by 59.2 percent, or 1.62 percent annual growth rate. Finally, growth in employment over the same 29-year period is projected to increase by 83.4 percent, or a 2.11 percent annual growth rate. This results in an average of 1.65 percent annual growth rate. As such, the 2.0 percent per year ambient growth rate utilized in this TA would appear to conservatively estimate annual traffic growth and overstate as opposed to understate future traffic forecasts.

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES



1	Driveway 1 & Old Oleander Av.	2	Harvill Av. & Old Oleander Av.	3	Harvill Av. & Peregrine Wy.	4	Harvill Av. & Driveway 2
	Nominal 200		Nominal 150		Nominal 150		Nominal 150
	← 4(1) 2(3) →	← 4(1) ← 6(2) 2(3) →	← 2(1) ← 4(2) 0(2) →	← 2(1) ← 4(2) 0(2) →	← 2(1) ← 3(3) 1(4) →	← 2(1) ← 3(3) 1(4) →	← 2(1) ← 3(3) 1(4) → 5(2) → 1(2) →
	Nominal 150	Nominal 150	Nominal 150	Nominal 150	Nominal 150	Nominal 150	Nominal 150
5	Harvill Av. & America's Tire Dr.	6	Harvill Av. & Cajalco Exwy.	7	I-215 SB Ramps & Harley Knox Bl.	8	I-215 NB Ramps & Harley Knox Bl.
	150		250		100		100
← 3(1) ← 1(6) 1(2) → 2(7) →	← 3(1) ← 1(6) 1(2) → 2(7) →	← 0(2) ← 0(3) ← 2(8) 2(1) →	← 0(2) ← 0(3) ← 2(8) 2(1) →	← 10(3) 4(10) →	← 10(3) 4(10) →	← 10(3) 4(10) →	← 10(3) 4(10) →
	200		Nominal 250		Nominal 200		Nominal 100
9	I-215 SB Ramps & Ramona Exwy.	10	I-215 NB Ramps & Ramona Exwy.				
	100		Nominal 100				
← 7(3) 0(1) → 2(7) →	← 7(3) 0(1) → 2(7) →	← 1(0) 0(1) → 6(2) → 6(2) →	← 1(0) 0(1) → 6(2) → 6(2) →				
	150		Nominal 100				

###(##) AM(PM) Peak Hour Intersection Volumes
Average Daily Trips

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the County of Riverside. The cumulative project list includes known and foreseeable projects that are anticipated to contribute traffic to the study area intersections.

Where applicable, cumulative projects anticipated to contribute measurable traffic (i.e., 50 or more peak hour trips) to study area intersections have been manually added to the study area network to generate EAPC forecasts. In other words, this list of cumulative development projects has been reviewed to determine which projects would likely contribute measurable traffic through the study area intersections (e.g., those cumulative projects in close proximity to the proposed Project). For the purposes of this analysis, the cumulative projects that were determined to affect one or more of the study area intersections are shown on Exhibit 4-4, listed in Table 4-3, and have been considered for inclusion. Any additional traffic generated by other projects not on the cumulative projects list is likely accounted for through background ambient growth factors that have been applied to the peak hour volumes at study area intersections as discussed in Section 4.5 *Background Traffic*. Cumulative development projects shown in Exhibit 4-4 and listed in Table 4-3. Cumulative Only ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-5.

4.7 NEAR-TERM TRAFFIC CONDITIONS

The “buildup” approach combines existing traffic counts with a background ambient growth factor to forecast EAP (2025) and EAPC (2025) traffic conditions. An ambient growth factor accounts for background (area-wide) traffic increases that occur over time up to the year 2025 from the year 2022. Traffic volumes generated by the Project are then added to assess the near-term traffic conditions. The 2025 roadway network is similar to the Existing conditions roadway network, with the exception of future driveways proposed to be developed by the Project. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Existing Plus Ambient Growth Plus Project (2025)
 - Existing 2022 counts
 - Ambient growth traffic (6.12%)
 - Project traffic
- Existing Plus Ambient Growth Plus Project Plus Cumulative (2025)
 - Existing 2022 counts
 - Ambient growth traffic (6.12%)
 - Cumulative Development traffic
 - Project traffic

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

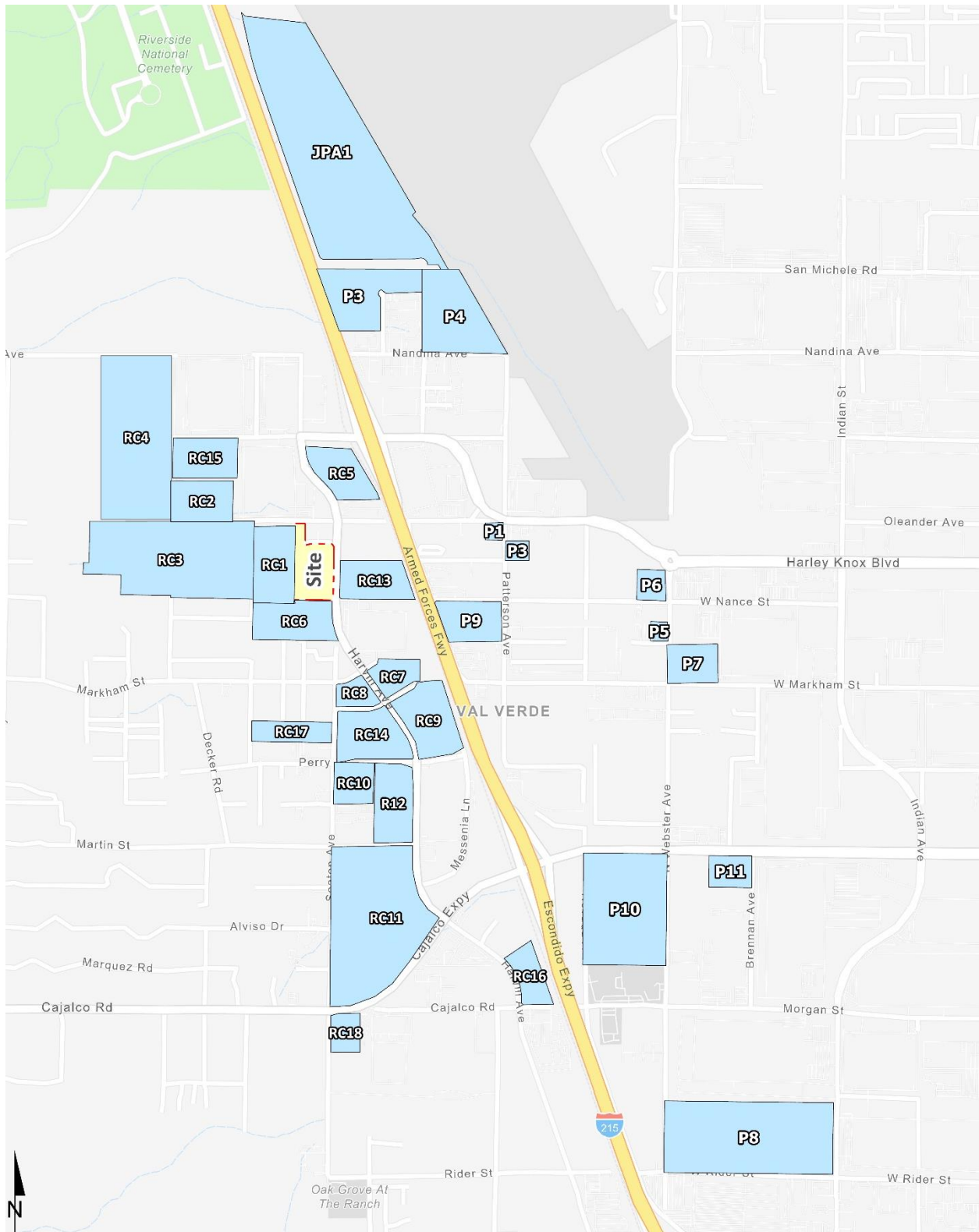
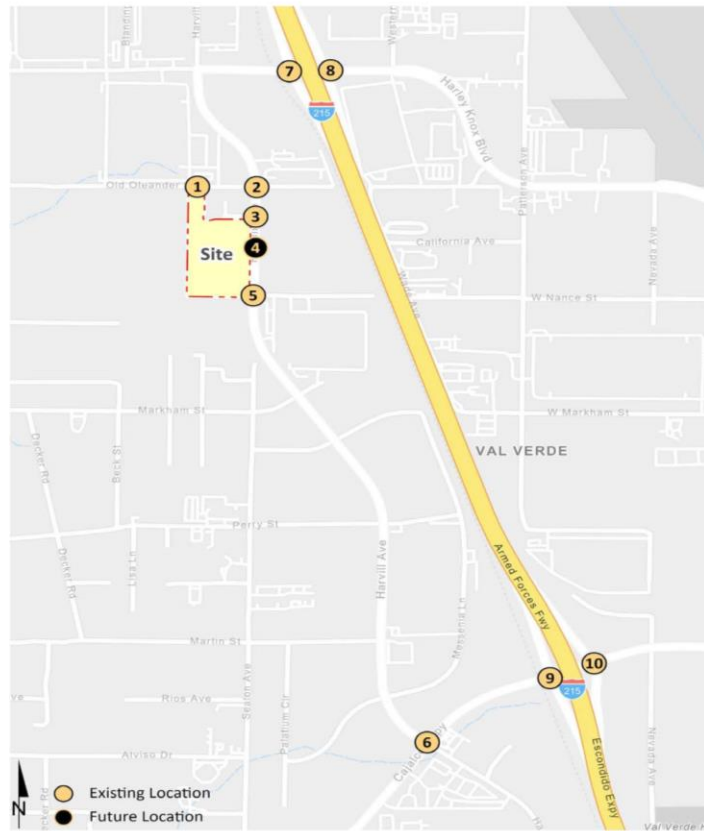


EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES



1 Driveway 1 & Old Oleander Av.	2 Harvill Av. & Old Oleander Av.	3 Harvill Av. & Peregrine Wy.	4 Harvill Av. & Driveway 2
<p>4,400</p> <p>← 179(98)</p> <p>73(220) →</p> <p>4,400</p>	<p>7,400</p> <p>← 136(77)</p> <p>← 259(138)</p> <p>58(174) →</p> <p>15(46) →</p> <p>43(21) ↑</p> <p>76(375) ↑</p> <p>4,400</p>	<p>4,550</p> <p>← 249(184)</p> <p>104(396) ↑</p> <p>4,550</p>	<p>4,550</p> <p>← 244(182)</p> <p>4(2)</p> <p>↑ 1(5)</p> <p>0(2)</p> <p>104(390) →</p> <p>1(1)</p> <p>150</p> <p>4,550</p>
5 Harvill Av. & America's Tire Dr.	6 Harvill Av. & Cajalco Exwy.	7 I-215 SB Ramps & Harley Knox Bl.	8 I-215 NB Ramps & Harley Knox Bl.
<p>4,500</p> <p>← 38(15)</p> <p>← 202(168)</p> <p>← 4(1)</p> <p>↑ 2(3)</p> <p>2(9)</p> <p>12(39) →</p> <p>4(14) ↓</p> <p>13(6) ↑</p> <p>91(349) ↑</p> <p>8(3) ↑</p> <p>1,150</p>	<p>15,800</p> <p>← 53(130)</p> <p>← 100(87)</p> <p>← 219(666)</p> <p>↑ 634(270)</p> <p>↑ 412(253)</p> <p>↑ 461(205)</p> <p>135(95) →</p> <p>120(471) →</p> <p>159(71) ↓</p> <p>53(166) ↑</p> <p>69(116) ↑</p> <p>156(45.4) ↑</p> <p>9,900</p>	<p>7,950</p> <p>← 422(165)</p> <p>← 490(210)</p> <p>↑ 104(49)</p> <p>↑ 54(215)</p> <p>163(513) ↓</p> <p>22(70) ↓</p> <p>8,750</p>	<p>7,900</p> <p>↑ 166(548)</p> <p>← 98(234)</p> <p>135(431) →</p> <p>518(292) →</p> <p>60(30) ↑</p> <p>209(65) ↑</p> <p>12,450</p> <p>2,250</p> <p>10,500</p> <p>2,050</p>
9 I-215 SB Ramps & Ramona Exwy.	10 I-215 NB Ramps & Ramona Exwy.	<p>###(###) AM(PM) Peak Hour Intersection Volumes</p> <p>## Average Daily Trips</p>	
<p>17,000</p> <p>← 610(268)</p> <p>← 891(1144)</p> <p>← 907(489)</p> <p>↑ 235(420)</p> <p>323(984) →</p> <p>174(605) ↓</p> <p>24,850</p>	<p>22,050</p> <p>13,550</p> <p>↑ 836(1065)</p> <p>↑ 569(623)</p> <p>191(595) →</p> <p>1022(1534) →</p> <p>573(286) ↑</p> <p>573(286) ↑</p> <p>218(158) ↑</p> <p>22,050</p> <p>8,600</p>		

TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

No.	Project Name / Case Number	Land Use	Quantity	Units ¹
RC1	Majestic Freeway Business Center - Building 20	High-Cube Warehouse	426.821	TSF
RC2	Majestic Freeway Business Center - Building 21,22	Warehousing	241.059	TSF
RC3	Knox Logistics Center	High-Cube Warehouse	1,259.410	TSF
RC4	Oleander Business Park	High-Cube Warehouse	680.000	TSF
RC5	PPT190031	High-Cube Warehouse	418.000	TSF
RC6	Majestic Freeway Business Center - Building 19	Warehousing	364.560	TSF
RC7	Majestic Freeway Business Center - Building 12	Warehousing	154.751	TSF
RC8	Majestic Freeway Business Center - Building 15	Warehousing	90.279	TSF
RC9	Majestic Freeway Business Center - Building 11	High-Cube Warehouse	391.045	TSF
RC10	PPT180025: Seaton Commerce Center	High-Cube Warehouse	210.800	TSF
RC11	Majestic Freeway Business Center - Buildings 1, 3 & 4	Warehousing	48.930	TSF
		High-Cube Warehouse	1,195.740	TSF
RC12	Majestic Freeway Business Center - Building 18	High-Cube Warehouse	333.648	TSF
RC13	Majestic Freeway Business Center - Building 17	High-Cube Warehouse	268.955	TSF
RC14	Majestic Freeway Business Center - Building 13	High-Cube Warehouse	322.997	TSF
RC15	PPT210130	Warehousing	239.308	TSF
RC16	Harvill & Cajalco Warehouse	General Light Industrial	99.770	TSF
		Truck Trailer Yard	133	Spaces
RC17	PPT210022	General Light Industrial	98.940	TSF
RC18	PPT210133	Warehousing	350.481	TSF
P1	Canyon Steel (CS)	Industrial	25.000	TSF
P2	First March Logistics	Warehousing	589.971	TSF
P3	Duke - Patterson at Nance	High-Cube Warehouse	580.000	TSF
P4	Western Industrial (DRP19-00003)	High-Cube Warehouse	250.000	TSF
P5	Marijuana Manufacturing (MM)	Industrial	1.000	TSF
P6	AAA	Industrial	2.000	TSF
P7	Integra Expansion / MMOD 17-05075	High-Cube Warehouse	273.000	TSF
P8	Rados / DPR 07-0119	High-Cube Warehouse	1,200.000	TSF
P9	Patterson Commerce Center	High-Cube Fulfillment	224.247	TSF
		High-Cube Cold Storage	39.573	TSF
P10	Ramona Gateway Commerce Center	High-Cube Fulfillment	902.713	TSF
		High-Cube Cold Storage	47.511	TSF
		Fast-Food Restaurant w/	16.500	TSF
		Fast-Food Restaurant w/	10.200	TSF
		Coffee Shop w/ DT	2.400	TSF
P10	Ramona Gateway Commerce Center	Automated Car Wash	1.000	Tunnel
		Gas Station w/ Market	16.000	VFP
		Warehousing	162.871	TSF
JPA1	VIP 215	High-Cube Warehouse	2,219.850	TSF

¹ TSF = Thousand Square Feet; VFP = Vehicle Fueling Positions

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5 EAP (2025) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EAP (2025) conditions and the resulting intersection operations, traffic signal warrant, and queuing analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAP (2025) 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).
- The I-215 Freeway at Placentia Avenue interchange which is anticipated to be completed and open in Fall of 2022 has been assumed to be completed with improvements in place for EAP (2025) traffic conditions.

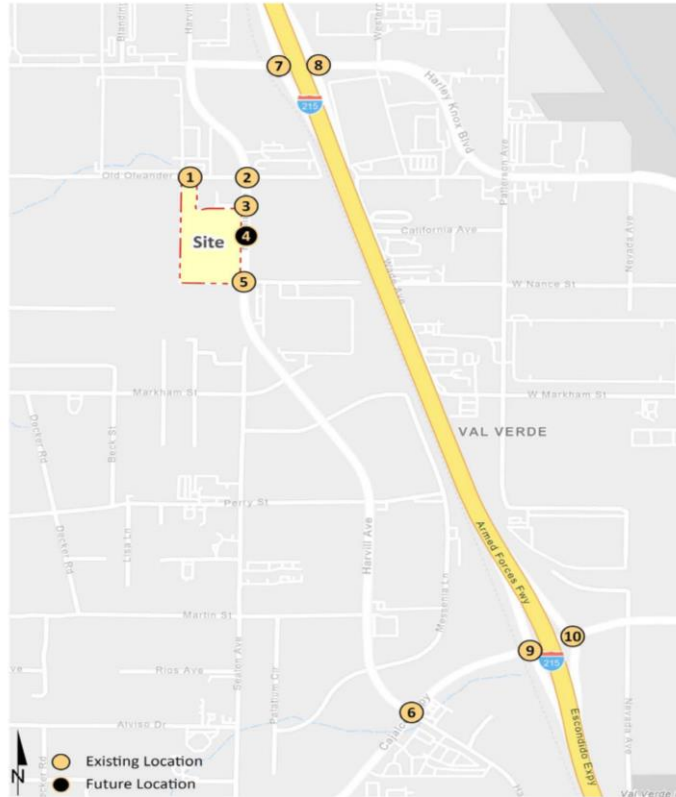
5.2 EAP (2025) TRAFFIC VOLUME FORECASTS

This scenario includes Existing (2022) traffic volumes plus an ambient growth factor of 6.12% and the addition of Project traffic. The weekday ADT volumes and peak hour volumes which can be expected for EAP (2025) traffic conditions are shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

EAP (2025) 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 on Table 5-1 for EAP traffic conditions, which indicate there are no additional intersections anticipated to operate at an unacceptable LOS with the addition of Project traffic under EAP traffic conditions in addition to the location currently operating at unacceptable LOS. Intersection operations improve at the I-215 Freeway and Ramona Expressway interchange for EAP traffic conditions as there are reductions to the baseline traffic volumes with the opening of the I-215 Freeway and Placentia Avenue interchange. The intersection operations analysis worksheets for EAP traffic conditions are included in Appendix 5.1 of this TA.

EXHIBIT 5-1: EAP (2025) TRAFFIC VOLUMES



1	2	3	4
1 Driveway 1 & Old Oleander Av. 300 0(1) 0(2) 11(11) 250	2 Harvill Av. & Old Oleander Av. 1,050 10,350 107 266(328) 3(2) 15(24) 2(5) 4(12) 1,050 <i>Nominal</i>	3 Harvill Av. & Peregrine Wy. 10,050 2(1) 269(341) 1(5) 437(367) 150	4 Harvill Av. & Driveway 2 9,100 2(1) 269(345) 1(4) 1(4) 5(2) 436(362) 9,150
5 Harvill Av. & America's Tire Dr. 9,150 3(1) 264(348) 3(0) 1(2) 2(7) 200	6 Harvill Av. & Cajal Exwy. 100 11,800 20(36) 108(215) 187(239) 41(24) 664(728) 51(212) 302(169) 350(150) 69(123) 10,200	7 I-215 SB Ramps & Harley Knox Bl. 6,400 155(165) 3(0) 392(278) 262(191) 137(320) 507(389) 5(84) 11,850	8 I-215 NB Ramps & Harley Knox Bl. 16,800 10,600 323(211) 575(456) 7(14) 1(1) 36(189) 16,800
9 I-215 SB Ramps & Ramona Exwy. 10,250 115(107) 1(4) 584(715) 809(670) 241(303) 445(575) 246(264) 20,950	10 I-215 NB Ramps & Ramona Exwy. 28,250 7,800 477(464) 796(718) 80(80) 952(1213) 256(256) 256(256) 439(338) 32,400	###(##) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips	
8,550	13,950	5,800	2,900

TABLE 5-1: INTERSECTION ANALYSIS FOR EAP (2025) CONDITIONS

# Intersection	Traffic Control ²	Existing (2022)				EAP (2025)			
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Driveway 1 & Old Oleander Av.	CSS	9.0	9.1	A	A	9.2	9.2	A	A
2 Harvill Av. & Old Oleander Av.	TS	7.3	7.7	A	A	7.5	8.0	A	A
3 Harvill Av. & Peregrine Wy.	CSS	9.9	9.5	A	A	9.2	9.6	A	A
4 Harvill Av. & Driveway 3	CSS	Future Intersection				10.5	10.9	B	B
5 Harvill Av. & America's Tire Dr.	CSS	8.3	9.4	A	A	11.7	11.4	B	B
6 Harvill Av. & Cajalco Exwy.	TS	38.4	37.8	D	D	40.2	39.5	D	D
7 I-215 SB Ramps & Harley Knox Bl.	TS	31.8	29.4	C	C	33.2	30.4	C	C
8 I-215 NB Ramps & Harley Knox Bl.	TS	85.1	15.6	F	B	107.3	17.6	F	B
9 I-215 SB Ramps & Ramona Exwy.	TS	36.7	43.9	D	D	33.6	35.4	C	D
10 I-215 NB Ramps & Ramona Exwy.	TS	25.5	18.4	C	B	18.8	15.3	B	B

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

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

² TS = Traffic Signal; CSS = Cross-street Stop

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EAP (2025) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants. No study area intersections are anticipated to meet either peak hour volume or ADT volume-based warrants with the addition of Project traffic (see Appendix 5.2).

5.5 QUEUING ANALYSIS

Queuing analysis findings for EAP (2025) are presented on Table 5-2. As shown on Table 5-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic. Worksheets for EAP (2025) traffic conditions queuing analysis are provided in Appendix 5.3.

TABLE 5-2: PEAK HOUR QUEUING SUMMARY FOR EAP (2025) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2022)				EAP (2025)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
I-215 SB Ramps & Harley Knox Bl.	SBL/T	1,330	425	304	Yes	Yes	506 ²	328	Yes	Yes
	SBR	270	36	45	Yes	Yes	38	46	Yes	Yes
I-215 NB Ramps & Harley Knox Bl.	NBL/T	1,120	26	32	Yes	Yes	26	32	Yes	Yes
	NBR	265	13	64	Yes	Yes	15	65	Yes	Yes
I-215 SB Ramps & Ramona Exwy.	SBL	530	445 ²	468 ²	Yes	Yes	468 ²	424 ²	Yes	Yes
	SBT	1,100	448 ²	481 ²	Yes	Yes	469 ²	437 ²	Yes	Yes
	SBR	530	138	78	Yes	Yes	77	46	Yes	Yes
I-215 NB Ramps & Ramona Exwy.	NBL	520	184	176	Yes	Yes	153	147	Yes	Yes
	NBT	1,120	187	181	Yes	Yes	151	144	Yes	Yes
	NBR	520	685 ^{2,3}	457 ²	Yes	Yes	478 ²	302	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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

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

5.6 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the County of Riverside deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, roadway intersections were found to be deficient. Improvements necessary to improve project-related traffic deficiencies are shown in Table 5-3. Table 5-3 indicates the physical improvements needed to address LOS deficiencies at each of the study area intersections under EAP (2025) traffic conditions. The improvements have been identified to improve the EAP (2025) deficiencies back to acceptable levels. Intersection analysis worksheets for EAP (2025) traffic conditions, with improvements, are provided in Appendix 5.4.

TABLE 5-3: INTERSECTION ANALYSIS FOR EAP (2025) CONDITIONS WITH IMPROVEMENTS

# Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
		Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
		L	T	R	L	T	R	L	T	R	L	T	R				
8 I-215 NB Ramps & Harley Knox Bl.																	
- Without Improvements	TS	0	1	1	0	0	0	1	2	0	0	2	1	107.3	17.6	F	B
- With Improvements	TS	0	1	1	0	0	0	2	2	0	0	2	1	28.8	15.7	C	B

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

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

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

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

³ TS = Traffic Signal

As shown previously in Table 5-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for EAP (2025) traffic conditions. As such, no improvements have been identified for the off-ramps.

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6 EAPC (2025) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EAPC (2025) conditions and the resulting intersection operations, traffic signal warrant, and queuing analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAPC (2025) 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 EAPC (2025) conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAPC (2025) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).
- The I-215 Freeway at Placentia Avenue interchange which is anticipated to be completed and open in Fall of 2022 has been assumed to be completed with improvements in place for EAPC (2025) traffic conditions.

6.2 EAPC (2025) TRAFFIC VOLUME FORECASTS

This scenario includes Existing (2022) traffic volumes plus an ambient growth factor of 6.12%, traffic from pending and approved cumulative development projects, and the addition of Project traffic. The weekday ADT volumes and peak hour volumes which can be expected for EAPC (2025) traffic conditions are shown on Exhibit 6-1.

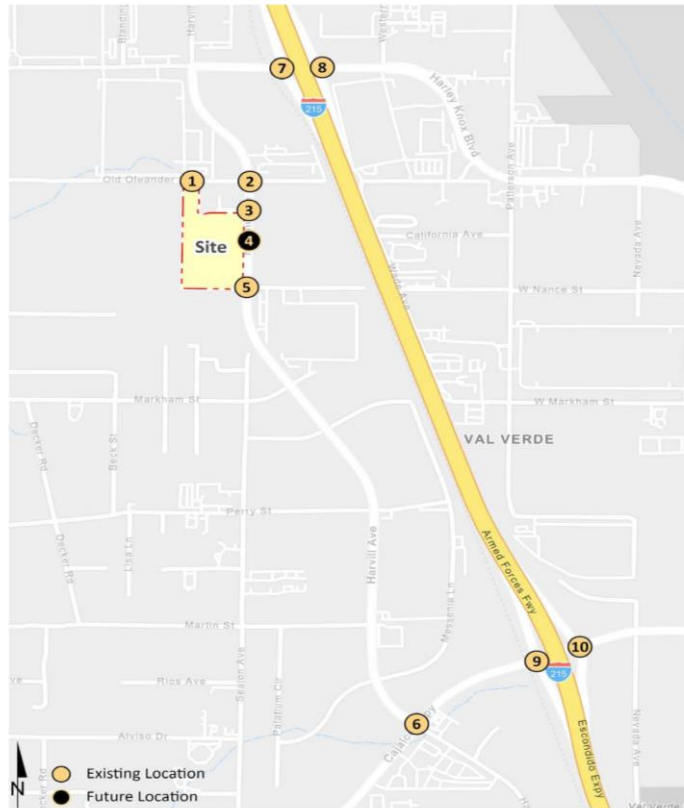
6.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under EAPC (2025) conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown on Table 6-1, the study area intersections are anticipated to operate at an acceptable LOS under EAPC (2025) traffic conditions with the exception of the following intersections:

- Harvill Av. & Cajalco Exwy. (#6) – LOS F AM and PM peak hours
- I-215 SB Ramps & Harley Knox Bl. (#7) – LOS F AM and PM peak hours
- I-215 NB Ramps & Harley Knox Bl. (#8) – LOS F AM and PM peak hours
- I-215 SB Ramps & Ramona Exwy. (#9) – LOS F AM and PM peak hours
- I-215 NB Ramps & Ramona Exwy. (#10) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for EAPC (2025) traffic conditions are included in Appendix 6.1 of this TA.

EXHIBIT 6-1: EAPC (2025) TRAFFIC VOLUMES



1	2	3	4
Driveway 1 & Old Oleander Av. 300 0(1) ↓ 4(14) ↓ 0(2) ↓ 84(231) → 4,650	Harvill Av. & Old Oleander Av. 5,450 17,750 146(84) ↓ 525(466) ↓ 3(2) ↓ 73(198) ↓ 2(5) ↓ 19(58) ↓ 5,450 Nominal	Harvill Av. & Peregrine Wy. 250 14,650 2(1) ↓ 518(524) ↓ 1(5) ↓ 541(763) ↑ 150	Harvill Av. & Driveway 2 150 13,700 2(1) ↓ 513(527) ↓ 4(2) ↓ 1(4) ↓ 1(4) ↓ 5(2) ↓ 540(752) ↓ 1(1) ↓ 13,700
5	6	7	8
Harvill Av. & America's Tire Dr. 13,650 41(16) ↓ 466(516) ↓ 7(1) ↓ 13(41) → 6(21) ↓ 1,350	Harvill Av. & Cajalco Exwy. 700 27,550 73(166) ↓ 209(302) ↓ 406(905) ↓ 176(120) ↓ 784(1199) ↓ 210(284) ↓ 13,600	I-215 SB Ramps & Harley Knox Bl. 53,700 14,350 577(330) ↓ 3(0) ↓ 882(488) ↓ 366(240) ↓ 191(535) ↓ 670(902) ↓ 27(154) ↓ 20,600	I-215 NB Ramps & Harley Knox Bl. 150 36,400 1313(1081) ↑ 490(732) ↓ 459(642) ↓ 1093(748) ↓ 67(44) ↓ 1(1) ↓ 245(254) ↓ 4,950
9	10		
I-215 SB Ramps & Ramona Exwy. 27,200 724(376) ↓ 1(4) ↓ 1508(1860) ↓ 1717(1155) ↓ 475(727) ↓ 735(1558) → 420(869) ↓ 45,750	I-215 NB Ramps & Ramona Exwy. 50,250 21,350 62,550 1313(1529) ↑ 1364(1341) ↓ 271(675) ↓ 1975(2747) ↓ 829(542) ↓ 829(542) ↑ 657(496) ↓ 17,200	##(##) AM(PM) Peak Hour Intersection Volumes ## Average Daily Trips	

TABLE 6-1: INTERSECTION ANALYSIS FOR EAPC (2025) CONDITIONS

#	Intersection	Traffic Control ²	EAPC (2025)			
			Delay ¹ (secs.)		Level of Service	
			AM	PM	AM	PM
1	Driveway 1 & Old Oleander Av.	CSS	10.8	12.8	B	B
2	Harvill Av. & Old Oleander Av.	TS	10.3	11.5	B	B
3	Harvill Av. & Peregrine Wy.	CSS	10.2	10.4	B	B
4	Harvill Av. & Driveway 3	CSS	16.1	18.5	C	C
5	Harvill Av. & America's Tire Dr.	CSS	19.3	28.2	C	D
6	Harvill Av. & Cajalco Exwy.	TS	154.1	>200.0	F	F
7	I-215 SB Ramps & Harley Knox Bl.	TS	113.3	94.4	F	F
8	I-215 NB Ramps & Harley Knox Bl.	TS	>200.0	183.9	F	F
9	I-215 SB Ramps & Ramona Exwy.	TS	183.5	>200.0	F	F
10	I-215 NB Ramps & Ramona Exwy.	TS	>200.0	>200.0	F	F

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

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

² TS = Traffic Signal; CSS = Cross-street Stop

6.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EAPC (2025) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants. There are no study area intersections anticipated to meet either peak hour or planning level (ADT) warrants for EAPC (2025) traffic conditions (see Appendix 6.2).

6.5 QUEUING ANALYSIS

Queuing analysis findings for EAPC (2025) are presented on Table 6-2. As shown on Table 6-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows with the addition of Project traffic, with the exception of the following movements:

- I-215 SB Ramps & Ramona Exwy. (#9): Southbound Left (AM and PM peak hours, Southbound Left-Through (AM and PM peak hours), and Southbound Right (AM peak hour only)
- I-215 NB Ramps & Ramona Exwy. (#10): Northbound Right (AM peak hour only)

Worksheets for EAPC (2025) traffic conditions queuing analysis are provided in Appendix 6.3.

TABLE 6-2: PEAK HOUR QUEUING SUMMARY FOR EAPC (2025) CONDITIONS

Intersection	Movement	Available Stacking Distance	95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM
I-215 SB Ramps & Harley Knox Bl.	SBL/T	1,330	1,151 ²	644 ²	Yes	Yes
	SBR	270	266	62	Yes	Yes
I-215 NB Ramps & Harley Knox Bl.	NBL/T	1,120	79	57	Yes	Yes
	NBR	265	217 ²	171	Yes	Yes
I-215 SB Ramps & Ramona Exwy.	SBL	530	1,312 ²	1,413 ²	No	No
	SBT	1,100	1,316 ²	1,434 ²	No	No
	SBR	530	980 ²	377	No	Yes
I-215 NB Ramps & Ramona Exwy.	NBL	520	493 ²	284	Yes	Yes
	NBT	1,120	500 ²	289	Yes	Yes
	NBR	520	1,008 ²	631 ^{2,3}	No	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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

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

6.6 NEAR-TERM DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. Based on the County of Riverside deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, roadway intersections were found to be deficient. Improvements necessary to improve project-related traffic deficiencies are shown in Table 6-3. Table 6-3 indicates the physical improvements needed to address LOS deficiencies at each of the study area intersections under EAPC (2025) traffic conditions. The improvements have been identified to improve the EAPC (2025) deficiencies back to acceptable levels. Intersection analysis worksheets for EAPC (2025) traffic conditions, with improvements, are provided in Appendix 6.4.

TABLE 6-3: INTERSECTION ANALYSIS FOR EAPC (2025) CONDITIONS WITH IMPROVEMENTS

#	Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service		
			Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
			L	T	R	L	T	R	L	T	R	L	T	R	L	T	R		
6	Harvill Av. & Cajalco Exwy.																		
	- Without Improvements	TS	2	2	0	2	2	0	1	2	1	2	2	1>	154.1	>200.0	F	F	
	- With Improvements	TS	2	2	0	2	2	0	1	3	1	2	3	1	53.4	54.1	D	D	
7	I-215 SB Ramps & Harley Knox Bl.																		
	- Without Improvements	TS	0	0	0	0	1	1	0	2	d	1	2	0	113.3	94.4	F	F	
	- With Improvements	TS	0	0	0	1	1	1	0	2	d	2	1	0	29.3	28.4	C	C	
8	I-215 NB Ramps & Harley Knox Bl.																		
	- Without Improvements	TS	0	1	1	0	0	0	1	2	0	0	2	1	>200.0	183.9	F	F	
	- With Improvements	TS	0	1	1	0	0	0	2	2	0	0	2	1>>	14.2	26.4	B	C	
9	I-215 SB Ramps & Ramona Exwy.																		
	- Without Improvements	TS	0	0	0	1	1	1	0	2	0	1	2	0	183.5	>200.0	F	F	
	- With Improvements	TS	0	0	0	2	1	1	0	3	1	2	3	0	35.8	54.6	D	D	
10	I-215 NB Ramps & Ramona Exwy.																		
	- Without Improvements	TS	1	1	1	0	0	0	1	2	0	0	2	1	>200.0	>200.0	F	F	
	- With Improvements	TS	1	1	1	0	0	0	2	3	0	0	3	1>>	36.3	33.2	D	C	

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

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

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

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

³ TS = Traffic Signal

With the proposed intersection improvements at the I-215 Southbound Ramps and Ramona Expressway, the peak hour queues are also anticipated to improve (see Table 6-4). The I-215 Southbound Ramps also require southbound left turn storage of 700-feet to accommodate the anticipated future peak hour queues.

TABLE 6-4: PEAK HOUR QUEUING SUMMARY FOR EAPC (2025) CONDITIONS WITH IMPROVEMENTS

Intersection	Movement	Available Stacking Distance	95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM
I-215 SB Ramps & Ramona Exwy.	SBL	700	429	696 ²	Yes	Yes
	SBT	1,100	482	789 ²	Yes	Yes
	SBR	530	804 ^{2,3}	350	Yes	Yes
I-215 NB Ramps & Ramona Exwy.	NBL	520	390	311	Yes	Yes
	NBT	1,120	393	317	Yes	Yes
	NBR	520	930 ^{2,3}	696 ^{2,3}	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 15 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

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

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

7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the County of Riverside are funded through a combination of improvements constructed by the Project, development impact fee programs. Fee programs applicable to the Project are described below.

7.1 RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF)

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2016 to address major changes in right of way acquisition and improvement cost factors. (7) This regional program was put into place to ensure that development pays its fair share, and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

7.2 RIVERSIDE COUNTY DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The Project is located within the County's Mead Valley Area Plan and therefore will be subject to County of Riverside DIF in an effort by the County to address development throughout its unincorporated area. The DIF program consists of two separate transportation components: the Roads, Bridges and Major Improvements component and the Traffic Signals component. Eligible facilities for funding by the County DIF program are identified on the County's Public Needs List, which currently extends through the year 2020. (8) A comprehensive review of the DIF program is now planned in order to update the nexus study. This will result in development of a revised "needs list" extending the program time horizon from 2010 to 2030.

The cost of signaling DIF network intersections is identified under the Traffic Signals component of the DIF program. County staff generally defines DIF eligible intersections as those consisting of two intersecting general plan roadways. If the intersection meets this requirement, it is potentially eligible for up to \$235,000 of credit, which is subject to negotiations with the County.

7.3 MEASURE A

Measure A, Riverside County's half-cent sales tax for transportation, was adopted by voters in 1988 and extended in 2002. It will continue to fund transportation improvements through 2038. Measure A funds a wide variety of transportation projects and services throughout the County. Riverside County Transportation Commission (RCTC) is responsible for administering the program. Measure A dollars are spent in accordance with a voter-approved expenditure plan that was adopted as part of the 1988 election.

7.4 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate. When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, have been provided in Table 7-1 for the applicable deficient study area intersections. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 7-1: PROJECT FAIR SHARE CALCULATIONS

#	Intersection	Project			Net New Traffic	Project % of New Traffic	
		Existing	Only	EAPC			
6	Harvill Av. & Cajalco Exwy.	AM:	2,761	15	5,569	2,808	0.5%
		PM:	2,811	19	5,976	3,165	0.6%
9	I-215 SB Ramps & Ramona Exwy.	AM:	3,599	11	6,308	2,709	0.4%
		PM:	3,586	12	7,032	3,446	0.3%
10	I-215 NB Ramps & Ramona Exwy.	AM:	4,379	8	7,345	2,966	0.3%
		PM:	4,164	4	8,001	3,837	0.1%

BOLD = Denotes highest fair share percentage.

¹ Although the intersection operates at an acceptable LOS under EAPC traffic conditions, fair share calculations have been provided as the intersection meets peak hour warrants for a traffic signal under EAPC traffic conditions.

8 REFERENCES

1. **County of Riverside Transportation Department.** *Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled.* County of Riverside : s.n., December 2020.
2. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
3. **VRPA Technologies, Inc. for Riverside County Transportation Commission.** *Riverside County Long Range Transportation Study.* County of Riverside : VRPA Technologies, Inc., December 2019.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014, Updated March 30, 2021 (Revision 6).
6. **Southern California Association of Governments (SCAG).** *2020 Regional Transportation Plan / Sustainable Communities Strategy.* Adopted September 2020.
7. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.
8. **Willdan Financial Services.** *County of Riverside Development Impact Fee Study Update.* County of Riverside : s.n., 2013.

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APPENDIX 1.1: APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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EXHIBIT B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the Riverside County Transportation Department requirements for traffic impact analysis of the following project. The analysis must follow the Riverside County Transportation Department Traffic Study Guidelines dated April 2008.

Case No. PPT220003

Related Cases-

SP No. 341 ← Project is not technically within SP00341 or covered in EIR00466.

EIR No. 466 ←

GPA No. _____

CZ No. _____

Project Name: Majestic Freeway Business Center Specific Plan - Building 18

Project Address: Southwest corner of Harvill Avenue and Peregrine Way

Project Description: 317,760 square feet of high-cube transload and short-term storage warehouse use

	<u>Consultant</u>	<u>Developer - Representative</u>
Name:	<u>Urban Crossroads Inc. - Charlene So</u>	<u>T&B Planning</u>
Address:	<u>1133 Camelback St. #8329</u> <u>Newport Beach, CA 92658</u>	<u>3200 El Caminio Real, Suite 100</u> <u>Irvine, CA 92602</u>
Telephone:	<u>949-861-0177</u>	_____
Fax:	_____	_____

A. Trip Generation Source: ITE Trip Generation Manual, 11th Edition (2021)

Current GP Land Use	<u>SP</u>	Proposed Land Use	<u>SP</u>
Current Zoning	<u>SP</u>	Proposed Zoning	<u>SP</u>

	<u>Current Trip Generation</u>			<u>Proposed Trip Generation</u>			
	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	
AM Trips	_____	_____	_____	<u>24</u>	<u>11</u>	<u>35</u>	(PCE)
PM Trips	_____	_____	_____	<u>11</u>	<u>25</u>	<u>36</u>	(PCE)

Internal Trip Allowance	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	(<u>0</u> % Trip Discount)
Pass-By Trip Allowance	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	(<u>0</u> % Trip Discount)

A passby trip discount of 25% is allowed for appropriate land uses. The passby trips at adjacent study area intersections and project driveways shall be indicated on a report figure.

B. Trip Geographic Distribution: (see distribution exhibits - varies)

N varies % S varies % E varies % W varies %

C. Background Traffic

Project Build-out Year: 2025 Annual Ambient Growth Rate: 2 %

Phase Year(s) N/A

Other area Projects to be analyzed: County to provide updated list

Model/Forecast Methodology: Not Applicable



D. Study Intersections: (NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments form other agencies). (See Exhibit 1)

- | | |
|---|-----------|
| 1. Driveway 1 & Old Oleander Avenue - Future Intersection | 13. _____ |
| 2. Harvill Avenue & Old Oleander Avenue | 14. _____ |
| 3. Harvill Avenue & Peregrine Wy. | 15. _____ |
| 4. Harvill Avenue & Driveway 3 | 16. _____ |
| 5. Harvill Avenue & Driveway 4/America's Tire | 17. _____ |
| 6. Harvill Avenue & Cajalco Expressway | 18. _____ |
| 7. I-215 SB Ramps & Ramona Expressway | 19. _____ |
| 8. I-215 NB Ramps & Ramona Expressway | 20. _____ |
| 9. - I-215 & Harley Knox Ramps | 21. _____ |
| 10. _____ | 22. _____ |
| 11. _____ | 23. _____ |
| 12. _____ | 24. _____ |

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

1. _____ 2. _____

F. Other Jurisdictional Impacts

Is this project within a City's Sphere of influence or one mile radius of City boundaries? Yes No

If so, name of City jurisdiction: City of Perris, Caltrans (I-215 Freeway)

G. Site Plan (please attach reduced copy)

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

(NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted", or similar statement) at an existing unsignalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.

Fair share percentages and rough order of magnitude fair share costs will be calculated for intersections not analyzed in this traffic study, but identified in the project conditions of approval.

I. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.

Date of counts: traffic counts will be conducted once scoping agreement has been approved

***NOTE* Traffic Study Submittal Form and appropriate fee must be submitted with, or prior to submittal of this form. Transportation Department staff will not process the Scoping Agreement prior to receipt of the fee.**

Recommended by:

Charlene S 5/25/2022
 Consultant's Representative Date

Approved Scoping Agreement:

[Signature] 07/12/2022
 Riverside County Transportation Department Date

Scoping Agreement Revised on June 10, 2022



June 10, 2022

Mr. Kevin Tsang
County of Riverside, Transportation Department
4080 Lemon Street, 8th Floor
Riverside, CA 92501

SUBJECT: BUILDING 18 OF THE MAJESTIC FREEWAY BUSINESS CENTER SPECIFIC PLAN TRAFFIC IMPACT ANALYSIS SCOPING AGREEMENT

Dear Mr. Kevin Tsang:

The firm of Urban Crossroads, Inc. is pleased to submit this scoping letter regarding the traffic impact analysis for Building 18 of the Majestic Freeway Business Center Specific Plan (**Project**), which is located on the southwest corner of Peregrine Way and Harvill Avenue in the County of Riverside. This letter describes the proposed Project trip generation, trip distribution, and analysis methodology, which have been used to establish the draft proposed Project study area and analysis locations.

PROJECT DESCRIPTION

A preliminary site use plan for the proposed Project is shown on Exhibit 1. Exhibit 2 depicts the location of the proposed project in relation to the existing roadway network. The Project is anticipated to have an Opening Year of 2025. Access to the Project site will be provided via Old Oleander Avenue and Harvill Avenue. The proposed Project consists of 317,760 square feet of high-cube transload and short-term storage warehouse use (Building 18).

The traffic study is to include two site plan configurations as follows:

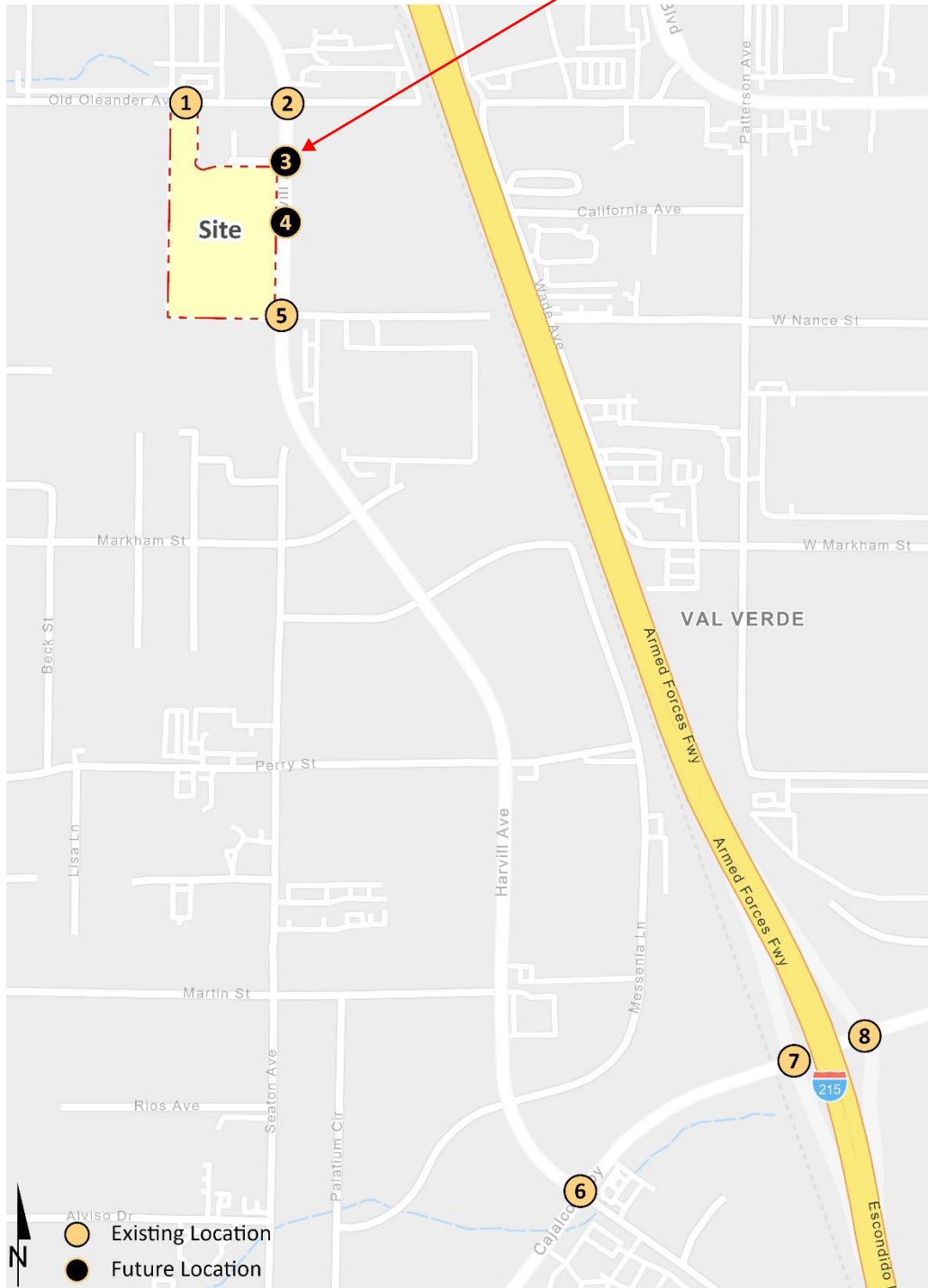
Option 1: Building 18 configured as shown below with a footprint of 217,136 SF.

Option 2: Building 18 configured, assuming properties north of Peregrine Wy are acquired by the applicant. It's anticipated this will increase the building size and re-orient the access/circulation plan.

EXHIBIT 1: PRELIMINARY SITE PLAN



EXHIBIT 2: STUDY AREA Existing location.



TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development, and is based upon the specific land uses planned for a given project. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) for the proposed land use was used. Trip generation rates for the Project are shown in Table 1 for both passenger car equivalent (PCE) and actual vehicles. 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 2. The following ITE land use code and vehicle mix has been utilized:

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for the Project. High-cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has also been obtained from the latest Trip Generation Manual. The SCAQMD recommended truck mix, by axle type for high-cube warehouses has been utilized for the 2-axle, 3-axle, and 4+-axle trucks: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 1: 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									
High-Cube Transload and Short-Term Storage Warehouse ³	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.046	0.014	0.060	0.025	0.065	0.090	1.180
2-Axle Trucks			0.002	0.001	0.003	0.001	0.001	0.002	0.037
3-Axle Trucks			0.002	0.002	0.004	0.001	0.001	0.002	0.046
4+-Axle Trucks			0.006	0.007	0.013	0.003	0.003	0.006	0.138
Passenger Car Equivalent (PCE) Trip Generation Rates⁴									
High-Cube Transload and Short-Term Storage Warehouse ³	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.046	0.014	0.060	0.025	0.065	0.090	1.180
2-Axle Trucks (PCE = 1.5)			0.003	0.002	0.005	0.002	0.001	0.003	0.055
3-Axle Trucks (PCE = 2.0)			0.004	0.004	0.008	0.002	0.002	0.004	0.091
4+-Axle Trucks (PCE = 3.0)			0.018	0.020	0.038	0.009	0.010	0.019	0.413

¹ Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

² TSF = thousand square feet

³ 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.

⁴ PCE factors: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

Finally, PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service

analyses. The PCE factors are consistent with the recommended PCE factors in the latest County Guidelines.

As shown on Table 2, the proposed Project is anticipated to generate a net total of 468 two-way trips per day with 27 AM peak hour trips and 32 PM peak hour trips (actual vehicles). The operations analyses for the Traffic Study will utilize the PCE trip generation consistent with the County Guidelines and other traffic studies prepared in the County of Riverside.

Develop a trip generation for Option 1 and Option 2 as mentioned on page 2 of 10.

TABLE 2: PROJECT TRIP GENERATION

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
High-Cube Short-Term Storage/Transload	317.760 TSF							
Passenger Cars:		16	3	19	7	21	28	376
2-axle Trucks:		1	0	1	0	0	0	12
3-axle Trucks:		1	1	2	0	0	0	14
4+-axle Trucks:		2	2	4	1	1	2	44
Total Truck Trips (Actual Vehicles):		4	3	7	1	1	2	70
Total Trips (Actual Vehicles)²		20	6	26	8	22	30	446
Passenger Car Equivalent (PCE):								
High-Cube Short-Term Storage/Transload	317.760 TSF							
Passenger Cars:		16	3	19	7	21	28	376
2-axle Trucks:		1	1	2	0	0	0	18
3-axle Trucks:		1	1	2	1	1	2	30
4+-axle Trucks:		6	6	12	3	3	6	132
Total Truck Trips (PCE):		8	8	16	4	4	8	180
Total Trips (PCE)²		24	11	35	11	25	36	556

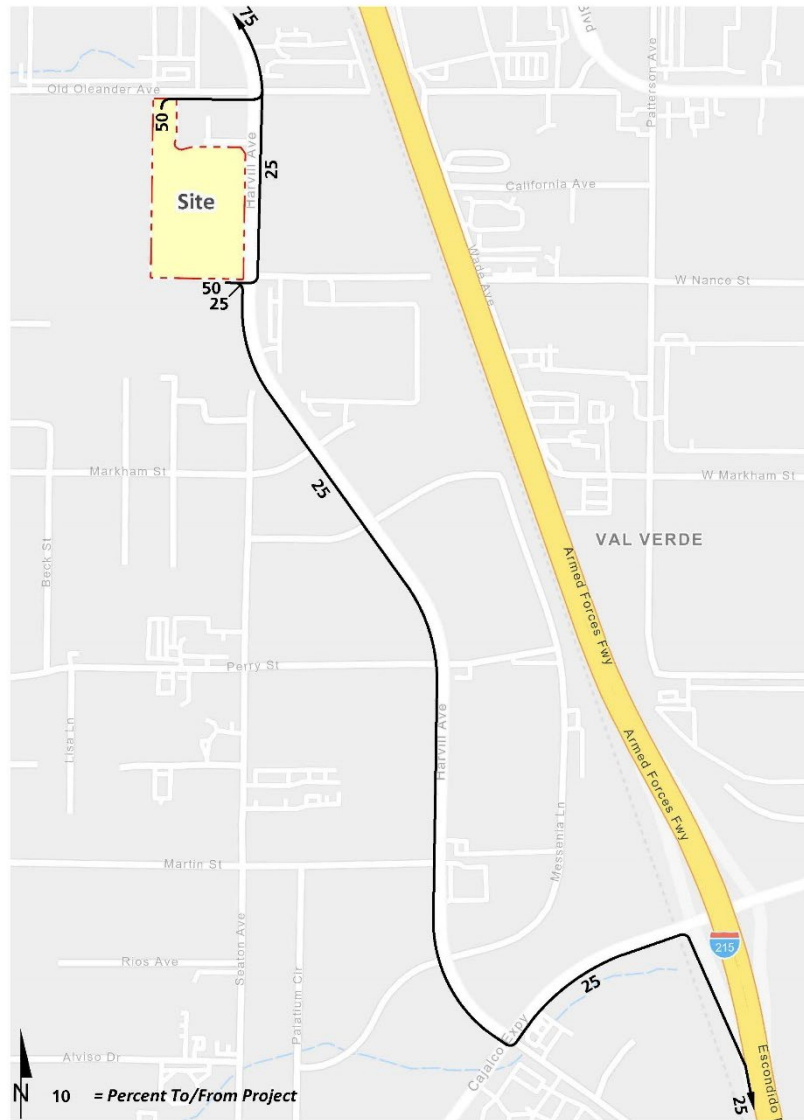
¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

TRIP DISTRIBUTION

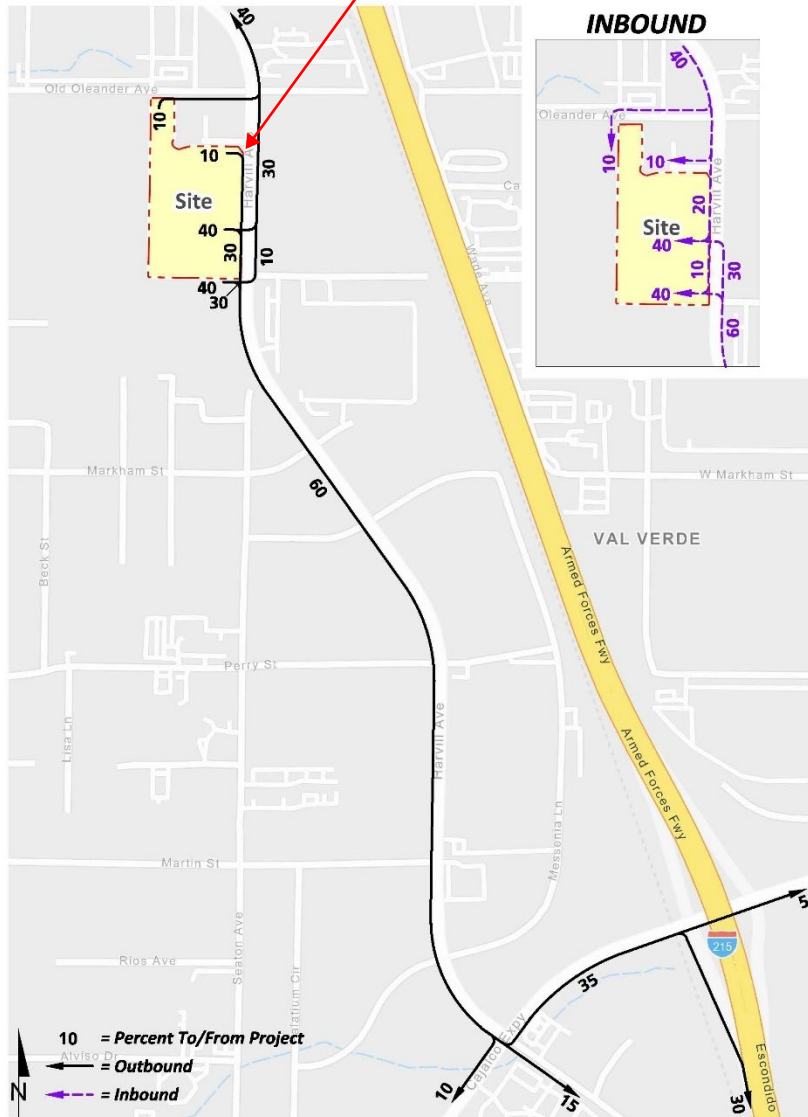
The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. Exhibit 3 illustrates the truck trip distribution patterns for the Project and Exhibit 4 illustrates the passenger car trip distribution patterns. Project passenger car and truck trip distribution patterns have been developed to be consistent with existing driveway and intersection counts conducted for locations along the Harvill Avenue corridor.

EXHIBIT 3: PROJECT (TRUCK) TRIP DISTRIBUTION



Project to provide effective channelization on Harvill Avenue to enforce the right-in/right-out turning movements. Preliminary design by the civil engineer indicates a raised median on Harvill Ave is feasible.

EXHIBIT 4: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



Passenger car distributions will be reviewed when traffic counts are available. Please send counts prior to using them in the study.

A separate trip distribution may be needed for Option 2 as described on Page 2 of 10.

ANALYSIS SCENARIOS

Consistent with the County Guidelines, intersection analysis will be provided for the following analysis scenarios:

- Existing (2022) Conditions
- Existing plus Ambient Growth plus Project (EAP) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) Conditions

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

CUMULATIVE PROJECTS

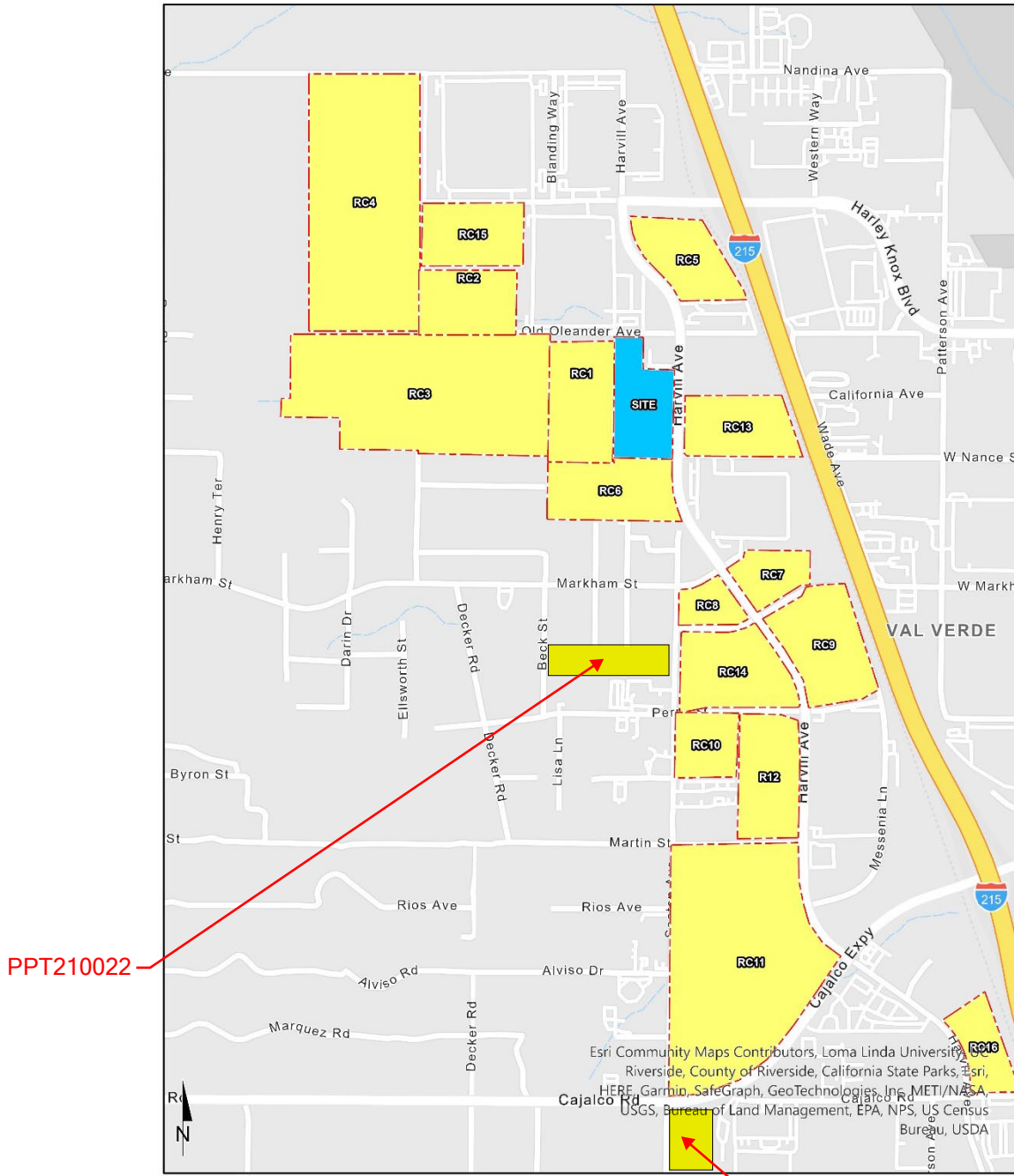
A preliminary list of cumulative projects is provided in Table 3 and are shown on Exhibit 5. These cumulative projects are based on information collected from the County of Riverside.

TABLE 3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

No.	Project Name / Case Number	Land Use	Quantity Units ¹	Location
Riverside County:				
RC1	Majestic Freeway Business Center - Building 20	High-Cube Warehouse	426.821 TSF	S OF OLEANDER AV. AND W OF HARVILL AV.
RC2	Majestic Freeway Business Center - Building 21,22	Warehousing	241.059 TSF	NEC OF DECKER RD. & OLD OLEANDER AVE.
RC3	Knox Logistics Center	High-Cube Warehouse	1,259.410 TSF	NWC OF DECKER RD. & OLD OLEANDER AVE.
RC4	Oleander Business Park	High-Cube Warehouse	680.000 TSF	NWC OF DECKER RD. & HARLEY KNOX BLVD.
RC5	PPT190031	High-Cube Warehouse	418.000 TSF	SEC OF HARVILL AV. & HARLEY KNOX BL.
RC6	Majestic Freeway Business Center - Building 19	Warehousing	364.560 TSF	SWC OF HARVILL AVE. & OLD OLEANDER AVE.
RC7	Majestic Freeway Business Center - Building 12	Warehousing	154.751 TSF	NEC OF HARVILL AVE. & COMMERCE CENTER DR.
RC8	Majestic Freeway Business Center - Building 15	Warehousing	90.279 TSF	NWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC9	Majestic Freeway Business Center - Building 11	High-Cube Warehouse	391.045 TSF	NEC OF HARVILL AVE. & PERRY ST.
RC10	PPT180025: Seaton Commerce Center	High-Cube Warehouse	210.800 TSF	SEC OF SEATON AV. & PERRY ST.
RC11	Majestic Freeway Business Center - Buildings 1, 3 & 4	Warehousing	48.930 TSF	NWC OF HARVILL AVE. & CAJALCO RD.
		High-Cube Warehouse	1,195.740 TSF	
RC12	Majestic Freeway Business Center - Building 13	High-Cube Warehouse	322.997 TSF	SWC OF HARVILL AVE. & PERRY ST.
RC13	Majestic Freeway Business Center - Building 17	High-Cube Warehouse	268.955 TSF	NEC OF HARVILL AVE. & AMERICA'S TIRE DR.
RC14	Majestic Freeway Business Center - Building 14A/B	Warehousing	354.583 TSF	SWC OF HARVILL AVE. & COMMERCE CENTER DR.
RC15	PPT210130	Warehousing	239.308 TSF	SEC OF DECKER RD. & HARLEY KNOX BL.
RC16	Harvill & Cajalco Warehouse	General Light Industrial	99.770 TSF	NEC OF HARVILL AV. & CAJALCO RD.
		Truck Trailer Yard	133 Spaces	

¹ TSF = Thousand Square Feet

EXHIBIT 5: CUMULATIVE DEVELOPMENT LOCATION MAP



Trip generation and distributions are included at the end of this scoping agreement for the two identified projects.

PPT210133

Mr. Kevin Tsang
County of Riverside, Transportation Department
June 10, 2022
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TRAFFIC COUNTS

Traffic counts (classified by vehicle type) were conducted in February 2022 when local schools are in session and operating on a typical bell schedule.

CONCLUSION

Urban Crossroads, Inc. is pleased to submit this letter documenting the Project trip generation, trip distribution, and the recommended intersection analysis locations for the Building 18 of the Majestic Freeway Business Center Specific Plan Traffic Impact Study. We will continue to move forward towards completing the traffic study after receiving jurisdiction approval or comments finalizing the study area.

If you have any questions, please contact me directly at (949) 861-0177.

Respectfully submitted,

URBAN CROSSROADS, INC.



Charlene So, PE
Principal

PPT210133

Table A: Total Project Trip Generation

Land Use	Units	Peak Hour						Daily	
		AM Peak Hour			PM Peak Hour				
		In	Out	Total	In	Out	Total		
Total Project Trip Generation (Trips, By Vehicle Type)									
Warehouse	280.385	TSF							
Passenger Cars			15	2	17	6	19	25	331
2-Axle Trucks			1	0	1	0	0	0	10
3-Axle Trucks			0	1	1	1	0	1	14
4+ Axle Trucks			1	2	3	1	1	2	37
All Trucks			2	3	5	2	1	3	61
Total Vehicles			17	5	22	8	20	28	392
Cold Storage Warehouse	70.096	TSF							
Passenger Cars			6	0	6	2	4	6	96
2-Axle Trucks			0	0	0	0	0	0	9
3-Axle Trucks			0	0	0	0	0	0	12
4+ Axle Trucks			0	1	1	0	1	1	32
All Trucks			0	1	1	0	1	1	53
Total Vehicles			6	1	7	2	5	7	149
Entire Project	350.481	TSF							
Passenger Cars			21	2	23	8	23	31	427
2-Axle Trucks			1	0	1	0	0	0	19
3-Axle Trucks			0	1	1	1	0	1	26
4+ Axle Trucks			1	3	4	1	2	3	69
All Trucks			2	4	6	2	2	4	114
Total Vehicles			23	6	29	10	25	35	541
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)									
Passenger Cars			21	2	23	8	23	31	427
Truck PCE									
2-Axle Trucks			2	0	2	0	0	0	29
3-Axle Trucks			0	2	2	2	0	2	52
4+ Axle Trucks			3	9	12	3	6	9	207
Total Truck PCE			5	11	16	5	6	11	288
Total PCE			26	13	39	13	29	42	715

¹ Rates based on Land Use 154 & 157 - from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table B: Project Trip Generation (High-Cube Transload and Short-Term Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.062	0.018	0.080	0.028	0.072	0.100	1.400
PCE Inbound/Outbound Splits		69%	31%	100%	31%	69%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		84.09%	44.57%	75.00%	83.21%	92.64%	90.00%	84.29%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks								
Recommended Mix (%) ²		2.69%	9.39%	4.23%	2.84%	1.25%	1.69%	2.66%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.002	0.003	0.005	0.001	0.001	0.003	0.056
3-Axle Trucks								
Recommended Mix (%) ²		3.61%	12.59%	5.68%	3.81%	1.67%	2.27%	3.57%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.004	0.005	0.009	0.002	0.002	0.005	0.100
4-Axle Trucks								
Recommended Mix (%) ²		9.60%	33.46%	15.09%	10.13%	4.44%	6.04%	9.48%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.018	0.018	0.036	0.009	0.010	0.018	0.398
Warehouse Net PCE Rate		0.076	0.034	0.110	0.035	0.080	0.115	1.734
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	280.385 TSF							
Passenger Cars		15	2	17	6	19	25	331
2-Axle Trucks		1	0	1	0	0	0	10
3-Axle Trucks		0	1	1	1	0	1	14
4+ Axle Trucks		1	2	3	1	1	2	37
All Trucks		2	3	5	2	1	3	61
Total Vehicles		17	5	22	8	20	28	392
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars		15	2	17	6	19	25	331
Truck PCE								
2-Axle Trucks		2	0	2	0	0	0	15
3-Axle Trucks		0	2	2	2	0	2	28
4+ Axle Trucks		3	6	9	3	3	6	111
Total Truck PCE		5	8	13	5	3	8	154
Total PCE		20	10	30	11	22	33	485

¹ Rates based on Land Use 154 - "High-Cube Transload and Short-Term Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

Table C: Project Trip Generation (High-Cube Cold Storage)

Land Use	Units	Peak Hour						Daily
		AM Peak Hour			PM Peak Hour			
		In	Out	Total	In	Out	Total	
Total Vehicle Rates								
Trip Generation Rates ¹	TSF	0.089	0.021	0.110	0.047	0.073	0.120	2.120
PCE Inbound/Outbound Splits		72%	28%	100%	41%	59%	100%	100%
Passenger Car Equivalent Rates Calculations								
Passenger Cars								
Recommended Mix (%) ²		83.16%	28.23%	72.73%	70.51%	77.87%	75.00%	64.62%
PCE Factor ³		1.0	1.0	1.0	1.0	1.0	1.0	1.0
PCE Rates		0.074	0.006	0.080	0.033	0.057	0.090	1.370
2-Axle Trucks								
Recommended Mix (%) ²		2.85%	12.15%	4.62%	4.99%	3.75%	4.23%	5.99%
PCE Factor ³		1.5	1.5	1.5	1.5	1.5	1.5	1.5
PCE Rates		0.004	0.004	0.008	0.004	0.004	0.008	0.191
3-Axle Trucks								
Recommended Mix (%) ²		3.82%	16.30%	6.19%	6.70%	5.03%	5.68%	8.03%
PCE Factor ³		2.0	2.0	2.0	2.0	2.0	2.0	2.0
PCE Rates		0.007	0.007	0.014	0.006	0.007	0.014	0.341
4-Axle Trucks								
Recommended Mix (%) ²		10.16%	43.32%	16.46%	17.80%	13.36%	15.09%	21.35%
PCE Factor ³		3.0	3.0	3.0	3.0	3.0	3.0	3.0
PCE Rates		0.027	0.027	0.054	0.025	0.029	0.054	1.358
Warehouse Net PCE Rate		0.112	0.044	0.156	0.068	0.098	0.166	3.259
Total Project Trip Generation (Trips, By Vehicle Type)								
Warehouse	70.096	TSF						
Passenger Cars			6	0	6	2	4	6
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	1	1	0	1	1
All Trucks			0	1	1	0	1	1
Total Vehicles			6	1	7	2	5	7
Total Project Trip Generation (Passenger Car Equivalent Trips, By Vehicle Type)								
Passenger Cars			6	0	6	2	4	6
Truck PCE								
2-Axle Trucks			0	0	0	0	0	0
3-Axle Trucks			0	0	0	0	0	0
4+ Axle Trucks			0	3	3	0	3	3
Total Truck PCE			0	3	3	0	3	3
Total PCE			6	3	9	2	7	9

¹ Rates based on Land Use 157 - "High-Cube Cold Storage Warehouse" from Institute of Transportation Engineers (ITE) Trip Generation (10th Ed.+Supplement).

² Recommended Truck Mix Percentages per ITE 10th Ed. + Supplement. Sub types based on Fontana Study.

³ Recommended PCE Factor per County of Riverside *Transportation Impact Analysis Preparation Guide for Vehicle Miles Traveled and Level of Service Assessment (December 2020)*

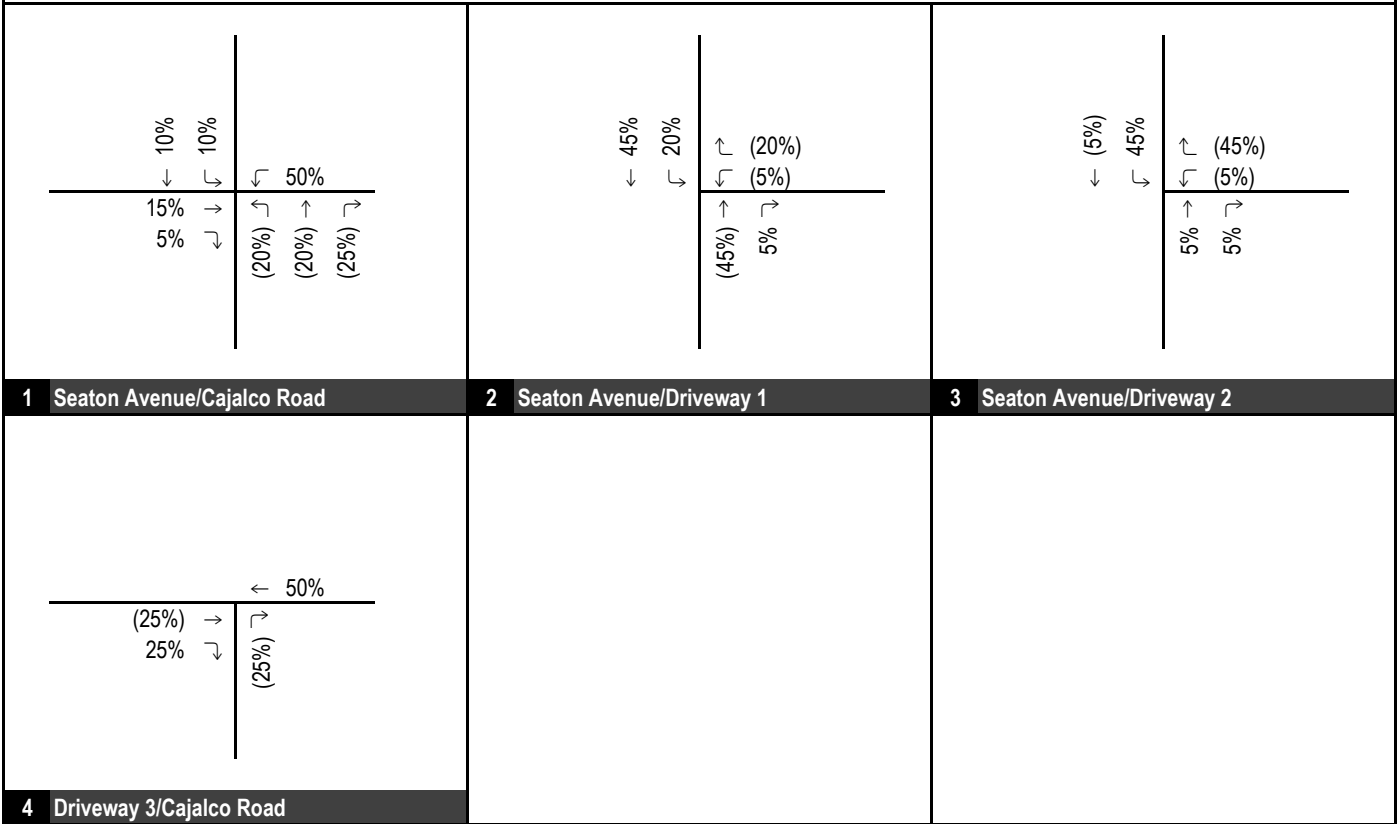
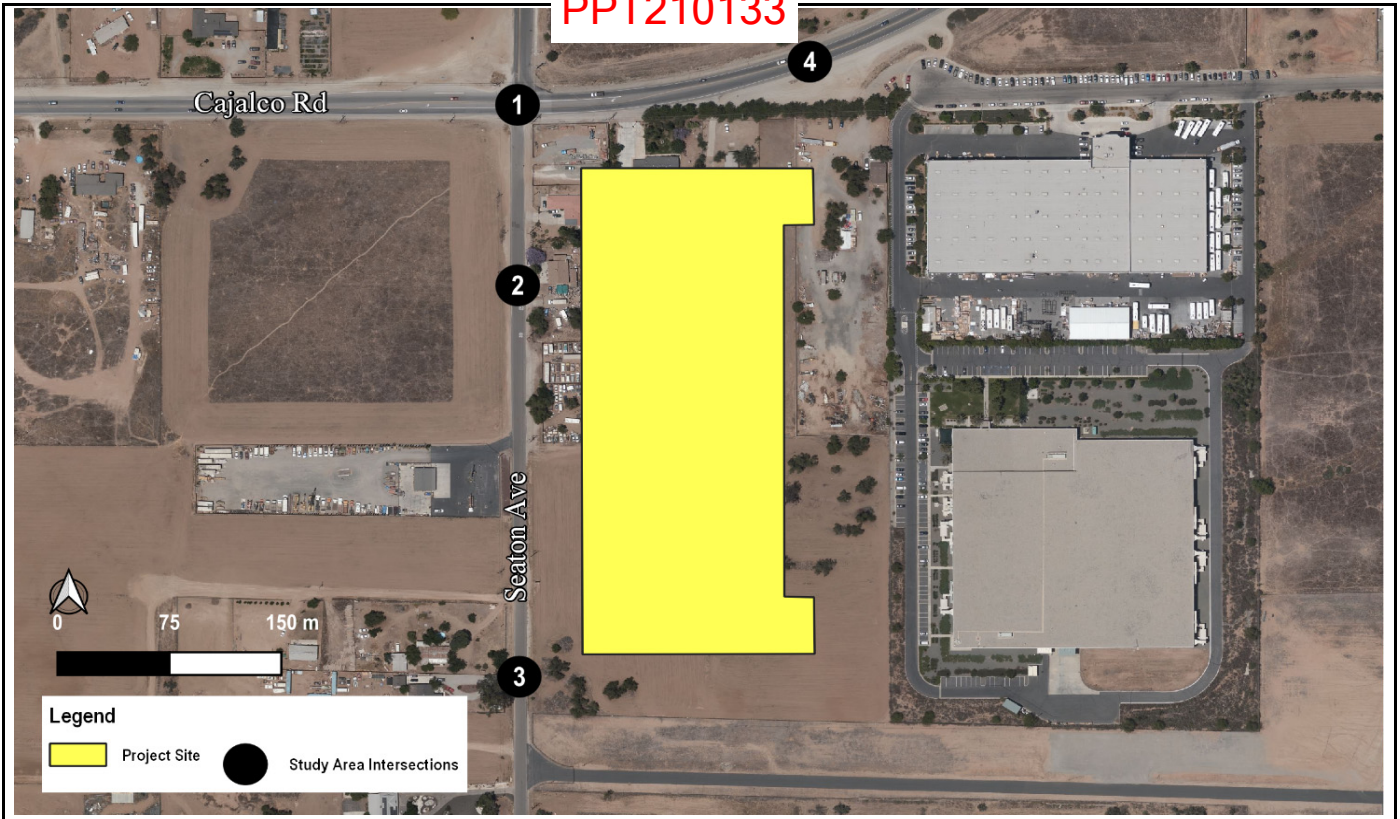


FIGURE 4

XXX%(YYY%) Inbound%(Outbound%) Percent

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Distribution (Autos)



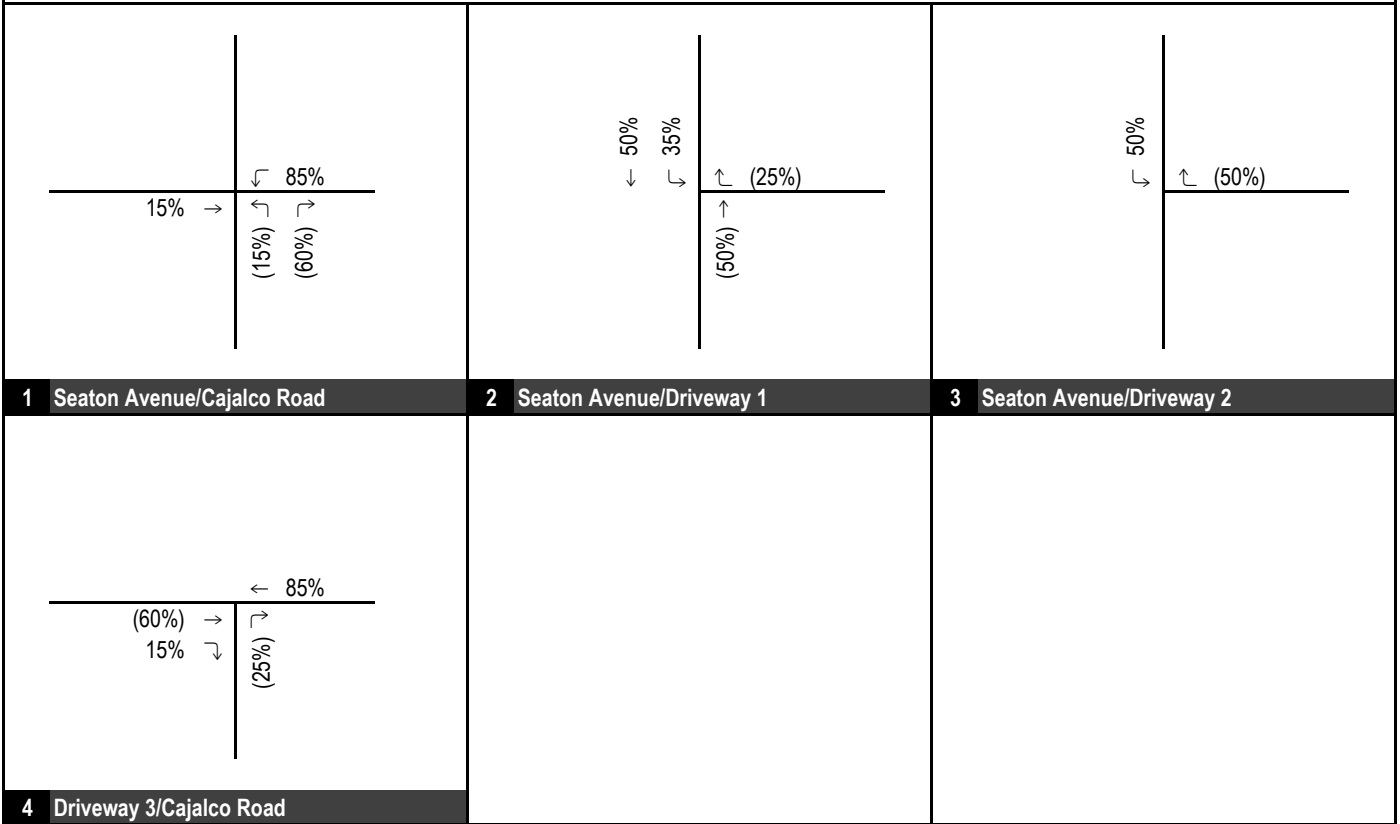
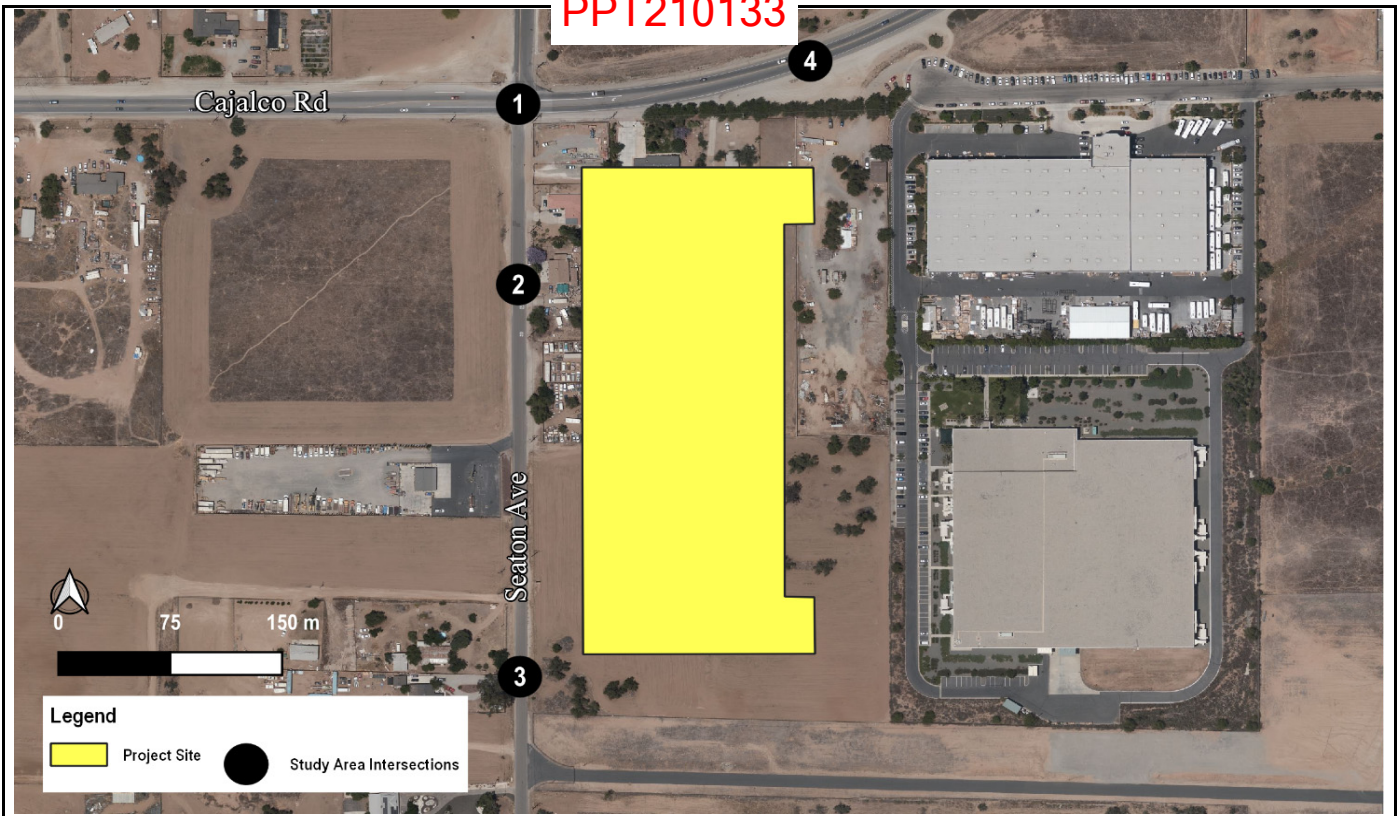


FIGURE 5

XXX%(YYY%) Inbound%(Outbound%) Percent

Seaton Avenue and Cajalco Road High-Cube Warehouse Project Trip Distribution (Trucks)



PPT210022

Table 4. Project Trip Generation

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<u>Trip Rates</u>								
General Light Industrial ¹	TSF	4.96	0.62	0.08	0.70	0.08	0.55	0.63
<u>Project Trip Generation</u>								
Project	98.940 TSF	491	61	8	69	8	54	62
<u>Vehicle Mix²</u>								
	<u>Percent</u>							
Passenger Vehicles	78.60%	386	48	7	54	6	43	49
2-Axle Trucks	8.00%	39	5	1	6	1	4	5
3-Axle Trucks	3.90%	19	2	0	3	0	2	2
4+-Axle Trucks	9.50%	47	6	1	7	1	5	6
	100%	491	61	8	69	8	54	62
<u>PCE Trip Generation³</u>								
	<u>PCE Factor</u>							
Passenger Vehicles	1.0	386	48	7	54	6	43	49
2-Axle Trucks	1.5	59	7	1	8	1	7	7
3-Axle Trucks	2.0	38	5	1	5	1	4	5
4+-Axle Trucks	3.0	140	17	2	20	2	15	18
Total PCE Trip Generation		623	77	11	88	10	69	79

TSF = Thousand Square Feet

PCE = Passenger Car Equivalent

¹ Trip rates from the Institute of Transportation Engineers, *Trip Generation, 10th Edition, 2017*. Land Use Code 110 - General Light Industrial.² Vehicle Mix from the City of Fontana, *Truck Trip Generation Study*, August 2003. Classification: Light Industrial.³ Passenger Car Equivalent (PCE) factors from the County of Riverside Transportation Analysis Guidelines, 2020

Figure 7a: Project Auto Trip Distribution (Developed)

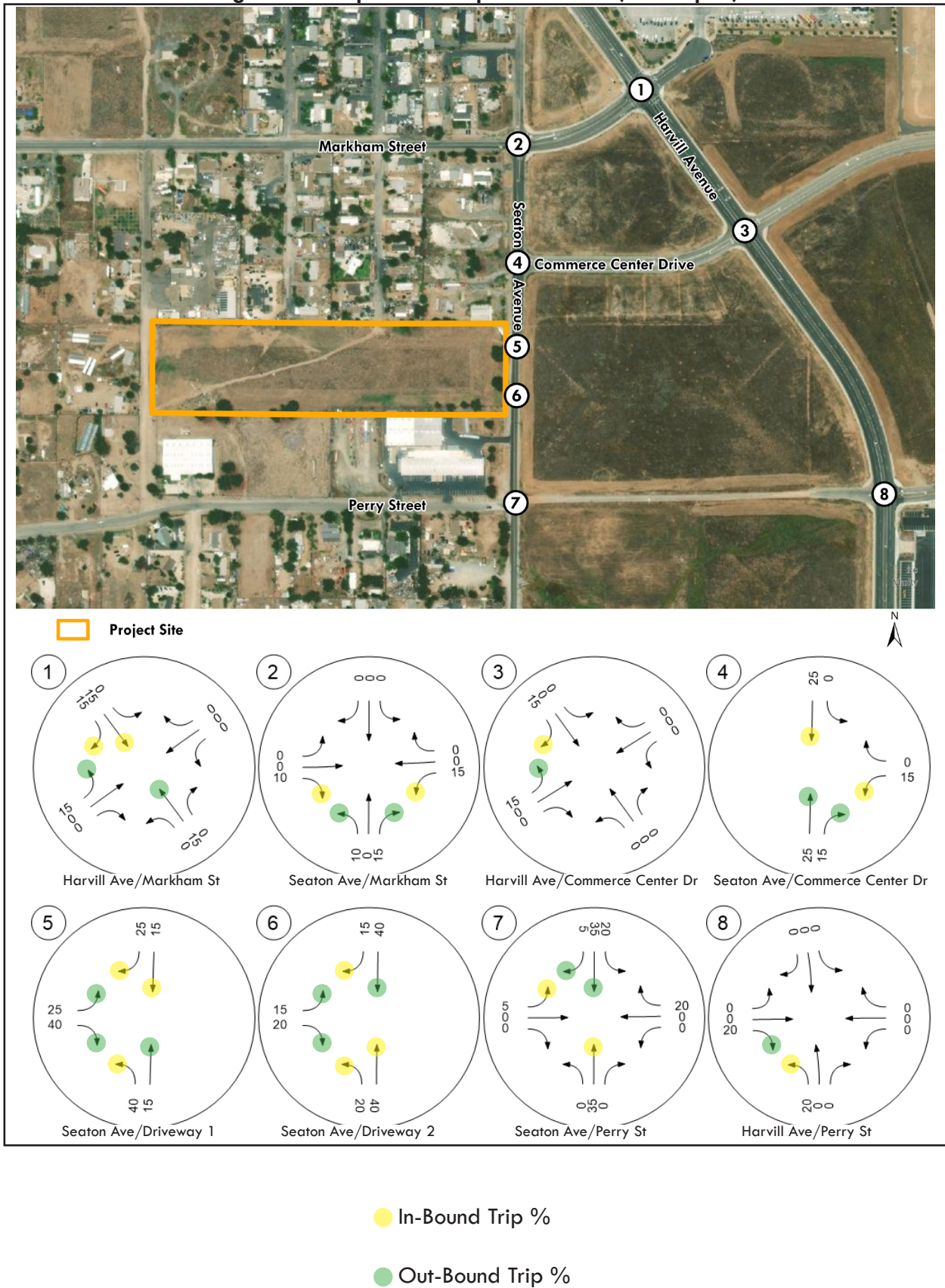
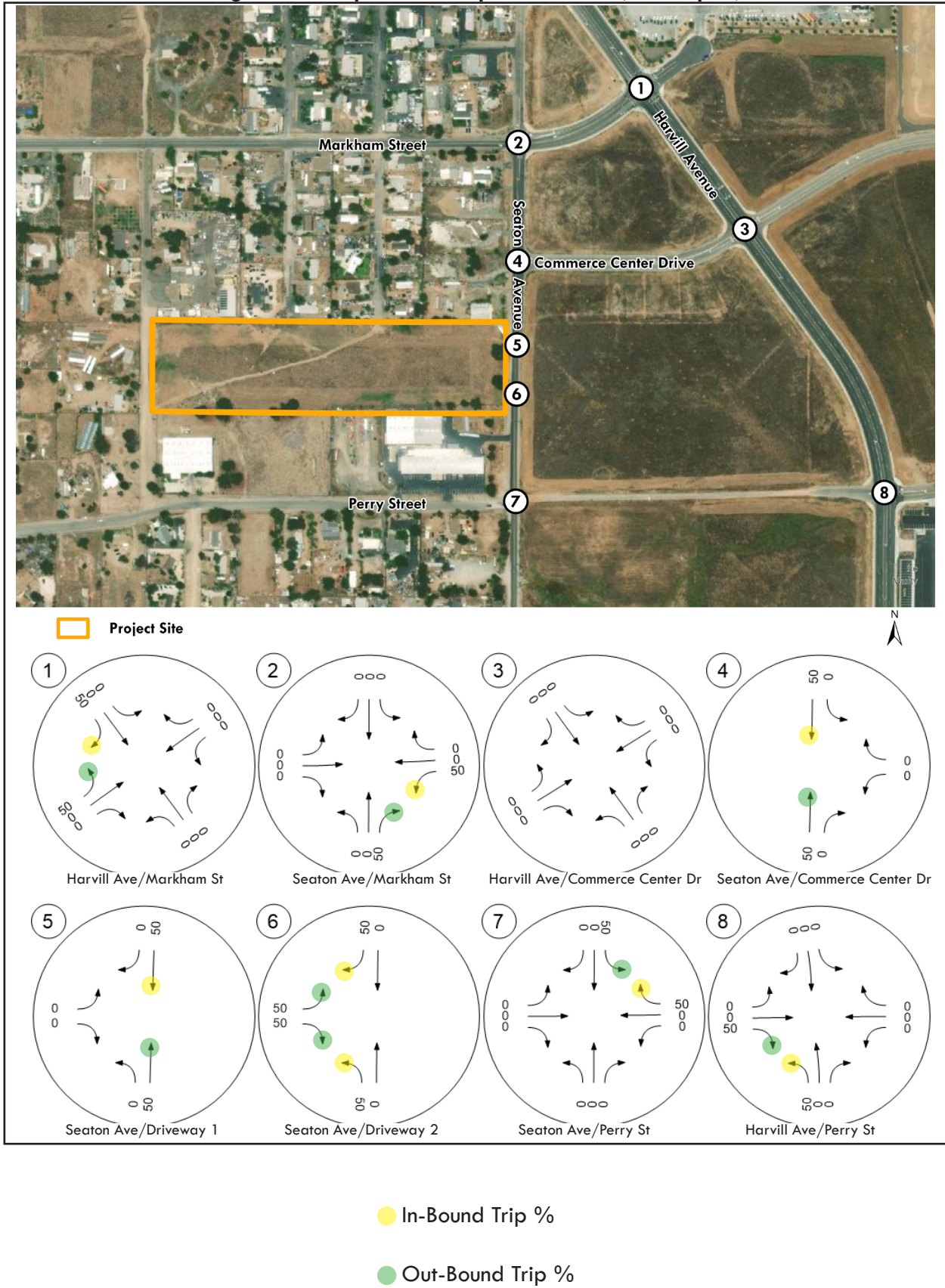


Figure 7b: Project Truck Trip Distribution (Developed)



APPENDIX 1.2: SITE ADJACENT QUEUES

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Intersection: 1: Driveway 1/Driveway & Old Oleander Av.

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	13	31	26
Average Queue (ft)	1	4	5
95th Queue (ft)	7	21	20
Link Distance (ft)		398	141
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Harvill Av. & Peregrine Wy.

Movement	EB
Directions Served	R
Maximum Queue (ft)	23
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	383
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Harvill Av. & Driveway 3/Bldg 17 Dwy

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	30	7	13	21
Average Queue (ft)	2	0	1	1
95th Queue (ft)	15	5	7	11
Link Distance (ft)	66	62		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Harvill Av. & Driveway 4/America's Tire

Movement	EB	WB	WB	NB	SB	SB
Directions Served	LTR	L	TR	L	L	TR
Maximum Queue (ft)	32	31	30	28	25	5
Average Queue (ft)	14	2	4	5	4	0
95th Queue (ft)	36	14	21	23	19	3
Link Distance (ft)	546	472	472			471
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)				100	130	
Storage Blk Time (%)						
Queuing Penalty (veh)						

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 1: Driveway 1/Driveway & Old Oleander Av.

Movement	WB	NB	SB
Directions Served	L	LTR	LTR
Maximum Queue (ft)	14	31	26
Average Queue (ft)	1	2	12
95th Queue (ft)	7	16	32
Link Distance (ft)		398	141
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: Harvill Av. & Peregrine Wy.

Movement	EB
Directions Served	R
Maximum Queue (ft)	36
Average Queue (ft)	6
95th Queue (ft)	26
Link Distance (ft)	383
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Harvill Av. & Driveway 3/Bldg 17 Dwy

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	30	30	8	31
Average Queue (ft)	6	7	1	2
95th Queue (ft)	26	28	8	14
Link Distance (ft)	66	62		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: Harvill Av. & Driveway 4/America's Tire

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	L	TR	L	L
Maximum Queue (ft)	69	36	37	21	17
Average Queue (ft)	31	7	10	3	1
95th Queue (ft)	56	28	34	17	8
Link Distance (ft)	546	472	472		
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)				100	130
Storage Blk Time (%)					
Queuing Penalty (veh)					

Zone Summary

Zone wide Queuing Penalty: 0

APPENDIX 3.1: TRAFFIC COUNTS

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**Volume Development
AM Peak Hour**

1: Driveway 1 & Old Oleander Av.

	PHF: 0.775		7:30		Count Date: 2/8/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	0	0	4	0	0	0	15	0	0	17	5	40
EAP 2025 PCE:	0	0	5	4	0	0	0	15	0	6	18	5	53
EAPC 2025 PCE:	0	0	5	4	0	0	0	17	0	6	25	5	62

2: Harvill Av. & Old Oleander Av.

	PHF: 0.944		7:15		Count Date: 2/8/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	10	439	2	4	270	9	25	3	4	1	2	3	770
EAP 2025 PCE:	11	468	2	4	294	15	32	3	4	1	2	3	838
EAPC 2025 PCE:	11	498	2	4	369	15	32	5	4	1	9	3	953

3: Harvill Av. & Peregrine Wy.

	PHF: 0.943		7:15		Count Date: 2/8/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	1	450	0	0	275	0	1	0	1	0	0	0	728
EAP 2025 PCE:	1	480	0	0	297	2	1	0	1	0	0	0	782
EAPC 2025 PCE:	1	510	0	0	373	2	1	6	1	0	38	0	932

4: Harvill Av. & Driveway 2

	PHF: 0.920		Count Date: 2/8/2022										
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	451	0	0	276	0	0	0	0	0	0	0	727
EAP 2025 PCE:	5	481	0	0	297	2	1	0	1	0	0	0	787
EAPC 2025 PCE:	5	510	1	4	369	2	1	6	1	0	38	1	938

5: Harvill Av. & America's Tire Dr.

	PHF: 0.935		7:15		Count Date: 2/8/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	451	0	3	273	0	0	0	0	0	0	0	727
EAP 2025 PCE:	7	483	0	3	291	4	3	0	3	0	0	0	794
EAPC 2025 PCE:	10	1,218	19	21	698	8	4	0	4	6	0	8	1,996

6: Harvill Av. & Cajalco Exwy.

	PHF: 0.930		7:00		Count Date: 2/8/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	297	337	75	189	116	27	47	680	50	167	677	102	2,761
EAP 2025 PCE:	315	359	80	204	123	28	51	721	53	177	718	116	2,944
EAPC 2025 PCE:	373	434	240	427	229	83	192	841	218	640	1,130	761	5,569

7: I-215 SB Ramps & Harley Knox Bl.

	PHF: 0.958		7:15		Count Date: 4/6/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	0	0	579	3	175	0	556	5	177	269	0	1,762
EAP 2025 PCE:	0	300	0	614	203	198	0	598	5	187	285	0	2,391
EAPC 2025 PCE:	0	1,022	0	614	550	274	0	628	5	187	285	0	3,566

8: I-215 NB Ramps & Harley Knox Bl.

	PHF: 0.884		7:15		Count Date: 4/6/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	12	1	41	0	0	0	362	773	0	0	434	1,240	2,861
EAP 2025 PCE:	12	1	43	0	0	0	392	820	0	0	461	1,315	3,044
EAPC 2025 PCE:	48	723	56	2	342	2	422	820	6	4	461	1,316	4,201

Volume Development
AM Peak Hour

9: I-215 SB Ramps & Ramona Exwy.

	PHF: 0.982		7:15		Count Date: 1/25/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	0	0	817	2	210	0	759	364	328	1,121	0	3,599
EAP 2025 PCE:	0	0	0	843	2	167	0	414	293	280	959	0	2,957
EAPC 2025 PCE:	0	0	0	1,847	2	780	0	785	473	547	1,878	0	6,310

10: I-215 NB Ramps & Ramona Exwy.

	PHF: 0.967		7:15		Count Date: 1/25/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	398	4	612	0	0	0	159	1,417	0	0	1,051	740	4,379
EAP 2025 PCE:	323	4	487	0	0	0	126	1,136	0	0	917	589	3,583
EAPC 2025 PCE:	906	4	808	0	0	0	320	2,316	0	0	1,519	1,471	7,344

Volume Development
PM Peak Hour

1: Driveway 1 & Old Oleander Av.

	PHF: 0.547		4:00		Count Date: 2/8/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	0	0	0	13	0	1	2	15	0	0	5	7	43
EAP 2025 PCE:	0	0	4	14	0	1	2	15	0	3	5	7	52
EAPC 2025 PCE:	0	0	4	14	0	1	2	23	0	3	7	7	62

2: Harvill Av. & Old Oleander Av.

	PHF: 0.903		4:00		Count Date: 2/8/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	2	356	0	2	344	8	34	9	15	3	12	0	784
EAP 2025 PCE:	2	385	0	2	368	11	40	10	16	3	13	0	849
EAPC 2025 PCE:	2	460	0	2	400	11	40	18	16	3	15	0	966

3: Harvill Av. & Peregrine Wy.

	PHF: 0.903		4:00		Count Date: 2/8/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	3	358	0	0	362	0	0	0	4	0	0	0	727
EAP 2025 PCE:	3	387	0	0	387	1	0	0	6	0	0	0	784
EAPC 2025 PCE:	3	462	0	0	419	1	0	37	6	0	7	0	935

4: Harvill Av. & Driveway 2

	PHF: 0.920				Count Date:								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	0	361	0	0	366	0	0	0	0	0	0	0	727
EAP 2025 PCE:	2	386	0	0	392	1	4	0	4	0	0	0	789
EAPC 2025 PCE:	2	455	1	2	422	1	4	37	4	2	7	5	942

5: Harvill Av. & America's Tire Dr.

	PHF: 0.895		4:00		Count Date: 1/25/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	0	355	1	0	366	0	0	0	0	0	0	6	728
EAP 2025 PCE:	3	379	1	0	394	2	3	0	7	0	0	6	795
EAPC 2025 PCE:	4	848	9	7	1,176	3	8	0	10	21	0	22	2,109

6: Harvill Av. & Cajalco Exwy.

	PHF: 0.934		4:00		Count Date: 2/8/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	165	144	125	222	211	35	24	723	207	132	637	187	2,811
EAP 2025 PCE:	175	154	132	244	227	39	26	767	220	140	676	202	3,002
EAPC 2025 PCE:	312	241	591	920	321	175	124	1,238	297	350	929	477	5,974

7: I-215 SB Ramps & Harley Knox Bl.

	PHF: 0.947		4:30		Count Date: 4/6/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	0	0	0	390	0	181	0	385	86	323	193	0	1,556
EAP 2025 PCE:	0	200	0	413	300	198	0	420	91	342	204	0	2,168
EAPC 2025 PCE:	0	610	0	413	1,068	229	0	494	91	342	204	0	3,452

8: I-215 NB Ramps & Harley Knox Bl.

	PHF: 0.919		4:00		Count Date: 4/6/2022								TOTAL
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
2022 PCE:	18	1	218	0	0	0	218	557	0	0	497	640	2,149
EAP 2025 PCE:	19	1	231	0	0	0	242	591	0	0	527	679	2,291
EAPC 2025 PCE:	26	407	236	1	767	0	319	591	35	13	527	681	3,603

**Volume Development
PM Peak Hour**

9: I-215 SB Ramps & Ramona Exwy.

	PHF: 0.990		5:00		Count Date: 1/25/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	0	0	0	853	8	184	0	911	348	369	915	0	3,586
EAP 2025 PCE:	0	0	0	802	8	146	0	634	284	322	749	0	2,945
EAPC 2025 PCE:	0	0	0	2,002	8	418	0	1,622	899	844	1,240	0	7,032

10: I-215 NB Ramps & Ramona Exwy.

	PHF: 0.940		5:00		Count Date: 1/25/2022								
	<u>NBL</u>	<u>NBT</u>	<u>NBR</u>	<u>SBL</u>	<u>SBT</u>	<u>SBR</u>	<u>EBL</u>	<u>EBT</u>	<u>EBR</u>	<u>WBL</u>	<u>WBT</u>	<u>WBR</u>	<u>TOTAL</u>
2022 PCE:	371	4	461	0	0	0	121	1,643	0	0	913	652	4,164
EAP 2025 PCE:	298	4	367	0	0	0	96	1,343	0	0	774	519	3,402
EAPC 2025 PCE:	589	4	561	0	0	0	695	2,932	0	0	1,496	1,722	7,999

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

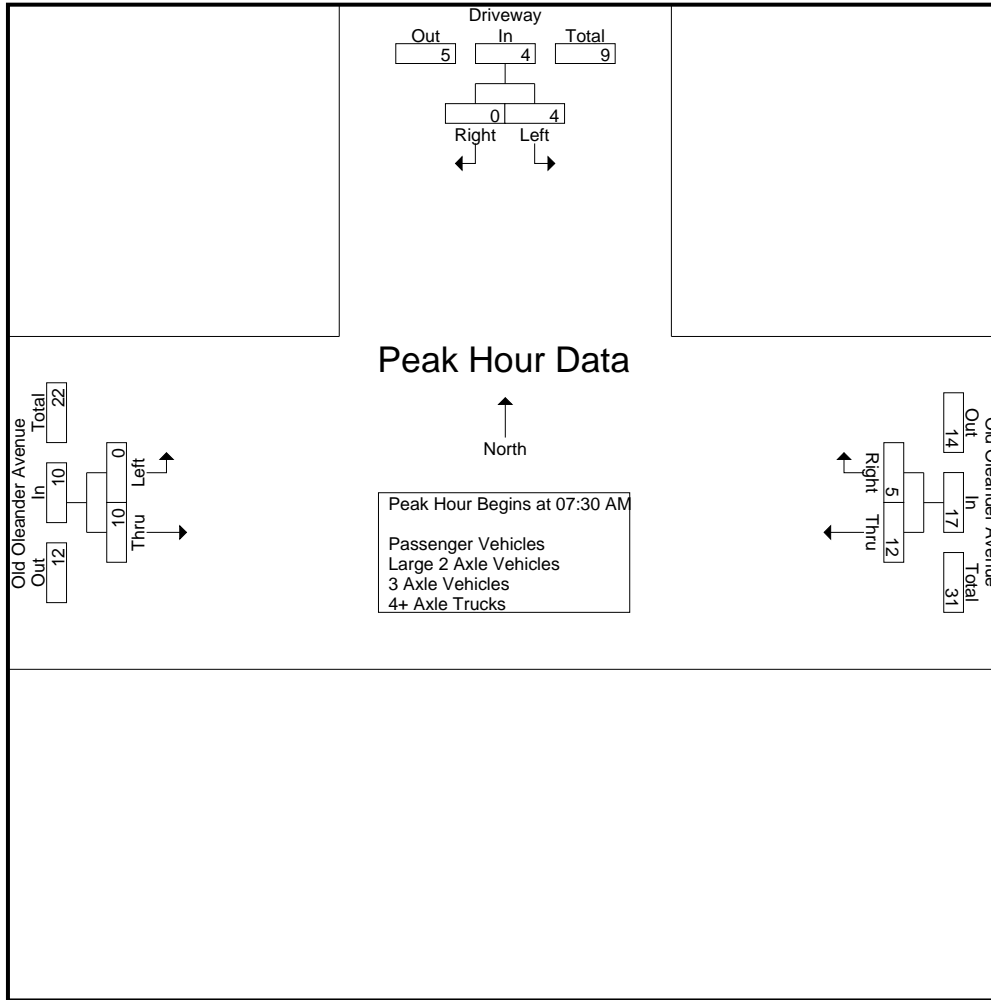
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	2	0	2	0	3	3	5
07:15 AM	0	0	0	2	1	3	0	1	1	4
07:30 AM	0	0	0	4	1	5	0	1	1	6
07:45 AM	2	0	2	4	2	6	0	2	2	10
Total	2	0	2	12	4	16	0	7	7	25
08:00 AM	0	0	0	4	1	5	0	4	4	9
08:15 AM	2	0	2	0	1	1	0	3	3	6
08:30 AM	1	0	1	1	1	2	0	2	2	5
08:45 AM	3	0	3	0	0	0	0	1	1	4
Total	6	0	6	5	3	8	0	10	10	24
Grand Total	8	0	8	17	7	24	0	17	17	49
Apprch %	100	0		70.8	29.2		0	100		
Total %	16.3	0	16.3	34.7	14.3	49	0	34.7	34.7	
Passenger Vehicles	8	0	8	14	7	21	0	13	13	42
% Passenger Vehicles	100	0	100	82.4	100	87.5	0	76.5	76.5	85.7
Large 2 Axle Vehicles	0	0	0	1	0	1	0	2	2	3
% Large 2 Axle Vehicles	0	0	0	5.9	0	4.2	0	11.8	11.8	6.1
3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0
4+ Axle Trucks	0	0	0	2	0	2	0	2	2	4
% 4+ Axle Trucks	0	0	0	11.8	0	8.3	0	11.8	11.8	8.2

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:30 AM										
07:30 AM	0	0	0	4	1	5	0	1	1	6
07:45 AM	2	0	2	4	2	6	0	2	2	10
08:00 AM	0	0	0	4	1	5	0	4	4	9
08:15 AM	2	0	2	0	1	1	0	3	3	6
Total Volume	4	0	4	12	5	17	0	10	10	31
% App. Total	100	0		70.6	29.4		0	100		
PHF	.500	.000	.500	.750	.625	.708	.000	.625	.625	.775

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	08:00 AM			07:15 AM			07:45 AM		
+0 mins.	0	0	0	2	1	3	0	2	2
+15 mins.	2	0	2	4	1	5	0	4	4
+30 mins.	1	0	1	4	2	6	0	3	3
+45 mins.	3	0	3	4	1	5	0	2	2
Total Volume	6	0	6	14	5	19	0	11	11
% App. Total	100	0		73.7	26.3		0	100	
PHF	.500	.000	.500	.875	.625	.792	.000	.688	.688

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

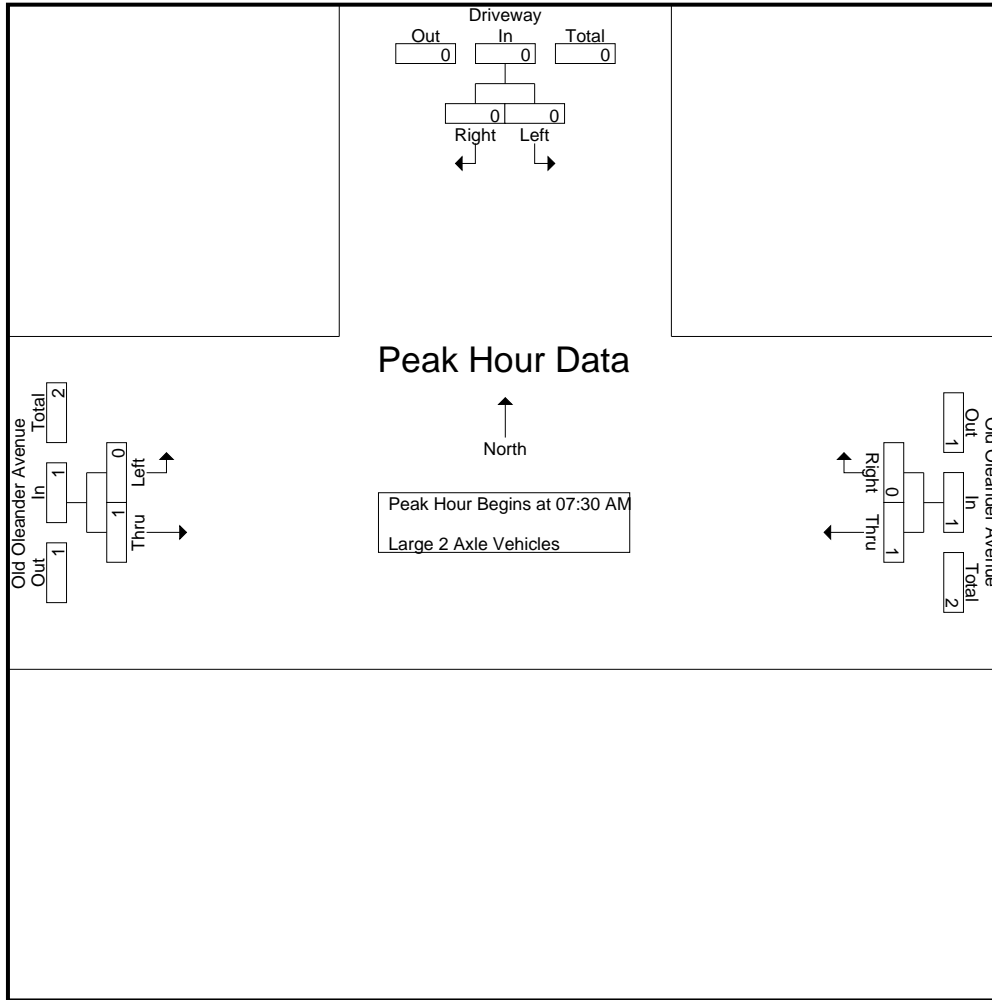
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	1	0	1	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	1	1	2
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1	1
Grand Total	0	0	0	1	0	1	0	2	2	3
Apprch %	0	0		100	0		0	100		
Total %	0	0		33.3	0	33.3	0	66.7	66.7	

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	0	0	0	1	0	1	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	1	1	2
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250	.500

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	1	0	1	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	1	0	1	0	1	1
% App. Total	0	0	0	100	0	100	0	100	100
PHF	.000	.000	.000	.250	.000	.250	.000	.250	.250

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

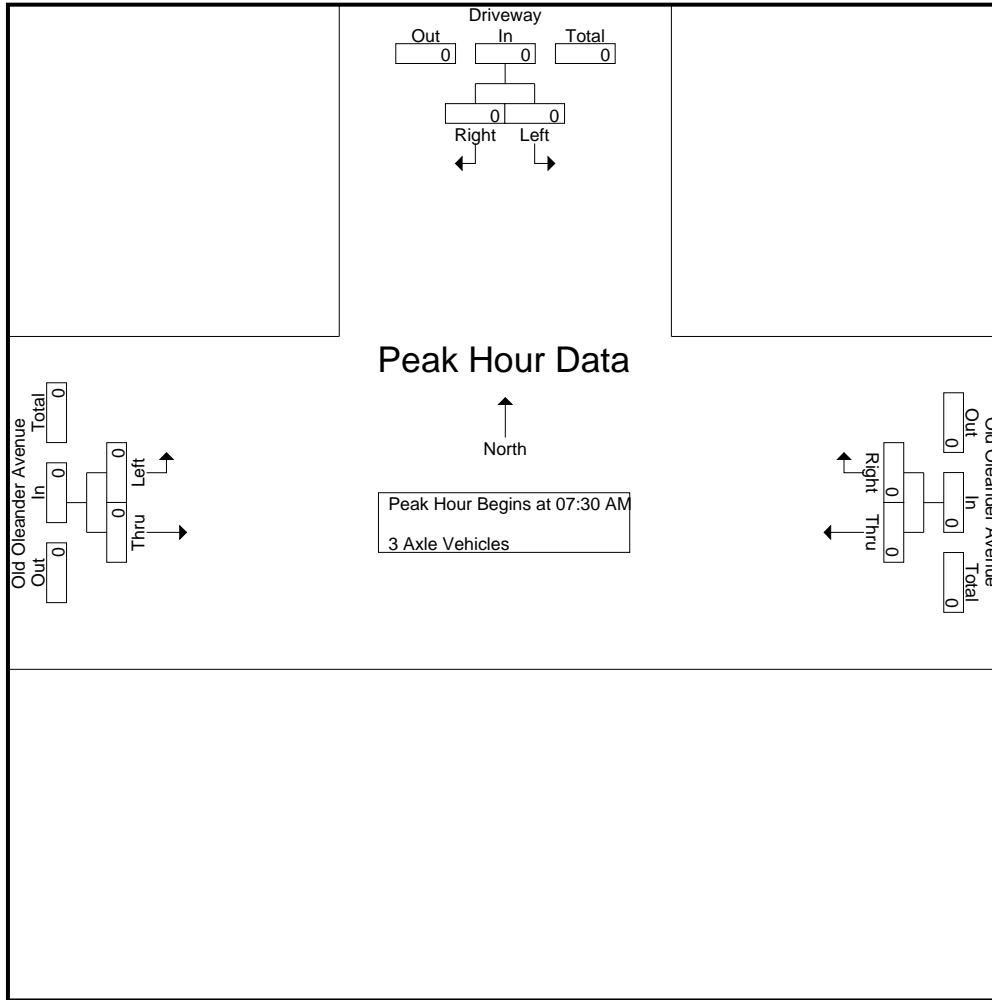
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0		0	0		0	0		
Total %										

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0		0	0		0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:30 AM			07:30 AM			07:30 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

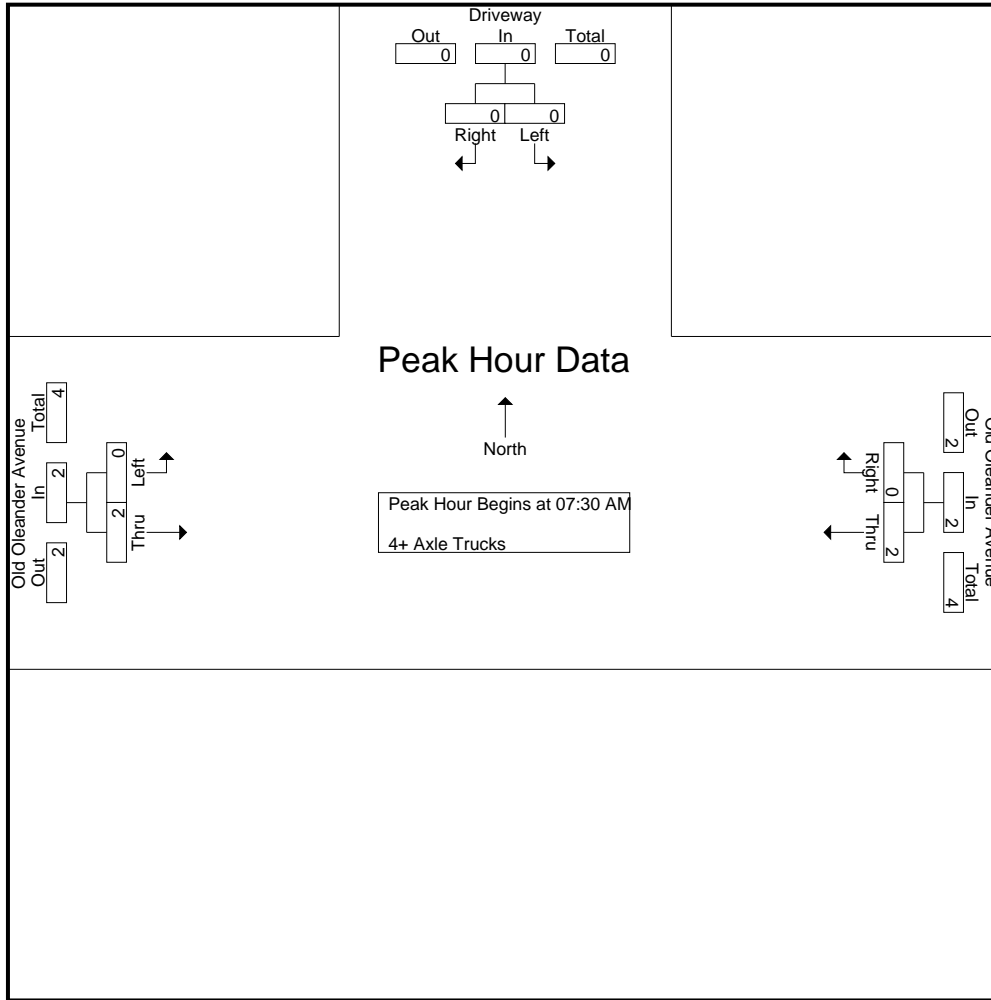
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	1	1	2
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	0	1	0	1	1	2
Grand Total	0	0	0	2	0	2	0	2	2	4
Apprch %	0	0		100	0		0	100		
Total %	0	0		50	0	50	0	50	50	

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	0	0	0	1	0	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	1	0	1	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	2	0	2	0	2	2	4
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.500	.500	.500

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

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

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	8	0	8	0	2	2	2	4	6	16
04:15 PM	2	1	3	1	1	2	0	2	2	7
04:30 PM	0	0	0	3	1	4	0	2	2	6
04:45 PM	3	0	3	0	1	1	0	2	2	6
Total	13	1	14	4	5	9	2	10	12	35
05:00 PM	0	0	0	0	2	2	0	9	9	11
05:15 PM	1	0	1	0	1	1	0	1	1	3
05:30 PM	0	0	0	1	0	1	0	6	6	7
05:45 PM	0	0	0	1	2	3	0	0	0	3
Total	1	0	1	2	5	7	0	16	16	24
Grand Total	14	1	15	6	10	16	2	26	28	59
Apprch %	93.3	6.7		37.5	62.5		7.1	92.9		
Total %	23.7	1.7	25.4	10.2	16.9	27.1	3.4	44.1	47.5	
Passenger Vehicles	14	1	15	4	8	12	2	22	24	51
% Passenger Vehicles	100	100	100	66.7	80	75	100	84.6	85.7	86.4
Large 2 Axle Vehicles	0	0	0	2	0	2	0	1	1	3
% Large 2 Axle Vehicles	0	0	0	33.3	0	12.5	0	3.8	3.6	5.1
3 Axle Vehicles	0	0	0	0	2	2	0	2	2	4
% 3 Axle Vehicles	0	0	0	0	20	12.5	0	7.7	7.1	6.8
4+ Axle Trucks	0	0	0	0	0	0	0	1	1	1
% 4+ Axle Trucks	0	0	0	0	0	0	0	3.8	3.6	1.7

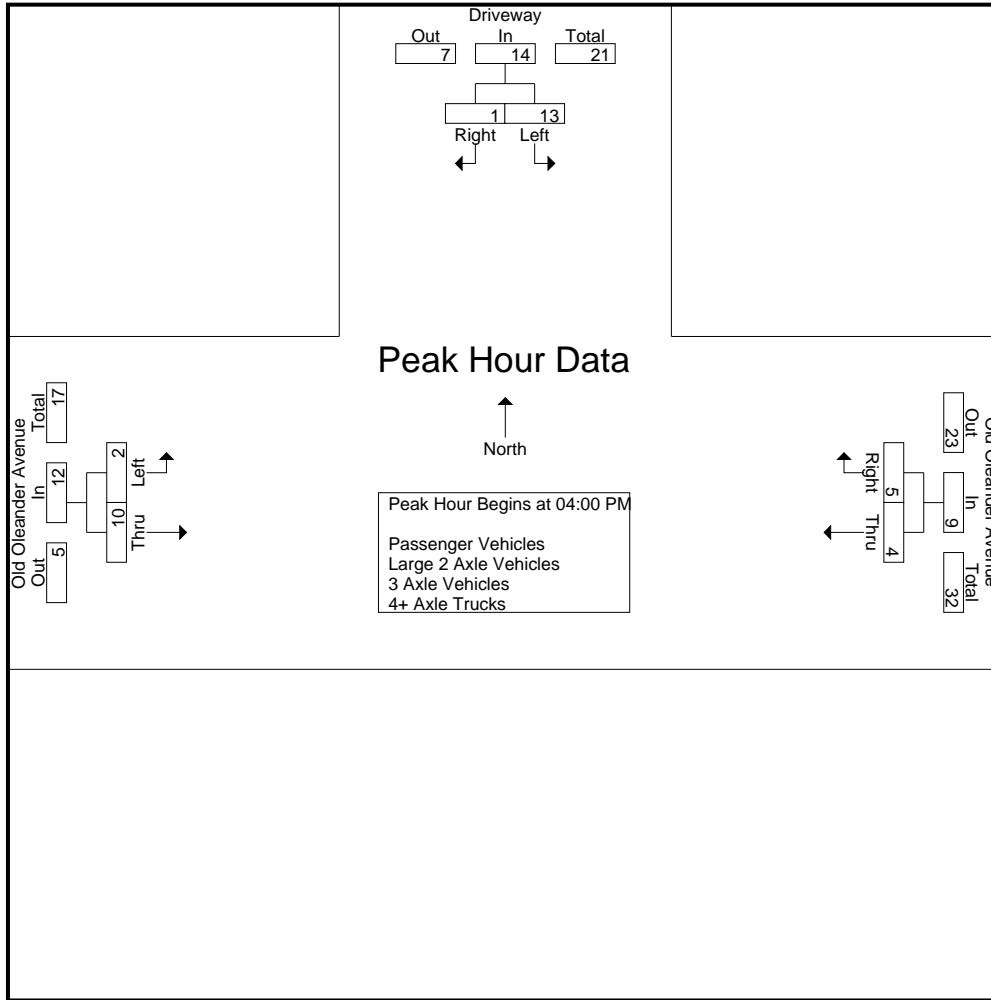
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	8	0	8	0	2	2	2	4	6	16
04:15 PM	2	1	3	1	1	2	0	2	2	7
04:30 PM	0	0	0	3	1	4	0	2	2	6
04:45 PM	3	0	3	0	1	1	0	2	2	6
Total Volume	13	1	14	4	5	9	2	10	12	35
% App. Total	92.9	7.1		44.4	55.6		16.7	83.3		
PHF	.406	.250	.438	.333	.625	.563	.250	.625	.500	.547

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			04:00 PM			04:45 PM		
+0 mins.	8	0	8	0	2	2	0	2	2
+15 mins.	2	1	3	1	1	2	0	9	9
+30 mins.	0	0	0	3	1	4	0	1	1
+45 mins.	3	0	3	0	1	1	0	6	6
Total Volume	13	1	14	4	5	9	0	18	18
% App. Total	92.9	7.1		44.4	55.6		0	100	
PHF	.406	.250	.438	.333	.625	.563	.000	.500	.500

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

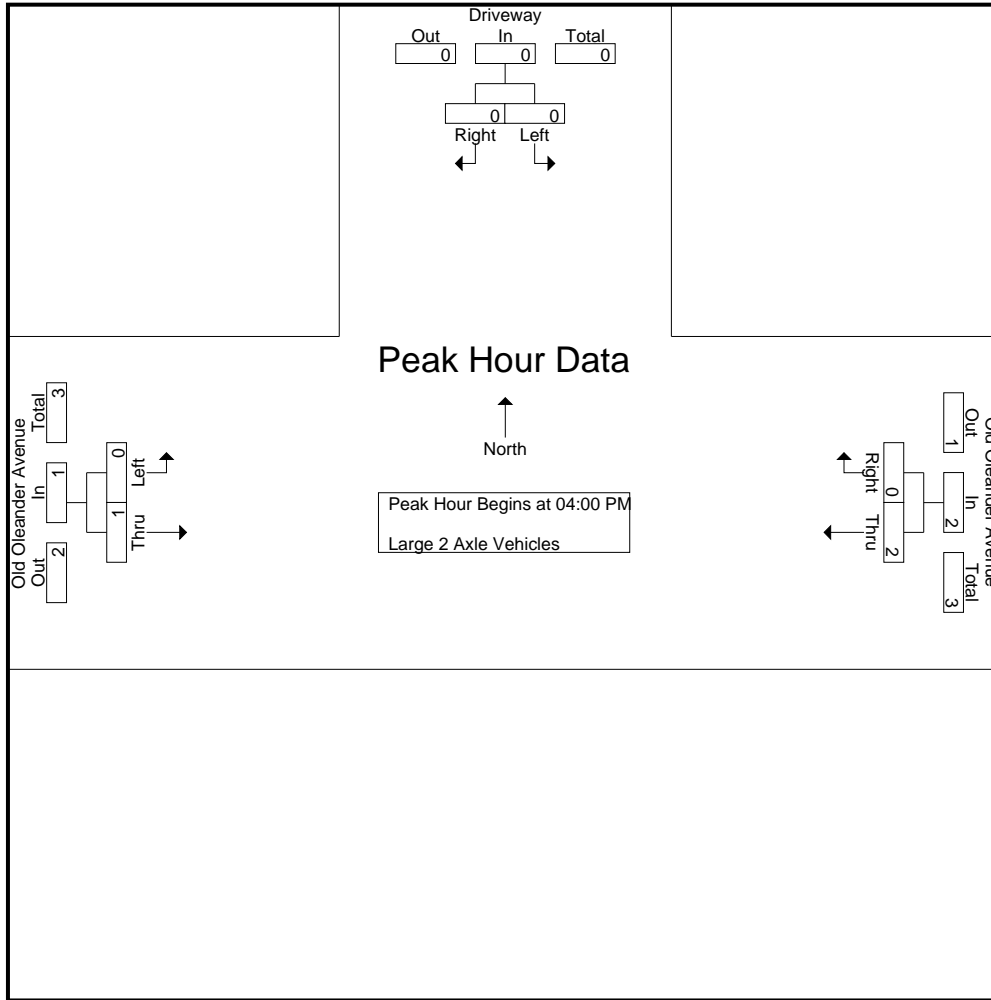
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	0	0	0	1	0	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	2	0	2	0	1	1	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	2	0	2	0	1	1	3
Apprch %	0	0		100	0		0	100		
Total %	0	0		66.7	0	66.7	0	33.3	33.3	

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	1	0	1	0	0	0	1
04:30 PM	0	0	0	1	0	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	1	1	1
Total Volume	0	0	0	2	0	2	0	1	1	3
% App. Total	0	0		100	0		0	100		
PHF	.000	.000	.000	.500	.000	.500	.000	.250	.250	.750

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_00 PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

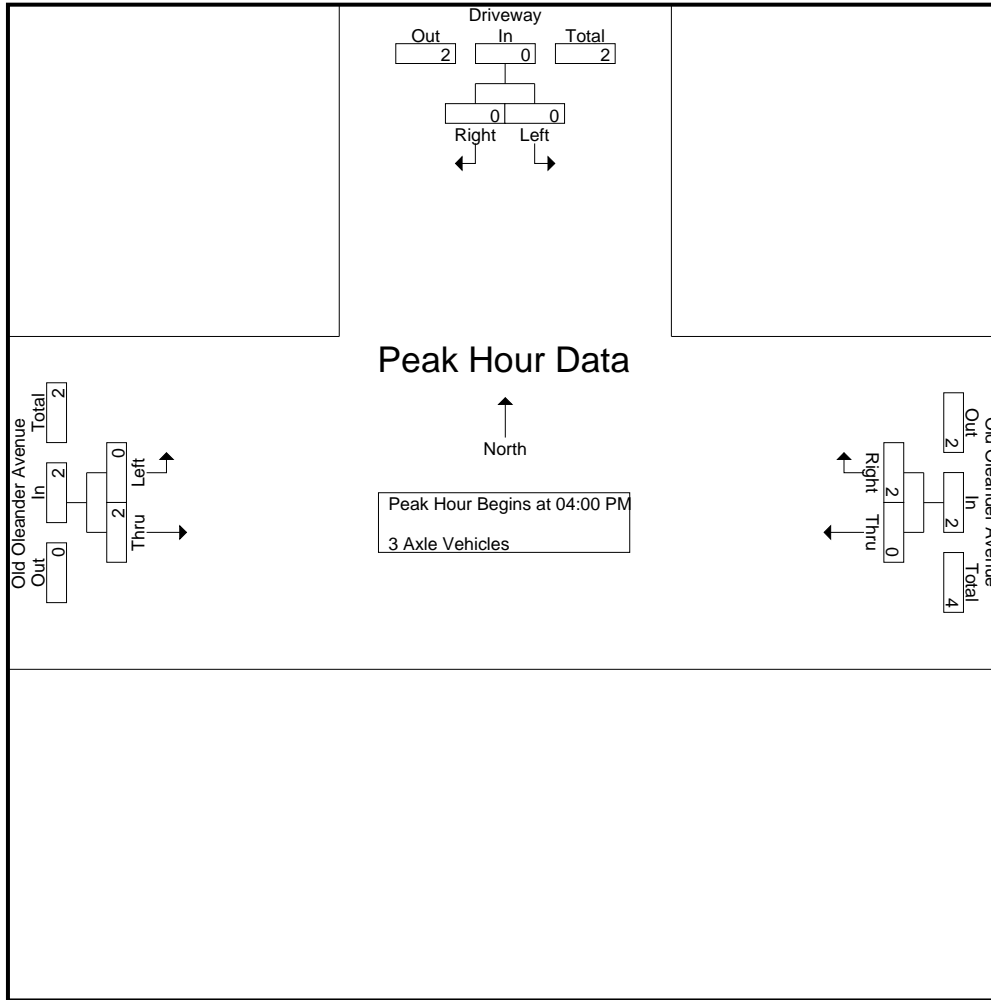
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	1	1	0	1	1	2
04:30 PM	0	0	0	0	1	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	2	2	0	2	2	4
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	2	2	0	2	2	4
Apprch %	0	0		0	100		0	100		
Total %	0	0		0	50	50	0	50	50	

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	1	1	0	1	1	2
04:30 PM	0	0	0	0	1	1	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	2	2	0	2	2	4
% App. Total	0	0		0	100		0	100		
PHF	.000	.000	.000	.000	.500	.500	.000	.500	.500	.500

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_00 PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

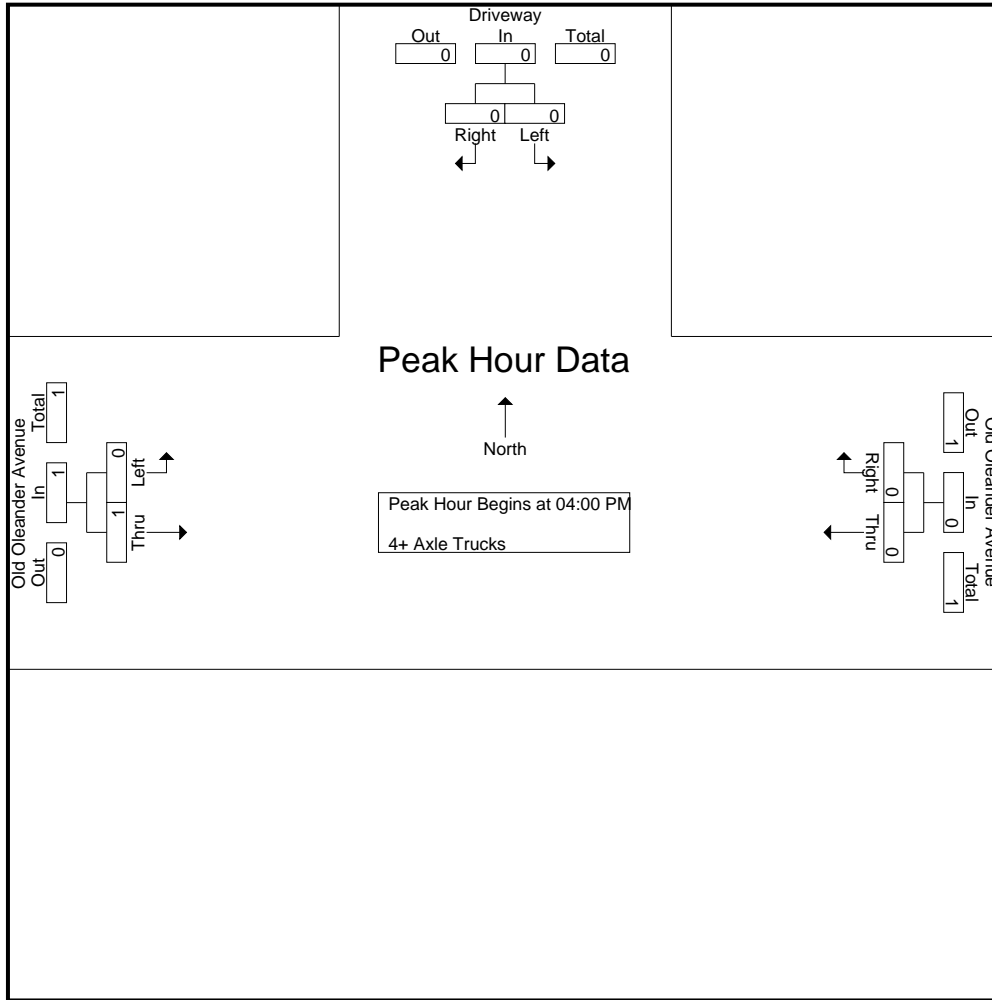
Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	1	1	1
Apprch %	0	0	0	0	0	0	0	100		
Total %	0	0	0	0	0	0	0	100	100	

Start Time	Driveway Southbound			Old Oleander Avenue Westbound			Old Oleander Avenue Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	1	1
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	1	1	1
% App. Total	0	0	0	0	0	0	0	100		
PHF	.000	.000	.000	.000	.000	.000	.000	.250	.250	.250

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

County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 01_CRV_DW_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

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

Location: County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue



Date: 2/8/2022
 Day: Tuesday

PEDESTRIANS

	North Leg Driveway	East Leg Old Oleander Avenue	South Leg Dead End	West Leg Old Oleander Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Driveway	East Leg Old Oleander Avenue	South Leg Dead End	West Leg Old Oleander Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	0	1

Location: County of Riverside
 N/S: Driveway
 E/W: Old Oleander Avenue



Date: 2/8/2022
 Day: Tuesday

BICYCLES

	Southbound Driveway			Westbound Old Oleander Avenue			Northbound Dead End			Eastbound Old Oleander Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Driveway			Westbound Old Oleander Avenue			Northbound Dead End			Eastbound Old Oleander Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

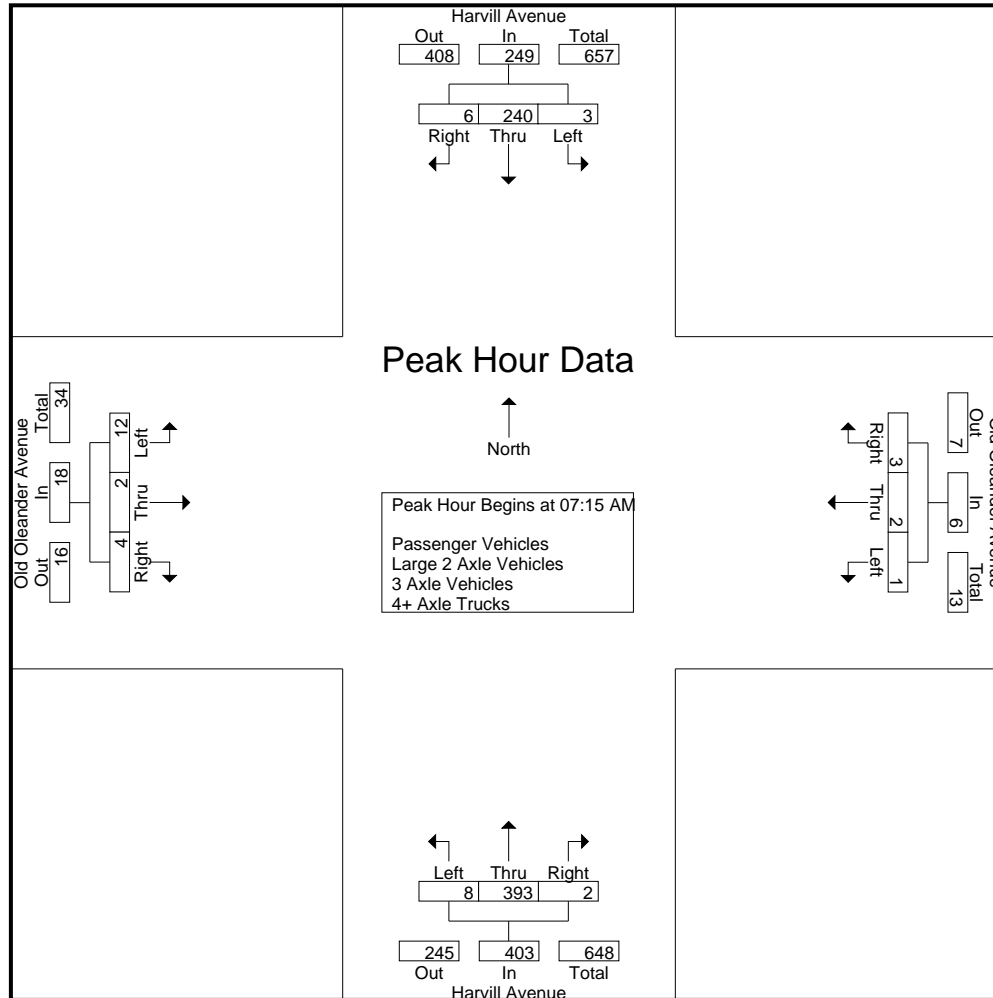
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	39	0	0	39	1	1	0	0	2	2	89	0	0	91	4	0	0	0	4	0	136	136
07:15 AM	2	56	1	0	59	0	0	1	0	1	1	95	2	0	98	2	0	2	0	4	0	162	162
07:30 AM	0	62	3	0	65	0	0	1	0	1	1	105	0	0	106	3	0	0	0	3	0	175	175
07:45 AM	0	63	2	0	65	1	1	1	0	3	3	102	0	0	105	5	0	1	0	6	0	179	179
Total	2	220	6	0	228	2	2	3	0	7	7	391	2	0	400	14	0	3	0	17	0	652	652
08:00 AM	1	59	0	0	60	0	1	0	0	1	3	91	0	0	94	2	2	1	0	5	0	160	160
08:15 AM	1	42	1	0	44	0	0	0	0	0	4	72	0	0	76	4	1	5	0	10	0	130	130
08:30 AM	1	24	0	0	25	0	0	0	0	0	2	74	0	0	76	3	0	1	0	4	0	105	105
08:45 AM	0	30	0	0	30	0	1	2	0	3	0	55	0	0	55	2	1	0	0	3	0	91	91
Total	3	155	1	0	159	0	2	2	0	4	9	292	0	0	301	11	4	7	0	22	0	486	486
Grand Total	5	375	7	0	387	2	4	5	0	11	16	683	2	0	701	25	4	10	0	39	0	1138	1138
Apprch %	1.3	96.9	1.8			18.2	36.4	45.5			2.3	97.4	0.3			64.1	10.3	25.6					
Total %	0.4	33	0.6		34	0.2	0.4	0.4		1	1.4	60	0.2		61.6	2.2	0.4	0.9		3.4	0	100	
Passenger Vehicles	3	332	5		340	2	4	3		9	15	626	2		643	9	3	8		20	0	0	1012
% Passenger Vehicles	60	88.5	71.4	0	87.9	100	100	60	0	81.8	93.8	91.7	100	0	91.7	36	75	80	0	51.3	0	0	88.9
Large 2 Axle Vehicles	2	21	1		24	0	0	2		2	0	26	0		26	1	1	0		2	0	0	54
% Large 2 Axle Vehicles	40	5.6	14.3	0	6.2	0	0	40	0	18.2	0	3.8	0	0	3.7	4	25	0	0	5.1	0	0	4.7
3 Axle Vehicles	0	4	0		4	0	0	0		0	0	9	0		9	3	0	0		3	0	0	16
% 3 Axle Vehicles	0	1.1	0	0	1	0	0	0	0	0	0	1.3	0	0	1.3	12	0	0	0	7.7	0	0	1.4
4+ Axle Trucks	0	18	1		19	0	0	0		0	1	22	0		23	12	0	2		14	0	0	56
% 4+ Axle Trucks	0	4.8	14.3	0	4.9	0	0	0	0	0	6.2	3.2	0	0	3.3	48	0	20	0	35.9	0	0	4.9

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	56	1	59	0	0	1	1	1	95	2	98	2	0	2	4	162
07:30 AM	0	62	3	65	0	0	1	1	1	105	0	106	3	0	0	3	175
07:45 AM	0	63	2	65	1	1	1	3	3	102	0	105	5	0	1	6	179
08:00 AM	1	59	0	60	0	1	0	1	3	91	0	94	2	2	1	5	160
Total Volume	3	240	6	249	1	2	3	6	8	393	2	403	12	2	4	18	676
% App. Total	1.2	96.4	2.4		16.7	33.3	50		2	97.5	0.5		66.7	11.1	22.2		
PHF	.375	.952	.500	.958	.250	.500	.750	.500	.667	.936	.250	.950	.600	.250	.500	.750	.944

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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				07:00 AM				07:15 AM				07:45 AM				
+0 mins.	2	56	1	59	1	1	0	2	1	95	2	98	5	0	1	6	
+15 mins.	0	62	3	65	0	0	1	1	1	105	0	106	2	2	1	5	
+30 mins.	0	63	2	65	0	0	1	1	3	102	0	105	4	1	5	10	
+45 mins.	1	59	0	60	1	1	1	3	3	91	0	94	3	0	1	4	
Total Volume	3	240	6	249	2	2	3	7	8	393	2	403	14	3	8	25	
% App. Total	1.2	96.4	2.4		28.6	28.6	42.9		2	97.5	0.5		56	12	32		
PHF	.375	.952	.500	.958	.500	.500	.750	.583	.667	.936	.250	.950	.700	.375	.400	.625	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

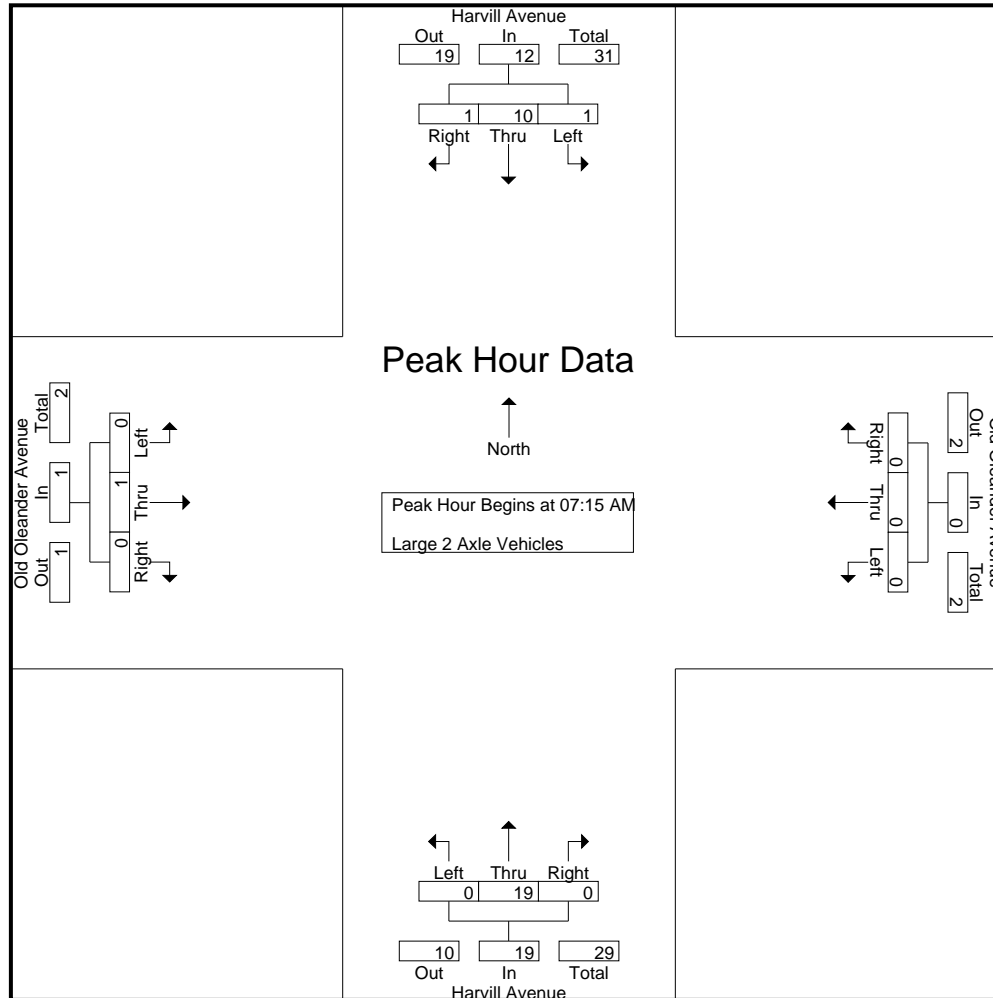
Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	2	2
07:15 AM	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	0	0	0	0	0	0	10	10	10
07:30 AM	0	5	1	0	6	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	12	12	12
07:45 AM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	4	4
Total	0	10	1	0	11	0	0	0	0	0	0	16	0	0	16	1	0	0	0	1	0	28	28	28
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	0	6	6	6
08:15 AM	0	5	0	0	5	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	7	7	7
08:30 AM	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	7	7	7
08:45 AM	0	3	0	0	3	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	6	6	6
Total	2	11	0	0	13	0	0	2	0	2	0	10	0	0	10	0	1	0	0	1	0	26	26	26
Grand Total	2	21	1	0	24	0	0	2	0	2	0	26	0	0	26	1	1	0	0	2	0	54	54	54
Apprch %	8.3	87.5	4.2			0	0	100			0	100	0			50	50	0			0			
Total %	3.7	38.9	1.9		44.4	0	0	3.7		3.7	0	48.1	0		48.1	1.9	1.9	0		3.7	0	100		

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	8	0	8	0	0	0	0	10
07:30 AM	0	5	1	6	0	0	0	0	0	6	0	6	0	0	0	0	12
07:45 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
08:00 AM	1	0	0	1	0	0	0	0	0	4	0	4	0	1	0	1	6
Total Volume	1	10	1	12	0	0	0	0	0	19	0	19	0	1	0	1	32
% App. Total	8.3	83.3	8.3		0	0	0		0	100	0		0	100	0		
PHF	.250	.500	.250	.500	.000	.000	.000	.000	.000	.594	.000	.594	.000	.250	.000	.250	.667

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	2	0	2	0	0	0	0	0	8	0	8	0	0	0	0	
+15 mins.	0	5	1	6	0	0	0	0	0	6	0	6	0	0	0	0	
+30 mins.	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	
+45 mins.	1	0	0	1	0	0	0	0	0	4	0	4	0	1	0	1	
Total Volume	1	10	1	12	0	0	0	0	0	19	0	19	0	1	0	1	
% App. Total	8.3	83.3	8.3		0	0	0		0	100	0		0	100	0		
PHF	.250	.500	.250	.500	.000	.000	.000	.000	.000	.594	.000	.594	.000	.250	.000	.250	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

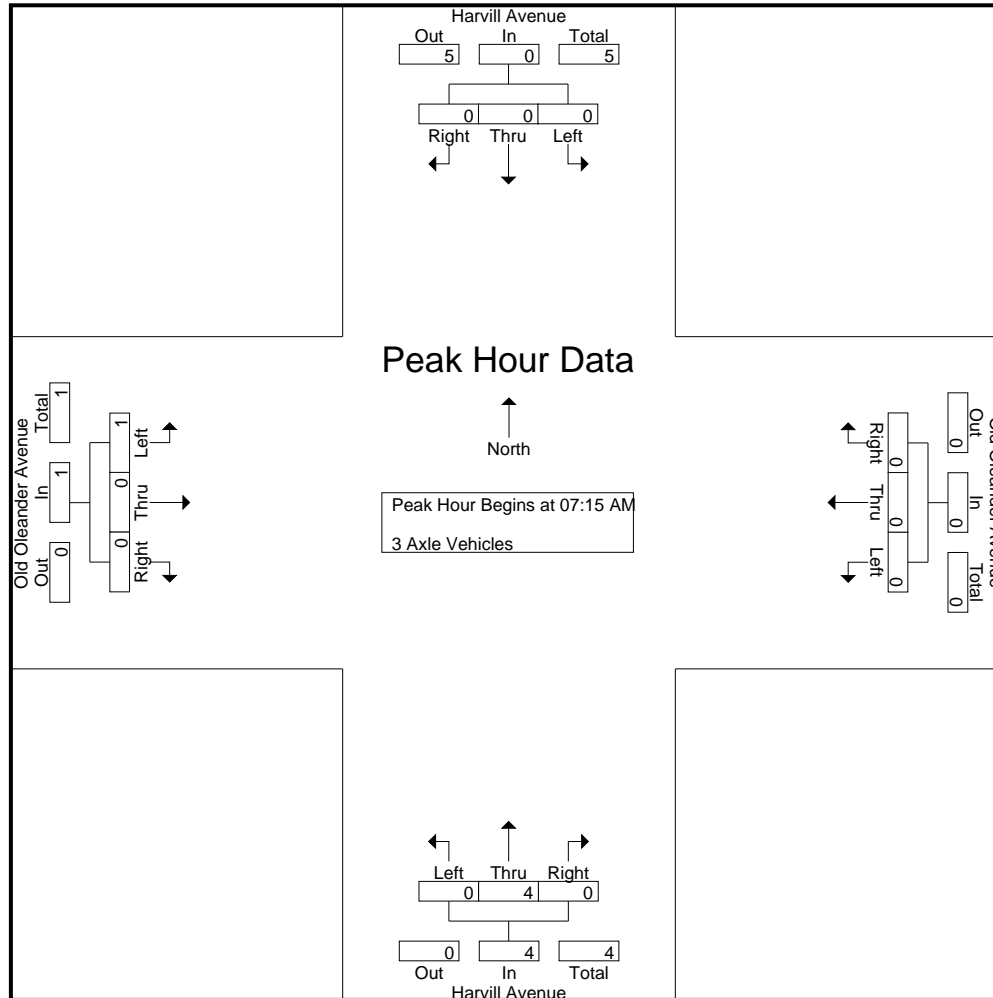
Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	0	0	0	1	0	4	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	0	0	0	0	2	0	4	4
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
08:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5	5
Total	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	2	0	0	0	2	0	0	0	0	2	0	12	12
Grand Total	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	3	0	0	0	3	0	0	0	0	3	0	16	16
Apprch %	0	100	0			0	0	0			0	100	0			100	0	0			0	0	0			0		
Total %	0	25	0		25	0	0	0		0	0	56.2	0		56.2	18.8	0	0		18.8	0	0	0		100	0		

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	0	2	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	1	5
% App. Total	0	0	0	0	0	0	0	0	0	100	0	100	100	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250	.625

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	
Total Volume	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	1	
% App. Total	0	0	0	0	0	0	0	0	0	100	0	100	100	0	0	100	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.250	.000	.000	.250	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

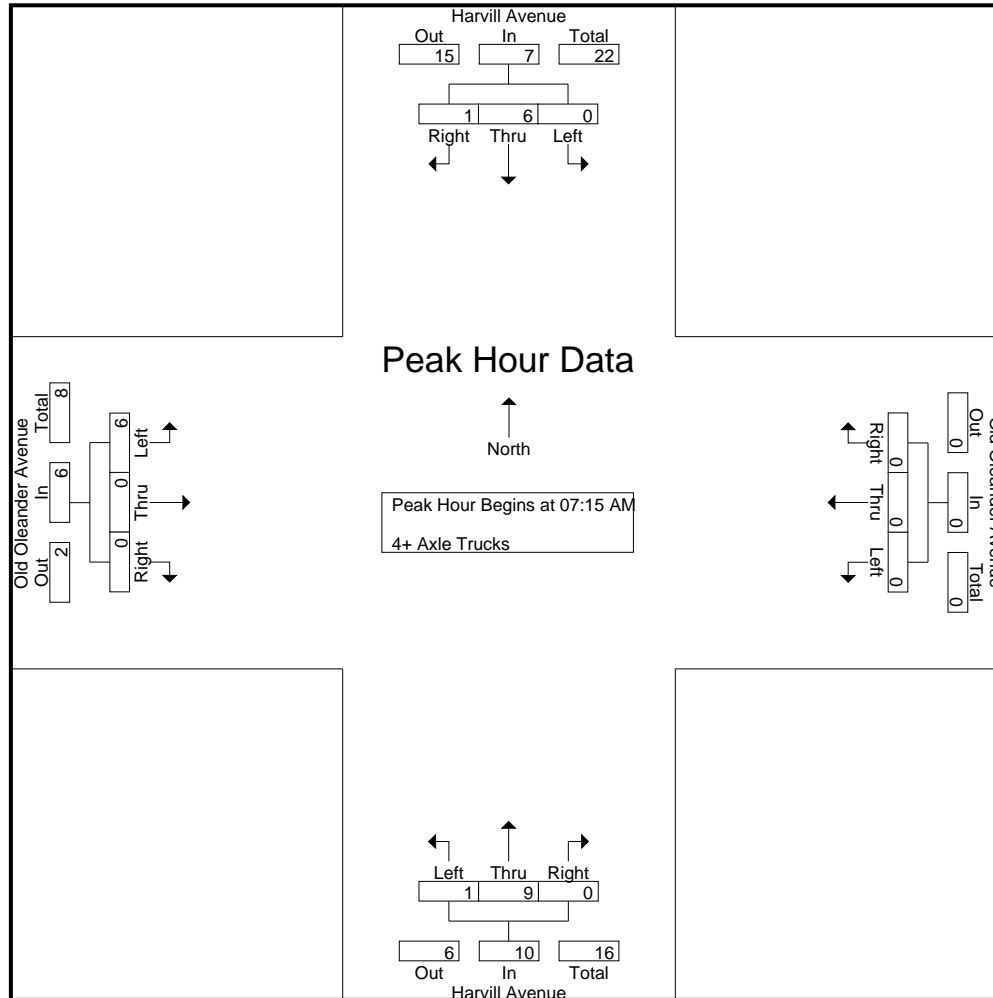
Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	2	0	0	0	2	0	0	8	8
07:15 AM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	2	0	0	0	2	0	0	5	5
07:30 AM	0	1	1	0	2	0	0	0	0	0	0	4	0	0	4	2	0	0	0	2	0	0	8	8
07:45 AM	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	0	0	7	7
Total	0	9	1	0	10	0	0	0	0	0	0	10	0	0	10	8	0	0	0	8	0	0	28	28
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	0	0	0	0	0	0	0	3	3
08:15 AM	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	1	0	2	0	3	0	0	11	11
08:30 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	5	5
08:45 AM	0	2	0	0	2	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	0	9	9
Total	0	9	0	0	9	0	0	0	0	0	1	12	0	0	13	4	0	2	0	6	0	0	28	28
Grand Total	0	18	1	0	19	0	0	0	0	0	1	22	0	0	23	12	0	2	0	14	0	0	56	56
Apprch %	0	94.7	5.3			0	0	0			4.3	95.7	0			85.7	0	14.3			0	0		
Total %	0	32.1	1.8		33.9	0	0	0		0	1.8	39.3	0		41.1	21.4	0	3.6		25	0	0	100	

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	2	0	0	2	5
07:30 AM	0	1	1	2	0	0	0	0	0	4	0	4	2	0	0	2	8
07:45 AM	0	3	0	3	0	0	0	0	0	2	0	2	2	0	0	2	7
08:00 AM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
Total Volume	0	6	1	7	0	0	0	0	1	9	0	10	6	0	0	6	23
% App. Total	0	85.7	14.3		0	0	0		10	90	0		100	0	0		
PHF	.000	.500	.250	.583	.000	.000	.000	.000	.250	.563	.000	.625	.750	.000	.000	.750	.719

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	2	0	2	0	0	0	0	0	1	0	1	2	0	0	2	
+15 mins.	0	1	1	2	0	0	0	0	0	4	0	4	2	0	0	2	
+30 mins.	0	3	0	3	0	0	0	0	0	2	0	2	2	0	0	2	
+45 mins.	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	
Total Volume	0	6	1	7	0	0	0	0	1	9	0	10	6	0	0	6	
% App. Total	0	85.7	14.3		0	0	0		10	90	0		100	0	0		
PHF	.000	.500	.250	.583	.000	.000	.000	.000	.250	.563	.000	.625	.750	.000	.000	.750	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

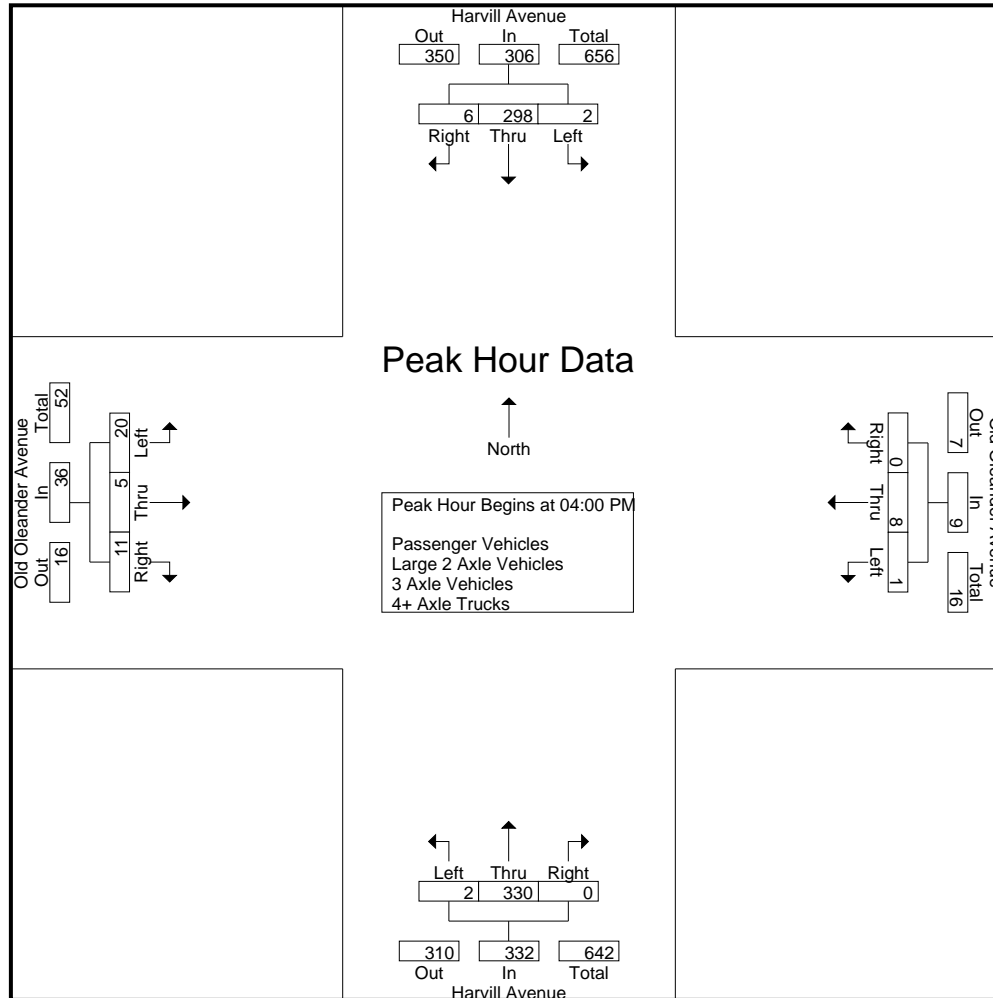
Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	71	2	0	73	0	0	0	0	0	0	100	0	0	100	11	1	4	2	16	2	189	191
04:15 PM	0	69	1	0	70	0	2	0	0	2	1	79	0	0	80	3	3	2	1	8	1	160	161
04:30 PM	0	84	2	0	86	1	6	0	0	7	1	90	0	0	91	2	0	2	0	4	0	188	188
04:45 PM	2	74	1	0	77	0	0	0	2	0	0	61	0	0	61	4	1	3	3	8	5	146	151
Total	2	298	6	0	306	1	8	0	2	9	2	330	0	0	332	20	5	11	6	36	8	683	691
05:00 PM	0	78	1	0	79	0	0	0	1	0	2	74	0	0	76	11	0	0	0	11	1	166	167
05:15 PM	0	72	2	0	74	0	0	0	0	0	0	79	0	0	79	1	0	2	2	3	2	156	158
05:30 PM	0	77	0	0	77	0	0	0	0	0	0	70	0	0	70	8	0	0	0	8	0	155	155
05:45 PM	0	65	1	0	66	0	0	0	1	0	1	59	0	0	60	2	0	0	0	2	1	128	129
Total	0	292	4	0	296	0	0	0	2	0	3	282	0	0	285	22	0	2	2	24	4	605	609
Grand Total	2	590	10	0	602	1	8	0	4	9	5	612	0	0	617	42	5	13	8	60	12	1288	1300
Apprch %	0.3	98	1.7			11.1	88.9	0			0.8	99.2	0			70	8.3	21.7					
Total %	0.2	45.8	0.8		46.7	0.1	0.6	0		0.7	0.4	47.5	0		47.9	3.3	0.4	1		4.7	0.9	99.1	
Passenger Vehicles	2	546	7		555	0	4	0		8	5	573	0		578	30	1	10		47	0	0	1188
% Passenger Vehicles	100	92.5	70		92.2	0	50	0		61.5	100	93.6	0		93.7	71.4	20	76.9		69.1	0	0	91.4
Large 2 Axle Vehicles	0	14	1		15	0	0	0		0	0	13	0		13	1	0	0		1	0	0	29
% Large 2 Axle Vehicles	0	2.4	10		2.5	0	0	0		0	0	2.1	0		2.1	2.4	0	0		1.5	0	0	2.2
3 Axle Vehicles	0	13	2		15	0	4	0		4	0	18	0		18	4	4	0		8	0	0	45
% 3 Axle Vehicles	0	2.2	20		2.5	0	50	0		30.8	0	2.9	0		2.9	9.5	80	0		11.8	0	0	3.5
4+ Axle Trucks	0	17	0		17	1	0	0		1	0	8	0		8	7	0	3		12	0	0	38
% 4+ Axle Trucks	0	2.9	0		2.8	100	0	0		7.7	0	1.3	0		1.3	16.7	0	23.1		17.6	0	0	2.9

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	71	2	73	0	0	0	0	0	100	0	100	11	1	4	16	189
04:15 PM	0	69	1	70	0	2	0	2	1	79	0	80	3	3	2	8	160
04:30 PM	0	84	2	86	1	6	0	7	1	90	0	91	2	0	2	4	188
04:45 PM	2	74	1	77	0	0	0	0	0	61	0	61	4	1	3	8	146
Total Volume	2	298	6	306	1	8	0	9	2	330	0	332	20	5	11	36	683
% App. Total	0.7	97.4	2		11.1	88.9	0		0.6	99.4	0		55.6	13.9	30.6		
PHF	.250	.887	.750	.890	.250	.333	.000	.321	.500	.825	.000	.830	.455	.417	.688	.563	.903

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	84	2	86	0	0	0	0	0	100	0	100	11	1	4	16	
+15 mins.	2	74	1	77	0	2	0	2	1	79	0	80	3	3	2	8	
+30 mins.	0	78	1	79	1	6	0	7	1	90	0	91	2	0	2	4	
+45 mins.	0	72	2	74	0	0	0	0	0	61	0	61	4	1	3	8	
Total Volume	2	308	6	316	1	8	0	9	2	330	0	332	20	5	11	36	
% App. Total	0.6	97.5	1.9		11.1	88.9	0		0.6	99.4	0		55.6	13.9	30.6		
PHF	.250	.917	.750	.919	.250	.333	.000	.321	.500	.825	.000	.830	.455	.417	.688	.563	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

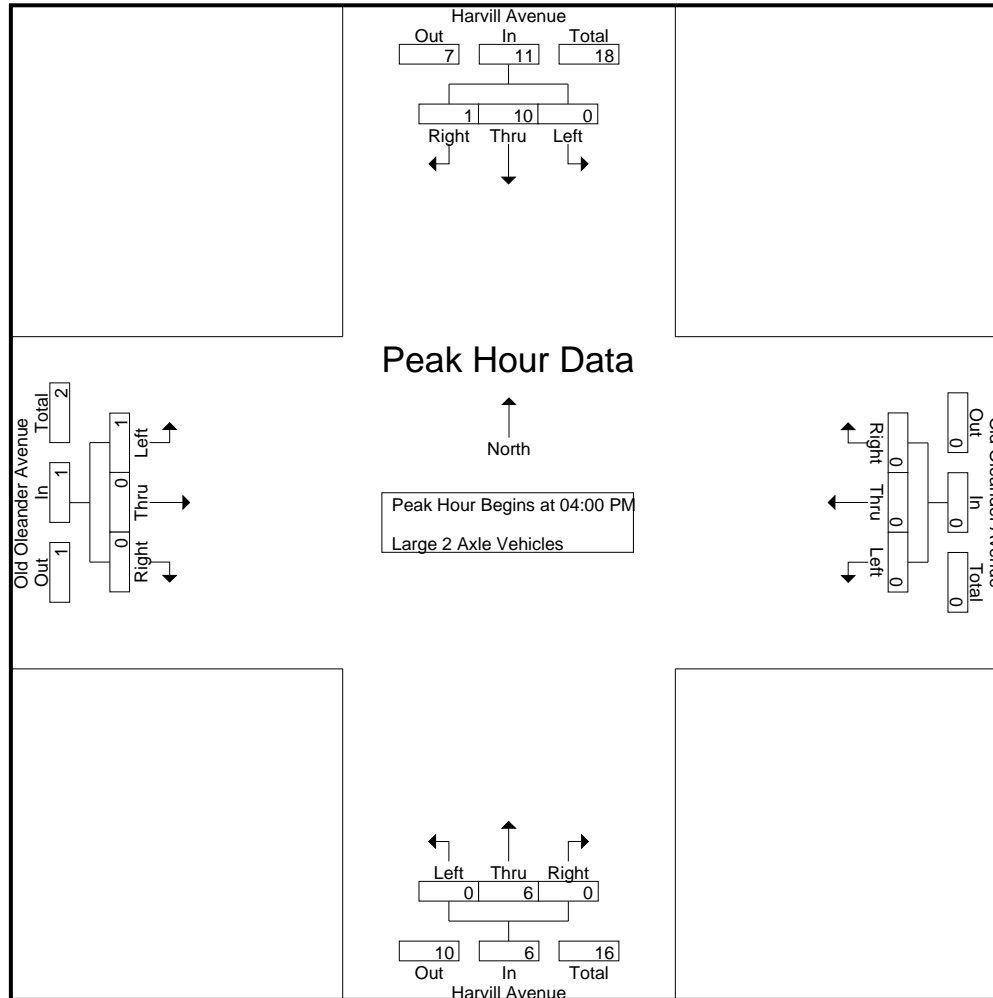
Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	10	10
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30 PM	0	2	1	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	4
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	3	3
Total	0	10	1	0	11	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	0	0	0	1	0	18	18
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	7	7
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	0	0	0	0	0
Total	0	4	0	0	4	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0	0	0	0	0	11	11
Grand Total	0	14	1	0	15	0	0	0	0	0	0	13	0	0	13	1	0	0	0	1	0	0	0	0	1	0	29	29
Apprch %	0	93.3	6.7			0	0	0			0	100	0			100	0	0			0	0	0			0		
Total %	0	48.3	3.4		51.7	0	0	0		0	0	44.8	0		44.8	3.4	0	0		3.4	0	0	0		0	0	100	

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0	10
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
Total Volume	0	10	1	11	0	0	0	0	0	6	0	6	1	0	0	1	18
% App. Total	0	90.9	9.1		0	0	0		0	100	0		100	0	0		
PHF	.000	.417	.250	.458	.000	.000	.000	.000	.000	.375	.000	.375	.250	.000	.000	.250	.450

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	6	0	6	0	0	0	0	0	4	0	4	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	2	1	3	0	0	0	0	0	1	0	1	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	
Total Volume	0	10	1	11	0	0	0	0	0	6	0	6	1	0	0	1	
% App. Total	0	90.9	9.1		0	0	0		0	100	0		100	0	0		
PHF	.000	.417	.250	.458	.000	.000	.000	.000	.000	.375	.000	.375	.250	.000	.000	.250	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

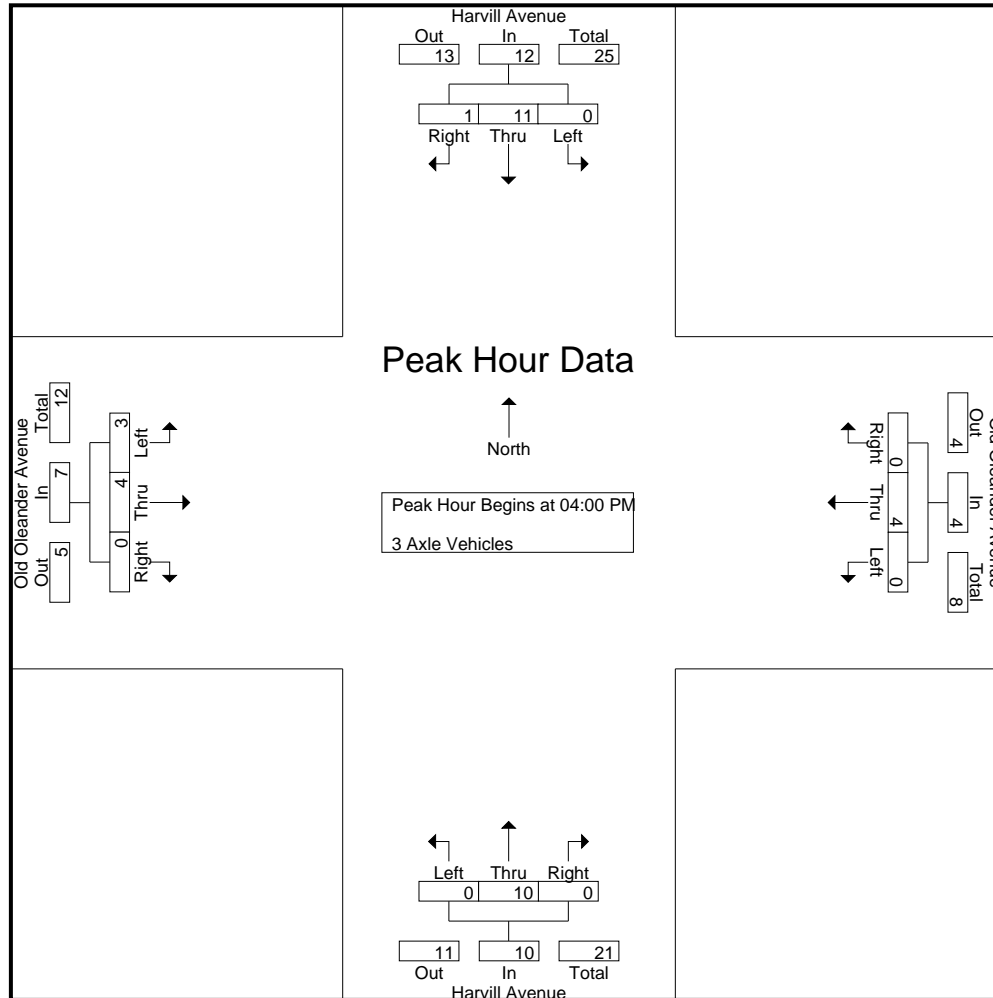
Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	2	1	0	0	3	0	9	9
04:15 PM	0	4	1	0	5	0	2	0	0	2	0	4	0	0	4	0	3	0	0	3	0	14	14
04:30 PM	0	3	0	0	3	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	7	7
04:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	3
Total	0	11	1	0	12	0	4	0	0	4	0	10	0	0	10	3	4	0	0	7	0	33	33
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	2	2
05:15 PM	0	2	1	0	3	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	10	10
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	2	1	0	3	0	0	0	0	0	0	8	0	0	8	1	0	0	0	1	0	12	12
Grand Total	0	13	2	0	15	0	4	0	0	4	0	18	0	0	18	4	4	0	0	8	0	45	45
Aprch %	0	86.7	13.3			0	100	0			0	100	0			50	50	0			0		
Total %	0	28.9	4.4		33.3	0	8.9	0		8.9	0	40	0		40	8.9	8.9	0		17.8	0	100	

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	0	2	0	0	0	0	0	4	0	4	2	1	0	3	9
04:15 PM	0	4	1	5	0	2	0	2	0	4	0	4	0	3	0	3	14
04:30 PM	0	3	0	3	0	2	0	2	0	2	0	2	0	0	0	0	7
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	11	1	12	0	4	0	4	0	10	0	10	3	4	0	7	33
% App. Total	0	91.7	8.3		0	100	0		0	100	0		42.9	57.1	0		
PHF	.000	.688	.250	.600	.000	.500	.000	.500	.000	.625	.000	.625	.375	.333	.000	.583	.589

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	0	2	0	0	0	0	0	4	0	4	2	1	0	3	
+15 mins.	0	4	1	5	0	2	0	2	0	4	0	4	0	3	0	3	
+30 mins.	0	3	0	3	0	2	0	2	0	2	0	2	0	0	0	0	
+45 mins.	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	
Total Volume	0	11	1	12	0	4	0	4	0	10	0	10	3	4	0	7	
% App. Total	0	91.7	8.3		0	100	0		0	100	0		42.9	57.1	0		
PHF	.000	.688	.250	.600	.000	.500	.000	.500	.000	.625	.000	.625	.375	.333	.000	.583	

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

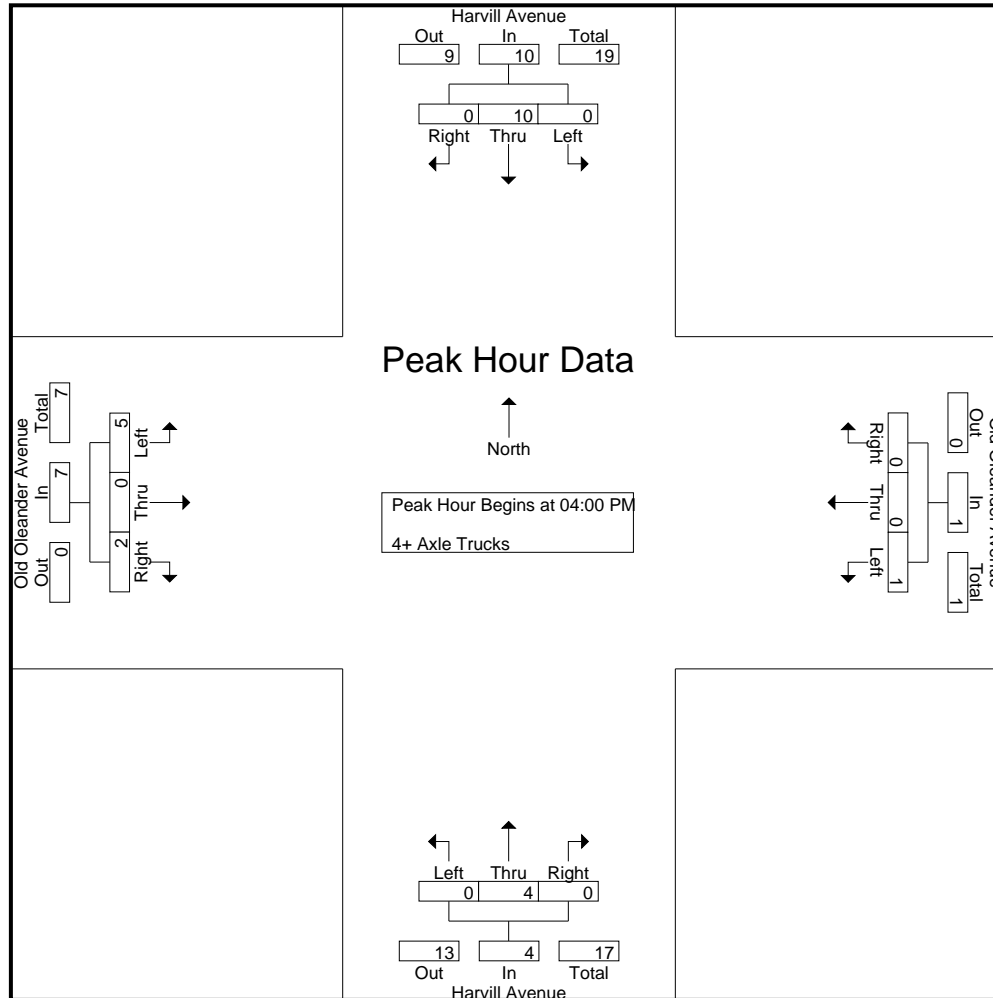
Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Old Oleander Avenue Westbound					Harvill Avenue Northbound					Old Oleander Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	2	0	0	0	2	0	0	9	9
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	4	0	0	4	1	0	0	0	1	0	0	0	0	0	2	0	1	0	3	0	0	8	8
04:45 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	1	0	5	6
Total	0	10	0	0	10	1	0	0	0	1	0	4	0	0	4	5	0	2	1	7	1	0	22	23
05:00 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4	4
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	1	1	1	0	5	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	1
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	4	4
Total	0	7	0	0	7	0	0	0	0	0	0	4	0	0	4	2	0	1	1	3	1	0	14	15
Grand Total	0	17	0	0	17	1	0	0	0	1	0	8	0	0	8	7	0	3	2	10	2	0	36	38
Apprch %	0	100	0			100	0	0			0	100	0			70	0	30						
Total %	0	47.2	0		47.2	2.8	0	0		2.8	0	22.2	0		22.2	19.4	0	8.3		27.8	5.3		94.7	

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	4	0	4	2	0	0	2	9
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	4	0	4	1	0	0	1	0	0	0	0	2	0	1	3	8
04:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	1	0	1	2	5
Total Volume	0	10	0	10	1	0	0	1	0	4	0	4	5	0	2	7	22
% App. Total	0	100	0		100	0	0		0	100	0		71.4	0	28.6		
PHF	.000	.625	.000	.625	.250	.000	.000	.250	.000	.250	.000	.250	.625	.000	.500	.583	.611

County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue
 Weather: Clear

File Name : 02_CRV_Har_OO PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Old Oleander Avenue Westbound				Harvill Avenue Northbound				Old Oleander Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	4	0	4	2	0	0	2	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	4	0	4	1	0	0	1	0	0	0	0	2	0	1	3	
+45 mins.	0	3	0	3	0	0	0	0	0	0	0	0	1	0	1	2	
Total Volume	0	10	0	10	1	0	0	1	0	4	0	4	5	0	2	7	
% App. Total	0	100	0		100	0	0		0	100	0		71.4	0	28.6		
PHF	.000	.625	.000	.625	.250	.000	.000	.250	.000	.250	.000	.250	.625	.000	.500	.583	

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue



Date: 2/8/2022
 Day: Tuesday

PEDESTRIANS

	North Leg Harvill Avenue	East Leg Old Oleander Avenue	South Leg Harvill Avenue	West Leg Old Oleander Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Harvill Avenue	East Leg Old Oleander Avenue	South Leg Harvill Avenue	West Leg Old Oleander Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Old Oleander Avenue



Date: 2/8/2022
 Day: Tuesday

BICYCLES

	Southbound Harvill Avenue			Westbound Old Oleander Avenue			Northbound Harvill Avenue			Eastbound Old Oleander Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Harvill Avenue			Westbound Old Oleander Avenue			Northbound Harvill Avenue			Eastbound Old Oleander Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

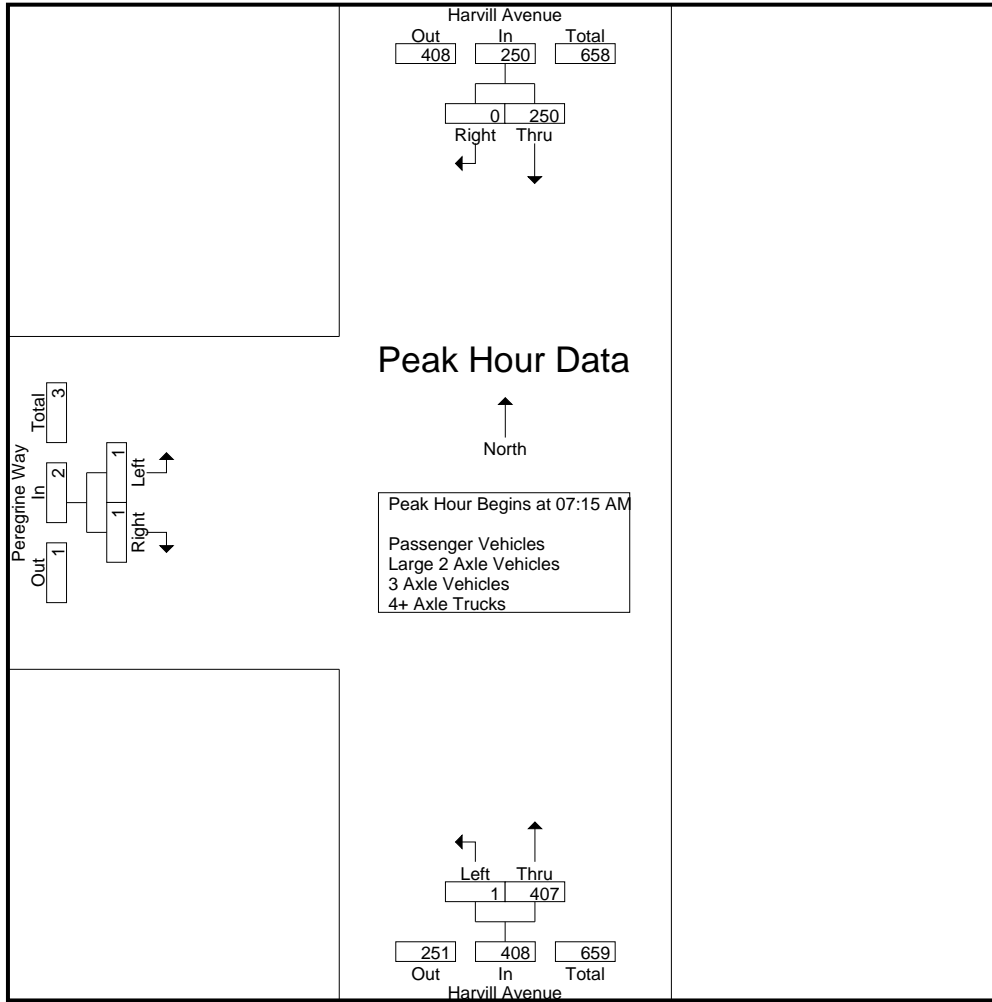
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	42	0	42	2	87	89	0	1	1	132
07:15 AM	58	0	58	0	100	100	0	0	0	158
07:30 AM	65	0	65	1	102	103	1	0	1	169
07:45 AM	66	0	66	0	108	108	0	1	1	175
Total	231	0	231	3	397	400	1	2	3	634
08:00 AM	61	0	61	0	97	97	0	0	0	158
08:15 AM	45	0	45	1	76	77	0	0	0	122
08:30 AM	25	0	25	1	82	83	0	1	1	109
08:45 AM	29	0	29	1	51	52	0	0	0	81
Total	160	0	160	3	306	309	0	1	1	470
Grand Total	391	0	391	6	703	709	1	3	4	1104
Apprch %	100	0		0.8	99.2		25	75		
Total %	35.4	0	35.4	0.5	63.7	64.2	0.1	0.3	0.4	
Passenger Vehicles	342	0	342	5	639	644	1	3	4	990
% Passenger Vehicles	87.5	0	87.5	83.3	90.9	90.8	100	100	100	89.7
Large 2 Axle Vehicles	19	0	19	1	25	26	0	0	0	45
% Large 2 Axle Vehicles	4.9	0	4.9	16.7	3.6	3.7	0	0	0	4.1
3 Axle Vehicles	4	0	4	0	10	10	0	0	0	14
% 3 Axle Vehicles	1	0	1	0	1.4	1.4	0	0	0	1.3
4+ Axle Trucks	26	0	26	0	29	29	0	0	0	55
% 4+ Axle Trucks	6.6	0	6.6	0	4.1	4.1	0	0	0	5

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. 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	58	0	58	0	100	100	0	0	0	158
07:30 AM	65	0	65	1	102	103	1	0	1	169
07:45 AM	66	0	66	0	108	108	0	1	1	175
08:00 AM	61	0	61	0	97	97	0	0	0	158
Total Volume	250	0	250	1	407	408	1	1	2	660
% App. Total	100	0		0.2	99.8		50	50		
PHF	.947	.000	.947	.250	.942	.944	.250	.250	.500	.943

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:00 AM		
+0 mins.	58	0	58	0	100	100	0	1	1
+15 mins.	65	0	65	1	102	103	0	0	0
+30 mins.	66	0	66	0	108	108	1	0	1
+45 mins.	61	0	61	0	97	97	0	1	1
Total Volume	250	0	250	1	407	408	1	2	3
% App. Total	100	0		0.2	99.8		33.3	66.7	
PHF	.947	.000	.947	.250	.942	.944	.250	.500	.750

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	1	0	1	1	2	3	0	0	0	4
07:15 AM	3	0	3	0	7	7	0	0	0	10
07:30 AM	4	0	4	0	4	4	0	0	0	8
07:45 AM	2	0	2	0	3	3	0	0	0	5
Total	10	0	10	1	16	17	0	0	0	27
08:00 AM	0	0	0	0	5	5	0	0	0	5
08:15 AM	5	0	5	0	1	1	0	0	0	6
08:30 AM	3	0	3	0	2	2	0	0	0	5
08:45 AM	1	0	1	0	1	1	0	0	0	2
Total	9	0	9	0	9	9	0	0	0	18
Grand Total	19	0	19	1	25	26	0	0	0	45
Apprch %	100	0		3.8	96.2		0	0		
Total %	42.2	0	42.2	2.2	55.6	57.8	0	0	0	

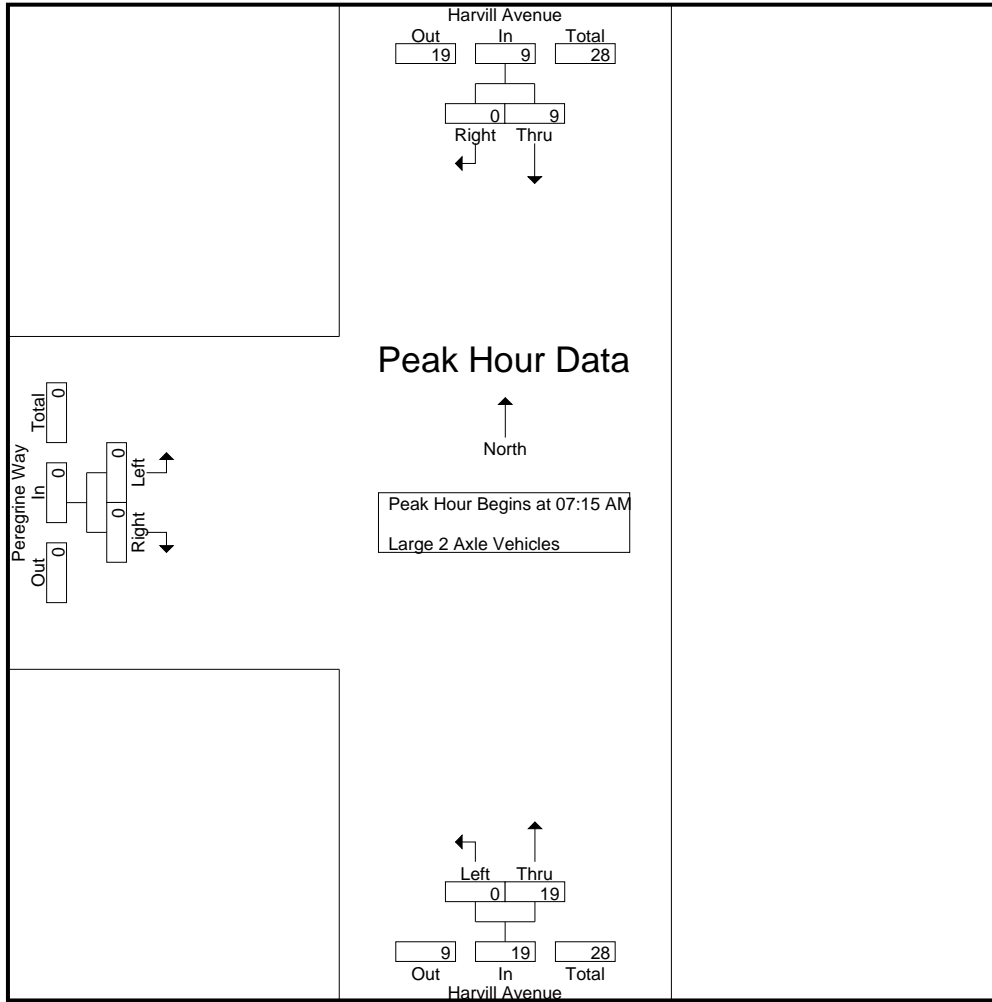
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	3	0	3	0	7	7	0	0	0	10
07:30 AM	4	0	4	0	4	4	0	0	0	8
07:45 AM	2	0	2	0	3	3	0	0	0	5
08:00 AM	0	0	0	0	5	5	0	0	0	5
Total Volume	9	0	9	0	19	19	0	0	0	28
% App. Total	100	0		0	100		0	0		
PHF	.563	.000	.563	.000	.679	.679	.000	.000	.000	.700

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	3	0	3	0	7	7	0	0	0
+15 mins.	4	0	4	0	4	4	0	0	0
+30 mins.	2	0	2	0	3	3	0	0	0
+45 mins.	0	0	0	0	5	5	0	0	0
Total Volume	9	0	9	0	19	19	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.563	.000	.563	.000	.679	.679	.000	.000	.000

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

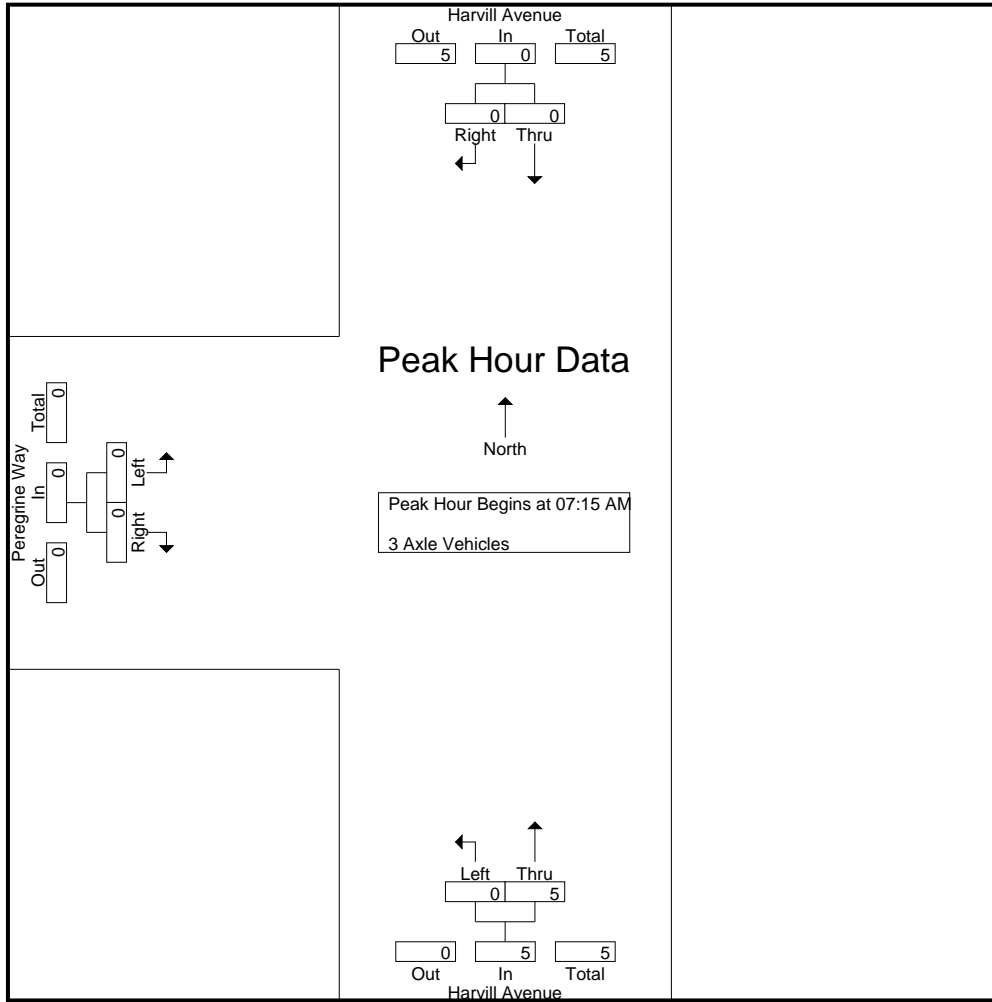
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	2	2	0	0	0	2
07:30 AM	0	0	0	0	2	2	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	4	4	0	0	0	4
08:00 AM	0	0	0	0	1	1	0	0	0	1
08:15 AM	0	0	0	0	2	2	0	0	0	2
08:30 AM	1	0	1	0	1	1	0	0	0	2
08:45 AM	3	0	3	0	2	2	0	0	0	5
Total	4	0	4	0	6	6	0	0	0	10
Grand Total	4	0	4	0	10	10	0	0	0	14
Apprch %	100	0		0	100		0	0		
Total %	28.6	0	28.6	0	71.4	71.4	0	0	0	

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	0	0	0	0	2	2	0	0	0	2
07:30 AM	0	0	0	0	2	2	0	0	0	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	1	1	0	0	0	1
Total Volume	0	0	0	0	5	5	0	0	0	5
% App. Total	0	0		0	100		0	0		
PHF	.000	.000	.000	.000	.625	.625	.000	.000	.000	.625

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	2	2	0	0	0
+15 mins.	0	0	0	0	2	2	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	1	0	0	0
Total Volume	0	0	0	0	5	5	0	0	0
% App. Total	0	0	0	0	100		0	0	
PHF	.000	.000	.000	.000	.625	.625	.000	.000	.000

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

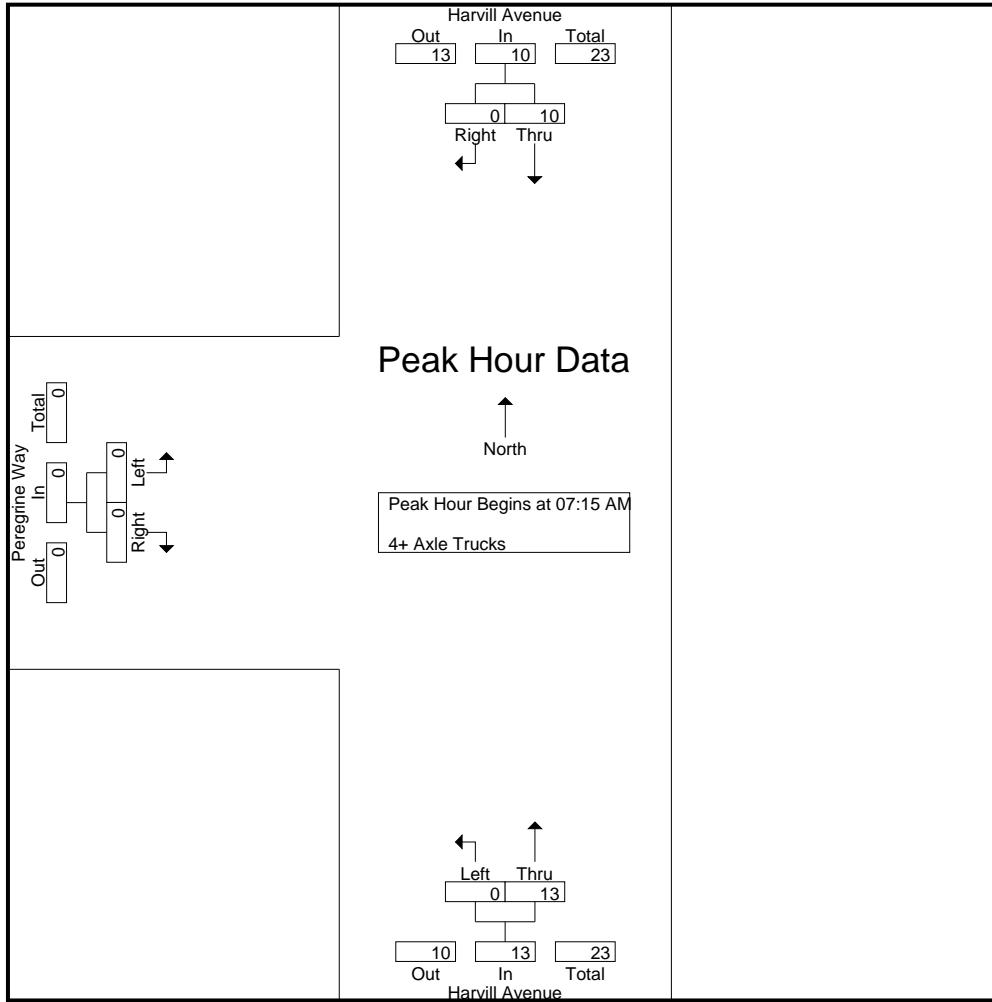
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:00 AM	3	0	3	0	3	3	0	0	0	6
07:15 AM	3	0	3	0	3	3	0	0	0	6
07:30 AM	3	0	3	0	5	5	0	0	0	8
07:45 AM	4	0	4	0	2	2	0	0	0	6
Total	13	0	13	0	13	13	0	0	0	26
08:00 AM	0	0	0	0	3	3	0	0	0	3
08:15 AM	7	0	7	0	6	6	0	0	0	13
08:30 AM	3	0	3	0	1	1	0	0	0	4
08:45 AM	3	0	3	0	6	6	0	0	0	9
Total	13	0	13	0	16	16	0	0	0	29
Grand Total	26	0	26	0	29	29	0	0	0	55
Apprch %	100	0		0	100		0	0		
Total %	47.3	0	47.3	0	52.7	52.7	0	0	0	

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
07:15 AM	3	0	3	0	3	3	0	0	0	6
07:30 AM	3	0	3	0	5	5	0	0	0	8
07:45 AM	4	0	4	0	2	2	0	0	0	6
08:00 AM	0	0	0	0	3	3	0	0	0	3
Total Volume	10	0	10	0	13	13	0	0	0	23
% App. Total	100	0		0	100		0	0		
PHF	.625	.000	.625	.000	.650	.650	.000	.000	.000	.719

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	3	0	3	0	3	3	0	0	0
+15 mins.	3	0	3	0	5	5	0	0	0
+30 mins.	4	0	4	0	2	2	0	0	0
+45 mins.	0	0	0	0	3	3	0	0	0
Total Volume	10	0	10	0	13	13	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.625	.000	.625	.000	.650	.650	.000	.000	.000

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

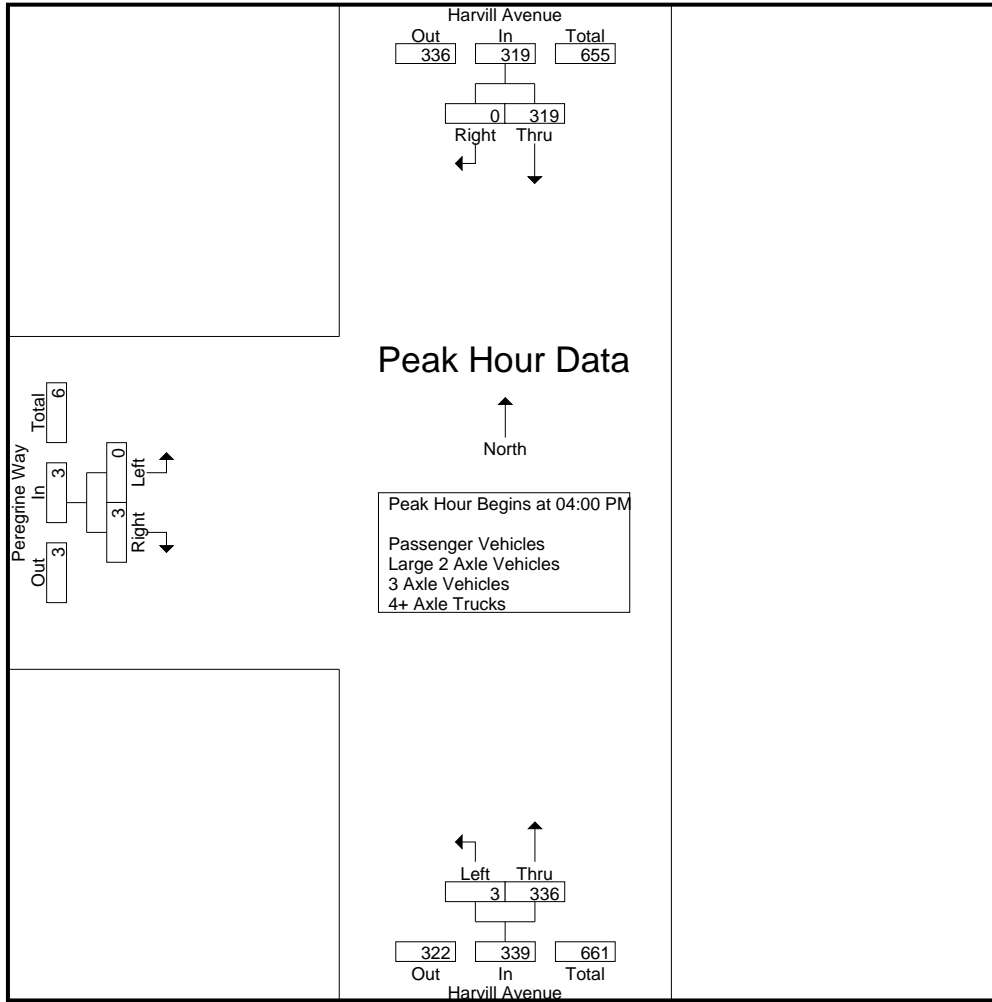
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	76	0	76	1	99	100	0	0	0	176
04:15 PM	74	0	74	1	80	81	0	0	0	155
04:30 PM	89	0	89	1	93	94	0	0	0	183
04:45 PM	80	0	80	0	64	64	0	3	3	147
Total	319	0	319	3	336	339	0	3	3	661
05:00 PM	82	0	82	0	78	78	0	0	0	160
05:15 PM	76	0	76	0	77	77	0	0	0	153
05:30 PM	81	0	81	0	69	69	0	0	0	150
05:45 PM	66	0	66	0	63	63	0	0	0	129
Total	305	0	305	0	287	287	0	0	0	592
Grand Total	624	0	624	3	623	626	0	3	3	1253
Apprch %	100	0		0.5	99.5		0	100		
Total %	49.8	0	49.8	0.2	49.7	50	0	0.2	0.2	
Passenger Vehicles	574	0	574	3	579	582	0	2	2	1158
% Passenger Vehicles	92	0	92	100	92.9	93	0	66.7	66.7	92.4
Large 2 Axle Vehicles	16	0	16	0	15	15	0	1	1	32
% Large 2 Axle Vehicles	2.6	0	2.6	0	2.4	2.4	0	33.3	33.3	2.6
3 Axle Vehicles	13	0	13	0	19	19	0	0	0	32
% 3 Axle Vehicles	2.1	0	2.1	0	3	3	0	0	0	2.6
4+ Axle Trucks	21	0	21	0	10	10	0	0	0	31
% 4+ Axle Trucks	3.4	0	3.4	0	1.6	1.6	0	0	0	2.5

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. 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	76	0	76	1	99	100	0	0	0	176
04:15 PM	74	0	74	1	80	81	0	0	0	155
04:30 PM	89	0	89	1	93	94	0	0	0	183
04:45 PM	80	0	80	0	64	64	0	3	3	147
Total Volume	319	0	319	3	336	339	0	3	3	661
% App. Total	100	0		0.9	99.1		0	100		
PHF	.896	.000	.896	.750	.848	.848	.000	.250	.250	.903

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	89	0	89	1	99	100	0	0	0
+15 mins.	80	0	80	1	80	81	0	0	0
+30 mins.	82	0	82	1	93	94	0	0	0
+45 mins.	76	0	76	0	64	64	0	3	3
Total Volume	327	0	327	3	336	339	0	3	3
% App. Total	100	0		0.9	99.1		0	100	
PHF	.919	.000	.919	.750	.848	.848	.000	.250	.250

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	7	0	7	0	4	4	0	0	0	11
04:15 PM	2	0	2	0	0	0	0	0	0	2
04:30 PM	2	0	2	0	1	1	0	0	0	3
04:45 PM	1	0	1	0	1	1	0	1	1	3
Total	12	0	12	0	6	6	0	1	1	19
05:00 PM	1	0	1	0	3	3	0	0	0	4
05:15 PM	0	0	0	0	2	2	0	0	0	2
05:30 PM	2	0	2	0	4	4	0	0	0	6
05:45 PM	1	0	1	0	0	0	0	0	0	1
Total	4	0	4	0	9	9	0	0	0	13
Grand Total	16	0	16	0	15	15	0	1	1	32
Apprch %	100	0		0	100		0	100		
Total %	50	0	50	0	46.9	46.9	0	3.1	3.1	

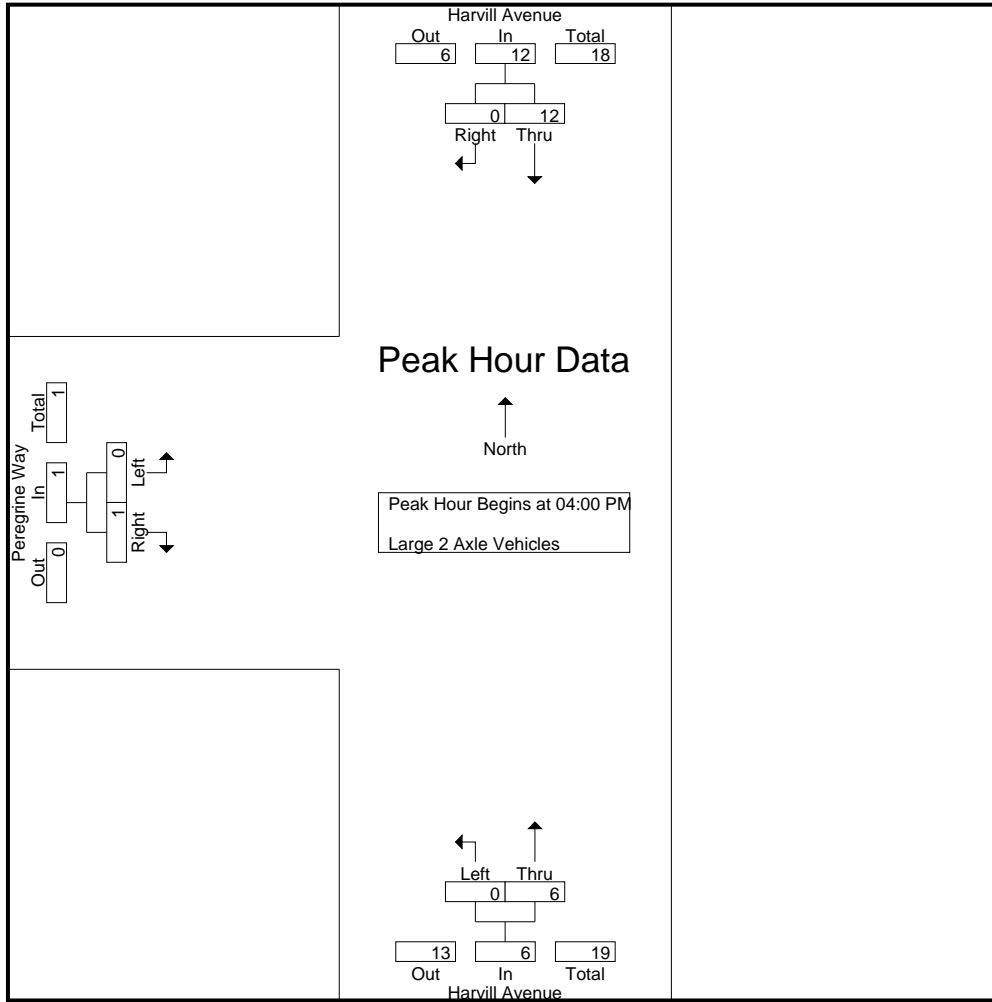
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	7	0	7	0	4	4	0	0	0	11
04:15 PM	2	0	2	0	0	0	0	0	0	2
04:30 PM	2	0	2	0	1	1	0	0	0	3
04:45 PM	1	0	1	0	1	1	0	1	1	3
Total Volume	12	0	12	0	6	6	0	1	1	19
% App. Total	100	0		0	100		0	100		
PHF	.429	.000	.429	.000	.375	.375	.000	.250	.250	.432

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	7	0	7	0	4	4	0	0	0
+15 mins.	2	0	2	0	0	0	0	0	0
+30 mins.	2	0	2	0	1	1	0	0	0
+45 mins.	1	0	1	0	1	1	0	1	1
Total Volume	12	0	12	0	6	6	0	1	1
% App. Total	100	0		0	100		0	100	
PHF	.429	.000	.429	.000	.375	.375	.000	.250	.250

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

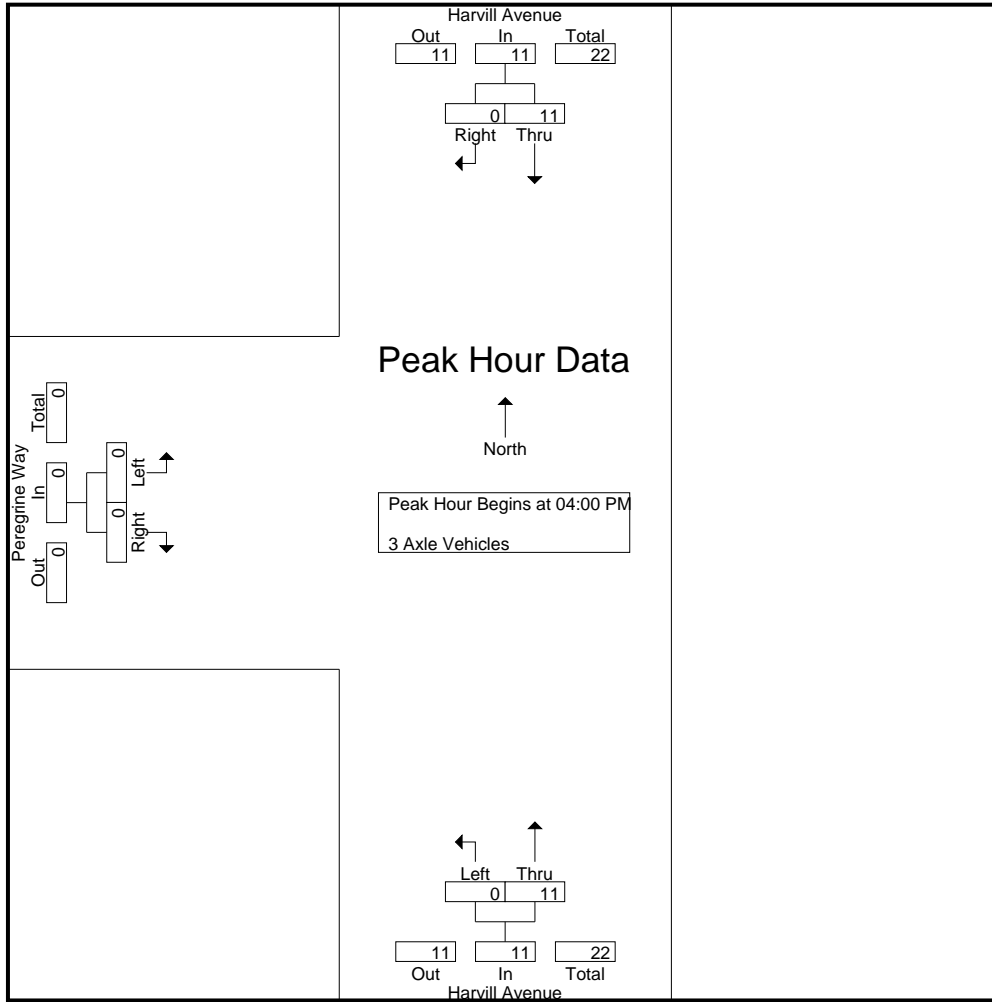
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	2	0	2	0	4	4	0	0	0	6
04:15 PM	4	0	4	0	4	4	0	0	0	8
04:30 PM	3	0	3	0	2	2	0	0	0	5
04:45 PM	2	0	2	0	1	1	0	0	0	3
Total	11	0	11	0	11	11	0	0	0	22
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	2	0	2	0	7	7	0	0	0	9
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	1	0	0	0	1
Total	2	0	2	0	8	8	0	0	0	10
Grand Total	13	0	13	0	19	19	0	0	0	32
Apprch %	100	0		0	100		0	0		
Total %	40.6	0	40.6	0	59.4	59.4	0	0	0	

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	2	0	2	0	4	4	0	0	0	6
04:15 PM	4	0	4	0	4	4	0	0	0	8
04:30 PM	3	0	3	0	2	2	0	0	0	5
04:45 PM	2	0	2	0	1	1	0	0	0	3
Total Volume	11	0	11	0	11	11	0	0	0	22
% App. Total	100	0		0	100		0	0		
PHF	.688	.000	.688	.000	.688	.688	.000	.000	.000	.688

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	2	0	2	0	4	4	0	0	0
+15 mins.	4	0	4	0	4	4	0	0	0
+30 mins.	3	0	3	0	2	2	0	0	0
+45 mins.	2	0	2	0	1	1	0	0	0
Total Volume	11	0	11	0	11	11	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.688	.000	.688	.000	.688	.688	.000	.000	.000

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	3	0	3	0	4	4	0	0	0	7
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	6	0	6	0	0	0	0	0	0	6
04:45 PM	4	0	4	0	0	0	0	0	0	4
Total	13	0	13	0	4	4	0	0	0	17
05:00 PM	3	0	3	0	2	2	0	0	0	5
05:15 PM	3	0	3	0	2	2	0	0	0	5
05:30 PM	0	0	0	0	1	1	0	0	0	1
05:45 PM	2	0	2	0	1	1	0	0	0	3
Total	8	0	8	0	6	6	0	0	0	14
Grand Total	21	0	21	0	10	10	0	0	0	31
Apprch %	100	0		0	100		0	0		
Total %	67.7	0	67.7	0	32.3	32.3	0	0	0	

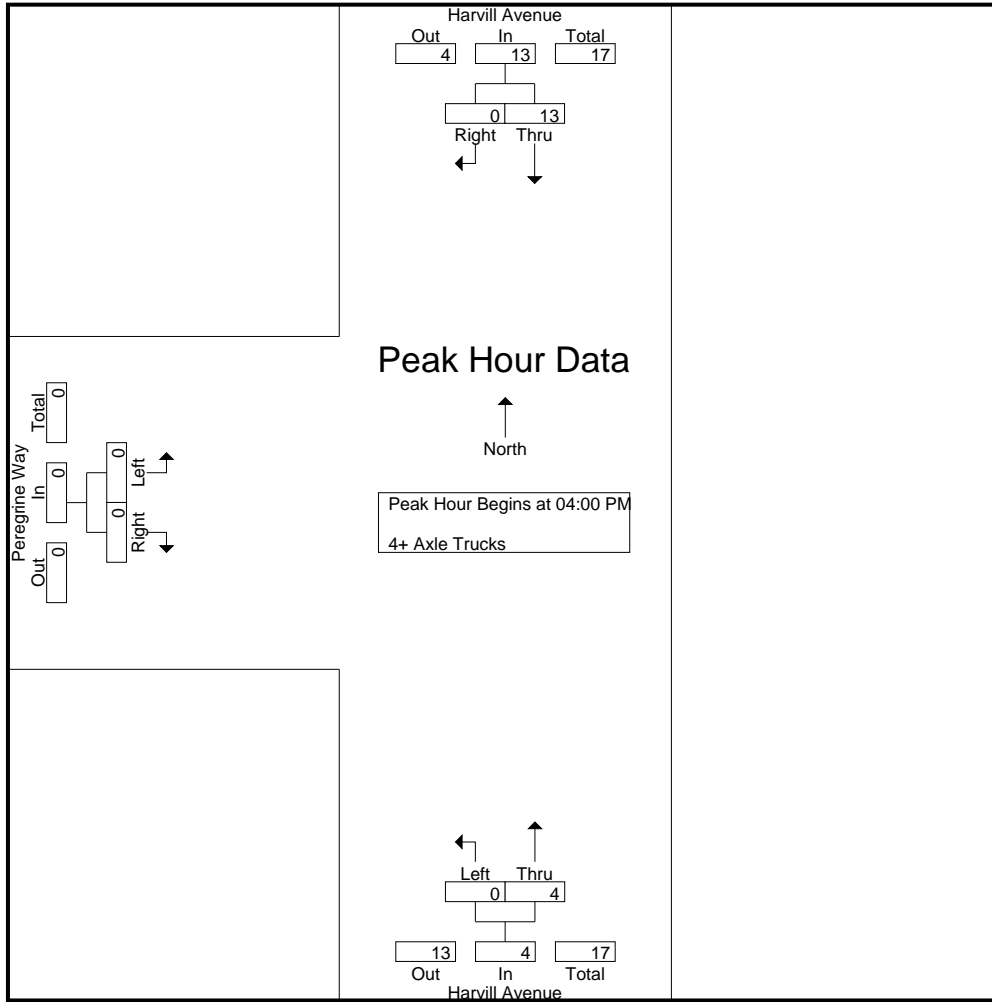
Start Time	Harvill Avenue Southbound			Harvill Avenue Northbound			Peregrine Way Eastbound			Int. Total
	Thru	Right	App. Total	Left	Thru	App. Total	Left	Right	App. Total	
04:00 PM	3	0	3	0	4	4	0	0	0	7
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	6	0	6	0	0	0	0	0	0	6
04:45 PM	4	0	4	0	0	0	0	0	0	4
Total Volume	13	0	13	0	4	4	0	0	0	17
% App. Total	100	0		0	100		0	0		
PHF	.542	.000	.542	.000	.250	.250	.000	.000	.000	.607

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way
 Weather: Clear

File Name : 03_CRV_Har_Per PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	3	0	3	0	4	4	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	6	0	6	0	0	0	0	0	0
+45 mins.	4	0	4	0	0	0	0	0	0
Total Volume	13	0	13	0	4	4	0	0	0
% App. Total	100	0		0	100		0	0	
PHF	.542	.000	.542	.000	.250	.250	.000	.000	.000

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way



Date: 2/8/2022
 Day: Tuesday

PEDESTRIANS

	North Leg Harvill Avenue	East Leg Dead End	South Leg Harvill Avenue	West Leg Peregrine Way	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Harvill Avenue	East Leg Dead End	South Leg Harvill Avenue	West Leg Peregrine Way	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Peregrine Way



Date: 2/8/2022
 Day: Tuesday

BICYCLES

	Southbound Harvill Avenue			Westbound Dead End			Northbound Harvill Avenue			Eastbound Peregrine Way			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Harvill Avenue			Westbound Dead End			Northbound Harvill Avenue			Eastbound Peregrine Way			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

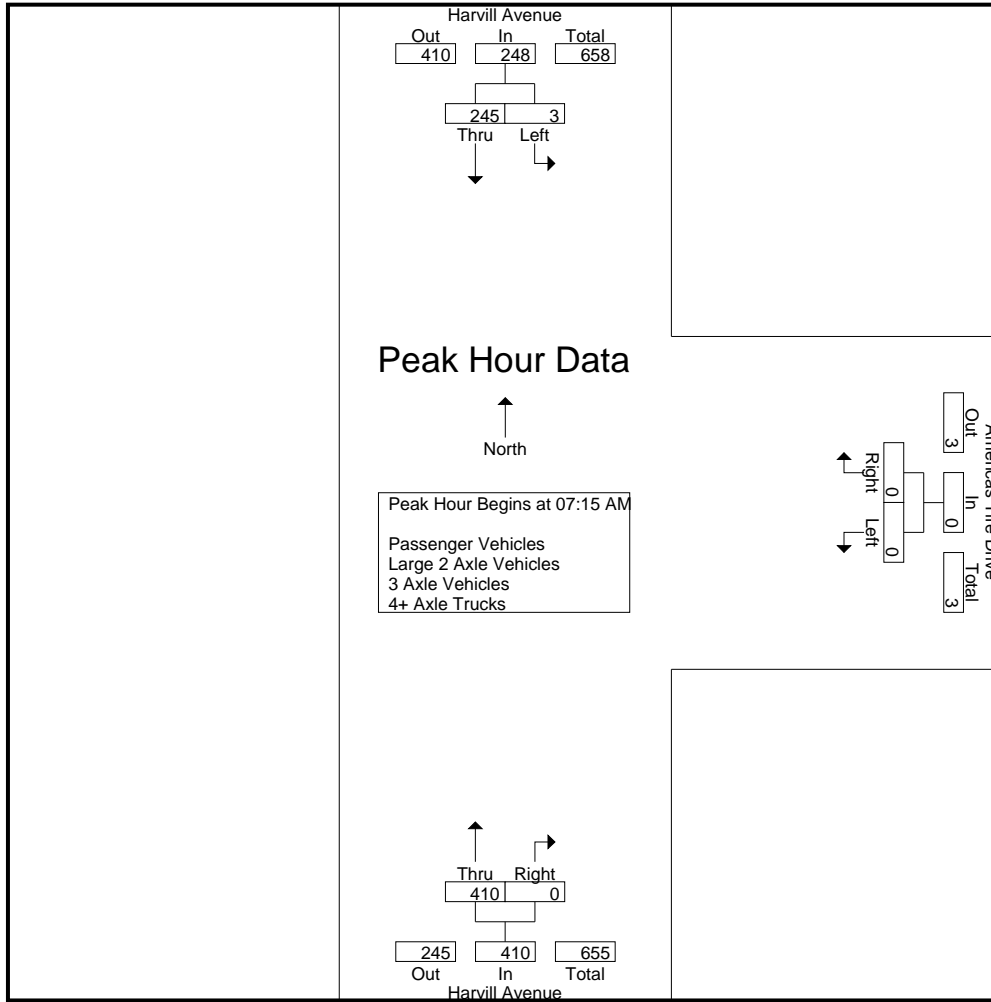
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	44	44	0	0	0	89	0	89	133
07:15 AM	0	57	57	0	0	0	103	0	103	160
07:30 AM	1	63	64	0	0	0	98	0	98	162
07:45 AM	1	65	66	0	0	0	110	0	110	176
Total	2	229	231	0	0	0	400	0	400	631
08:00 AM	1	60	61	0	0	0	99	0	99	160
08:15 AM	1	46	47	0	1	1	73	1	74	122
08:30 AM	0	27	27	0	0	0	82	0	82	109
08:45 AM	1	26	27	0	0	0	54	0	54	81
Total	3	159	162	0	1	1	308	1	309	472
Grand Total	5	388	393	0	1	1	708	1	709	1103
Apprch %	1.3	98.7		0	100		99.9	0.1		
Total %	0.5	35.2	35.6	0	0.1	0.1	64.2	0.1	64.3	
Passenger Vehicles	4	343	347	0	1	1	649	1	650	998
% Passenger Vehicles	80	88.4	88.3	0	100	100	91.7	100	91.7	90.5
Large 2 Axle Vehicles	1	20	21	0	0	0	26	0	26	47
% Large 2 Axle Vehicles	20	5.2	5.3	0	0	0	3.7	0	3.7	4.3
3 Axle Vehicles	0	3	3	0	0	0	8	0	8	11
% 3 Axle Vehicles	0	0.8	0.8	0	0	0	1.1	0	1.1	1
4+ Axle Trucks	0	22	22	0	0	0	25	0	25	47
% 4+ Axle Trucks	0	5.7	5.6	0	0	0	3.5	0	3.5	4.3

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	0	57	57	0	0	0	103	0	103	160
07:30 AM	1	63	64	0	0	0	98	0	98	162
07:45 AM	1	65	66	0	0	0	110	0	110	176
08:00 AM	1	60	61	0	0	0	99	0	99	160
Total Volume	3	245	248	0	0	0	410	0	410	658
% App. Total	1.2	98.8		0	0		100	0		
PHF	.750	.942	.939	.000	.000	.000	.932	.000	.932	.935

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:30 AM			07:45 AM		
+0 mins.	0	57	57	0	0	0	103	0	103
+15 mins.	1	63	64	0	0	0	98	0	98
+30 mins.	1	65	66	0	0	0	110	0	110
+45 mins.	1	60	61	0	1	1	99	0	99
Total Volume	3	245	248	0	1	1	410	0	410
% App. Total	1.2	98.8		0	100		100	0	
PHF	.750	.942	.939	.000	.250	.250	.932	.000	.932

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

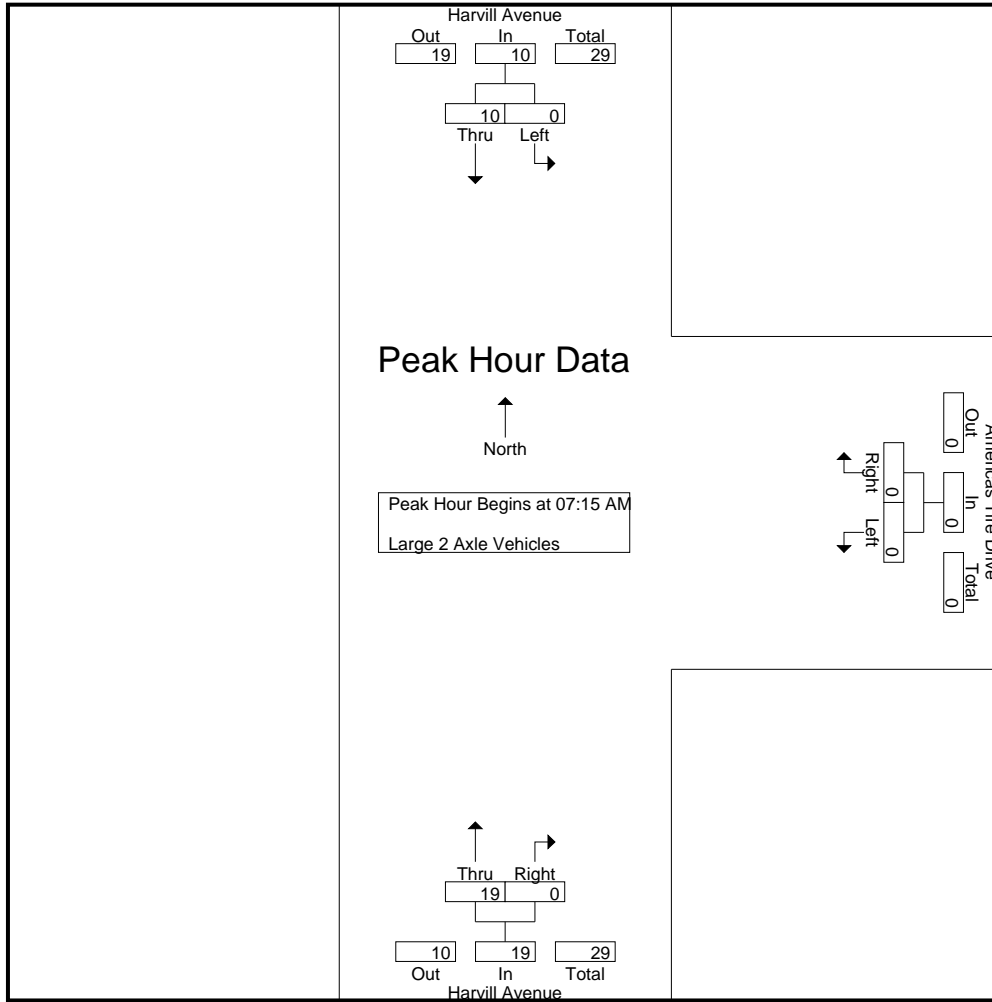
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	2	0	2	2
07:15 AM	0	2	2	0	0	0	10	0	10	12
07:30 AM	0	5	5	0	0	0	4	0	4	9
07:45 AM	0	3	3	0	0	0	1	0	1	4
Total	0	10	10	0	0	0	17	0	17	27
08:00 AM	0	0	0	0	0	0	4	0	4	4
08:15 AM	1	5	6	0	0	0	1	0	1	7
08:30 AM	0	3	3	0	0	0	3	0	3	6
08:45 AM	0	2	2	0	0	0	1	0	1	3
Total	1	10	11	0	0	0	9	0	9	20
Grand Total	1	20	21	0	0	0	26	0	26	47
Apprch %	4.8	95.2		0	0		100	0		
Total %	2.1	42.6	44.7	0	0	0	55.3	0	55.3	

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	0	2	2	0	0	0	10	0	10	12
07:30 AM	0	5	5	0	0	0	4	0	4	9
07:45 AM	0	3	3	0	0	0	1	0	1	4
08:00 AM	0	0	0	0	0	0	4	0	4	4
Total Volume	0	10	10	0	0	0	19	0	19	29
% App. Total	0	100		0	0		100	0		
PHF	.000	.500	.500	.000	.000	.000	.475	.000	.475	.604

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	2	2	0	0	0	10	0	10
+15 mins.	0	5	5	0	0	0	4	0	4
+30 mins.	0	3	3	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	4	0	4
Total Volume	0	10	10	0	0	0	19	0	19
% App. Total	0	100		0	0		100	0	
PHF	.000	.500	.500	.000	.000	.000	.475	.000	.475

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	0	3	3
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	2	0	2	2
08:30 AM	0	1	1	0	0	0	1	0	1	2
08:45 AM	0	2	2	0	0	0	2	0	2	4
Total	0	3	3	0	0	0	5	0	5	8
Grand Total	0	3	3	0	0	0	8	0	8	11
Apprch %	0	100		0	0		100	0		
Total %	0	27.3	27.3	0	0	0	72.7	0	72.7	

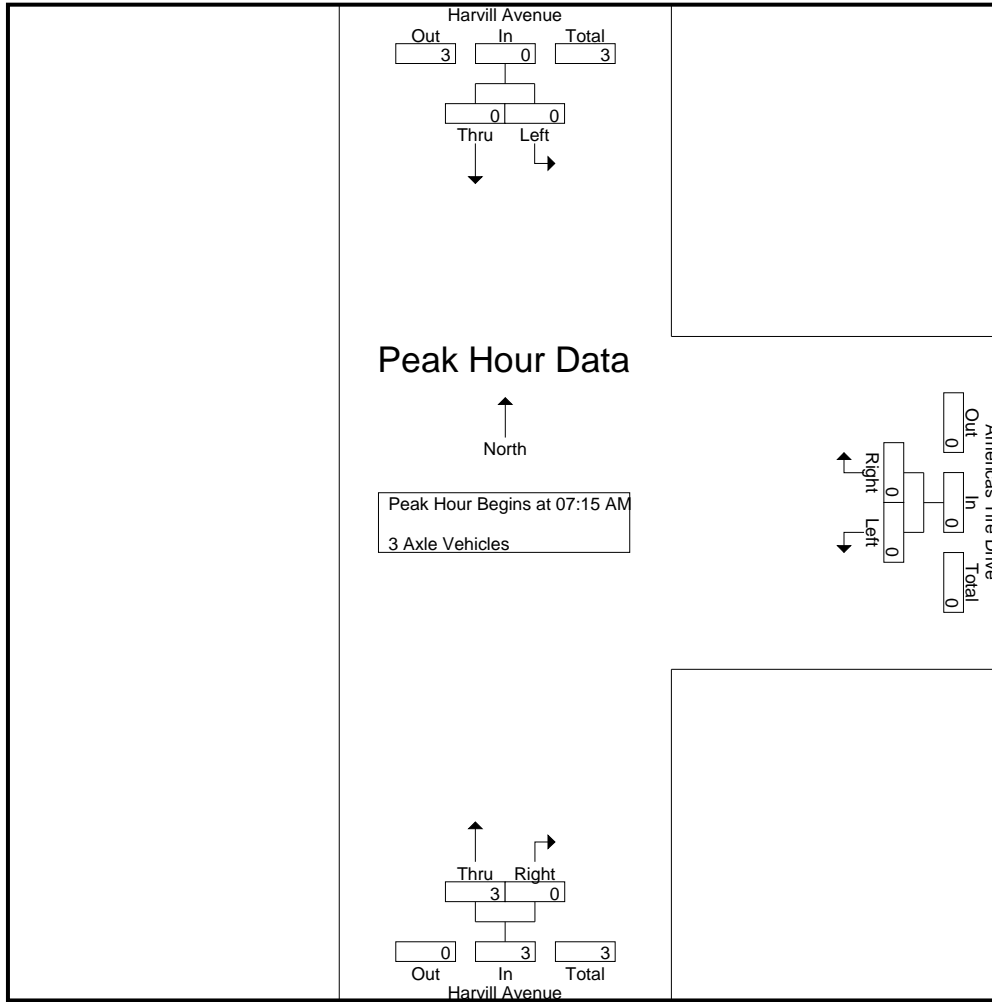
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	2	0	2	2
07:30 AM	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	3	0	3	3
% App. Total	0	0		0	0		100	0		
PHF	.000	.000	.000	.000	.000	.000	.375	.000	.375	.375

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	3	0	3
% App. Total	0	0	0	0	0	0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.375	.000	.375

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	0	3	3	0	0	0	3	0	3	6
07:15 AM	0	3	3	0	0	0	2	0	2	5
07:30 AM	0	2	2	0	0	0	3	0	3	5
07:45 AM	0	3	3	0	0	0	3	0	3	6
Total	0	11	11	0	0	0	11	0	11	22
08:00 AM	0	0	0	0	0	0	5	0	5	5
08:15 AM	0	6	6	0	0	0	3	0	3	9
08:30 AM	0	3	3	0	0	0	0	0	0	3
08:45 AM	0	2	2	0	0	0	6	0	6	8
Total	0	11	11	0	0	0	14	0	14	25
Grand Total	0	22	22	0	0	0	25	0	25	47
Apprch %	0	100		0	0		100	0		
Total %	0	46.8	46.8	0	0	0	53.2	0	53.2	

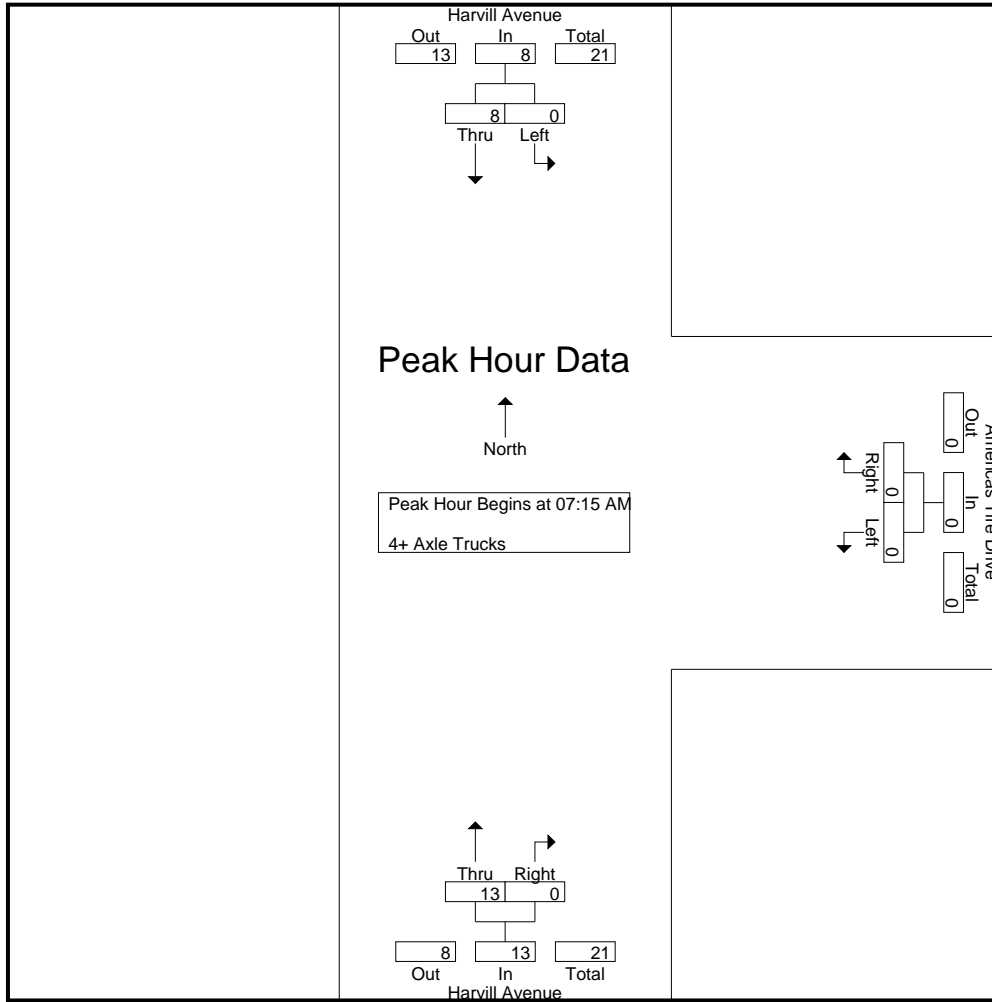
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:15 AM	0	3	3	0	0	0	2	0	2	5
07:30 AM	0	2	2	0	0	0	3	0	3	5
07:45 AM	0	3	3	0	0	0	3	0	3	6
08:00 AM	0	0	0	0	0	0	5	0	5	5
Total Volume	0	8	8	0	0	0	13	0	13	21
% App. Total	0	100		0	0		100	0		
PHF	.000	.667	.667	.000	.000	.000	.650	.000	.650	.875

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	07:15 AM			07:15 AM			07:15 AM		
+0 mins.	0	3	3	0	0	0	2	0	2
+15 mins.	0	2	2	0	0	0	3	0	3
+30 mins.	0	3	3	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	0	5	0	5
Total Volume	0	8	8	0	0	0	13	0	13
% App. Total	0	100		0	0		100	0	
PHF	.000	.667	.667	.000	.000	.000	.650	.000	.650

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

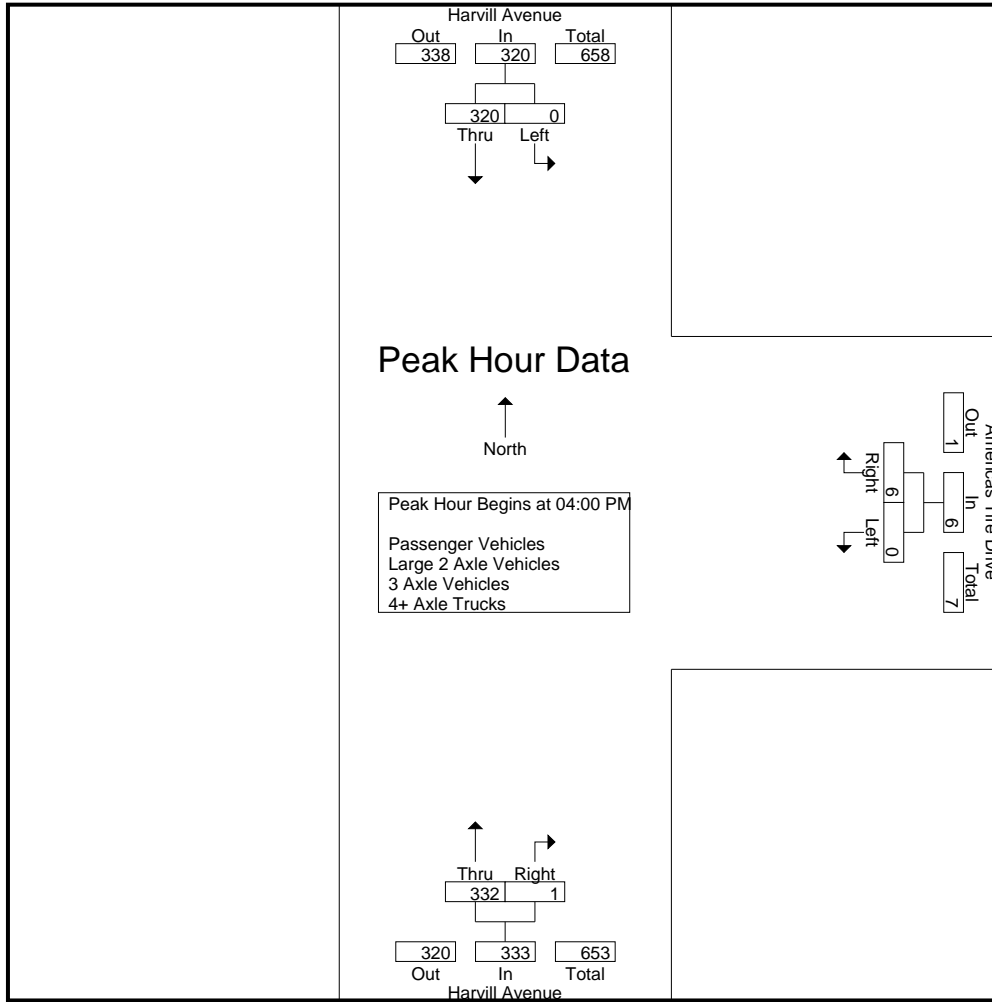
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	78	78	0	1	1	100	0	100	179
04:15 PM	0	73	73	0	0	0	79	1	80	153
04:30 PM	0	87	87	0	3	3	94	0	94	184
04:45 PM	0	82	82	0	2	2	59	0	59	143
Total	0	320	320	0	6	6	332	1	333	659
05:00 PM	0	76	76	0	0	0	78	0	78	154
05:15 PM	0	76	76	0	0	0	75	0	75	151
05:30 PM	0	83	83	0	0	0	72	0	72	155
05:45 PM	0	60	60	0	0	0	64	0	64	124
Total	0	295	295	0	0	0	289	0	289	584
Grand Total	0	615	615	0	6	6	621	1	622	1243
Apprch %	0	100		0	100		99.8	0.2		
Total %	0	49.5	49.5	0	0.5	0.5	50	0.1	50	
Passenger Vehicles	0	567	567	0	6	6	583	1	584	1157
% Passenger Vehicles	0	92.2	92.2	0	100	100	93.9	100	93.9	93.1
Large 2 Axle Vehicles	0	15	15	0	0	0	13	0	13	28
% Large 2 Axle Vehicles	0	2.4	2.4	0	0	0	2.1	0	2.1	2.3
3 Axle Vehicles	0	12	12	0	0	0	19	0	19	31
% 3 Axle Vehicles	0	2	2	0	0	0	3.1	0	3.1	2.5
4+ Axle Trucks	0	21	21	0	0	0	6	0	6	27
% 4+ Axle Trucks	0	3.4	3.4	0	0	0	1	0	1	2.2

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	0	78	78	0	1	1	100	0	100	179
04:15 PM	0	73	73	0	0	0	79	1	80	153
04:30 PM	0	87	87	0	3	3	94	0	94	184
04:45 PM	0	82	82	0	2	2	59	0	59	143
Total Volume	0	320	320	0	6	6	332	1	333	659
% App. Total	0	100		0	100		99.7	0.3		
PHF	.000	.920	.920	.000	.500	.500	.830	.250	.833	.895

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:30 PM			04:00 PM			04:00 PM		
+0 mins.	0	87	87	0	1	1	100	0	100
+15 mins.	0	82	82	0	0	0	79	1	80
+30 mins.	0	76	76	0	3	3	94	0	94
+45 mins.	0	76	76	0	2	2	59	0	59
Total Volume	0	321	321	0	6	6	332	1	333
% App. Total	0	100		0	100		99.7	0.3	
PHF	.000	.922	.922	.000	.500	.500	.830	.250	.833

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

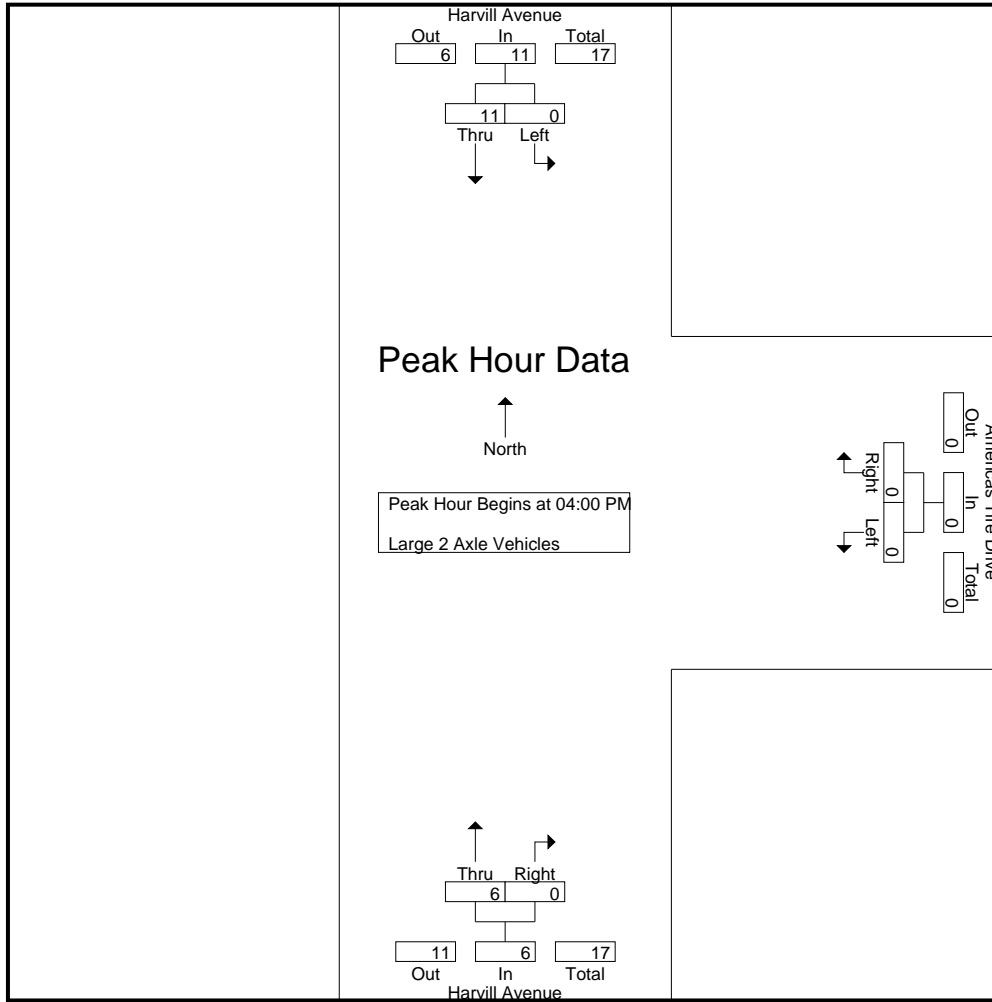
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	6	6	0	0	0	4	0	4	10
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	0	2	2	0	0	0	1	0	1	3
Total	0	11	11	0	0	0	6	0	6	17
05:00 PM	0	1	1	0	0	0	1	0	1	2
05:15 PM	0	0	0	0	0	0	2	0	2	2
05:30 PM	0	3	3	0	0	0	4	0	4	7
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	4	4	0	0	0	7	0	7	11
Grand Total	0	15	15	0	0	0	13	0	13	28
Apprch %	0	100		0	0		100	0		
Total %	0	53.6	53.6	0	0	0	46.4	0	46.4	

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	6	6	0	0	0	4	0	4	10
04:15 PM	0	1	1	0	0	0	0	0	0	1
04:30 PM	0	2	2	0	0	0	1	0	1	3
04:45 PM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	11	11	0	0	0	6	0	6	17
% App. Total	0	100		0	0		100	0		
PHF	.000	.458	.458	.000	.000	.000	.375	.000	.375	.425

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	6	6	0	0	0	4	0	4
+15 mins.	0	1	1	0	0	0	0	0	0
+30 mins.	0	2	2	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	11	11	0	0	0	6	0	6
% App. Total	0	100		0	0		100	0	
PHF	.000	.458	.458	.000	.000	.000	.375	.000	.375

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	4	0	4	6
04:15 PM	0	4	4	0	0	0	4	0	4	8
04:30 PM	0	2	2	0	0	0	2	0	2	4
04:45 PM	0	2	2	0	0	0	1	0	1	3
Total	0	10	10	0	0	0	11	0	11	21
05:00 PM	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	2	2	0	0	0	6	0	6	8
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	2	2	0	0	0	8	0	8	10
Grand Total	0	12	12	0	0	0	19	0	19	31
Apprch %	0	100		0	0		100	0		
Total %	0	38.7	38.7	0	0	0	61.3	0	61.3	

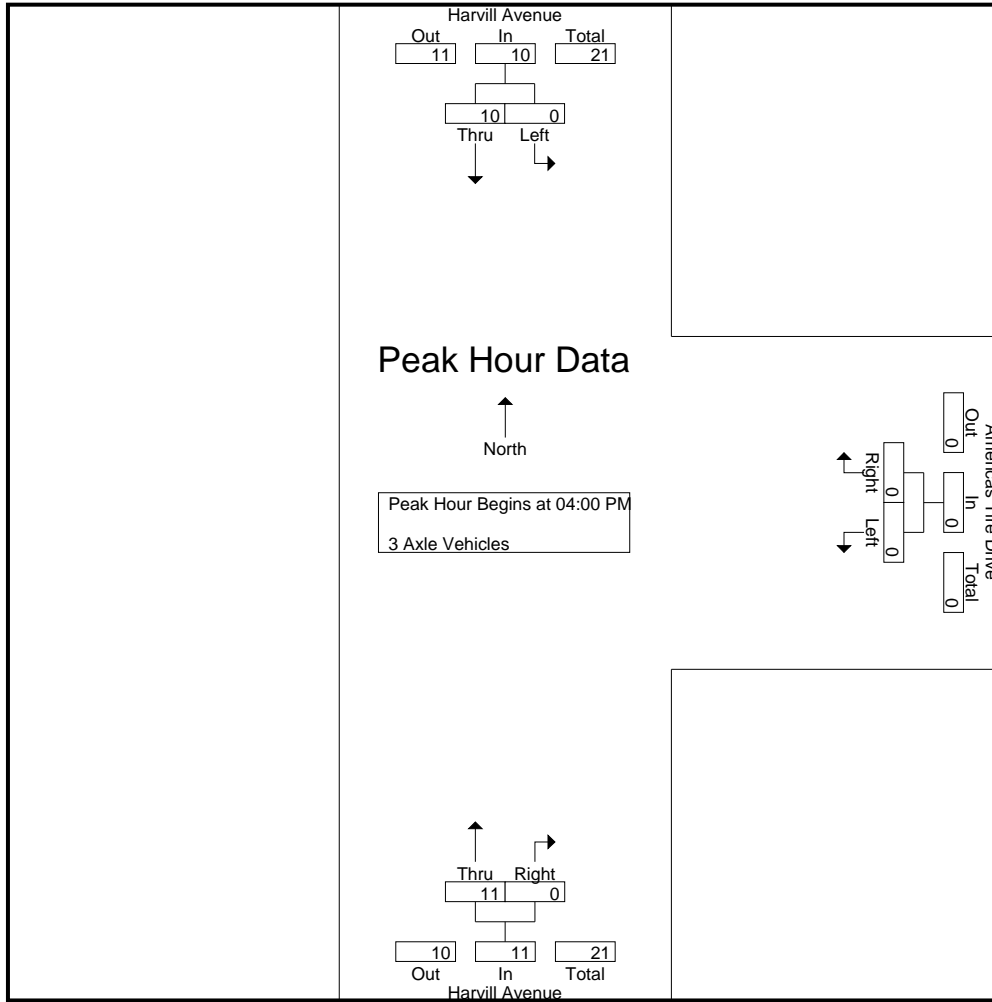
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	2	2	0	0	0	4	0	4	6
04:15 PM	0	4	4	0	0	0	4	0	4	8
04:30 PM	0	2	2	0	0	0	2	0	2	4
04:45 PM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	10	10	0	0	0	11	0	11	21
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.688	.000	.688	.656

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	2	2	0	0	0	4	0	4
+15 mins.	0	4	4	0	0	0	4	0	4
+30 mins.	0	2	2	0	0	0	2	0	2
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	10	10	0	0	0	11	0	11
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.688	.000	.688

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	3	3	0	0	0	3	0	3	6
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	6	6	0	0	0	0	0	0	6
04:45 PM	0	4	4	0	0	0	0	0	0	4
Total	0	13	13	0	0	0	3	0	3	16
05:00 PM	0	3	3	0	0	0	1	0	1	4
05:15 PM	0	3	3	0	0	0	2	0	2	5
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	2	2	0	0	0	0	0	0	2
Total	0	8	8	0	0	0	3	0	3	11
Grand Total	0	21	21	0	0	0	6	0	6	27
Apprch %	0	100		0	0		100	0		
Total %	0	77.8	77.8	0	0	0	22.2	0	22.2	

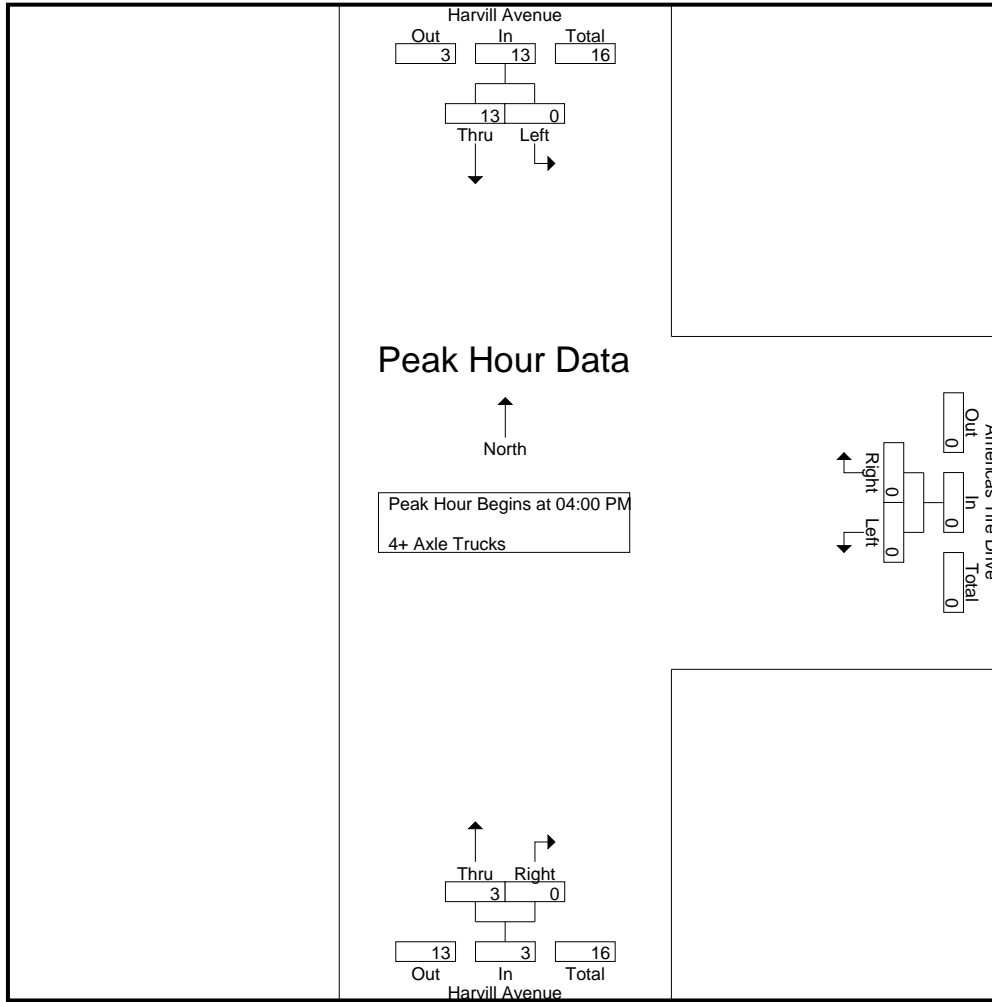
Start Time	Harvill Avenue Southbound			Americas Tire Drive Westbound			Harvill Avenue Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	0	3	3	0	0	0	3	0	3	6
04:15 PM	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	6	6	0	0	0	0	0	0	6
04:45 PM	0	4	4	0	0	0	0	0	0	4
Total Volume	0	13	13	0	0	0	3	0	3	16
% App. Total	0	100		0	0		100	0		
PHF	.000	.542	.542	.000	.000	.000	.250	.000	.250	.667

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

County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive
 Weather: Clear

File Name : 04_CRV_Har_Am T PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



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

	04:00 PM			04:00 PM			04:00 PM		
+0 mins.	0	3	3	0	0	0	3	0	3
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	6	6	0	0	0	0	0	0
+45 mins.	0	4	4	0	0	0	0	0	0
Total Volume	0	13	13	0	0	0	3	0	3
% App. Total	0	100		0	0		100	0	
PHF	.000	.542	.542	.000	.000	.000	.250	.000	.250

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive



Date: 2/8/2022
 Day: Tuesday

PEDESTRIANS

	North Leg Harvill Avenue	East Leg Americas Tire Drive	South Leg Harvill Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Harvill Avenue	East Leg Americas Tire Drive	South Leg Harvill Avenue	West Leg Dead End	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Americas Tire Drive



Date: 2/8/2022
 Day: Tuesday

BICYCLES

	Southbound Harvill Avenue			Westbound Americas Tire Drive			Northbound Harvill Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Harvill Avenue			Westbound Americas Tire Drive			Northbound Harvill Avenue			Eastbound Dead End			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

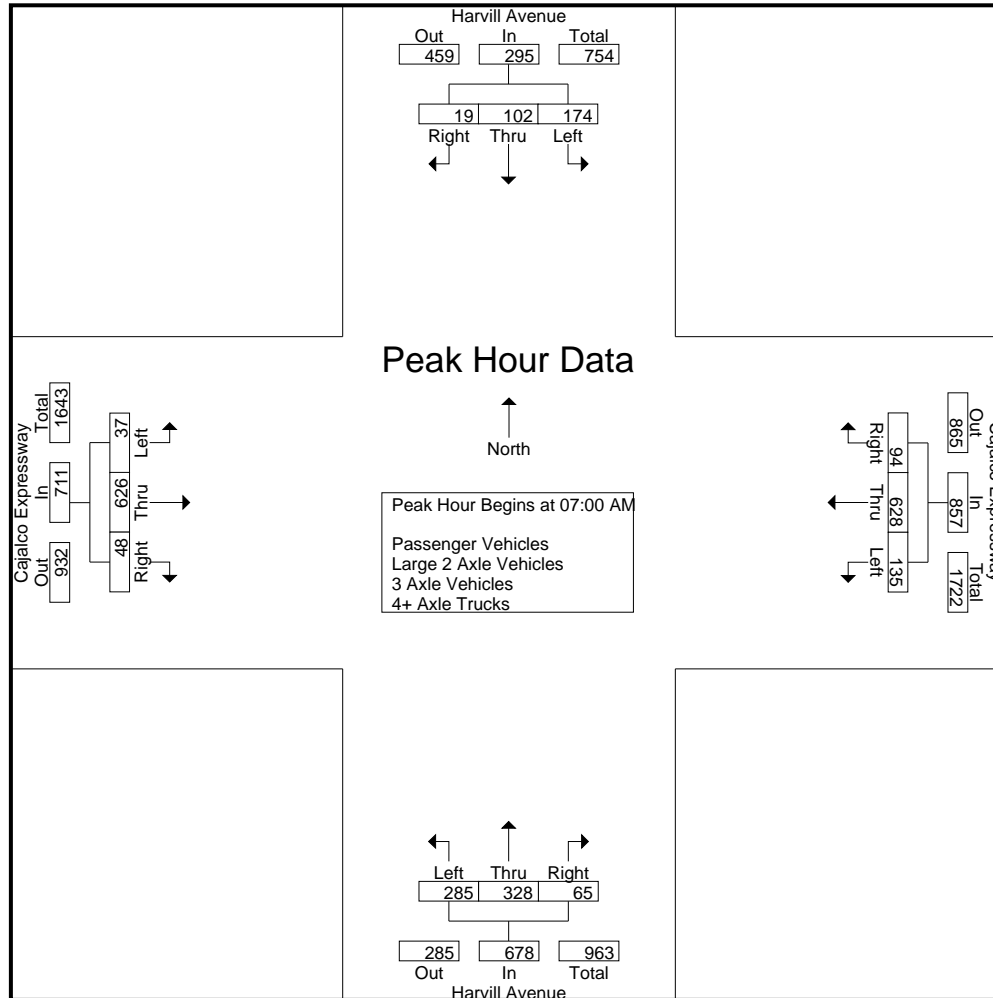
County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

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

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	52	24	5	1	81	34	177	13	12	224	79	80	10	14	169	9	130	7	6	146	33	620	653
07:15 AM	41	23	6	0	70	28	154	16	13	198	91	68	18	15	177	6	149	11	10	166	38	611	649
07:30 AM	35	23	6	1	64	43	167	34	23	244	61	94	13	10	168	9	180	18	16	207	50	683	733
07:45 AM	46	32	2	0	80	30	130	31	15	191	54	86	24	11	164	13	167	12	15	192	41	627	668
Total	174	102	19	2	295	135	628	94	63	857	285	328	65	50	678	37	626	48	47	711	162	2541	2703
08:00 AM	42	30	2	0	74	31	154	28	11	213	54	61	17	15	132	8	133	19	5	160	31	579	610
08:15 AM	56	31	3	4	90	25	132	18	24	175	31	32	5	16	68	9	130	13	11	152	55	485	540
08:30 AM	40	27	0	0	67	29	124	17	10	170	29	29	2	20	60	5	134	14	12	153	42	450	492
08:45 AM	31	17	7	3	55	29	175	21	7	225	27	21	2	13	50	5	131	20	7	156	30	486	516
Total	169	105	12	7	286	114	585	84	52	783	141	143	26	64	310	27	528	66	35	621	158	2000	2158
Grand Total	343	207	31	9	581	249	1213	178	115	1640	426	471	91	114	988	64	1154	114	82	1332	320	4541	4861
Apprch %	59	35.6	5.3			15.2	74	10.9			43.1	47.7	9.2			4.8	86.6	8.6					
Total %	7.6	4.6	0.7		12.8	5.5	26.7	3.9		36.1	9.4	10.4	2		21.8	1.4	25.4	2.5		29.3	6.6	93.4	
Passenger Vehicles	314	187	19		525	191	1118	161		1579	407	460	75		1036	51	1064	107		1301	0	0	4441
% Passenger Vehicles	91.5	90.3	61.3	55.6	89	76.7	92.2	90.4	94.8	90	95.5	97.7	82.4	82.5	94	79.7	92.2	93.9	96.3	92	0	0	91.4
Large 2 Axle Vehicles	17	10	5		33	23	47	12		85	13	3	6		30	3	41	0		46	0	0	194
% Large 2 Axle Vehicles	5	4.8	16.1	11.1	5.6	9.2	3.9	6.7	2.6	4.8	3.1	0.6	6.6	7	2.7	4.7	3.6	0	2.4	3.3	0	0	4
3 Axle Vehicles	3	1	0		5	5	9	1		17	2	3	1		8	3	10	1		14	0	0	44
% 3 Axle Vehicles	0.9	0.5	0	11.1	0.8	2	0.7	0.6	1.7	1	0.5	0.6	1.1	1.8	0.7	4.7	0.9	0.9	0	1	0	0	0.9
4+ Axle Trucks	9	9	7		27	30	39	4		74	4	5	9		28	7	39	6		53	0	0	182
% 4+ Axle Trucks	2.6	4.3	22.6	22.2	4.6	12	3.2	2.2	0.9	4.2	0.9	1.1	9.9	8.8	2.5	10.9	3.4	5.3	1.2	3.7	0	0	3.7

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	52	24	5	81	34	177	13	224	79	80	10	169	9	130	7	146	620
07:15 AM	41	23	6	70	28	154	16	198	91	68	18	177	6	149	11	166	611
07:30 AM	35	23	6	64	43	167	34	244	61	94	13	168	9	180	18	207	683
07:45 AM	46	32	2	80	30	130	31	191	54	86	24	164	13	167	12	192	627
Total Volume	174	102	19	295	135	628	94	857	285	328	65	678	37	626	48	711	2541
% App. Total	59	34.6	6.4		15.8	73.3	11		42	48.4	9.6		5.2	88	6.8		
PHF	.837	.797	.792	.910	.785	.887	.691	.878	.783	.872	.677	.958	.712	.869	.667	.859	.930



County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:00 AM				07:00 AM				07:15 AM				
+0 mins.	46	32	2	80	34	177	13	224	79	80	10	169	6	149	11	166	
+15 mins.	42	30	2	74	28	154	16	198	91	68	18	177	9	180	18	207	
+30 mins.	56	31	3	90	43	167	34	244	61	94	13	168	13	167	12	192	
+45 mins.	40	27	0	67	30	130	31	191	54	86	24	164	8	133	19	160	
Total Volume	184	120	7	311	135	628	94	857	285	328	65	678	36	629	60	725	
% App. Total	59.2	38.6	2.3		15.8	73.3	11		42	48.4	9.6		5	86.8	8.3		
PHF	.821	.938	.583	.864	.785	.887	.691	.878	.783	.872	.677	.958	.692	.874	.789	.876	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

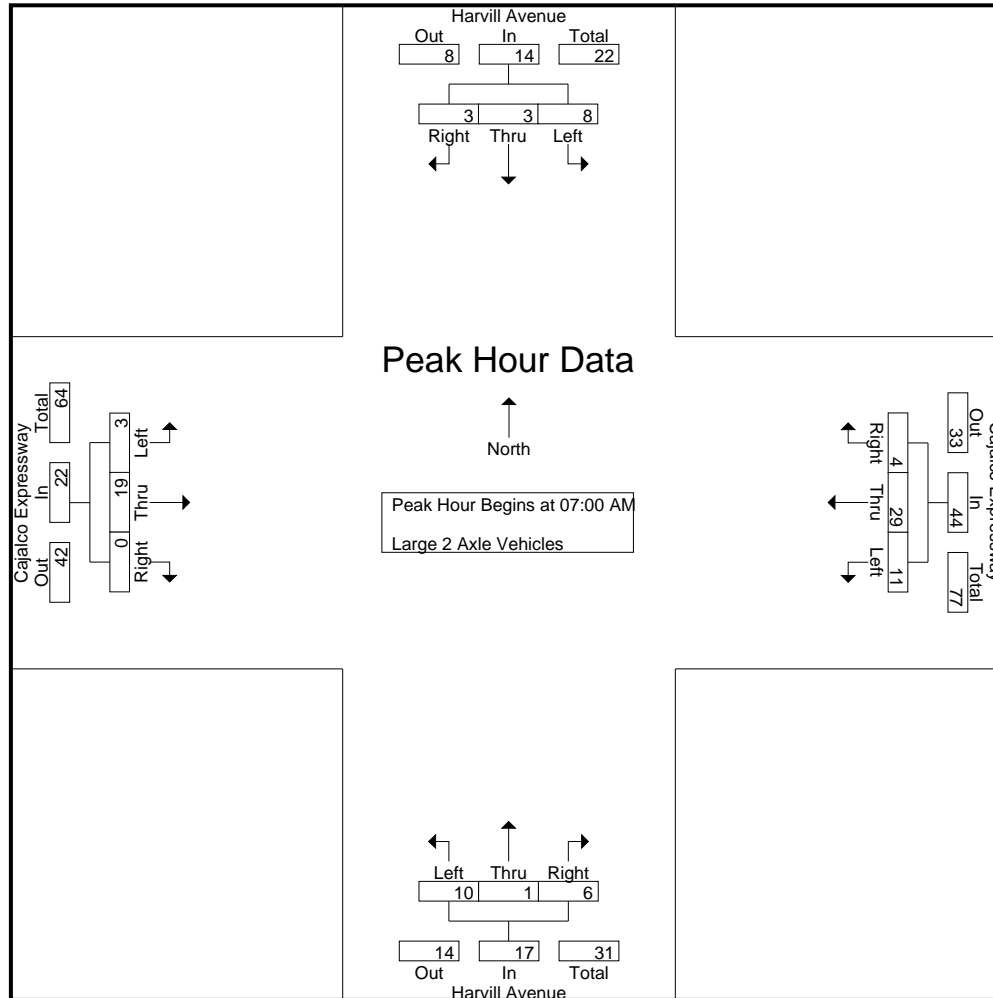
Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	0	1	0	4	4	6	2	1	12	5	1	3	2	9	0	2	0	0	2	3	27	30
07:15 AM	2	0	0	0	2	3	5	1	0	9	4	0	1	0	5	0	5	0	1	5	1	21	22
07:30 AM	0	2	1	1	3	1	10	1	0	12	0	0	1	0	1	1	7	0	0	8	1	24	25
07:45 AM	3	1	1	0	5	3	8	0	0	11	1	0	1	1	2	2	5	0	0	7	1	25	26
Total	8	3	3	1	14	11	29	4	1	44	10	1	6	3	17	3	19	0	1	22	6	97	103
08:00 AM	4	2	0	0	6	1	5	3	0	9	0	1	0	1	1	0	6	0	0	6	1	22	23
08:15 AM	0	3	0	0	3	3	3	2	1	8	1	1	0	1	2	0	8	0	0	8	2	21	23
08:30 AM	4	2	0	0	6	3	5	0	0	8	1	0	0	1	1	0	3	0	1	3	2	18	20
08:45 AM	1	0	2	0	3	5	5	3	1	13	1	0	0	2	1	0	5	0	0	5	3	22	25
Total	9	7	2	0	18	12	18	8	2	38	3	2	0	5	5	0	22	0	1	22	8	83	91
Grand Total	17	10	5	1	32	23	47	12	3	82	13	3	6	8	22	3	41	0	2	44	14	180	194
Apprch %	53.1	31.2	15.6			28	57.3	14.6			59.1	13.6	27.3			6.8	93.2	0					
Total %	9.4	5.6	2.8		17.8	12.8	26.1	6.7		45.6	7.2	1.7	3.3		12.2	1.7	22.8	0		24.4	7.2	92.8	

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	0	1	4	4	6	2	12	5	1	3	9	0	2	0	2	27
07:15 AM	2	0	0	2	3	5	1	9	4	0	1	5	0	5	0	5	21
07:30 AM	0	2	1	3	1	10	1	12	0	0	1	1	1	7	0	8	24
07:45 AM	3	1	1	5	3	8	0	11	1	0	1	2	2	5	0	7	25
Total Volume	8	3	3	14	11	29	4	44	10	1	6	17	3	19	0	22	97
% App. Total	57.1	21.4	21.4		25	65.9	9.1		58.8	5.9	35.3		13.6	86.4	0		
PHF	.667	.375	.750	.700	.688	.725	.500	.917	.500	.250	.500	.472	.375	.679	.000	.688	.898

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	3	0	1	4	4	6	2	12	5	1	3	9	0	2	0	2	
+15 mins.	2	0	0	2	3	5	1	9	4	0	1	5	0	5	0	5	
+30 mins.	0	2	1	3	1	10	1	12	0	0	1	1	1	7	0	8	
+45 mins.	3	1	1	5	3	8	0	11	1	0	1	2	2	5	0	7	
Total Volume	8	3	3	14	11	29	4	44	10	1	6	17	3	19	0	22	
% App. Total	57.1	21.4	21.4		25	65.9	9.1		58.8	5.9	35.3		13.6	86.4	0		
PHF	.667	.375	.750	.700	.688	.725	.500	.917	.500	.250	.500	.472	.375	.679	.000	.688	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

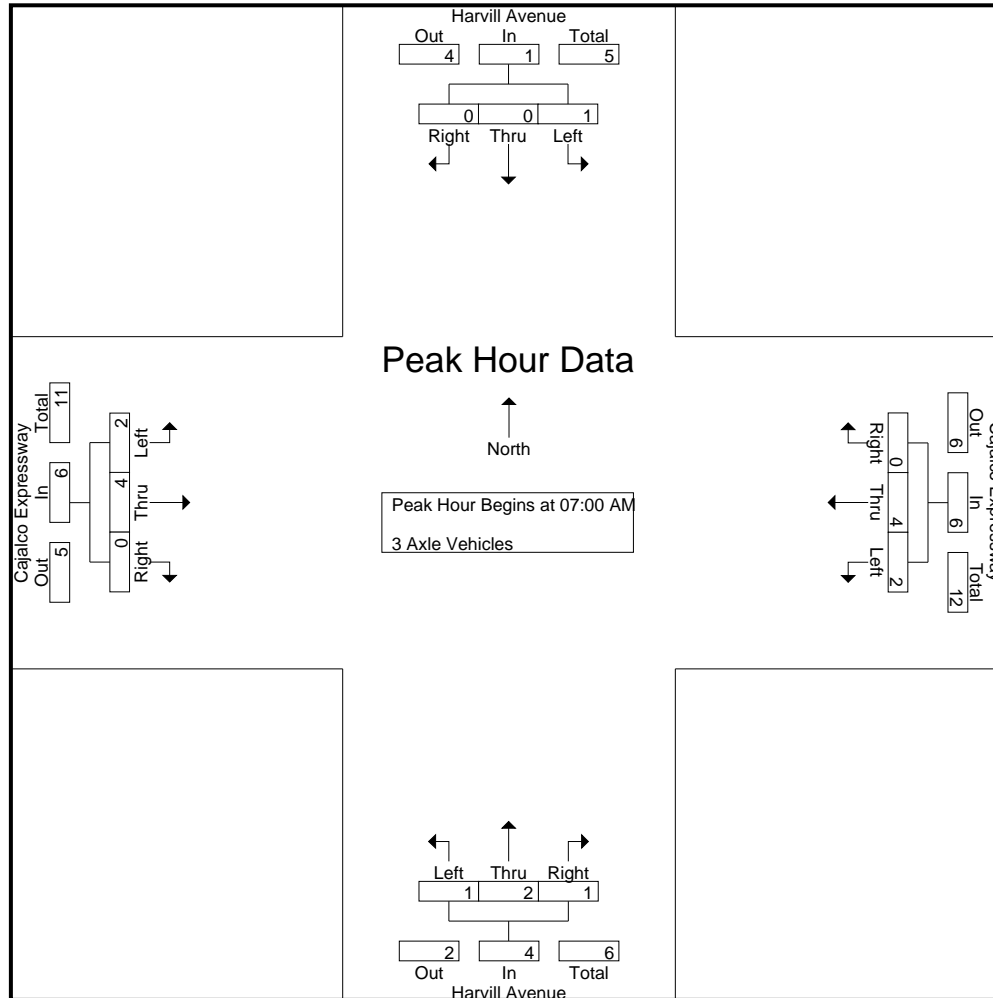
Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total				
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total							
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2	0	2	0	6	2
07:15 AM	1	0	0	0	1	1	2	0	0	3	0	1	0	0	1	1	0	0	0	1	0	0	0	1	0	6	6
07:30 AM	0	0	0	0	0	1	1	0	0	2	0	0	1	1	1	1	2	0	0	3	1	0	0	3	1	6	7
07:45 AM	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	2	0	0	2	0	0	0	2	0	5	5
Total	1	0	0	0	1	2	4	0	1	6	1	2	1	2	4	2	4	0	0	6	3	17	0	20			
08:00 AM	1	1	0	0	2	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	0	0	0	2	0	7	7
08:15 AM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	3	3
08:30 AM	1	0	0	0	1	0	2	0	1	2	0	0	0	0	0	1	1	0	0	2	1	0	0	2	1	5	6
08:45 AM	0	0	0	1	0	2	0	1	0	3	1	0	0	0	1	0	2	1	0	3	1	0	0	3	1	7	8
Total	2	1	0	1	3	3	5	1	1	9	1	1	0	0	2	1	6	1	0	8	2	22	0	24			
Grand Total	3	1	0	1	4	5	9	1	2	15	2	3	1	2	6	3	10	1	0	14	5	39	0	44			
Apprch %	75	25	0			33.3	60	6.7			33.3	50	16.7			21.4	71.4	7.1									
Total %	7.7	2.6	0		10.3	12.8	23.1	2.6		38.5	5.1	7.7	2.6		15.4	7.7	25.6	2.6		35.9	11.4	88.6					

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	1	0	0	1	1	2	0	3	0	1	0	1	1	0	0	1	6
07:30 AM	0	0	0	0	1	1	0	2	0	0	1	1	1	2	0	3	6
07:45 AM	0	0	0	0	0	1	0	1	1	1	0	2	0	2	0	2	5
Total Volume	1	0	0	1	2	4	0	6	1	2	1	4	2	4	0	6	17
% App. Total	100	0	0		33.3	66.7	0		25	50	25		33.3	66.7	0		
PHF	.250	.000	.000	.250	.500	.500	.000	.500	.250	.500	.250	.500	.500	.500	.000	.500	.708

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+15 mins.	1	0	0	1	1	2	0	3	0	1	0	1	1	0	0	1	
+30 mins.	0	0	0	0	1	1	0	2	0	0	1	1	1	2	0	3	
+45 mins.	0	0	0	0	0	1	0	1	1	1	0	2	0	2	0	2	
Total Volume	1	0	0	1	2	4	0	6	1	2	1	4	2	4	0	6	
% App. Total	100	0	0		33.3	66.7	0		25	50	25		33.3	66.7	0		
PHF	.250	.000	.000	.250	.500	.500	.000	.500	.250	.500	.250	.500	.500	.500	.000	.500	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

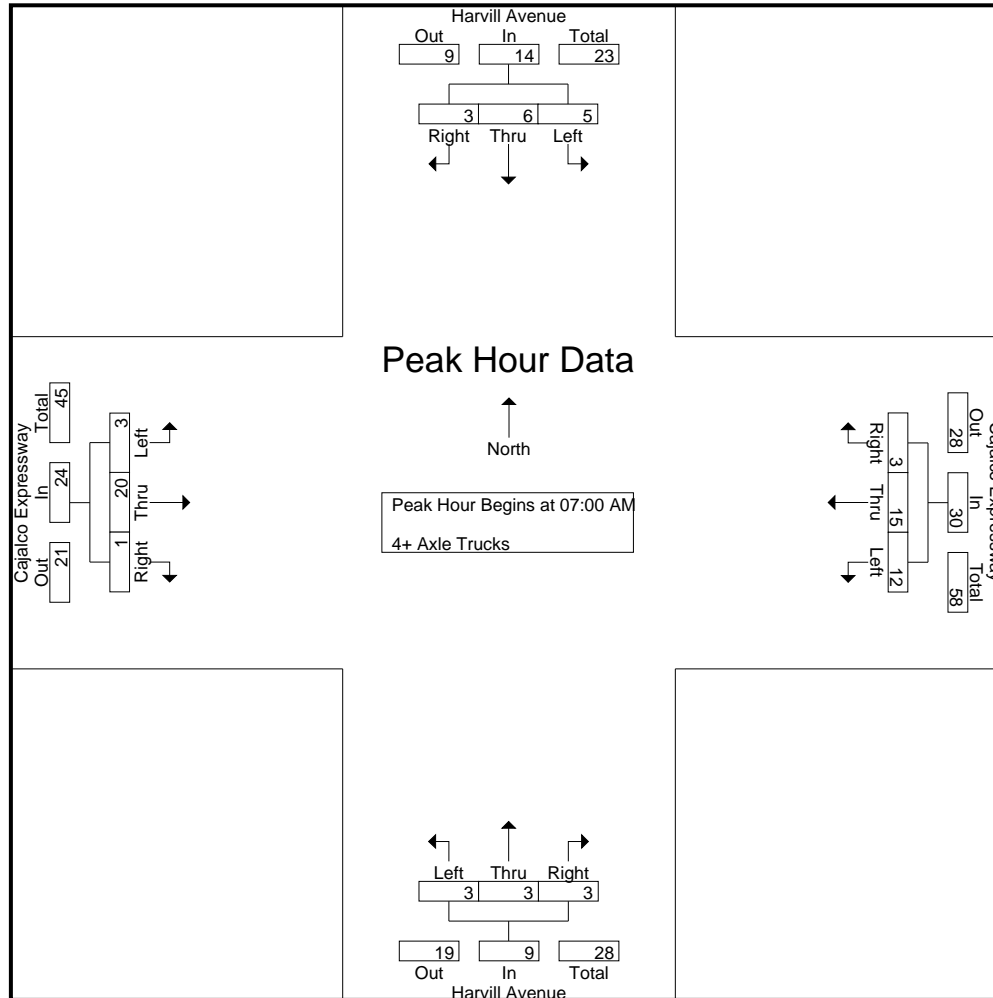
Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	2	2	2	0	6	4	5	1	0	10	1	0	1	1	2	1	7	0	0	8	1	26	27
07:15 AM	2	2	0	0	4	3	1	0	0	4	1	2	1	1	4	0	4	0	0	4	1	16	17
07:30 AM	1	0	1	0	2	3	4	1	0	8	0	1	0	1	1	0	4	0	0	4	1	15	16
07:45 AM	0	2	0	0	2	2	5	1	0	8	1	0	1	2	2	2	5	1	1	8	3	20	23
Total	5	6	3	0	14	12	15	3	0	30	3	3	3	5	9	3	20	1	1	24	6	77	83
08:00 AM	1	1	1	0	3	4	7	1	0	12	0	1	3	0	4	0	5	3	0	8	0	27	27
08:15 AM	2	0	2	1	4	4	3	0	1	7	0	0	1	1	1	3	5	1	0	9	3	21	24
08:30 AM	1	0	0	0	1	5	5	0	0	10	0	0	2	1	2	1	6	0	0	7	1	20	21
08:45 AM	0	2	1	1	3	5	9	0	0	14	1	1	0	3	2	0	3	1	0	4	4	23	27
Total	4	3	4	2	11	18	24	1	1	43	1	2	6	5	9	4	19	5	0	28	8	91	99
Grand Total	9	9	7	2	25	30	39	4	1	73	4	5	9	10	18	7	39	6	1	52	14	168	182
Apprch %	36	36	28			41.1	53.4	5.5			22.2	27.8	50			13.5	75	11.5					
Total %	5.4	5.4	4.2		14.9	17.9	23.2	2.4		43.5	2.4	3	5.4		10.7	4.2	23.2	3.6		31	7.7	92.3	

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	2	2	2	6	4	5	1	10	1	0	1	2	1	7	0	8	26
07:15 AM	2	2	0	4	3	1	0	4	1	2	1	4	0	4	0	4	16
07:30 AM	1	0	1	2	3	4	1	8	0	1	0	1	0	4	0	4	15
07:45 AM	0	2	0	2	2	5	1	8	1	0	1	2	2	5	1	8	20
Total Volume	5	6	3	14	12	15	3	30	3	3	3	9	3	20	1	24	77
% App. Total	35.7	42.9	21.4		40	50	10		33.3	33.3	33.3		12.5	83.3	4.2		
PHF	.625	.750	.375	.583	.750	.750	.750	.750	.750	.375	.750	.563	.375	.714	.250	.750	.740

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
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County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj AM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	2	2	2	6	4	5	1	10	1	0	1	2	1	7	0	8	
+15 mins.	2	2	0	4	3	1	0	4	1	2	1	4	0	4	0	4	
+30 mins.	1	0	1	2	3	4	1	8	0	1	0	1	0	4	0	4	
+45 mins.	0	2	0	2	2	5	1	8	1	0	1	2	2	5	1	8	
Total Volume	5	6	3	14	12	15	3	30	3	3	3	9	3	20	1	24	
% App. Total	35.7	42.9	21.4		40	50	10		33.3	33.3	33.3		12.5	83.3	4.2		
PHF	.625	.750	.375	.583	.750	.750	.750	.750	.750	.375	.750	.563	.375	.714	.250	.750	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

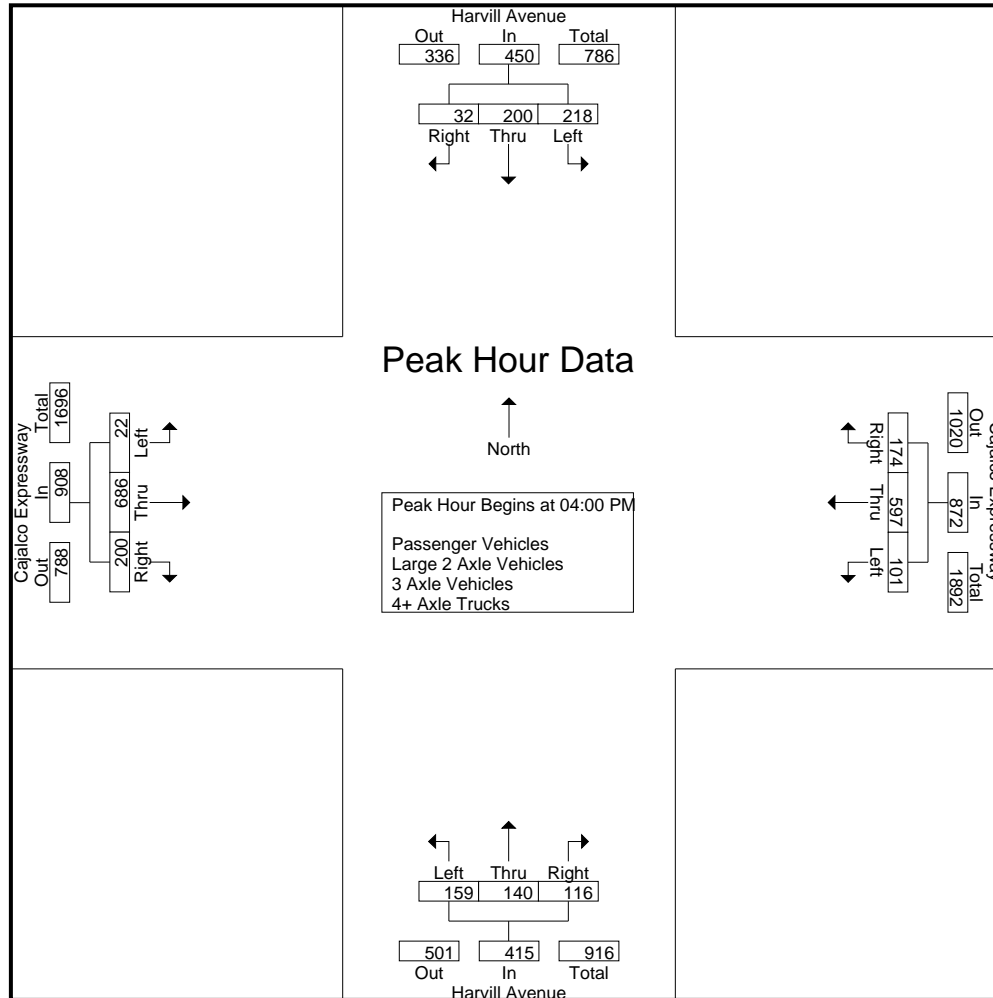
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	42	48	14	7	104	31	173	64	31	268	50	40	30	11	120	5	147	64	29	216	78	708	786
04:15 PM	46	46	5	2	97	23	139	33	7	195	33	33	25	15	91	11	158	44	29	213	53	596	649
04:30 PM	77	51	8	0	136	25	151	42	22	218	38	39	25	11	102	4	196	52	26	252	59	708	767
04:45 PM	53	55	5	1	113	22	134	35	14	191	38	28	36	26	102	2	185	40	21	227	62	633	695
Total	218	200	32	10	450	101	597	174	74	872	159	140	116	63	415	22	686	200	105	908	252	2645	2897
05:00 PM	60	42	6	2	108	21	150	45	19	216	39	22	26	14	87	7	189	30	20	226	55	637	692
05:15 PM	68	44	7	2	119	22	174	47	20	243	33	27	24	16	84	7	166	41	20	214	58	660	718
05:30 PM	43	49	4	0	96	20	166	40	17	226	41	29	19	14	89	4	229	33	12	266	43	677	720
05:45 PM	63	35	6	1	104	27	157	35	16	219	46	21	26	17	93	2	209	32	8	243	42	659	701
Total	234	170	23	5	427	90	647	167	72	904	159	99	95	61	353	20	793	136	60	949	198	2633	2831
Grand Total	452	370	55	15	877	191	1244	341	146	1776	318	239	211	124	768	42	1479	336	165	1857	450	5278	5728
Apprch %	51.5	42.2	6.3			10.8	70	19.2			41.4	31.1	27.5			2.3	79.6	18.1					
Total %	8.6	7	1		16.6	3.6	23.6	6.5		33.6	6	4.5	4		14.6	0.8	28	6.4		35.2	7.9	92.1	
Passenger Vehicles	443	354	50		861	148	1190	322		1799	311	230	201		859	37	1426	320		1942	0	0	5461
% Passenger Vehicles	98	95.7	90.9	93.3	96.5	77.5	95.7	94.4	95.2	93.6	97.8	96.2	95.3	94.4	96.3	88.1	96.4	95.2	96.4	96	0	0	95.3
Large 2 Axle Vehicles	4	5	2		11	7	19	15		47	2	2	2		8	0	26	9		40	0	0	106
% Large 2 Axle Vehicles	0.9	1.4	3.6	0	1.2	3.7	1.5	4.4	4.1	2.4	0.6	0.8	0.9	1.6	0.9	0	1.8	2.7	3	2	0	0	1.9
3 Axle Vehicles	2	2	0		4	5	9	0		14	2	5	2		11	1	5	1		7	0	0	36
% 3 Axle Vehicles	0.4	0.5	0	0	0.4	2.6	0.7	0	0	0.7	0.6	2.1	0.9	1.6	1.2	2.4	0.3	0.3	0	0.3	0	0	0.6
4+ Axle Trucks	3	9	3		16	31	26	4		62	3	2	6		14	4	22	6		33	0	0	125
% 4+ Axle Trucks	0.7	2.4	5.5	6.7	1.8	16.2	2.1	1.2	0.7	3.2	0.9	0.8	2.8	2.4	1.6	9.5	1.5	1.8	0.6	1.6	0	0	2.2

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	42	48	14	104	31	173	64	268	50	40	30	120	5	147	64	216	708
04:15 PM	46	46	5	97	23	139	33	195	33	33	25	91	11	158	44	213	596
04:30 PM	77	51	8	136	25	151	42	218	38	39	25	102	4	196	52	252	708
04:45 PM	53	55	5	113	22	134	35	191	38	28	36	102	2	185	40	227	633
Total Volume	218	200	32	450	101	597	174	872	159	140	116	415	22	686	200	908	2645
% App. Total	48.4	44.4	7.1		11.6	68.5	20		38.3	33.7	28		2.4	75.6	22		
PHF	.708	.909	.571	.827	.815	.863	.680	.813	.795	.875	.806	.865	.500	.875	.781	.901	.934

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				05:00 PM				04:00 PM				05:00 PM				
+0 mins.	77	51	8	136	21	150	45	216	50	40	30	120	7	189	30	226	
+15 mins.	53	55	5	113	22	174	47	243	33	33	25	91	7	166	41	214	
+30 mins.	60	42	6	108	20	166	40	226	38	39	25	102	4	229	33	266	
+45 mins.	68	44	7	119	27	157	35	219	38	28	36	102	2	209	32	243	
Total Volume	258	192	26	476	90	647	167	904	159	140	116	415	20	793	136	949	
% App. Total	54.2	40.3	5.5		10	71.6	18.5		38.3	33.7	28		2.1	83.6	14.3		
PHF	.838	.873	.813	.875	.833	.930	.888	.930	.795	.875	.806	.865	.714	.866	.829	.892	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
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 Page No : 1

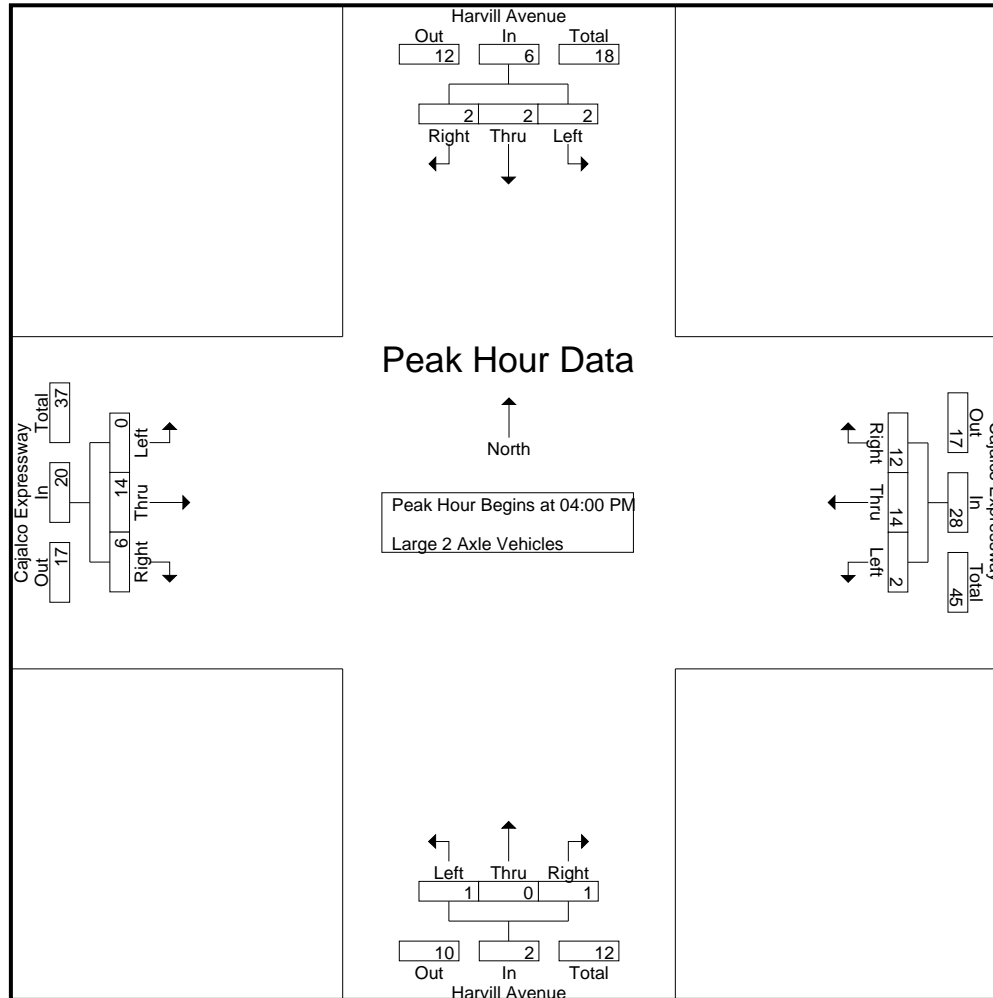
Groups Printed- Large 2 Axle Vehicles

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	1	0	1	0	2	1	7	3	2	11	0	0	1	1	1	0	5	3	1	8	4	22	26
04:15 PM	0	0	0	0	0	1	3	2	0	6	1	0	0	0	1	0	2	1	1	3	1	10	11
04:30 PM	1	1	0	0	2	0	3	4	2	7	0	0	0	0	0	0	3	1	0	4	2	13	15
04:45 PM	0	1	1	0	2	0	1	3	0	4	0	0	0	0	0	0	4	1	1	5	1	11	12
Total	2	2	2	0	6	2	14	12	4	28	1	0	1	1	2	0	14	6	3	20	8	56	64
05:00 PM	1	0	0	0	1	2	2	0	0	4	0	1	0	0	1	0	1	1	1	2	1	8	9
05:15 PM	1	0	0	0	1	2	0	3	2	5	0	1	1	1	2	0	1	0	0	1	3	9	12
05:30 PM	0	2	0	0	2	1	3	0	0	4	0	0	0	0	0	0	7	2	1	9	1	15	16
05:45 PM	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	5	5
Total	2	3	0	0	5	5	5	3	2	13	1	2	1	1	4	0	12	3	2	15	5	37	42
Grand Total	4	5	2	0	11	7	19	15	6	41	2	2	2	2	6	0	26	9	5	35	13	93	106
Apprch %	36.4	45.5	18.2			17.1	46.3	36.6			33.3	33.3	33.3			0	74.3	25.7					
Total %	4.3	5.4	2.2		11.8	7.5	20.4	16.1		44.1	2.2	2.2	2.2		6.5	0	28	9.7		37.6	12.3	87.7	

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	1	7	3	11	0	0	1	1	0	5	3	8	22
04:15 PM	0	0	0	0	1	3	2	6	1	0	0	1	0	2	1	3	10
04:30 PM	1	1	0	2	0	3	4	7	0	0	0	0	0	3	1	4	13
04:45 PM	0	1	1	2	0	1	3	4	0	0	0	0	0	4	1	5	11
Total Volume	2	2	2	6	2	14	12	28	1	0	1	2	0	14	6	20	56
% App. Total	33.3	33.3	33.3		7.1	50	42.9		50	0	50		0	70	30		
PHF	.500	.500	.500	.750	.500	.500	.750	.636	.250	.000	.250	.500	.000	.700	.500	.625	.636

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	1	7	3	11	0	0	1	1	0	5	3	8	
+15 mins.	0	0	0	0	1	3	2	6	1	0	0	1	0	2	1	3	
+30 mins.	1	1	0	2	0	3	4	7	0	0	0	0	0	3	1	4	
+45 mins.	0	1	1	2	0	1	3	4	0	0	0	0	0	4	1	5	
Total Volume	2	2	2	6	2	14	12	28	1	0	1	2	0	14	6	20	
% App. Total	33.3	33.3	33.3		7.1	50	42.9		50	0	50		0	70	30		
PHF	.500	.500	.500	.750	.500	.500	.750	.636	.250	.000	.250	.500	.000	.700	.500	.625	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

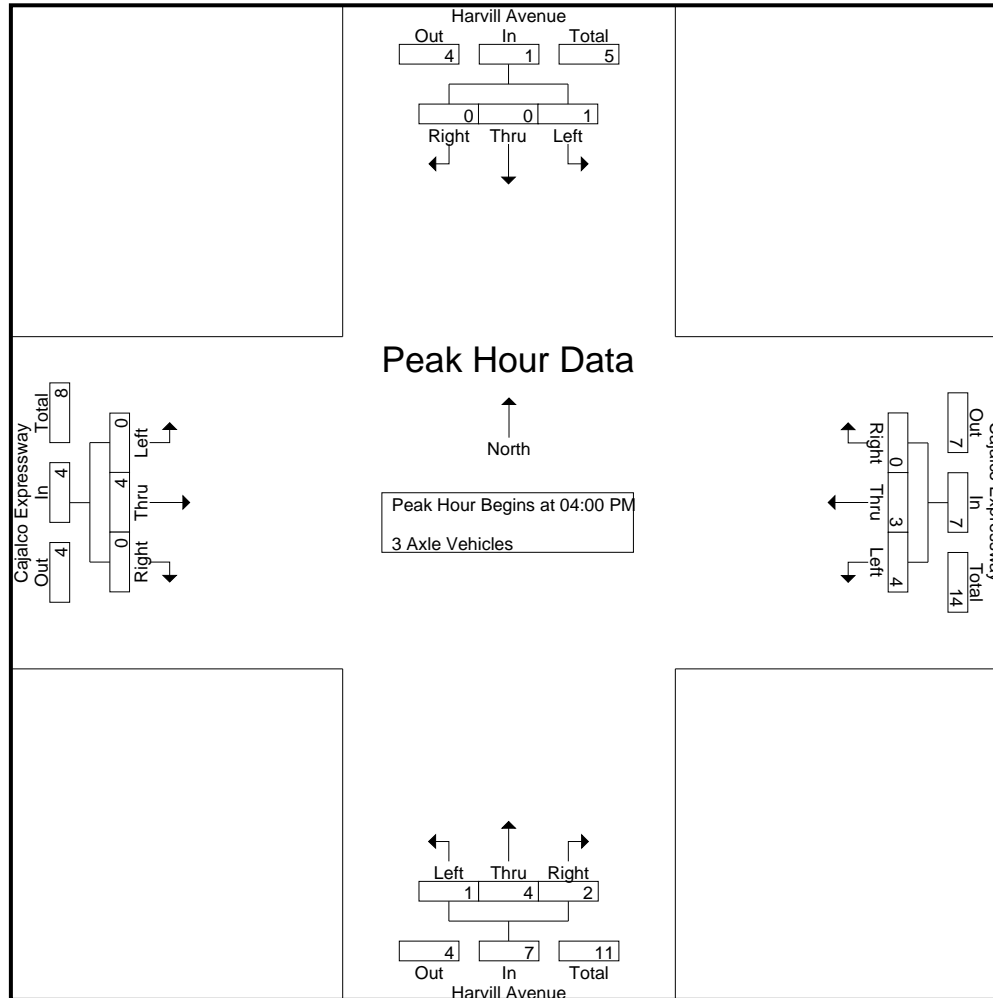
Groups Printed- 3 Axle Vehicles

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	1	0	0	0	1	0	2	0	0	2	0	3	1	1	4	0	2	0	0	2	1	9	10
04:15 PM	0	0	0	0	0	2	1	0	0	3	0	1	1	1	2	0	1	0	0	1	1	6	7
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2
04:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	2	2
Total	1	0	0	0	1	4	3	0	0	7	1	4	2	2	7	0	4	0	0	4	2	19	21
05:00 PM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	3
05:15 PM	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	6	6
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
05:45 PM	0	0	0	0	0	1	1	0	0	2	1	0	0	0	1	1	1	0	0	2	0	5	5
Total	1	2	0	0	3	1	6	0	0	7	1	1	0	0	2	1	1	1	0	3	0	15	15
Grand Total	2	2	0	0	4	5	9	0	0	14	2	5	2	2	9	1	5	1	0	7	2	34	36
Aprpch %	50	50	0			35.7	64.3	0			22.2	55.6	22.2			14.3	71.4	14.3					
Total %	5.9	5.9	0		11.8	14.7	26.5	0		41.2	5.9	14.7	5.9		26.5	2.9	14.7	2.9		20.6	5.6	94.4	

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	0	0	1	0	2	0	2	0	3	1	4	0	2	0	2	9
04:15 PM	0	0	0	0	2	1	0	3	0	1	1	2	0	1	0	1	6
04:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
04:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
Total Volume	1	0	0	1	4	3	0	7	1	4	2	7	0	4	0	4	19
% App. Total	100	0	0		57.1	42.9	0		14.3	57.1	28.6		0	100	0		
PHF	.250	.000	.000	.250	.500	.375	.000	.583	.250	.333	.500	.438	.000	.500	.000	.500	.528

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	0	1	0	2	0	2	0	3	1	4	0	2	0	2	
+15 mins.	0	0	0	0	2	1	0	3	0	1	1	2	0	1	0	1	
+30 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	
+45 mins.	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	
Total Volume	1	0	0	1	4	3	0	7	1	4	2	7	0	4	0	4	
% App. Total	100	0	0		57.1	42.9	0		14.3	57.1	28.6		0	100	0		
PHF	.250	.000	.000	.250	.500	.375	.000	.583	.250	.333	.500	.438	.000	.500	.000	.500	

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 1

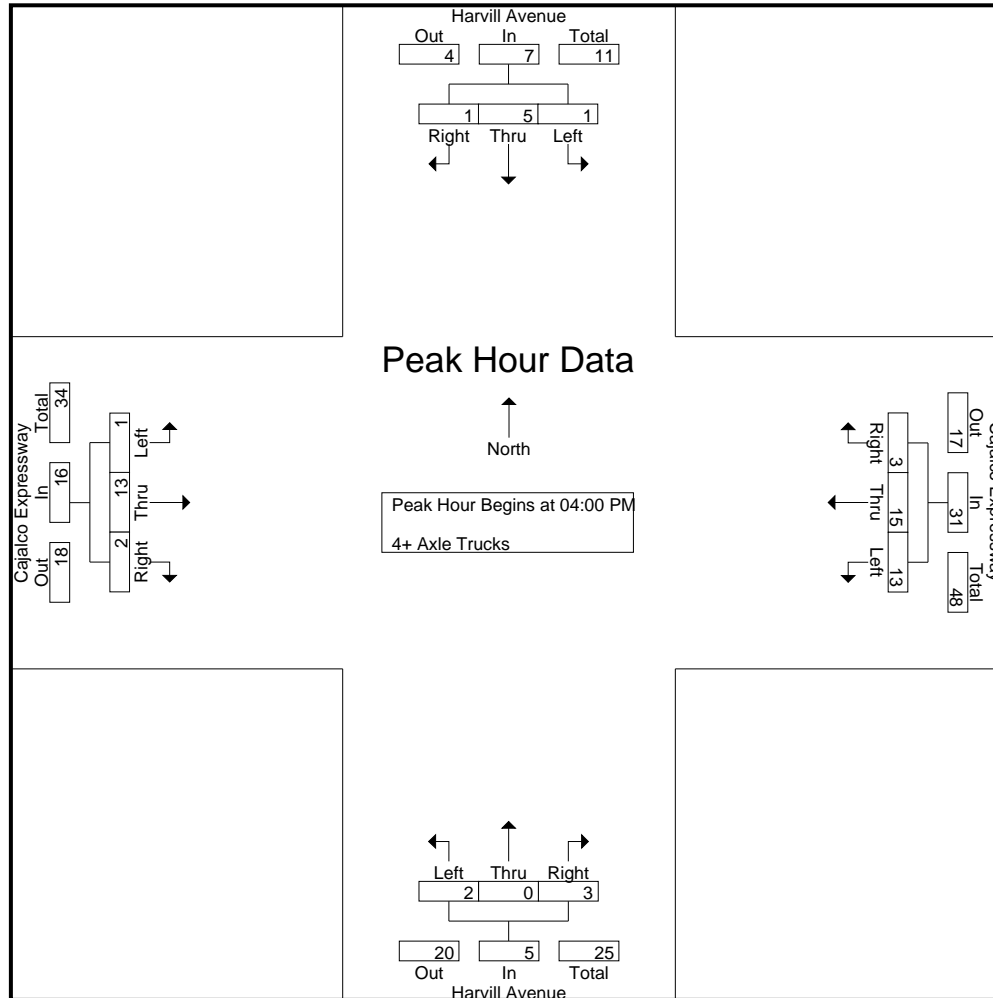
Groups Printed- 4+ Axle Trucks

Start Time	Harvill Avenue Southbound					Cajalco Expressway Westbound					Harvill Avenue Northbound					Cajalco Expressway Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	2	1	1	3	8	5	1	1	14	1	0	1	1	2	1	4	1	0	6	3	25	28
04:15 PM	0	0	0	0	0	2	4	0	0	6	0	0	1	0	1	0	6	0	0	6	0	13	13
04:30 PM	1	1	0	0	2	2	3	1	0	6	1	0	0	0	1	0	2	0	0	2	0	11	11
04:45 PM	0	2	0	0	2	1	3	1	0	5	0	0	1	0	1	0	1	1	0	2	0	10	10
Total	1	5	1	1	7	13	15	3	1	31	2	0	3	1	5	1	13	2	0	16	3	59	62
05:00 PM	1	1	1	0	3	3	4	1	0	8	0	1	1	0	2	0	1	1	1	2	1	15	16
05:15 PM	0	2	0	0	2	5	2	0	0	7	0	1	0	0	1	3	3	0	0	6	0	16	16
05:30 PM	0	0	0	0	0	6	3	0	0	9	0	0	1	1	1	0	2	1	0	3	1	13	14
05:45 PM	1	1	1	0	3	4	2	0	0	6	1	0	1	1	2	0	3	2	0	5	1	16	17
Total	2	4	2	0	8	18	11	1	0	30	1	2	3	2	6	3	9	4	1	16	3	60	63
Grand Total	3	9	3	1	15	31	26	4	1	61	3	2	6	3	11	4	22	6	1	32	6	119	125
Apprch %	20	60	20			50.8	42.6	6.6			27.3	18.2	54.5			12.5	68.8	18.8					
Total %	2.5	7.6	2.5		12.6	26.1	21.8	3.4		51.3	2.5	1.7	5		9.2	3.4	18.5	5		26.9	4.8	95.2	

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	1	3	8	5	1	14	1	0	1	2	1	4	1	6	25
04:15 PM	0	0	0	0	2	4	0	6	0	0	1	1	0	6	0	6	13
04:30 PM	1	1	0	2	2	3	1	6	1	0	0	1	0	2	0	2	11
04:45 PM	0	2	0	2	1	3	1	5	0	0	1	1	0	1	1	2	10
Total Volume	1	5	1	7	13	15	3	31	2	0	3	5	1	13	2	16	59
% App. Total	14.3	71.4	14.3		41.9	48.4	9.7		40	0	60		6.2	81.2	12.5		
PHF	.250	.625	.250	.583	.406	.750	.750	.554	.500	.000	.750	.625	.250	.542	.500	.667	.590

County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 2



County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway
 Weather: Clear

File Name : 18_CRV_Har_Caj PM
 Site Code : 05122112
 Start Date : 2/8/2022
 Page No : 3

Start Time	Harvill Avenue Southbound				Cajalco Expressway Westbound				Harvill Avenue Northbound				Cajalco Expressway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	2	1	3	8	5	1	14	1	0	1	2	1	4	1	6	
+15 mins.	0	0	0	0	2	4	0	6	0	0	1	1	0	6	0	6	
+30 mins.	1	1	0	2	2	3	1	6	1	0	0	1	0	2	0	2	
+45 mins.	0	2	0	2	1	3	1	5	0	0	1	1	0	1	1	2	
Total Volume	1	5	1	7	13	15	3	31	2	0	3	5	1	13	2	16	
% App. Total	14.3	71.4	14.3		41.9	48.4	9.7		40	0	60		6.2	81.2	12.5		
PHF	.250	.625	.250	.583	.406	.750	.750	.554	.500	.000	.750	.625	.250	.542	.500	.667	

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway



Date: 2/8/2022
 Day: Tuesday

PEDESTRIANS

	North Leg Harvill Avenue	East Leg Cajalco Expressway	South Leg Harvill Avenue	West Leg Cajalco Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Harvill Avenue	East Leg Cajalco Expressway	South Leg Harvill Avenue	West Leg Cajalco Expressway	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: County of Riverside
 N/S: Harvill Avenue
 E/W: Cajalco Expressway



Date: 2/8/2022
 Day: Tuesday

BICYCLES

	Southbound Harvill Avenue			Westbound Cajalco Expressway			Northbound Harvill Avenue			Eastbound Cajalco Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	1	1

	Southbound Harvill Avenue			Westbound Cajalco Expressway			Northbound Harvill Avenue			Eastbound Cajalco Expressway			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	1	0	2

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

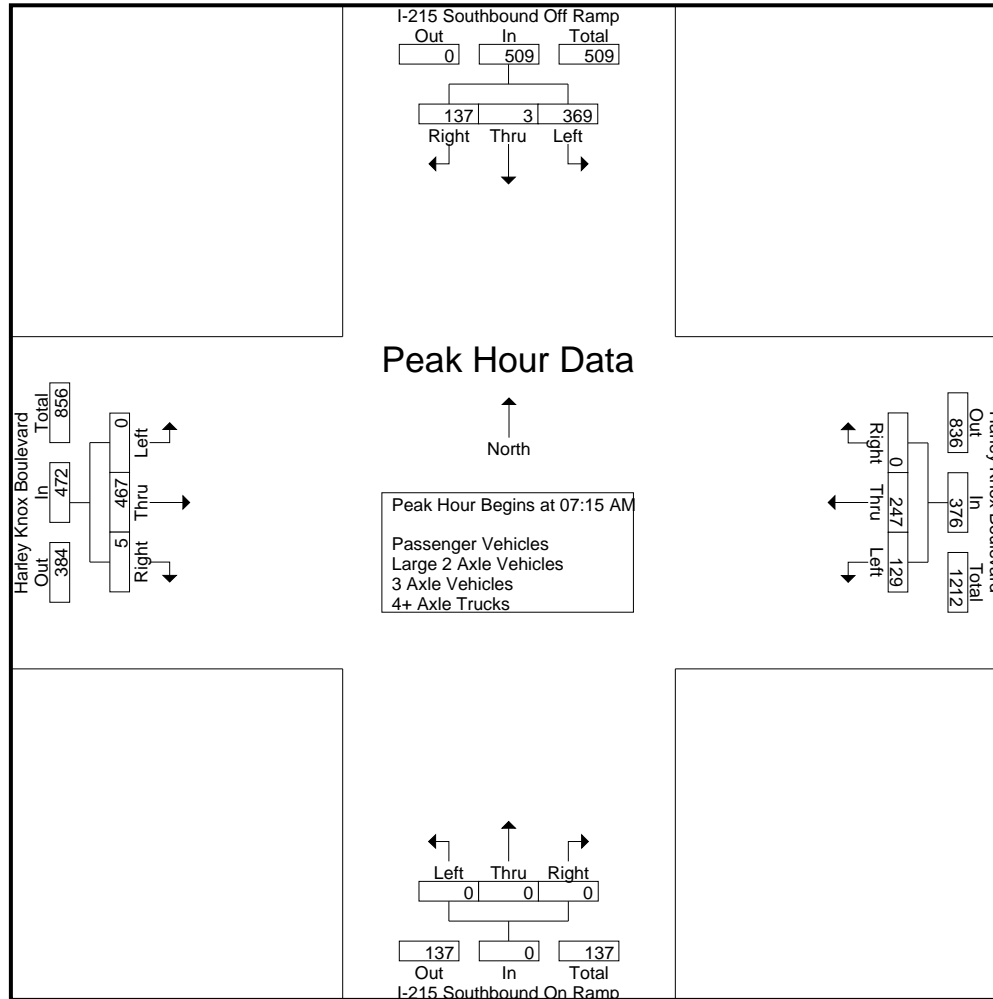
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	108	0	61	37	169	22	38	0	0	60	0	0	0	0	0	0	96	4	1	100	38	329	367
07:15 AM	94	2	49	40	145	30	38	0	0	68	0	0	0	0	0	0	113	1	1	114	41	327	368
07:30 AM	92	1	25	12	118	43	89	0	0	132	0	0	0	0	0	0	103	1	0	104	12	354	366
07:45 AM	91	0	39	22	130	38	62	0	0	100	0	0	0	0	0	0	105	2	1	107	23	337	360
Total	385	3	174	111	562	133	227	0	0	360	0	0	0	0	0	0	417	8	3	425	114	1347	1461
08:00 AM	92	0	24	18	116	18	58	0	0	76	0	0	0	0	0	0	146	1	0	147	18	339	357
08:15 AM	72	0	31	20	103	24	28	0	0	52	0	0	0	0	0	0	136	7	0	143	20	298	318
08:30 AM	94	0	29	14	123	36	16	0	0	52	0	0	0	0	0	0	98	5	1	103	15	278	293
08:45 AM	81	2	31	17	114	25	26	0	0	51	0	0	0	0	0	0	66	4	3	70	20	235	255
Total	339	2	115	69	456	103	128	0	0	231	0	0	0	0	0	0	446	17	4	463	73	1150	1223
Grand Total	724	5	289	180	1018	236	355	0	0	591	0	0	0	0	0	0	863	25	7	888	187	2497	2684
Apprch %	71.1	0.5	28.4			39.9	60.1	0			0	0	0			0	97.2	2.8					
Total %	29	0.2	11.6		40.8	9.5	14.2	0		23.7	0	0	0			0	34.6	1		35.6	7	93	
Passenger Vehicles	453	5	218		813	158	320	0		478	0	0	0			0	754	13		770	0	0	2061
% Passenger Vehicles	62.6	100	75.4	76.1	67.9	66.9	90.1	0	0	80.9	0	0	0	0	0	0	87.4	52	42.9	86	0	0	76.8
Large 2 Axle Vehicles	40	0	15		65	17	8	0		25	0	0	0			0	33	1		34	0	0	124
% Large 2 Axle Vehicles	5.5	0	5.2	5.6	5.4	7.2	2.3	0	0	4.2	0	0	0	0	0	0	3.8	4	0	3.8	0	0	4.6
3 Axle Vehicles	48	0	13		66	31	15	0		46	0	0	0			0	22	6		31	0	0	143
% 3 Axle Vehicles	6.6	0	4.5	2.8	5.5	13.1	4.2	0	0	7.8	0	0	0	0	0	0	2.5	24	42.9	3.5	0	0	5.3
4+ Axle Trucks	183	0	43		254	30	12	0		42	0	0	0			0	54	5		60	0	0	356
% 4+ Axle Trucks	25.3	0	14.9	15.6	21.2	12.7	3.4	0	0	7.1	0	0	0	0	0	0	6.3	20	14.3	6.7	0	0	13.3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	94	2	49	145	30	38	0	68	0	0	0	0	0	113	1	114	327
07:30 AM	92	1	25	118	43	89	0	132	0	0	0	0	0	103	1	104	366
07:45 AM	91	0	39	130	38	62	0	100	0	0	0	0	0	105	2	107	360
08:00 AM	92	0	24	116	18	58	0	76	0	0	0	0	0	146	1	147	357
Total Volume	369	3	137	509	129	247	0	376	0	0	0	0	0	467	5	472	1357
% App. Total	72.5	0.6	26.9		34.3	65.7	0		0	0	0		0	98.9	1.1		
PHF	.981	.375	.699	.878	.750	.694	.000	.712	.000	.000	.000	.000	.000	.800	.625	.803	.958

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
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County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				07:00 AM				07:30 AM				
+0 mins.	108	0	61	169	30	38	0	68	0	0	0	0	0	103	1	104	
+15 mins.	94	2	49	145	43	89	0	132	0	0	0	0	0	105	2	107	
+30 mins.	92	1	25	118	38	62	0	100	0	0	0	0	0	146	1	147	
+45 mins.	91	0	39	130	18	58	0	76	0	0	0	0	0	136	7	143	
Total Volume	385	3	174	562	129	247	0	376	0	0	0	0	0	490	11	501	
% App. Total	68.5	0.5	31		34.3	65.7	0		0	0	0		0	97.8	2.2		
PHF	.891	.375	.713	.831	.750	.694	.000	.712	.000	.000	.000	.000	.000	.839	.393	.852	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

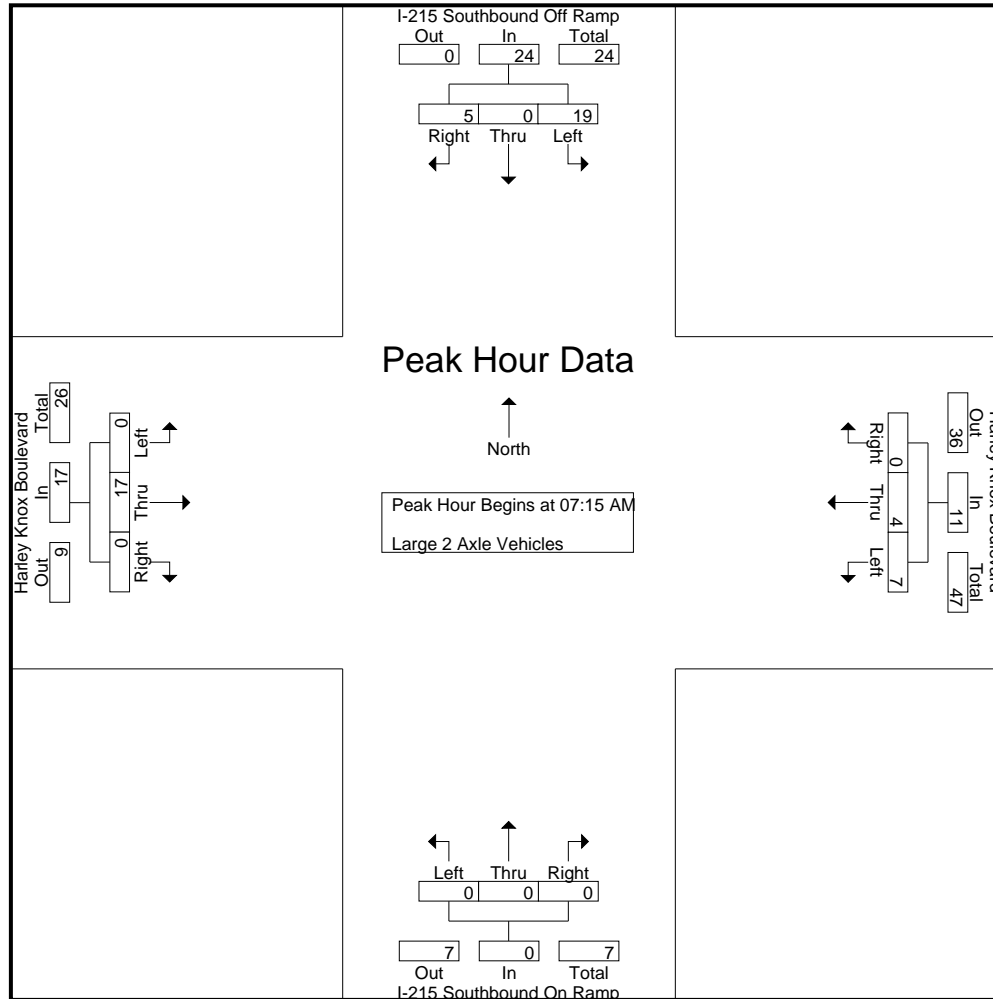
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	6	0	4	3	10	5	1	0	0	6	0	0	0	0	0	0	4	0	0	4	3	20	23
07:15 AM	3	0	1	1	4	3	0	0	0	3	0	0	0	0	0	0	2	0	0	2	1	9	10
07:30 AM	3	0	1	1	4	3	2	0	0	5	0	0	0	0	0	0	4	0	0	4	1	13	14
07:45 AM	8	0	3	2	11	1	1	0	0	2	0	0	0	0	0	0	5	0	0	5	2	18	20
Total	20	0	9	7	29	12	4	0	0	16	0	0	0	0	0	0	15	0	0	15	7	60	67
08:00 AM	5	0	0	0	5	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	0	12	12
08:15 AM	5	0	1	1	6	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	1	12	13
08:30 AM	5	0	3	2	8	3	1	0	0	4	0	0	0	0	0	0	6	1	0	7	2	19	21
08:45 AM	5	0	2	0	7	2	0	0	0	2	0	0	0	0	0	0	2	0	0	2	0	11	11
Total	20	0	6	3	26	5	4	0	0	9	0	0	0	0	0	0	18	1	0	19	3	54	57
Grand Total	40	0	15	10	55	17	8	0	0	25	0	0	0	0	0	0	33	1	0	34	10	114	124
Apprch %	72.7	0	27.3			68	32	0			0	0	0			0	97.1	2.9					
Total %	35.1	0	13.2		48.2	14.9	7	0		21.9	0	0	0		0	28.9	0.9		29.8	8.1	91.9		

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	0	1	4	3	0	0	3	0	0	0	0	0	2	0	2	9
07:30 AM	3	0	1	4	3	2	0	5	0	0	0	0	0	4	0	4	13
07:45 AM	8	0	3	11	1	1	0	2	0	0	0	0	0	5	0	5	18
08:00 AM	5	0	0	5	0	1	0	1	0	0	0	0	0	6	0	6	12
Total Volume	19	0	5	24	7	4	0	11	0	0	0	0	0	17	0	17	52
% App. Total	79.2	0	20.8		63.6	36.4	0		0	0	0		0	100	0		
PHF	.594	.000	.417	.545	.583	.500	.000	.550	.000	.000	.000	.000	.000	.708	.000	.708	.722

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
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County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	3	0	1	4	3	0	0	3	0	0	0	0	0	2	0	2	
+15 mins.	3	0	1	4	3	2	0	5	0	0	0	0	0	4	0	4	
+30 mins.	8	0	3	11	1	1	0	2	0	0	0	0	0	5	0	5	
+45 mins.	5	0	0	5	0	1	0	1	0	0	0	0	0	6	0	6	
Total Volume	19	0	5	24	7	4	0	11	0	0	0	0	0	17	0	17	
% App. Total	79.2	0	20.8		63.6	36.4	0		0	0	0		0	100	0		
PHF	.594	.000	.417	.545	.583	.500	.000	.550	.000	.000	.000	.000	.000	.708	.000	.708	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

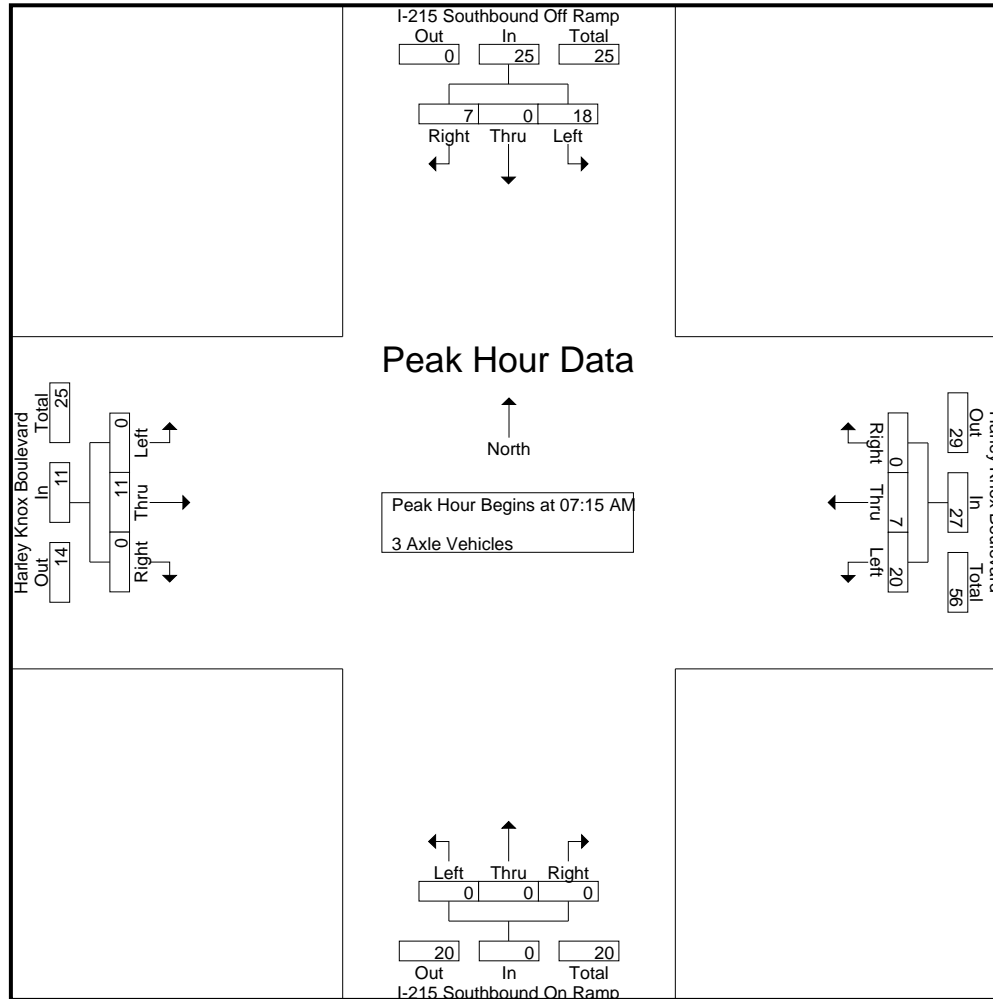
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	9	0	5	3	14	1	3	0	0	4	0	0	0	0	0	0	3	2	0	5	3	23	26
07:15 AM	3	0	1	0	4	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1	0	8	8
07:30 AM	6	0	3	1	9	8	0	0	0	8	0	0	0	0	0	0	4	0	0	4	1	21	22
07:45 AM	4	0	2	1	6	7	1	0	0	8	0	0	0	0	0	0	3	0	0	3	1	17	18
Total	22	0	11	5	33	18	5	0	0	23	0	0	0	0	0	0	11	2	0	13	5	69	74
08:00 AM	5	0	1	0	6	3	5	0	0	8	0	0	0	0	0	0	3	0	0	3	0	17	17
08:15 AM	5	0	0	0	5	1	1	0	0	2	0	0	0	0	0	0	2	1	0	3	0	10	10
08:30 AM	8	0	1	0	9	8	3	0	0	11	0	0	0	0	0	0	3	0	0	3	0	23	23
08:45 AM	8	0	0	0	8	1	1	0	0	2	0	0	0	0	0	0	3	3	3	6	3	16	19
Total	26	0	2	0	28	13	10	0	0	23	0	0	0	0	0	0	11	4	3	15	3	66	69
Grand Total	48	0	13	5	61	31	15	0	0	46	0	0	0	0	0	0	22	6	3	28	8	135	143
Apprch %	78.7	0	21.3			67.4	32.6	0			0	0	0			0	78.6	21.4					
Total %	35.6	0	9.6		45.2	23	11.1	0		34.1	0	0	0		0	0	16.3	4.4		20.7	5.6	94.4	

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	0	1	4	2	1	0	3	0	0	0	0	0	1	0	1	8
07:30 AM	6	0	3	9	8	0	0	8	0	0	0	0	0	4	0	4	21
07:45 AM	4	0	2	6	7	1	0	8	0	0	0	0	0	3	0	3	17
08:00 AM	5	0	1	6	3	5	0	8	0	0	0	0	0	3	0	3	17
Total Volume	18	0	7	25	20	7	0	27	0	0	0	0	0	11	0	11	63
% App. Total	72	0	28		74.1	25.9	0		0	0	0		0	100	0		
PHF	.750	.000	.583	.694	.625	.350	.000	.844	.000	.000	.000	.000	.000	.688	.000	.688	.750

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	3	0	1	4	2	1	0	3	0	0	0	0	0	1	0	1	
+15 mins.	6	0	3	9	8	0	0	8	0	0	0	0	0	4	0	4	
+30 mins.	4	0	2	6	7	1	0	8	0	0	0	0	0	3	0	3	
+45 mins.	5	0	1	6	3	5	0	8	0	0	0	0	0	3	0	3	
Total Volume	18	0	7	25	20	7	0	27	0	0	0	0	0	11	0	11	
% App. Total	72	0	28		74.1	25.9	0		0	0	0		0	100	0		
PHF	.750	.000	.583	.694	.625	.350	.000	.844	.000	.000	.000	.000	.000	.688	.000	.688	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

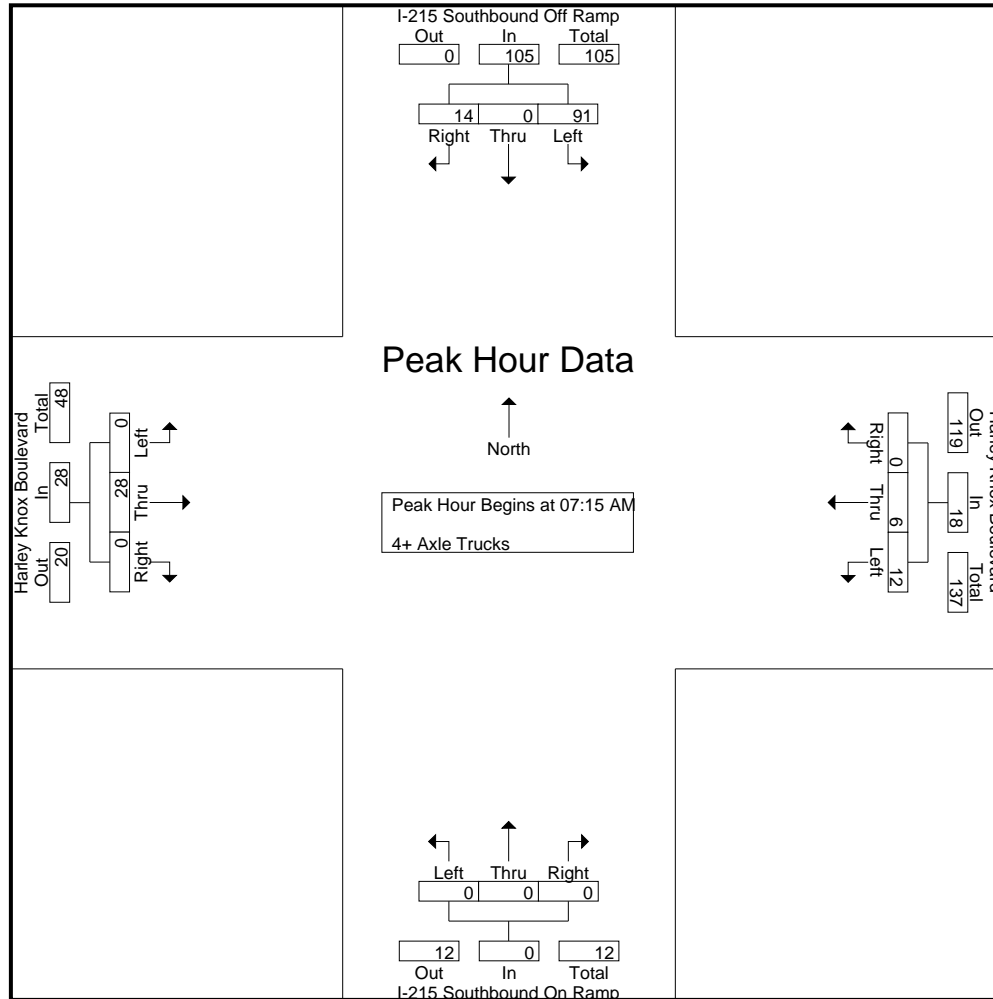
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	16	0	6	4	22	6	2	0	0	8	0	0	0	0	0	0	5	1	1	6	5	36	41
07:15 AM	22	0	6	5	28	2	1	0	0	3	0	0	0	0	0	0	6	0	0	6	5	37	42
07:30 AM	23	0	2	0	25	5	2	0	0	7	0	0	0	0	0	0	6	0	0	6	0	38	38
07:45 AM	20	0	4	2	24	4	1	0	0	5	0	0	0	0	0	0	6	0	0	6	2	35	37
Total	81	0	18	11	99	17	6	0	0	23	0	0	0	0	0	0	23	1	1	24	12	146	158
08:00 AM	26	0	2	2	28	1	2	0	0	3	0	0	0	0	0	0	10	0	0	10	2	41	43
08:15 AM	23	0	8	6	31	2	2	0	0	4	0	0	0	0	0	0	12	2	0	14	6	49	55
08:30 AM	29	0	8	6	37	5	0	0	0	5	0	0	0	0	0	0	5	1	0	6	6	48	54
08:45 AM	24	0	7	3	31	5	2	0	0	7	0	0	0	0	0	0	4	1	0	5	3	43	46
Total	102	0	25	17	127	13	6	0	0	19	0	0	0	0	0	0	31	4	0	35	17	181	198
Grand Total	183	0	43	28	226	30	12	0	0	42	0	0	0	0	0	0	54	5	1	59	29	327	356
Apprch %	81	0	19			71.4	28.6	0			0	0	0			0	91.5	8.5					
Total %	56	0	13.1		69.1	9.2	3.7	0		12.8	0	0	0			0	16.5	1.5		18	8.1	91.9	

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	22	0	6	28	2	1	0	3	0	0	0	0	0	6	0	6	37
07:30 AM	23	0	2	25	5	2	0	7	0	0	0	0	0	6	0	6	38
07:45 AM	20	0	4	24	4	1	0	5	0	0	0	0	0	6	0	6	35
08:00 AM	26	0	2	28	1	2	0	3	0	0	0	0	0	10	0	10	41
Total Volume	91	0	14	105	12	6	0	18	0	0	0	0	0	28	0	28	151
% App. Total	86.7	0	13.3		66.7	33.3	0		0	0	0		0	100	0		
PHF	.875	.000	.583	.938	.600	.750	.000	.643	.000	.000	.000	.000	.000	.700	.000	.700	.921

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
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County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	22	0	6	28	2	1	0	3	0	0	0	0	0	6	0	6	
+15 mins.	23	0	2	25	5	2	0	7	0	0	0	0	0	6	0	6	
+30 mins.	20	0	4	24	4	1	0	5	0	0	0	0	0	6	0	6	
+45 mins.	26	0	2	28	1	2	0	3	0	0	0	0	0	10	0	10	
Total Volume	91	0	14	105	12	6	0	18	0	0	0	0	0	28	0	28	
% App. Total	86.7	0	13.3		66.7	33.3	0		0	0	0		0	100	0		
PHF	.875	.000	.583	.938	.600	.750	.000	.643	.000	.000	.000	.000	.000	.700	.000	.700	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

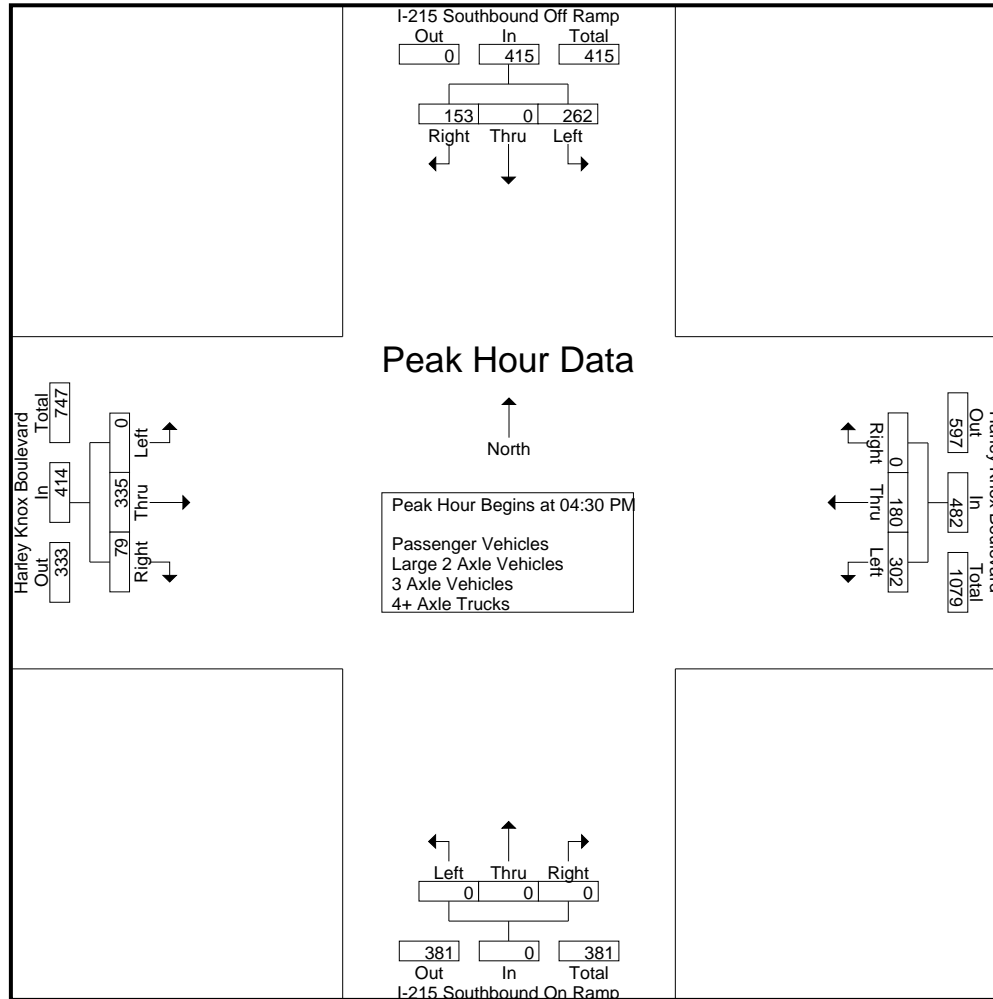
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	68	0	39	15	107	67	35	0	0	102	0	0	0	0	0	0	100	13	3	113	18	322	340
04:15 PM	62	1	42	22	105	64	34	0	0	98	0	0	0	0	0	0	97	3	1	100	23	303	326
04:30 PM	63	0	42	25	105	74	54	0	0	128	0	0	0	0	0	0	96	17	5	113	30	346	376
04:45 PM	66	0	33	22	99	88	44	0	0	132	0	0	0	0	0	0	70	13	8	83	30	314	344
Total	259	1	156	84	416	293	167	0	0	460	0	0	0	0	0	0	363	46	17	409	101	1285	1386
05:00 PM	63	0	37	15	100	66	35	0	0	101	0	0	0	0	0	0	89	22	9	111	24	312	336
05:15 PM	70	0	41	26	111	74	47	0	0	121	0	0	0	0	0	0	80	27	15	107	41	339	380
05:30 PM	55	1	20	13	76	71	38	0	0	109	0	0	0	0	0	0	80	17	9	97	22	282	304
05:45 PM	66	0	31	15	97	48	36	0	0	84	0	0	0	0	0	0	71	4	3	75	18	256	274
Total	254	1	129	69	384	259	156	0	0	415	0	0	0	0	0	0	320	70	36	390	105	1189	1294
Grand Total	513	2	285	153	800	552	323	0	0	875	0	0	0	0	0	0	683	116	53	799	206	2474	2680
Apprch %	64.1	0.2	35.6			63.1	36.9	0			0	0	0			0	85.5	14.5					
Total %	20.7	0.1	11.5		32.3	22.3	13.1	0		35.4	0	0	0			0	27.6	4.7		32.3	7.7	92.3	
Passenger Vehicles	378	2	250		771	529	303	0		832	0	0	0	0	0	0	637	109		798	0	0	2401
% Passenger Vehicles	73.7	100	87.7	92.2	80.9	95.8	93.8	0	0	95.1	0	0	0	0	0	0	93.3	94	98.1	93.7	0	0	89.6
Large 2 Axle Vehicles	14	0	9		25	5	4	0		9	0	0	0	0	0	0	7	0		7	0	0	41
% Large 2 Axle Vehicles	2.7	0	3.2	1.3	2.6	0.9	1.2	0	0	1	0	0	0	0	0	0	1	0	0	0.8	0	0	1.5
3 Axle Vehicles	32	0	6		39	4	7	0		11	0	0	0	0	0	0	11	4		16	0	0	66
% 3 Axle Vehicles	6.2	0	2.1	0.7	4.1	0.7	2.2	0	0	1.3	0	0	0	0	0	0	1.6	3.4	1.9	1.9	0	0	2.5
4+ Axle Trucks	89	0	20		118	14	9	0		23	0	0	0	0	0	0	28	3		31	0	0	172
% 4+ Axle Trucks	17.3	0	7	5.9	12.4	2.5	2.8	0	0	2.6	0	0	0	0	0	0	4.1	2.6	0	3.6	0	0	6.4

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	63	0	42	105	74	54	0	128	0	0	0	0	0	96	17	113	346
04:45 PM	66	0	33	99	88	44	0	132	0	0	0	0	0	70	13	83	314
05:00 PM	63	0	37	100	66	35	0	101	0	0	0	0	0	89	22	111	312
05:15 PM	70	0	41	111	74	47	0	121	0	0	0	0	0	80	27	107	339
Total Volume	262	0	153	415	302	180	0	482	0	0	0	0	0	335	79	414	1311
% App. Total	63.1	0	36.9		62.7	37.3	0		0	0	0		0	80.9	19.1		
PHF	.936	.000	.911	.935	.858	.833	.000	.913	.000	.000	.000	.000	.000	.872	.731	.916	.947

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:30 PM				04:00 PM				04:30 PM				
+0 mins.	68	0	39	107	74	54	0	128	0	0	0	0	0	96	17	113	
+15 mins.	62	1	42	105	88	44	0	132	0	0	0	0	0	70	13	83	
+30 mins.	63	0	42	105	66	35	0	101	0	0	0	0	0	89	22	111	
+45 mins.	66	0	33	99	74	47	0	121	0	0	0	0	0	80	27	107	
Total Volume	259	1	156	416	302	180	0	482	0	0	0	0	0	335	79	414	
% App. Total	62.3	0.2	37.5		62.7	37.3	0		0	0	0		0	80.9	19.1		
PHF	.952	.250	.929	.972	.858	.833	.000	.913	.000	.000	.000	.000	.000	.872	.731	.916	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

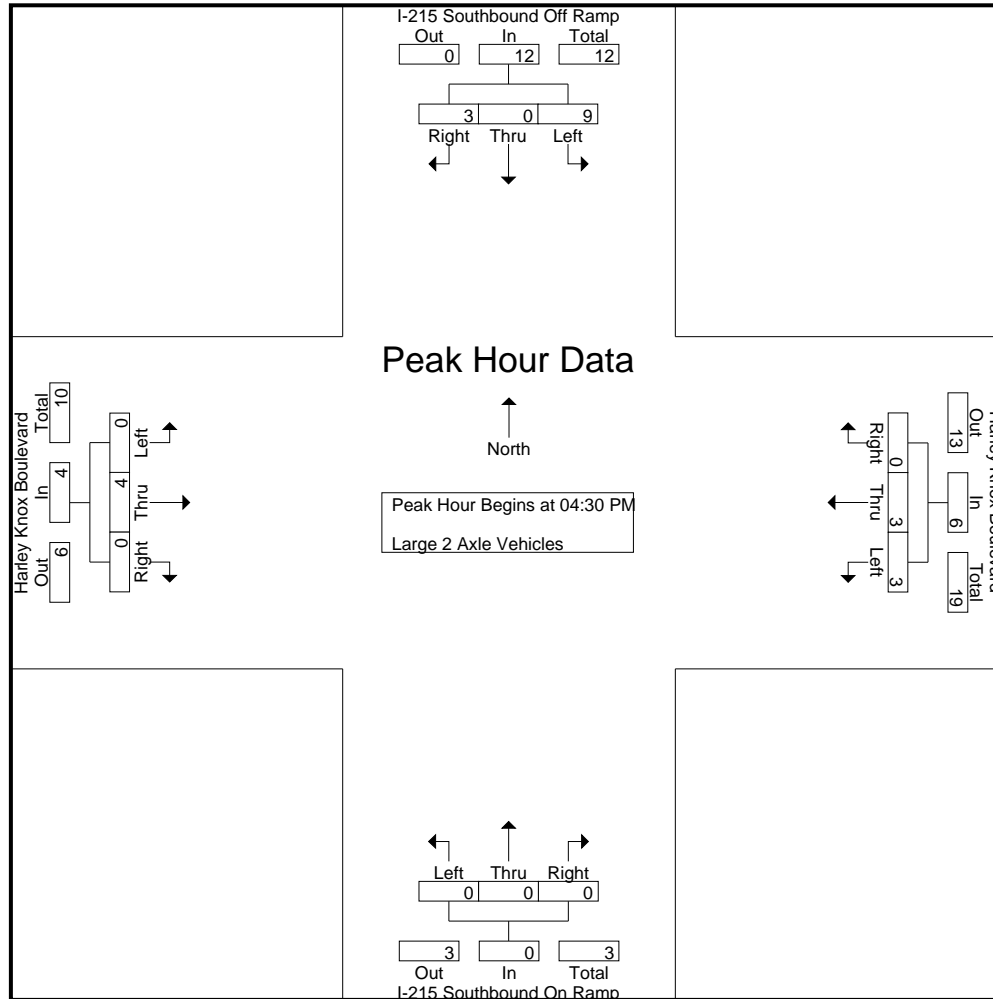
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	2	0	4	0	6	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	8	8
04:15 PM	2	0	1	1	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	1	5	6	6
04:30 PM	4	0	1	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6	6	6
04:45 PM	1	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	3
Total	9	0	7	2	16	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	2	21	23	23
05:00 PM	3	0	1	0	4	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	0	8	8	8
05:15 PM	1	0	0	0	1	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	0	6	6	6
05:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2	2
05:45 PM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	5	0	2	0	7	4	3	0	0	7	0	0	0	0	0	0	4	0	0	4	0	18	18	18
Grand Total	14	0	9	2	23	5	4	0	0	9	0	0	0	0	0	0	7	0	0	7	2	39	41	41
Apprch %	60.9	0	39.1			55.6	44.4	0			0	0	0			0	100	0						
Total %	35.9	0	23.1		59	12.8	10.3	0		23.1	0	0	0		0	0	17.9	0		17.9	4.9	95.1		

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	4	0	1	5	1	0	0	1	0	0	0	0	0	0	0	0	6
04:45 PM	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	3	0	1	4	1	1	0	2	0	0	0	0	0	2	0	2	8
05:15 PM	1	0	0	1	1	2	0	3	0	0	0	0	0	2	0	2	6
Total Volume	9	0	3	12	3	3	0	6	0	0	0	0	0	4	0	4	22
% App. Total	75	0	25		50	50	0		0	0	0		0	100	0		
PHF	.563	.000	.750	.600	.750	.375	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.688

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	4	0	1	5	1	0	0	1	0	0	0	0	0	0	0	0	
+15 mins.	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	3	0	1	4	1	1	0	2	0	0	0	0	0	2	0	2	
+45 mins.	1	0	0	1	1	2	0	3	0	0	0	0	0	2	0	2	
Total Volume	9	0	3	12	3	3	0	6	0	0	0	0	0	4	0	4	
% App. Total	75	0	25		50	50	0		0	0	0		0	100	0		
PHF	.563	.000	.750	.600	.750	.375	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

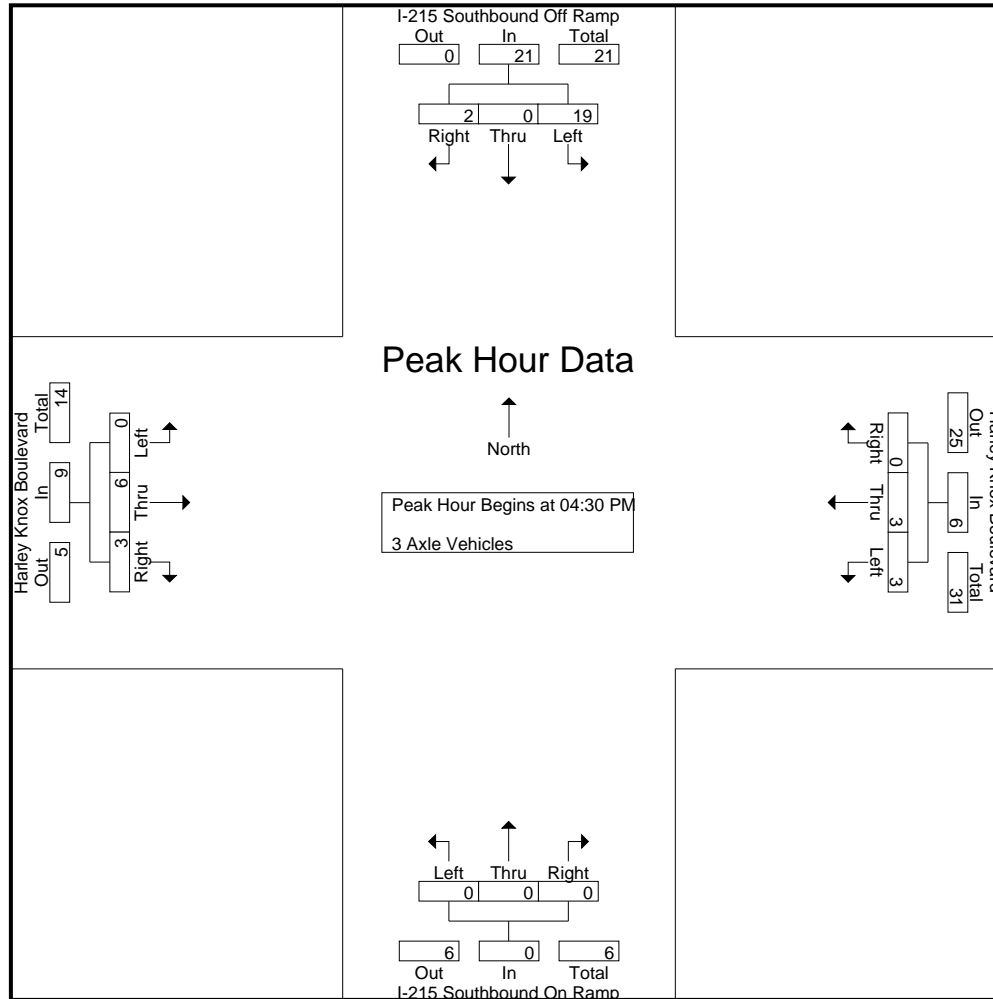
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	4	0	3	0	7	0	1	0	0	1	0	0	0	0	0	0	1	1	1	2	1	10	11
04:15 PM	3	0	1	0	4	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	0	10	10
04:30 PM	6	0	2	1	8	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	1	11	12
04:45 PM	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	4	4
Total	15	0	6	1	21	2	4	0	0	6	0	0	0	0	0	0	7	1	1	8	2	35	37
05:00 PM	5	0	0	0	5	0	1	0	0	1	0	0	0	0	0	0	2	2	0	4	0	10	10
05:15 PM	6	0	0	0	6	2	2	0	0	4	0	0	0	0	0	0	0	1	0	1	0	11	11
05:30 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	4	4
05:45 PM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	4	4
Total	17	0	0	0	17	2	3	0	0	5	0	0	0	0	0	0	4	3	0	7	0	29	29
Grand Total	32	0	6	1	38	4	7	0	0	11	0	0	0	0	0	0	11	4	1	15	2	64	66
Apprch %	84.2	0	15.8			36.4	63.6	0			0	0	0			0	73.3	26.7					
Total %	50	0	9.4		59.4	6.2	10.9	0		17.2	0	0	0		0	0	17.2	6.2		23.4	3	97	

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	6	0	2	8	0	0	0	0	0	0	0	0	0	3	0	3	11
04:45 PM	2	0	0	2	1	0	0	1	0	0	0	0	0	1	0	1	4
05:00 PM	5	0	0	5	0	1	0	1	0	0	0	0	0	2	2	4	10
05:15 PM	6	0	0	6	2	2	0	4	0	0	0	0	0	0	1	1	11
Total Volume	19	0	2	21	3	3	0	6	0	0	0	0	0	6	3	9	36
% App. Total	90.5	0	9.5		50	50	0		0	0	0		0	66.7	33.3		
PHF	.792	.000	.250	.656	.375	.375	.000	.375	.000	.000	.000	.000	.000	.500	.375	.563	.818

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	6	0	2	8	0	0	0	0	0	0	0	0	0	3	0	3	
+15 mins.	2	0	0	2	1	0	0	1	0	0	0	0	0	1	0	1	
+30 mins.	5	0	0	5	0	1	0	1	0	0	0	0	0	2	2	4	
+45 mins.	6	0	0	6	2	2	0	4	0	0	0	0	0	0	1	1	
Total Volume	19	0	2	21	3	3	0	6	0	0	0	0	0	6	3	9	
% App. Total	90.5	0	9.5		50	50	0		0	0	0		0	66.7	33.3		
PHF	.792	.000	.250	.656	.375	.375	.000	.375	.000	.000	.000	.000	.000	.500	.375	.563	

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

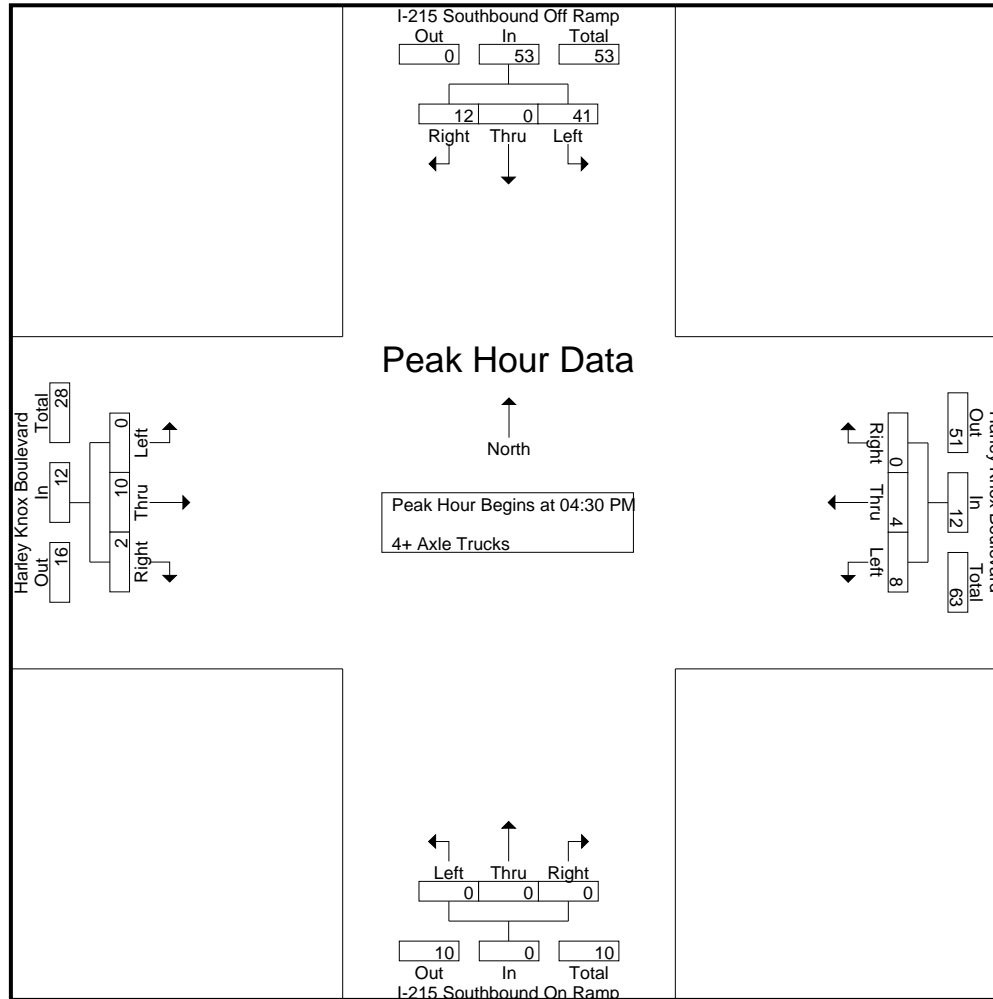
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Southbound Off Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Southbound On Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	13	0	2	0	15	2	1	0	0	3	0	0	0	0	0	0	6	0	0	6	0	24	24
04:15 PM	13	0	5	3	18	1	2	0	0	3	0	0	0	0	0	0	3	1	0	4	3	25	28
04:30 PM	5	0	1	0	6	4	1	0	0	5	0	0	0	0	0	0	5	0	0	5	0	16	16
04:45 PM	14	0	2	2	16	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	2	21	23
Total	45	0	10	5	55	9	4	0	0	13	0	0	0	0	0	0	17	1	0	18	5	86	91
05:00 PM	8	0	6	2	14	1	0	0	0	1	0	0	0	0	0	0	1	1	0	2	2	17	19
05:15 PM	14	0	3	2	17	1	3	0	0	4	0	0	0	0	0	0	1	1	0	2	2	23	25
05:30 PM	13	0	0	0	13	3	1	0	0	4	0	0	0	0	0	0	5	0	0	5	0	22	22
05:45 PM	9	0	1	0	10	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	15	15
Total	44	0	10	4	54	5	5	0	0	10	0	0	0	0	0	0	11	2	0	13	4	77	81
Grand Total	89	0	20	9	109	14	9	0	0	23	0	0	0	0	0	0	28	3	0	31	9	163	172
Apprch %	81.7	0	18.3			60.9	39.1	0			0	0	0			0	90.3	9.7					
Total %	54.6	0	12.3		66.9	8.6	5.5	0		14.1	0	0	0		0	0	17.2	1.8		19	5.2	94.8	

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	0	1	6	4	1	0	5	0	0	0	0	0	5	0	5	16
04:45 PM	14	0	2	16	2	0	0	2	0	0	0	0	0	3	0	3	21
05:00 PM	8	0	6	14	1	0	0	1	0	0	0	0	0	1	1	2	17
05:15 PM	14	0	3	17	1	3	0	4	0	0	0	0	0	1	1	2	23
Total Volume	41	0	12	53	8	4	0	12	0	0	0	0	0	10	2	12	77
% App. Total	77.4	0	22.6		66.7	33.3	0		0	0	0		0	83.3	16.7		
PHF	.732	.000	.500	.779	.500	.333	.000	.600	.000	.000	.000	.000	.000	.500	.500	.600	.837

County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



County of Riverside
 N/S: I-215 Southbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 02_CRV_215S_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Southbound Off Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Southbound On Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	5	0	1	6	4	1	0	5	0	0	0	0	0	5	0	5	
+15 mins.	14	0	2	16	2	0	0	2	0	0	0	0	0	3	0	3	
+30 mins.	8	0	6	14	1	0	0	1	0	0	0	0	0	1	1	2	
+45 mins.	14	0	3	17	1	3	0	4	0	0	0	0	0	1	1	2	
Total Volume	41	0	12	53	8	4	0	12	0	0	0	0	0	10	2	12	
% App. Total	77.4	0	22.6		66.7	33.3	0		0	0	0		0	83.3	16.7		
PHF	.732	.000	.500	.779	.500	.333	.000	.600	.000	.000	.000	.000	.000	.500	.500	.600	

Location: County of Riverside
 N/S: I-215 SB Ramps
 E/W: Harley Knox Blvd



Date: 4/6/2022
 Day: Wednesday

PEDESTRIANS

	North Leg I-215 SB Ramps	East Leg Harley Knox Blvd	South Leg I-215 SB Ramps	West Leg Harley Knox Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-215 SB Ramps	East Leg Harley Knox Blvd	South Leg I-215 SB Ramps	West Leg Harley Knox Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: County of Riverside
 N/S: I-215 SB Ramps
 E/W: Harley Knox Blvd



Date: 4/6/2022
 Day: Wednesday

BICYCLES

	Southbound I-215 SB Ramps			Westbound Harley Knox Blvd			Northbound I-215 SB Ramps			Eastbound Harley Knox Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 SB Ramps			Westbound Harley Knox Blvd			Northbound I-215 SB Ramps			Eastbound Harley Knox Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

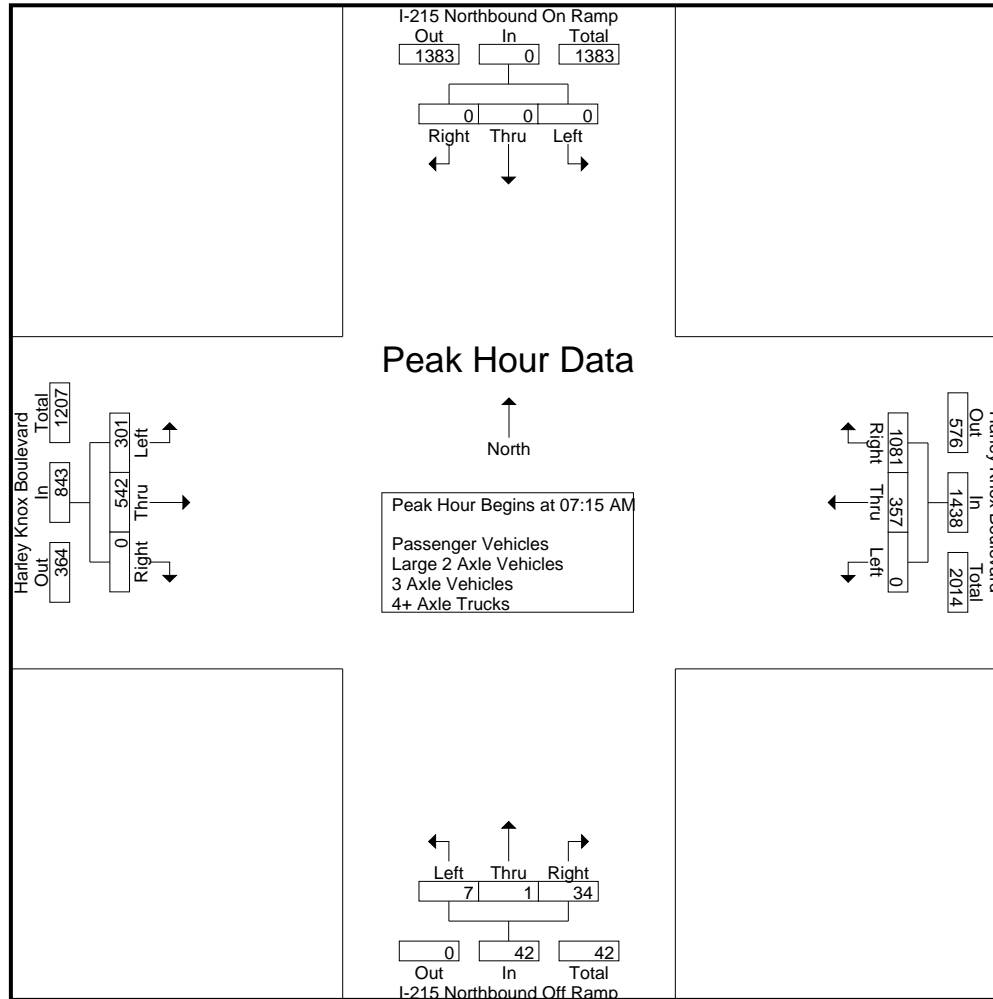
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	48	211	19	259	1	0	1	1	2	62	105	0	0	167	20	428	448
07:15 AM	0	0	0	0	0	0	64	285	35	349	2	0	2	2	4	79	120	0	0	199	37	552	589
07:30 AM	0	0	0	0	0	0	131	312	22	443	1	0	8	7	9	70	135	0	0	205	29	657	686
07:45 AM	0	0	0	0	0	0	92	293	22	385	1	1	9	9	11	63	130	0	0	193	31	589	620
Total	0	0	0	0	0	0	335	1101	98	1436	5	1	20	19	26	274	490	0	0	764	117	2226	2343
08:00 AM	0	0	0	0	0	0	70	191	26	261	3	0	15	15	18	89	157	0	0	246	41	525	566
08:15 AM	0	0	0	0	0	0	49	185	34	234	5	0	17	15	22	50	160	0	0	210	49	466	515
08:30 AM	0	0	0	0	0	0	44	116	17	160	6	0	19	13	25	58	128	0	0	186	30	371	401
08:45 AM	0	0	0	0	0	0	49	99	4	148	2	0	26	20	28	50	105	0	0	155	24	331	355
Total	0	0	0	0	0	0	212	591	81	803	16	0	77	63	93	247	550	0	0	797	144	1693	1837
Grand Total	0	0	0	0	0	0	547	1692	179	2239	21	1	97	82	119	521	1040	0	0	1561	261	3919	4180
Apprch %	0	0	0			0	24.4	75.6			17.6	0.8	81.5			33.4	66.6	0					
Total %	0	0	0			0	14	43.2		57.1	0.5	0	2.5		3	13.3	26.5	0		39.8	6.2	93.8	
Passenger Vehicles	0	0	0			0	456	1452		2070	13	1	83		168	452	753	0		1205	0	0	3443
% Passenger Vehicles	0	0	0			0	83.4	85.8	90.5	85.6	61.9	100	85.6	86.6	83.6	86.8	72.4	0		77.2	0	0	82.4
Large 2 Axle Vehicles	0	0	0			0	21	46		71	1	0	2		5	17	48	0		65	0	0	141
% Large 2 Axle Vehicles	0	0	0			0	3.8	2.7	2.2	2.9	4.8	0	2.1	2.4	2.5	3.3	4.6	0		4.2	0	0	3.4
3 Axle Vehicles	0	0	0			0	35	62		99	6	0	1		7	14	56	0		70	0	0	176
% 3 Axle Vehicles	0	0	0			0	6.4	3.7	1.1	4.1	28.6	0	1	0	3.5	2.7	5.4	0		4.5	0	0	4.2
4+ Axle Trucks	0	0	0			0	35	132		178	1	0	11		21	38	183	0		221	0	0	420
% 4+ Axle Trucks	0	0	0			0	6.4	7.8	6.1	7.4	4.8	0	11.3	11	10.4	7.3	17.6	0		14.2	0	0	10

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	64	285	349	2	0	2	4	79	120	0	199	552
07:30 AM	0	0	0	0	0	131	312	443	1	0	8	9	70	135	0	205	657
07:45 AM	0	0	0	0	0	92	293	385	1	1	9	11	63	130	0	193	589
08:00 AM	0	0	0	0	0	70	191	261	3	0	15	18	89	157	0	246	525
Total Volume	0	0	0	0	0	357	1081	1438	7	1	34	42	301	542	0	843	2323
% App. Total	0	0	0		0	24.8	75.2		16.7	2.4	81		35.7	64.3	0		
PHF	.000	.000	.000	.000	.000	.681	.866	.812	.583	.250	.567	.583	.846	.863	.000	.857	.884

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
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City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:15 AM				08:00 AM				07:30 AM				
+0 mins.	0	0	0	0	0	64	285	349	3	0	15	18	70	135	0	205	
+15 mins.	0	0	0	0	0	131	312	443	5	0	17	22	63	130	0	193	
+30 mins.	0	0	0	0	0	92	293	385	6	0	19	25	89	157	0	246	
+45 mins.	0	0	0	0	0	70	191	261	2	0	26	28	50	160	0	210	
Total Volume	0	0	0	0	0	357	1081	1438	16	0	77	93	272	582	0	854	
% App. Total	0	0	0	0	0	24.8	75.2		17.2	0	82.8		31.9	68.1	0		
PHF	.000	.000	.000	.000	.000	.681	.866	.812	.667	.000	.740	.830	.764	.909	.000	.868	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

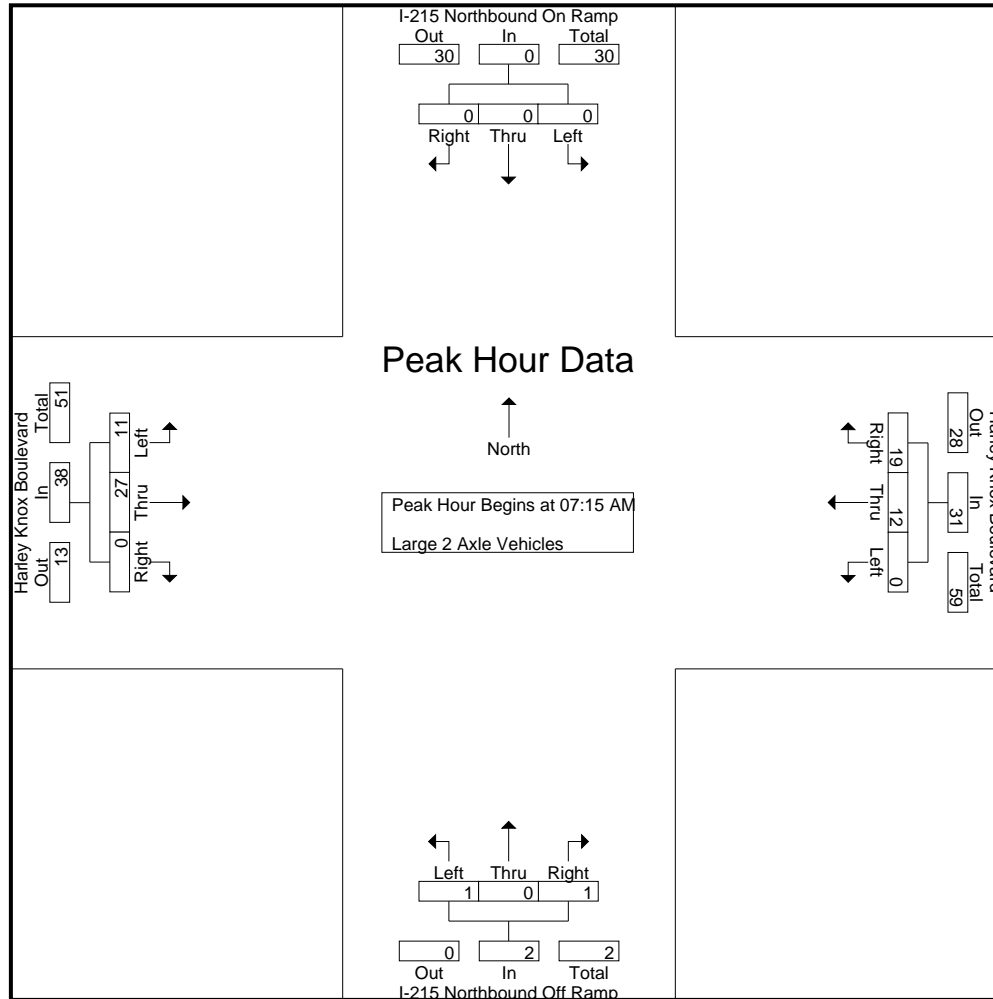
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total			
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	2	2	0	4	0	0	0	0	0	2	3	0	0	5	0	9	9	0	9	9
07:30 AM	0	0	0	0	0	0	5	7	0	12	0	0	0	0	0	0	6	0	0	6	0	18	18	0	18	18
07:45 AM	0	0	0	0	0	0	2	3	0	5	1	0	1	1	2	6	9	0	0	15	1	22	23	1	22	23
Total	0	0	0	0	0	0	9	12	0	21	1	0	1	1	2	8	18	0	0	26	1	49	50	1	49	50
08:00 AM	0	0	0	0	0	0	3	7	1	10	0	0	0	0	0	3	9	0	0	12	1	22	23	1	22	23
08:15 AM	0	0	0	0	0	0	2	11	1	13	0	0	0	0	0	2	8	0	0	10	1	23	24	1	23	24
08:30 AM	0	0	0	0	0	0	5	10	2	15	0	0	1	1	1	3	9	0	0	12	3	28	31	3	28	31
08:45 AM	0	0	0	0	0	0	2	6	0	8	0	0	0	0	0	1	4	0	0	5	0	13	13	0	13	13
Total	0	0	0	0	0	0	12	34	4	46	0	0	1	1	1	9	30	0	0	39	5	86	91	5	86	91
Grand Total	0	0	0	0	0	0	21	46	4	67	1	0	2	2	3	17	48	0	0	65	6	135	141	6	135	141
Apprch %	0	0	0			0	31.3	68.7			33.3	0	66.7			26.2	73.8	0								
Total %	0	0	0			0	15.6	34.1		49.6	0.7	0	1.5		2.2	12.6	35.6	0		48.1	4.3	95.7		4.3	95.7	

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	2	2	4	0	0	0	0	2	3	0	5	9
07:30 AM	0	0	0	0	0	5	7	12	0	0	0	0	0	6	0	6	18
07:45 AM	0	0	0	0	0	2	3	5	1	0	1	2	6	9	0	15	22
08:00 AM	0	0	0	0	0	3	7	10	0	0	0	0	3	9	0	12	22
Total Volume	0	0	0	0	0	12	19	31	1	0	1	2	11	27	0	38	71
% App. Total	0	0	0		0	38.7	61.3		50	0	50		28.9	71.1	0		
PHF	.000	.000	.000	.000	.000	.600	.679	.646	.250	.000	.250	.250	.458	.750	.000	.633	.807

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	2	2	4	0	0	0	0	2	3	0	5	
+15 mins.	0	0	0	0	0	5	7	12	0	0	0	0	0	6	0	6	
+30 mins.	0	0	0	0	0	2	3	5	1	0	1	2	6	9	0	15	
+45 mins.	0	0	0	0	0	3	7	10	0	0	0	0	3	9	0	12	
Total Volume	0	0	0	0	0	12	19	31	1	0	1	2	11	27	0	38	
% App. Total	0	0	0	0	0	38.7	61.3		50	0	50		28.9	71.1	0		
PHF	.000	.000	.000	.000	.000	.600	.679	.646	.250	.000	.250	.250	.458	.750	.000	.633	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

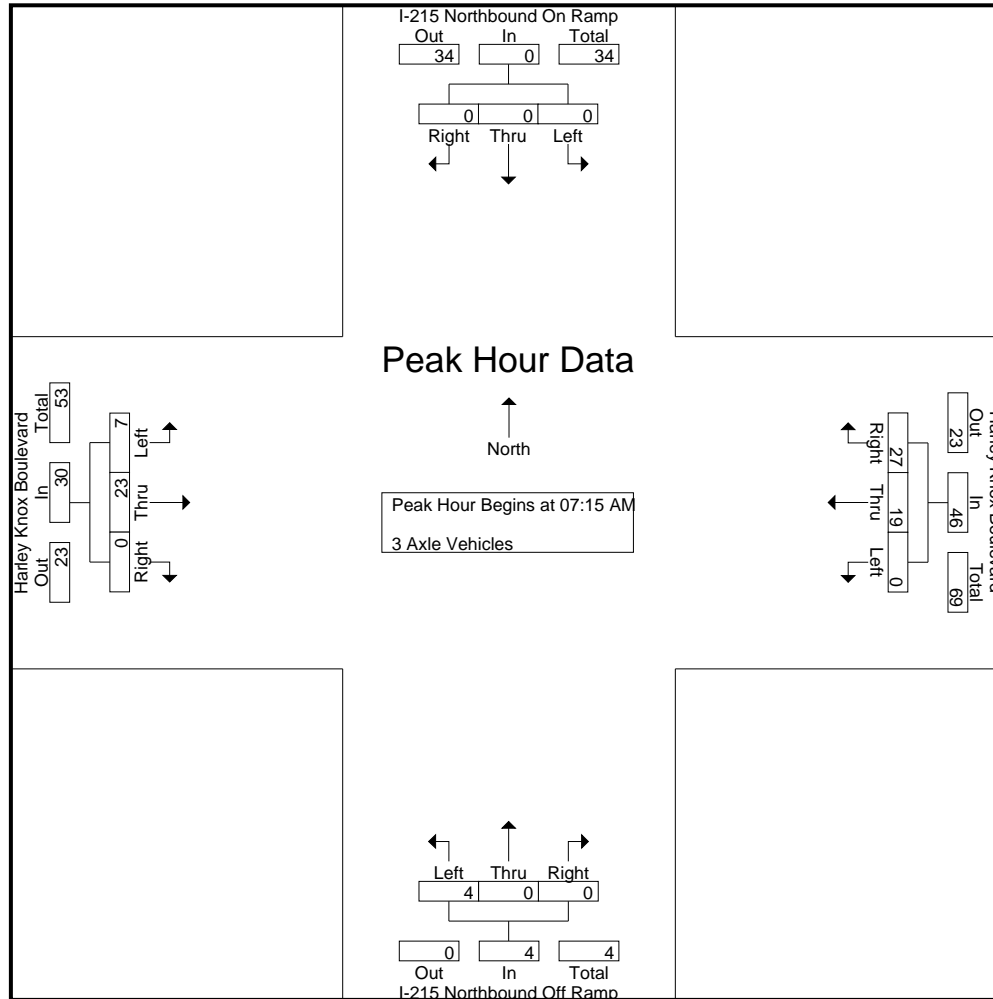
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	6	11	0	17	0	0	0	0	0	1	10	0	0	11	0	28	28
07:15 AM	0	0	0	0	0	0	3	9	0	12	1	0	0	0	1	0	4	0	0	4	0	17	17
07:30 AM	0	0	0	0	0	0	5	8	0	13	0	0	0	0	0	3	7	0	0	10	0	23	23
07:45 AM	0	0	0	0	0	0	7	2	0	9	0	0	0	0	0	1	7	0	0	8	0	17	17
Total	0	0	0	0	0	0	21	30	0	51	1	0	0	0	1	5	28	0	0	33	0	85	85
08:00 AM	0	0	0	0	0	0	4	8	1	12	3	0	0	0	3	3	5	0	0	8	1	23	24
08:15 AM	0	0	0	0	0	0	1	8	1	9	1	0	0	0	1	1	8	0	0	9	1	19	20
08:30 AM	0	0	0	0	0	0	8	8	0	16	1	0	0	0	1	2	7	0	0	9	0	26	26
08:45 AM	0	0	0	0	0	0	1	8	0	9	0	0	1	0	1	3	8	0	0	11	0	21	21
Total	0	0	0	0	0	0	14	32	2	46	5	0	1	0	6	9	28	0	0	37	2	89	91
Grand Total	0	0	0	0	0	0	35	62	2	97	6	0	1	0	7	14	56	0	0	70	2	174	176
Apprch %	0	0	0			0	36.1	63.9			85.7	0	14.3			20	80	0					
Total %	0	0	0			0	20.1	35.6		55.7	3.4	0	0.6		4	8	32.2	0		40.2	1.1	98.9	

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	3	9	12	1	0	0	1	0	4	0	4	17
07:30 AM	0	0	0	0	0	5	8	13	0	0	0	0	3	7	0	10	23
07:45 AM	0	0	0	0	0	7	2	9	0	0	0	0	1	7	0	8	17
08:00 AM	0	0	0	0	0	4	8	12	3	0	0	3	3	5	0	8	23
Total Volume	0	0	0	0	0	19	27	46	4	0	0	4	7	23	0	30	80
% App. Total	0	0	0		0	41.3	58.7		100	0	0		23.3	76.7	0		
PHF	.000	.000	.000	.000	.000	.679	.750	.885	.333	.000	.000	.333	.583	.821	.000	.750	.870

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	3	9	12	1	0	0	1	0	4	0	4	
+15 mins.	0	0	0	0	0	5	8	13	0	0	0	0	3	7	0	10	
+30 mins.	0	0	0	0	0	7	2	9	0	0	0	0	1	7	0	8	
+45 mins.	0	0	0	0	0	4	8	12	3	0	0	3	3	5	0	8	
Total Volume	0	0	0	0	0	19	27	46	4	0	0	4	7	23	0	30	
% App. Total	0	0	0	0	0	41.3	58.7		100	0	0		23.3	76.7	0		
PHF	.000	.000	.000	.000	.000	.679	.750	.885	.333	.000	.000	.333	.583	.821	.000	.750	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

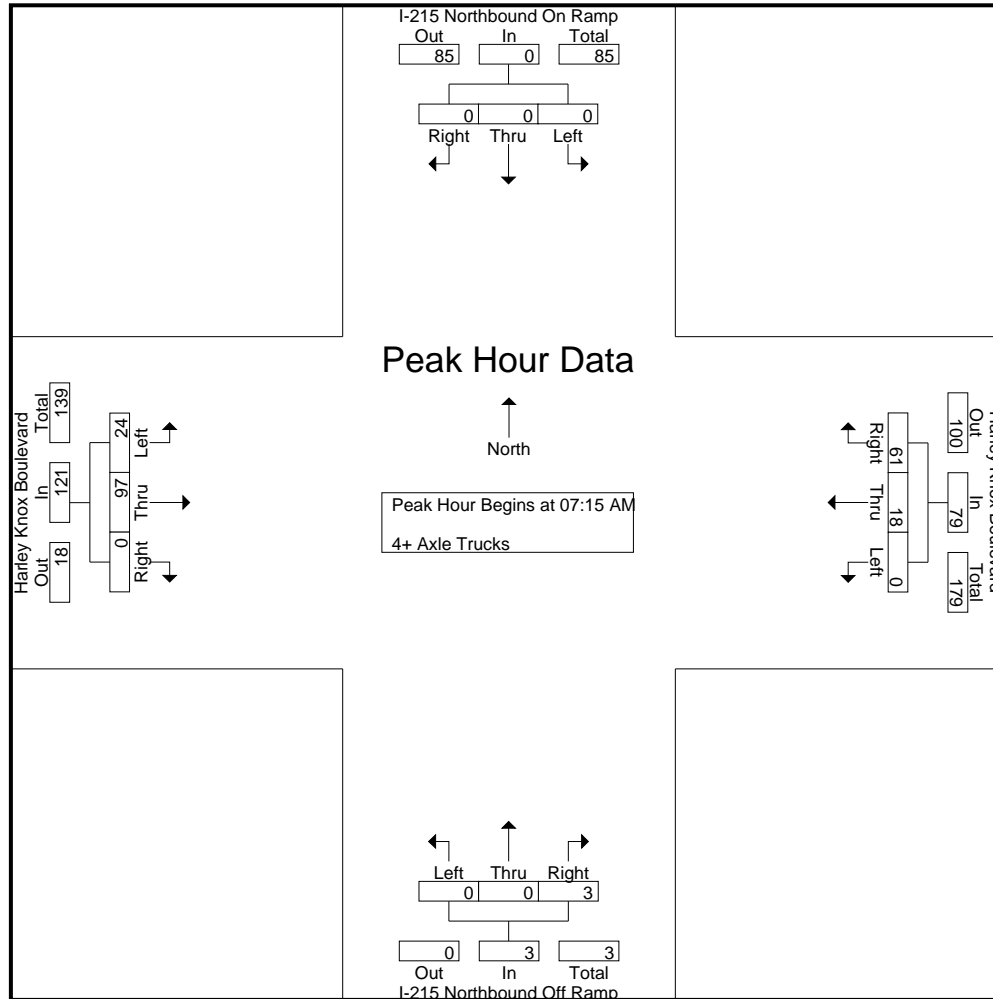
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total			
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	4	12	1	16	0	0	0	0	0	4	24	0	0	28	1	44	45			
07:30 AM	0	0	0	0	0	0	6	13	1	19	0	0	1	1	1	5	26	0	0	31	2	51	53			
07:45 AM	0	0	0	0	0	0	5	15	1	20	0	0	1	1	1	5	22	0	0	27	2	48	50			
Total	0	0	0	0	0	0	15	40	3	55	0	0	2	2	2	14	72	0	0	86	5	143	148			
08:00 AM	0	0	0	0	0	0	3	21	3	24	0	0	1	1	1	10	25	0	0	35	4	60	64			
08:15 AM	0	0	0	0	0	0	5	26	3	31	0	0	4	4	4	7	27	0	0	34	7	69	76			
08:30 AM	0	0	0	0	0	0	4	17	2	21	0	0	3	1	3	4	31	0	0	35	3	59	62			
08:45 AM	0	0	0	0	0	0	8	28	0	36	1	0	1	1	2	3	28	0	0	31	1	69	70			
Total	0	0	0	0	0	0	20	92	8	112	1	0	9	7	10	24	111	0	0	135	15	257	272			
Grand Total	0	0	0	0	0	0	35	132	11	167	1	0	11	9	12	38	183	0	0	221	20	400	420			
Apprch %	0	0	0			0	21	79			8.3	0	91.7			17.2	82.8	0								
Total %	0	0	0			0	8.8	33		41.8	0.2	0	2.8		3	9.5	45.8	0		55.2	4.8	95.2				

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	4	12	16	0	0	0	0	4	24	0	28	44
07:30 AM	0	0	0	0	0	6	13	19	0	0	1	1	5	26	0	31	51
07:45 AM	0	0	0	0	0	5	15	20	0	0	1	1	5	22	0	27	48
08:00 AM	0	0	0	0	0	3	21	24	0	0	1	1	10	25	0	35	60
Total Volume	0	0	0	0	0	18	61	79	0	0	3	3	24	97	0	121	203
% App. Total	0	0	0		0	22.8	77.2		0	0	100		19.8	80.2	0		
PHF	.000	.000	.000	.000	.000	.750	.726	.823	.000	.000	.750	.750	.600	.933	.000	.864	.846

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley AM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:15 AM				07:15 AM				07:15 AM				
+0 mins.	0	0	0	0	0	4	12	16	0	0	0	0	4	24	0	28	
+15 mins.	0	0	0	0	0	6	13	19	0	0	1	1	5	26	0	31	
+30 mins.	0	0	0	0	0	5	15	20	0	0	1	1	5	22	0	27	
+45 mins.	0	0	0	0	0	3	21	24	0	0	1	1	10	25	0	35	
Total Volume	0	0	0	0	0	18	61	79	0	0	3	3	24	97	0	121	
% App. Total	0	0	0	0	0	22.8	77.2		0	0	100		19.8	80.2	0		
PHF	.000	.000	.000	.000	.000	.750	.726	.823	.000	.000	.750	.750	.600	.933	.000	.864	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

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

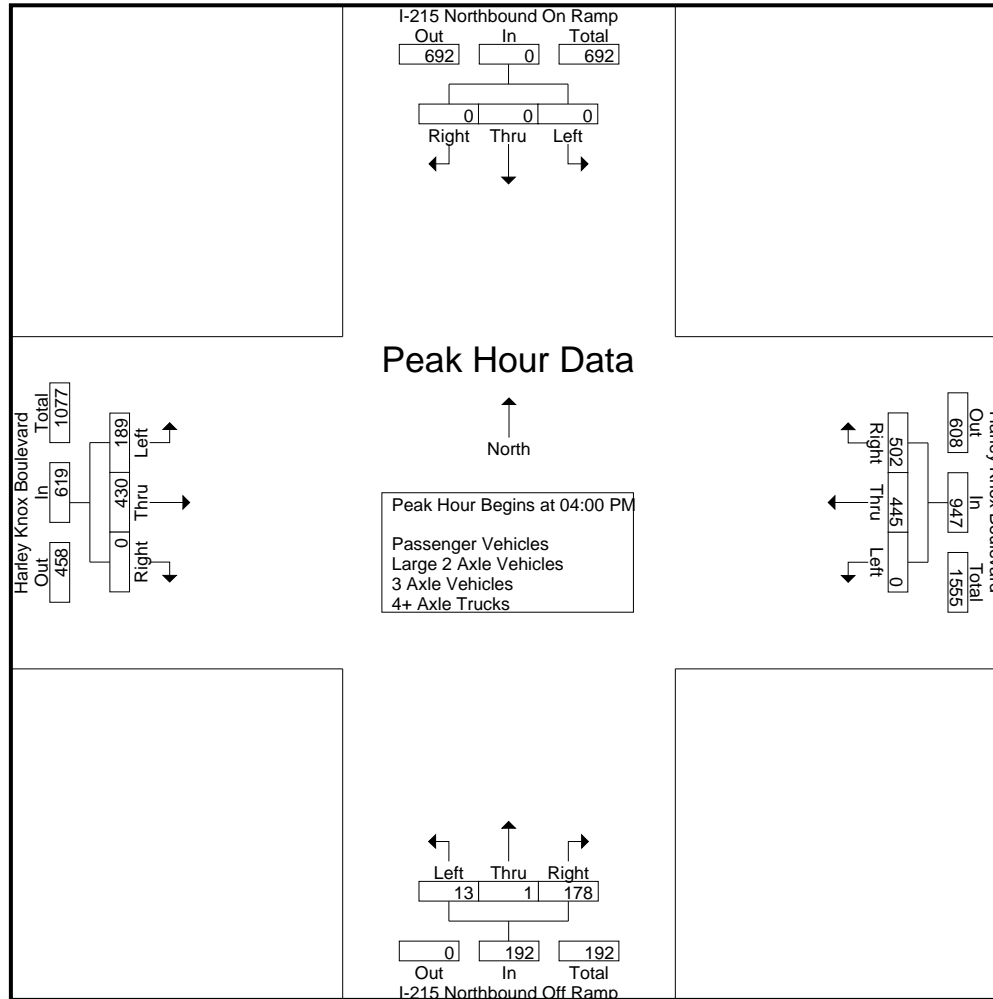
Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	94	123	21	217	4	1	47	35	52	52	124	0	0	176	56	445	501
04:15 PM	0	0	0	0	0	0	98	107	10	205	2	0	63	42	65	44	119	0	0	163	52	433	485
04:30 PM	0	0	0	0	0	0	121	169	8	290	4	0	38	34	42	58	88	0	0	146	42	478	520
04:45 PM	0	0	0	0	0	0	132	103	15	235	3	0	30	27	33	35	99	0	0	134	42	402	444
Total	0	0	0	0	0	0	445	502	54	947	13	1	178	138	192	189	430	0	0	619	192	1758	1950
05:00 PM	0	0	0	0	0	0	95	101	9	196	3	0	22	20	25	44	107	0	0	151	29	372	401
05:15 PM	0	0	0	0	0	0	112	96	9	208	5	0	48	39	53	50	98	0	0	148	48	409	457
05:30 PM	0	0	0	0	0	0	99	97	15	196	11	1	25	20	37	48	98	0	0	146	35	379	414
05:45 PM	0	0	0	0	0	0	76	73	5	149	9	0	43	34	52	41	103	0	0	144	39	345	384
Total	0	0	0	0	0	0	382	367	38	749	28	1	138	113	167	183	406	0	0	589	151	1505	1656
Grand Total	0	0	0	0	0	0	827	869	92	1696	41	2	316	251	359	372	836	0	0	1208	343	3263	3606
Apprch %	0	0	0			0	48.8	51.2			11.4	0.6	88			30.8	69.2	0					
Total %	0	0	0			0	25.3	26.6		52	1.3	0.1	9.7		11	11.4	25.6	0		37	9.5	90.5	
Passenger Vehicles	0	0	0			0	793	705		1581	35	2	247		482	336	688	0		1024	0	0	3087
% Passenger Vehicles	0	0	0			0	95.9	81.1	90.2	88.4	85.4	100	78.2	78.9	79	90.3	82.3	0	0	84.8	0	0	85.6
Large 2 Axle Vehicles	0	0	0			0	7	27		38	1	0	11		22	8	16	0		24	0	0	84
% Large 2 Axle Vehicles	0	0	0			0	0.8	3.1	4.3	2.1	2.4	0	3.5	4	3.6	2.2	1.9	0	0	2	0	0	2.3
3 Axle Vehicles	0	0	0			0	7	26		34	3	0	49		88	7	35	0		42	0	0	164
% 3 Axle Vehicles	0	0	0			0	0.8	3	1.1	1.9	7.3	0	15.5	14.3	14.4	1.9	4.2	0	0	3.5	0	0	4.5
4+ Axle Trucks	0	0	0			0	20	111		135	2	0	9		18	21	97	0		118	0	0	271
% 4+ Axle Trucks	0	0	0			0	2.4	12.8	4.3	7.6	4.9	0	2.8	2.8	3	5.6	11.6	0	0	9.8	0	0	7.5

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	0	94	123	217	4	1	47	52	52	124	0	176	445
04:15 PM	0	0	0	0	0	98	107	205	2	0	63	65	44	119	0	163	433
04:30 PM	0	0	0	0	0	121	169	290	4	0	38	42	58	88	0	146	478
04:45 PM	0	0	0	0	0	132	103	235	3	0	30	33	35	99	0	134	402
Total Volume	0	0	0	0	0	445	502	947	13	1	178	192	189	430	0	619	1758
% App. Total	0	0	0		0	47	53		6.8	0.5	92.7		30.5	69.5	0		
PHF	.000	.000	.000	.000	.000	.843	.743	.816	.813	.250	.706	.738	.815	.867	.000	.879	.919

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

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	94	123	217	4	1	47	52	52	124	0	176	
+15 mins.	0	0	0	0	0	98	107	205	2	0	63	65	44	119	0	163	
+30 mins.	0	0	0	0	0	121	169	290	4	0	38	42	58	88	0	146	
+45 mins.	0	0	0	0	0	132	103	235	3	0	30	33	35	99	0	134	
Total Volume	0	0	0	0	0	445	502	947	13	1	178	192	189	430	0	619	
% App. Total	0	0	0	0	0	47	53		6.8	0.5	92.7		30.5	69.5	0		
PHF	.000	.000	.000	.000	.000	.843	.743	.816	.813	.250	.706	.738	.815	.867	.000	.879	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

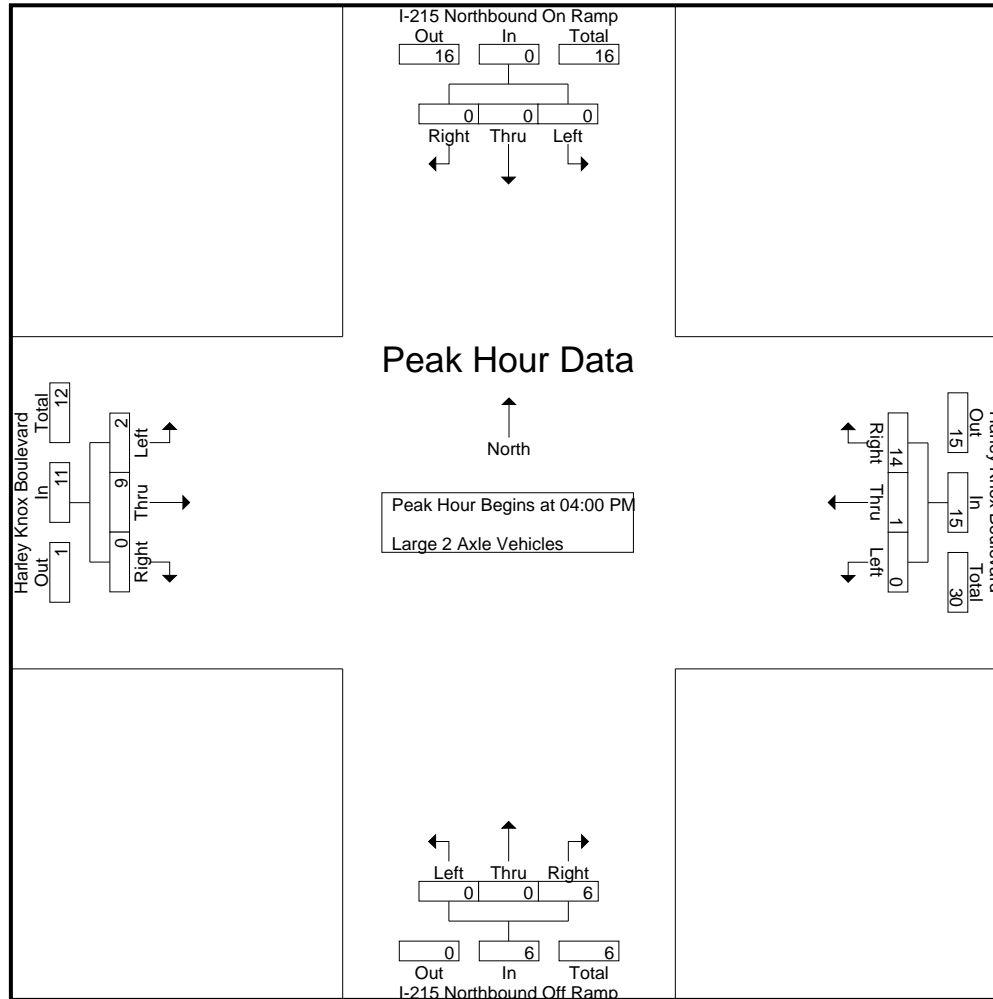
Groups Printed- Large 2 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	0	7	2	7	0	0	3	2	3	1	4	0	0	5	4	15	19
04:15 PM	0	0	0	0	0	0	0	2	0	2	0	0	2	2	2	1	1	0	0	2	2	6	8
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	0	1	1	1	0	2	0	0	2	1	4	5
04:45 PM	0	0	0	0	0	0	1	4	1	5	0	0	0	0	0	0	2	0	0	2	1	7	8
Total	0	0	0	0	0	0	1	14	3	15	0	0	6	5	6	2	9	0	0	11	8	32	40
05:00 PM	0	0	0	0	0	0	1	5	0	6	0	0	1	1	1	1	3	0	0	4	1	11	12
05:15 PM	0	0	0	0	0	0	2	4	0	6	1	0	2	2	3	2	1	0	0	3	2	12	14
05:30 PM	0	0	0	0	0	0	1	2	1	3	0	0	1	1	1	0	2	0	0	2	2	6	8
05:45 PM	0	0	0	0	0	0	2	2	0	4	0	0	1	1	1	3	1	0	0	4	1	9	10
Total	0	0	0	0	0	0	6	13	1	19	1	0	5	5	6	6	7	0	0	13	6	38	44
Grand Total	0	0	0	0	0	0	7	27	4	34	1	0	11	10	12	8	16	0	0	24	14	70	84
Apprch %	0	0	0			0	20.6	79.4			8.3	0	91.7			33.3	66.7	0					
Total %	0	0	0			0	10	38.6		48.6	1.4	0	15.7		17.1	11.4	22.9	0		34.3	16.7	83.3	

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	7	7	0	0	3	3	1	4	0	5	15
04:15 PM	0	0	0	0	0	0	2	2	0	0	2	2	1	1	0	2	6
04:30 PM	0	0	0	0	0	0	1	1	0	0	1	1	0	2	0	2	4
04:45 PM	0	0	0	0	0	1	4	5	0	0	0	0	0	2	0	2	7
Total Volume	0	0	0	0	0	1	14	15	0	0	6	6	2	9	0	11	32
% App. Total	0	0	0		0	6.7	93.3		0	0	100		18.2	81.8	0		
PHF	.000	.000	.000	.000	.000	.250	.500	.536	.000	.000	.500	.500	.500	.563	.000	.550	.533

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	7	7	0	0	3	3	1	4	0	5	
+15 mins.	0	0	0	0	0	0	2	2	0	0	2	2	1	1	0	2	
+30 mins.	0	0	0	0	0	0	1	1	0	0	1	1	0	2	0	2	
+45 mins.	0	0	0	0	0	1	4	5	0	0	0	0	0	2	0	2	
Total Volume	0	0	0	0	0	1	14	15	0	0	6	6	2	9	0	11	
% App. Total	0	0	0	0	0	6.7	93.3		0	0	100		18.2	81.8	0		
PHF	.000	.000	.000	.000	.000	.250	.500	.536	.000	.000	.500	.500	.500	.563	.000	.550	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

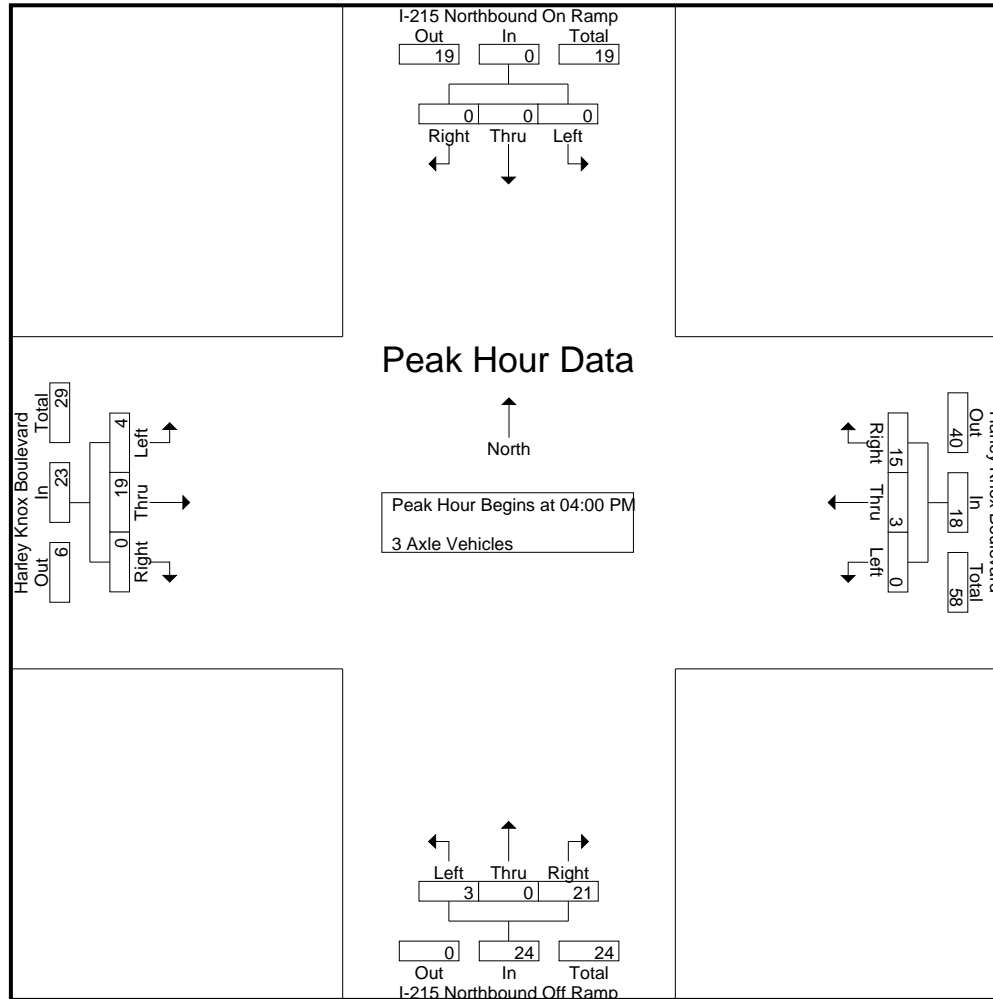
Groups Printed- 3 Axle Vehicles

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	0	4	0	4	1	0	3	2	4	1	4	0	0	5	2	13	15
04:15 PM	0	0	0	0	0	0	2	3	0	5	2	0	8	4	10	1	8	0	0	9	4	24	28
04:30 PM	0	0	0	0	0	0	1	4	0	5	0	0	2	2	2	2	4	0	0	6	2	13	15
04:45 PM	0	0	0	0	0	0	0	4	0	4	0	0	8	6	8	0	3	0	0	3	6	15	21
Total	0	0	0	0	0	0	3	15	0	18	3	0	21	14	24	4	19	0	0	23	14	65	79
05:00 PM	0	0	0	0	0	0	1	2	1	3	0	0	4	4	4	1	5	0	0	6	5	13	18
05:15 PM	0	0	0	0	0	0	3	4	0	7	0	0	11	9	11	0	6	0	0	6	9	24	33
05:30 PM	0	0	0	0	0	0	0	2	0	2	0	0	5	4	5	1	3	0	0	4	4	11	15
05:45 PM	0	0	0	0	0	0	0	3	0	3	0	0	8	5	8	1	2	0	0	3	5	14	19
Total	0	0	0	0	0	0	4	11	1	15	0	0	28	22	28	3	16	0	0	19	23	62	85
Grand Total	0	0	0	0	0	0	7	26	1	33	3	0	49	36	52	7	35	0	0	42	37	127	164
Apprch %	0	0	0			0	21.2	78.8			5.8	0	94.2			16.7	83.3	0					
Total %	0	0	0			0	5.5	20.5		26	2.4	0	38.6		40.9	5.5	27.6	0		33.1	22.6	77.4	

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	4	4	1	0	3	4	1	4	0	5	13
04:15 PM	0	0	0	0	0	2	3	5	2	0	8	10	1	8	0	9	24
04:30 PM	0	0	0	0	0	1	4	5	0	0	2	2	2	4	0	6	13
04:45 PM	0	0	0	0	0	0	4	4	0	0	8	8	0	3	0	3	15
Total Volume	0	0	0	0	0	3	15	18	3	0	21	24	4	19	0	23	65
% App. Total	0	0	0		0	16.7	83.3		12.5	0	87.5		17.4	82.6	0		
PHF	.000	.000	.000	.000	.000	.375	.938	.900	.375	.000	.656	.600	.500	.594	.000	.639	.677

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	0	4	4	1	0	3	4	1	4	0	5	
+15 mins.	0	0	0	0	0	2	3	5	2	0	8	10	1	8	0	9	
+30 mins.	0	0	0	0	0	1	4	5	0	0	2	2	2	4	0	6	
+45 mins.	0	0	0	0	0	0	4	4	0	0	8	8	0	3	0	3	
Total Volume	0	0	0	0	0	3	15	18	3	0	21	24	4	19	0	23	
% App. Total	0	0	0	0	0	16.7	83.3		12.5	0	87.5		17.4	82.6	0		
PHF	.000	.000	.000	.000	.000	.375	.938	.900	.375	.000	.656	.600	.500	.594	.000	.639	

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 1

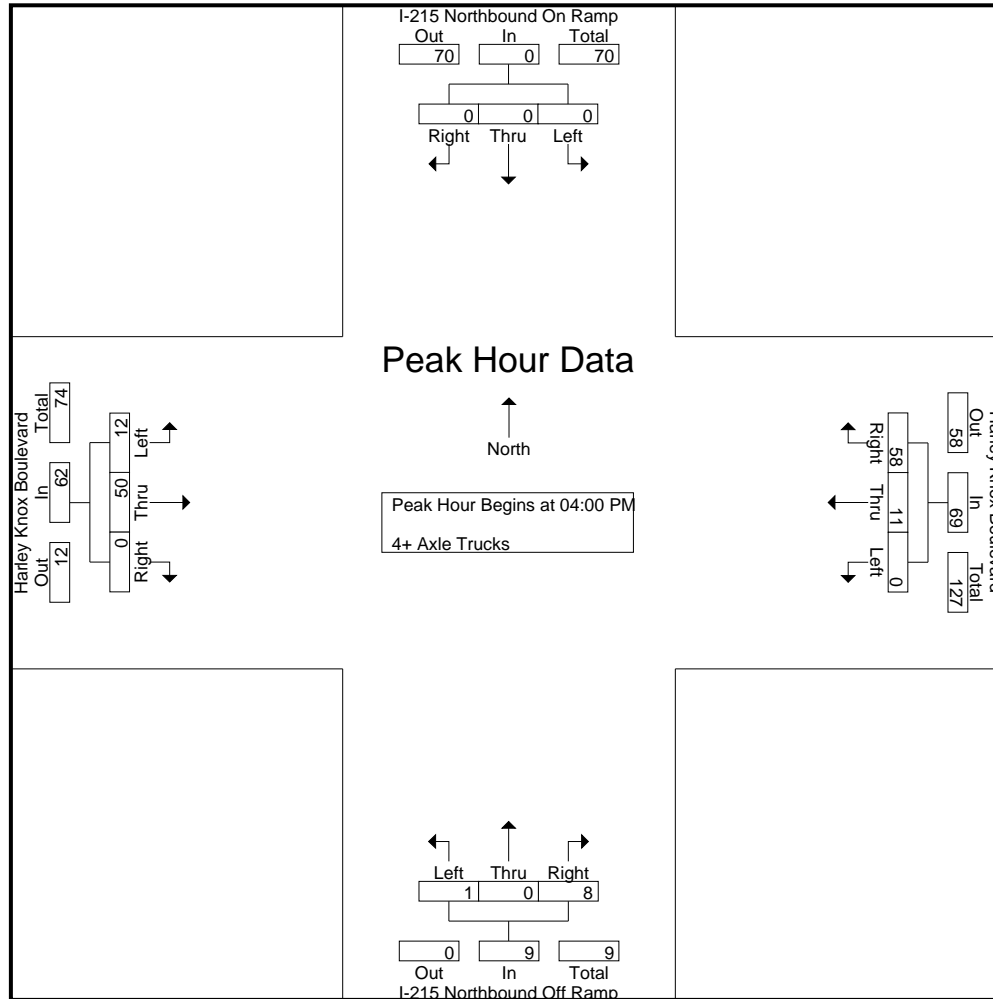
Groups Printed- 4+ Axle Trucks

Start Time	I-215 Northbound On Ramp Southbound					Harley Knox Boulevard Westbound					I-215 Northbound Off Ramp Northbound					Harley Knox Boulevard Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	3	10	1	13	0	0	4	3	4	5	14	0	0	19	4	36	40
04:15 PM	0	0	0	0	0	0	2	11	0	13	0	0	1	0	1	2	15	0	0	17	0	31	31
04:30 PM	0	0	0	0	0	0	4	22	0	26	0	0	2	2	2	2	6	0	0	8	2	36	38
04:45 PM	0	0	0	0	0	0	2	15	1	17	1	0	1	1	2	3	15	0	0	18	2	37	39
Total	0	0	0	0	0	0	11	58	2	69	1	0	8	6	9	12	50	0	0	62	8	140	148
05:00 PM	0	0	0	0	0	0	2	10	0	12	0	0	1	1	1	0	9	0	0	9	1	22	23
05:15 PM	0	0	0	0	0	0	4	17	1	21	0	0	0	0	0	1	14	0	0	15	1	36	37
05:30 PM	0	0	0	0	0	0	2	11	0	13	1	0	0	0	1	5	13	0	0	18	0	32	32
05:45 PM	0	0	0	0	0	0	1	15	1	16	0	0	0	0	0	3	11	0	0	14	1	30	31
Total	0	0	0	0	0	0	9	53	2	62	1	0	1	1	2	9	47	0	0	56	3	120	123
Grand Total	0	0	0	0	0	0	20	111	4	131	2	0	9	7	11	21	97	0	0	118	11	260	271
Apprch %	0	0	0			0	15.3	84.7			18.2	0	81.8			17.8	82.2	0					
Total %	0	0	0			0	7.7	42.7		50.4	0.8	0	3.5		4.2	8.1	37.3	0		45.4	4.1	95.9	

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. 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	3	10	13	0	0	4	4	5	14	0	19	36
04:15 PM	0	0	0	0	0	2	11	13	0	0	1	1	2	15	0	17	31
04:30 PM	0	0	0	0	0	4	22	26	0	0	2	2	2	6	0	8	36
04:45 PM	0	0	0	0	0	2	15	17	1	0	1	2	3	15	0	18	37
Total Volume	0	0	0	0	0	11	58	69	1	0	8	9	12	50	0	62	140
% App. Total	0	0	0		0	15.9	84.1		11.1	0	88.9		19.4	80.6	0		
PHF	.000	.000	.000	.000	.000	.688	.659	.663	.250	.000	.500	.563	.600	.833	.000	.816	.946

City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 2



City of Perris
 N/S: I-215 Northbound Ramps
 E/W: Harley Knox Boulevard
 Weather: Clear

File Name : 03_PER_215N_Harley PM
 Site Code : 05122305
 Start Date : 4/6/2022
 Page No : 3

Start Time	I-215 Northbound On Ramp Southbound				Harley Knox Boulevard Westbound				I-215 Northbound Off Ramp Northbound				Harley Knox Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	0	0	0	3	10	13	0	0	4	4	5	14	0	19	
+15 mins.	0	0	0	0	0	2	11	13	0	0	1	1	2	15	0	17	
+30 mins.	0	0	0	0	0	4	22	26	0	0	2	2	2	6	0	8	
+45 mins.	0	0	0	0	0	2	15	17	1	0	1	2	3	15	0	18	
Total Volume	0	0	0	0	0	11	58	69	1	0	8	9	12	50	0	62	
% App. Total	0	0	0	0	0	15.9	84.1		11.1	0	88.9		19.4	80.6	0		
PHF	.000	.000	.000	.000	.000	.688	.659	.663	.250	.000	.500	.563	.600	.833	.000	.816	

Location: Perris
 N/S: I-215 NB Ramps
 E/W: Harley Knox Blvd



Date: 4/6/2022
 Day: Wednesday

PEDESTRIANS

	North Leg I-215 NB Ramps	East Leg Harley Knox Blvd	South Leg I-215 NB Ramps	West Leg Harley Knox Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg I-215 NB Ramps	East Leg Harley Knox Blvd	South Leg I-215 NB Ramps	West Leg Harley Knox Blvd	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Perris
 N/S: I-215 NB Ramps
 E/W: Harley Knox Blvd



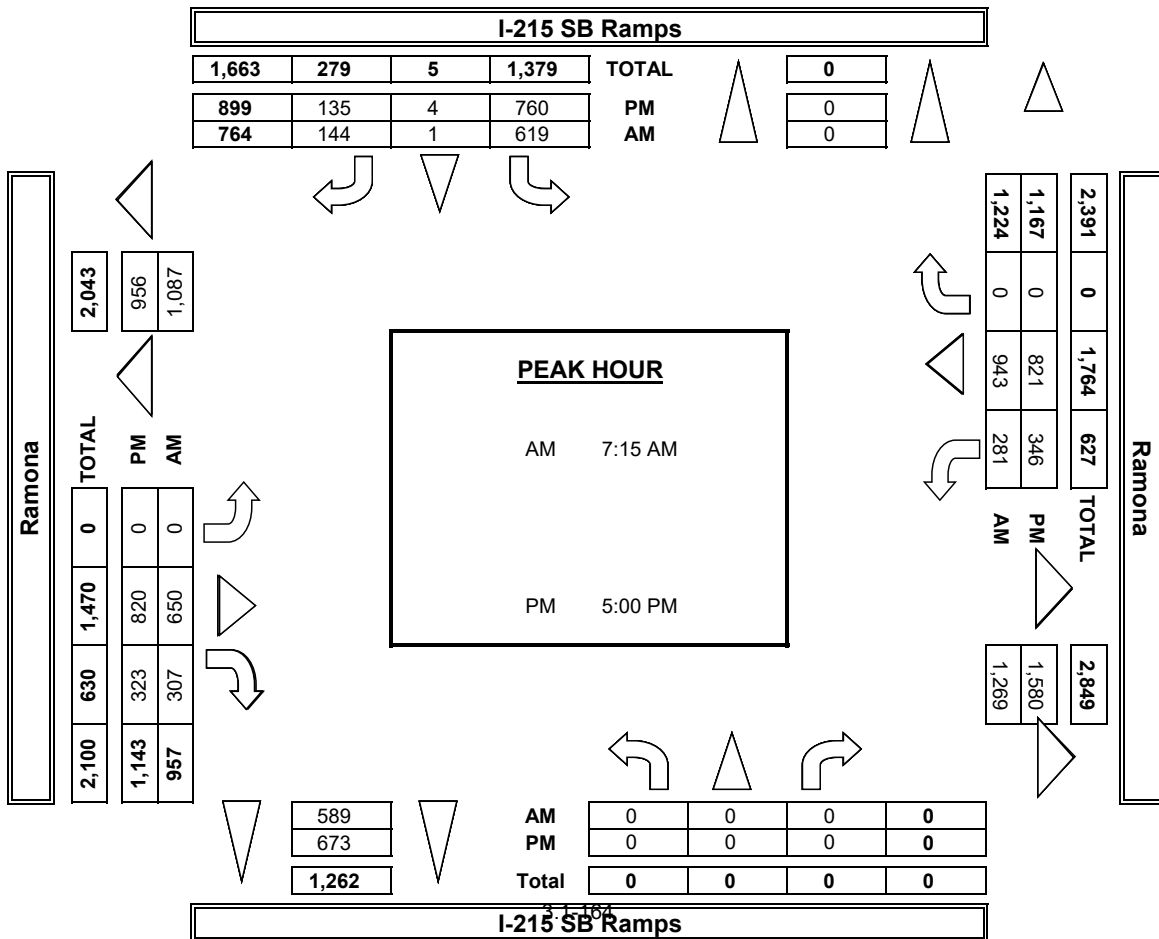
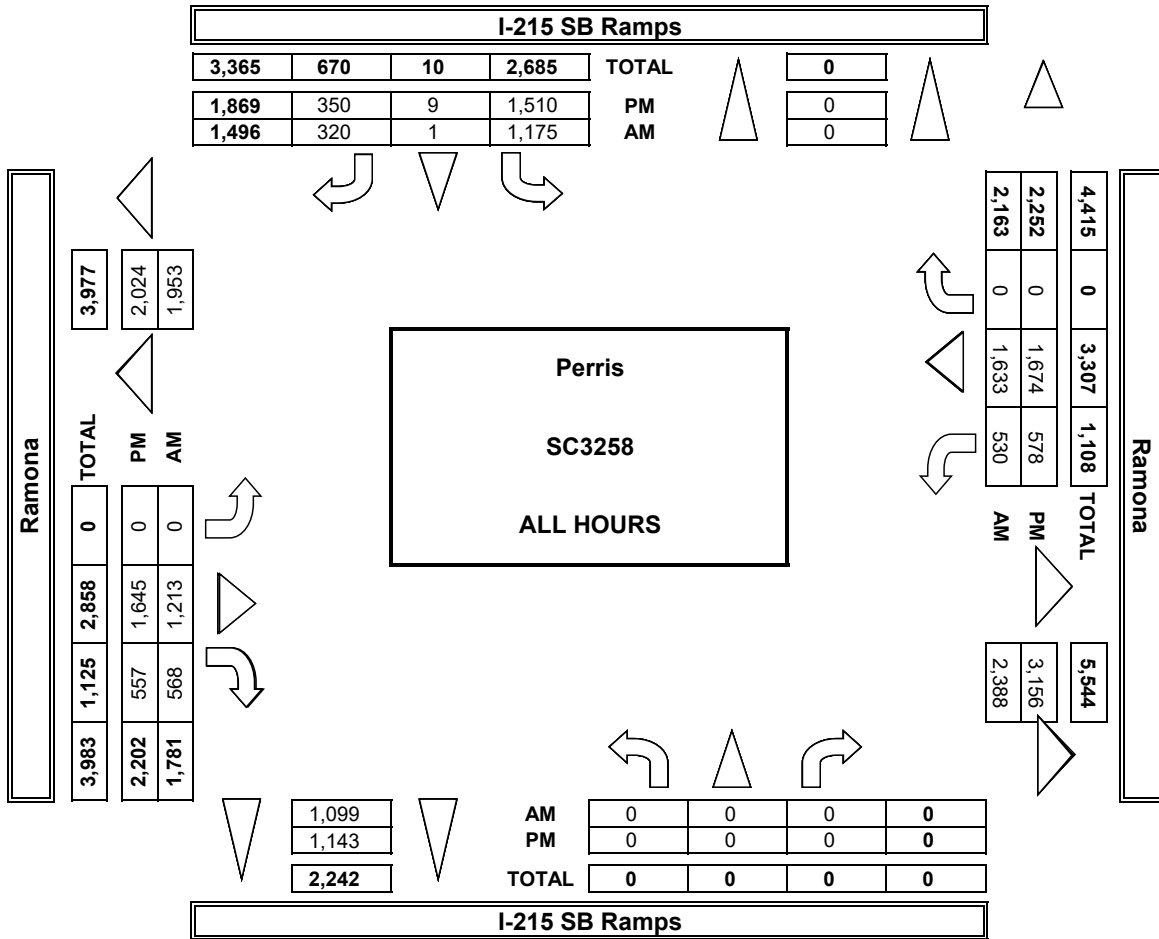
Date: 4/6/2022
 Day: Wednesday

BICYCLES

	Southbound I-215 NB Ramps			Westbound Harley Knox Blvd			Northbound I-215 NB Ramps			Eastbound Harley Knox Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound I-215 NB Ramps			Westbound Harley Knox Blvd			Northbound I-215 NB Ramps			Eastbound Harley Knox Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 SB Ramps Ramona	PROJECT #: SC3258	LOCATION #: 1	CONTROL: SIGNAL
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM		▲	
		PM		▲	
		MD	← W		E →
		OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	1.5	0.5	1	X	2	0	1	2	X	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	0	X

AM	7:00 AM	0	0	0	39	0	9	0	15	6	9	16	0	94
	7:15 AM	0	0	0	17	0	3	0	14	8	6	30	0	78
	7:30 AM	0	0	0	25	0	1	0	6	9	11	22	0	74
	7:45 AM	0	0	0	20	1	5	0	16	7	11	18	0	78
	8:00 AM	0	0	0	17	0	7	0	13	6	9	23	0	75
	8:15 AM	0	0	0	15	0	2	0	9	7	8	20	0	61
	8:30 AM	0	0	0	18	0	7	0	14	7	4	14	0	64
	8:45 AM	0	0	0	14	0	10	0	8	9	8	20	0	69
	VOLUMES	0	0	0	165	1	44	0	95	59	66	163	0	593
	APPROACH %	0%	0%	0%	79%	0%	21%	0%	62%	38%	29%	71%	0%	
APP/DEPART	0	/	0	210	/	126	154	/	260	229	/	207	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	79	1	16	0	49	30	37	93	0	305	
APPROACH %	0%	0%	0%	82%	1%	17%	0%	62%	38%	28%	72%	0%		
PEAK HR FACTOR	0.000			0.923			0.859			0.903			0.978	
APP/DEPART	0	/	0	96	/	68	79	/	128	130	/	109	0	
PM	4:00 PM	0	0	0	10	1	3	0	16	3	4	14	0	51
	4:15 PM	0	0	0	11	0	7	0	14	4	3	13	0	52
	4:30 PM	0	0	0	10	0	7	0	18	4	3	20	0	62
	4:45 PM	0	0	0	11	0	1	0	13	6	0	8	0	39
	5:00 PM	0	0	0	6	0	3	0	21	7	0	12	0	49
	5:15 PM	0	0	0	10	2	3	0	10	10	2	19	0	56
	5:30 PM	0	0	0	9	0	4	0	9	1	5	9	0	37
	5:45 PM	0	0	0	13	1	2	0	10	1	2	8	0	37
	VOLUMES	0	0	0	80	4	30	0	111	36	19	103	0	383
	APPROACH %	0%	0%	0%	70%	4%	26%	0%	76%	24%	16%	84%	0%	
APP/DEPART	0	/	0	114	/	59	147	/	191	122	/	133	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	0	38	3	12	0	50	19	9	48	0	179	
APPROACH %	0%	0%	0%	72%	6%	23%	0%	72%	28%	16%	84%	0%		
PEAK HR FACTOR	0.000			0.828			0.616			0.679			0.799	
APP/DEPART	0	/	0	53	/	31	69	/	88	57	/	60	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

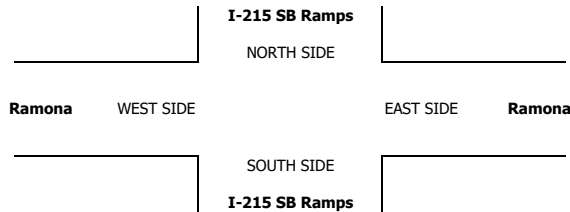
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0	0	4	0
0	2	6	0
0	3	3	0
0	1	3	0
0	4	3	0
0	4	5	0
0	19	29	0

0	7	16	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	1	1	0
0	4	0	0
0	0	2	0
0	2	2	0
0	2	3	0
0	1	0	0
0	1	0	0
0	14	11	0

0	6	5	0
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 SB Ramps Ramona	PROJECT #: LOCATION #: CONTROL:	SC3258 1 SIGNAL																				
CLASS 3: 3-AXLE TRUCKS	NOTES:		<table border="1" style="margin: auto;"> <tr><td>AM</td><td></td><td>▲</td><td></td></tr> <tr><td>PM</td><td></td><td>N</td><td></td></tr> <tr><td>MD</td><td>◀ W</td><td></td><td>E ▶</td></tr> <tr><td>OTHER</td><td></td><td>S</td><td></td></tr> <tr><td>OTHER</td><td></td><td>▼</td><td></td></tr> </table>	AM		▲		PM		N		MD	◀ W		E ▶	OTHER		S		OTHER		▼		
AM		▲																						
PM		N																						
MD	◀ W		E ▶																					
OTHER		S																						
OTHER		▼																						

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-215 SB Ramps			I-215 SB Ramps			Ramona			Ramona			
LANES:	NL X	NT X	NR X	SL 1.5	ST 0.5	SR 1	EL X	ET 2	ER 0	WL 1	WT 2	WR X	
7:00 AM	0	0	0	7	0	0	0	7	7	0	1	0	22
7:15 AM	0	0	0	4	0	0	0	18	4	1	11	0	38
7:30 AM	0	0	0	3	0	0	0	5	5	0	2	0	15
7:45 AM	0	0	0	2	0	1	0	5	2	0	4	0	14
8:00 AM	0	0	0	5	0	1	0	4	5	1	6	0	22
8:15 AM	0	0	0	1	0	3	0	8	2	2	7	0	23
8:30 AM	0	0	0	2	0	2	0	8	3	0	0	0	15
8:45 AM	0	0	0	2	0	2	0	11	3	1	4	0	23
VOLUMES	0	0	0	26	0	9	0	66	31	5	35	0	172
APPROACH %	0%	0%	0%	74%	0%	26%	0%	68%	32%	13%	88%	0%	
APP/DEPART	0	/	0	35	/	36	97	/	92	40	/	44	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	0	0	0	14	0	2	0	32	16	2	23	0	89
APPROACH %	0%	0%	0%	88%	0%	13%	0%	67%	33%	8%	92%	0%	
PEAK HR FACTOR	0.000			0.667			0.545			0.521			0.586
APP/DEPART	0	/	0	16	/	18	48	/	46	25	/	25	0
4:00 PM	0	0	0	1	0	3	0	4	2	0	2	0	12
4:15 PM	0	0	0	5	0	1	0	2	0	0	2	0	10
4:30 PM	0	0	0	2	0	0	0	7	1	0	0	0	10
4:45 PM	0	0	0	2	0	0	0	5	2	0	4	0	13
5:00 PM	0	0	0	2	0	1	0	1	0	0	2	0	6
5:15 PM	0	0	0	1	0	0	0	1	1	1	2	0	6
5:30 PM	0	0	0	1	0	2	0	1	0	1	4	0	9
5:45 PM	0	0	0	2	0	0	0	0	0	0	4	0	6
VOLUMES	0	0	0	16	0	7	0	21	6	2	20	0	72
APPROACH %	0%	0%	0%	70%	0%	30%	0%	78%	22%	9%	91%	0%	
APP/DEPART	0	/	0	23	/	8	27	/	37	22	/	27	0
BEGIN PEAK HR	5:00 PM												
VOLUMES	0	0	0	6	0	3	0	3	1	2	12	0	27
APPROACH %	0%	0%	0%	67%	0%	33%	0%	75%	25%	14%	86%	0%	
PEAK HR FACTOR	0.000			0.750			0.500			0.700			0.750
APP/DEPART	0	/	0	9	/	3	4	/	9	14	/	15	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

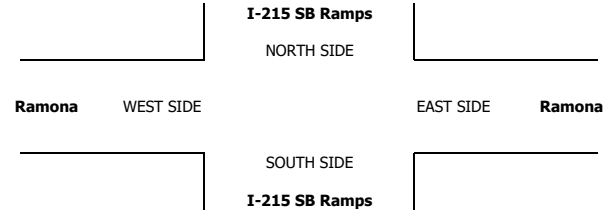
RTOR			
NRR	SRR	ERR	WRR
X	0	0	X
0	0	2	0
0	0	2	0
0	0	2	0
0	1	0	0
0	0	0	0
0	3	1	0
0	1	2	0
0	0	1	0
0	5	10	0

0	1	4	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0
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0	0	0	0
0	0	0	0
0	0	1	0
0	1	0	0
0	0	0	0
0	1	2	0

0	1	1	0
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 SB Ramps Ramona	PROJECT #: LOCATION #: CONTROL:	SC3258 1 SIGNAL
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER	▲ N ◀ W S ▼	E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-215 SB Ramps			I-215 SB Ramps			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	X	X	1.5	0.5	1	X	2	0	1	2	X	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	0	X

AM	7:00 AM	0	0	0	11	0	9	0	16	6	1	15	0	58
	7:15 AM	0	0	0	14	0	1	0	5	2	4	17	0	43
	7:30 AM	0	0	0	21	0	6	0	3	5	4	15	0	54
	7:45 AM	0	0	0	21	0	7	0	9	3	5	9	0	54
	8:00 AM	0	0	0	16	0	14	0	9	3	0	13	0	55
	8:15 AM	0	0	0	20	0	6	0	10	8	3	14	0	61
	8:30 AM	0	0	0	25	0	5	0	14	3	3	1	0	51
	8:45 AM	0	0	0	22	0	8	0	10	3	2	17	0	62
	VOLUMES	0	0	0	150	0	56	0	76	33	22	101	0	438
	APPROACH %	0%	0%	0%	73%	0%	27%	0%	70%	30%	18%	82%	0%	
APP/DEPART	0	/	0	206	/	55	109	/	226	123	/	157	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	72	0	28	0	26	13	13	54	0	206	
APPROACH %	0%	0%	0%	72%	0%	28%	0%	67%	33%	19%	81%	0%		
PEAK HR FACTOR	0.000			0.833			0.813			0.798			0.936	
APP/DEPART	0	/	0	100	/	26	39	/	98	67	/	82	0	
PM	4:00 PM	0	0	0	7	0	3	0	6	2	0	5	0	23
	4:15 PM	0	0	0	7	0	6	0	5	0	2	12	0	32
	4:30 PM	0	0	0	9	0	3	0	3	1	0	9	0	25
	4:45 PM	0	0	0	11	0	2	0	3	3	2	5	0	26
	5:00 PM	0	0	0	11	0	9	0	4	3	3	5	0	35
	5:15 PM	0	0	0	10	0	5	0	7	3	2	6	0	33
	5:30 PM	0	0	0	7	1	4	0	2	1	1	7	0	23
	5:45 PM	0	0	0	6	0	2	0	5	0	2	4	0	19
	VOLUMES	0	0	0	68	1	34	0	35	13	12	53	0	216
	APPROACH %	0%	0%	0%	66%	1%	33%	0%	73%	27%	18%	82%	0%	
APP/DEPART	0	/	0	103	/	26	48	/	103	65	/	87	0	
BEGIN PEAK HR	5:00 PM													
VOLUMES	0	0	0	34	1	20	0	18	7	8	22	0	110	
APPROACH %	0%	0%	0%	62%	2%	36%	0%	72%	28%	27%	73%	0%		
PEAK HR FACTOR	0.000			0.688			0.625			0.938			0.786	
APP/DEPART	0	/	0	55	/	16	25	/	52	30	/	42	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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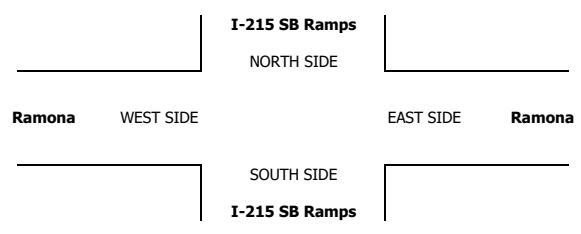
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0	5	1	0
0	2	2	0
0	3	1	0
0	5	1	0
0	22	9	0

0	12	4	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	1	0
0	0	0	0
0	1	0	0
0	0	1	0
0	4	2	0
0	3	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	9	5	0

0	7	3	0
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: Tue, Jan 25, 22	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 NB Ramps Ramona	PROJECT #: SC3258 LOCATION #: 2 CONTROL: SIGNAL
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NOTES:	
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Add U-Turns to Left Turns

LANES:	NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Ramona			WESTBOUND Ramona			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR

AM	7:00 AM	67	1	143	0	0	0	32	253	0	0	184	147	827
	7:15 AM	89	0	154	0	0	0	28	279	0	0	239	153	942
	7:30 AM	71	0	132	0	0	0	20	278	0	0	236	166	904
	7:45 AM	77	3	143	0	0	0	23	325	0	0	216	108	894
	8:00 AM	77	0	123	0	0	0	29	285	0	0	219	172	905
	8:15 AM	60	2	99	0	0	0	32	277	0	0	189	166	825
	8:30 AM	50	0	93	0	0	0	32	244	0	0	166	143	728
	8:45 AM	61	0	95	0	0	0	44	205	0	0	163	137	705
	VOLUMES	552	6	982	0	0	0	240	2,146	0	0	1,612	1,192	6,730
	APPROACH %	36%	0%	64%	0%	0%	0%	10%	90%	0%	0%	57%	43%	
APP/DEPART	1,540	/	1,438	0	/	0	2,386	/	3,128	2,804	/	2,164	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	314	3	552	0	0	0	100	1,167	0	0	910	599	3,645	
APPROACH %	36%	0%	64%	0%	0%	0%	8%	92%	0%	0%	60%	40%		
PEAK HR FACTOR	0.894			0.000			0.910			0.938			0.967	
APP/DEPART	869	/	702	0	/	0	1,267	/	1,719	1,509	/	1,224	0	
PM	4:00 PM	84	1	106	0	0	0	25	414	0	0	202	145	977
	4:15 PM	78	1	116	0	0	0	24	333	0	0	185	153	890
	4:30 PM	76	0	106	0	0	0	26	358	0	0	216	145	927
	4:45 PM	59	1	97	0	0	0	25	371	0	0	185	140	878
	5:00 PM	81	0	92	0	0	0	42	324	0	0	223	88	850
	5:15 PM	80	1	100	0	0	0	37	349	0	0	202	127	896
	5:30 PM	85	0	117	0	0	0	35	368	0	0	218	155	978
	5:45 PM	73	0	106	0	0	0	24	397	0	0	199	131	930
	VOLUMES	615	4	840	0	0	0	238	2,914	0	0	1,630	1,084	7,326
	APPROACH %	42%	0%	58%	0%	0%	0%	8%	92%	0%	0%	60%	40%	
APP/DEPART	1,460	/	1,326	0	/	0	3,152	/	3,754	2,714	/	2,246	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	297	3	425	0	0	0	100	1,476	0	0	788	583	3,672	
APPROACH %	41%	0%	59%	0%	0%	0%	6%	94%	0%	0%	57%	43%		
PEAK HR FACTOR	0.929			0.000			0.897			0.949			0.940	
APP/DEPART	725	/	686	0	/	0	1,576	/	1,901	1,371	/	1,085	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

39	0	0	0	30
42	0	0	0	34
39	0	0	0	42
26	0	0	0	28
40	0	0	0	40
21	0	0	0	39
29	0	0	0	24
38	0	0	0	29
274	0	0	0	266

147	0	0	144
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

15	0	0	34
15	0	0	39
22	0	0	34
24	0	0	34
22	0	0	26
19	0	0	25
21	0	0	35
12	0	0	31
150	0	0	258

76	0	0	141
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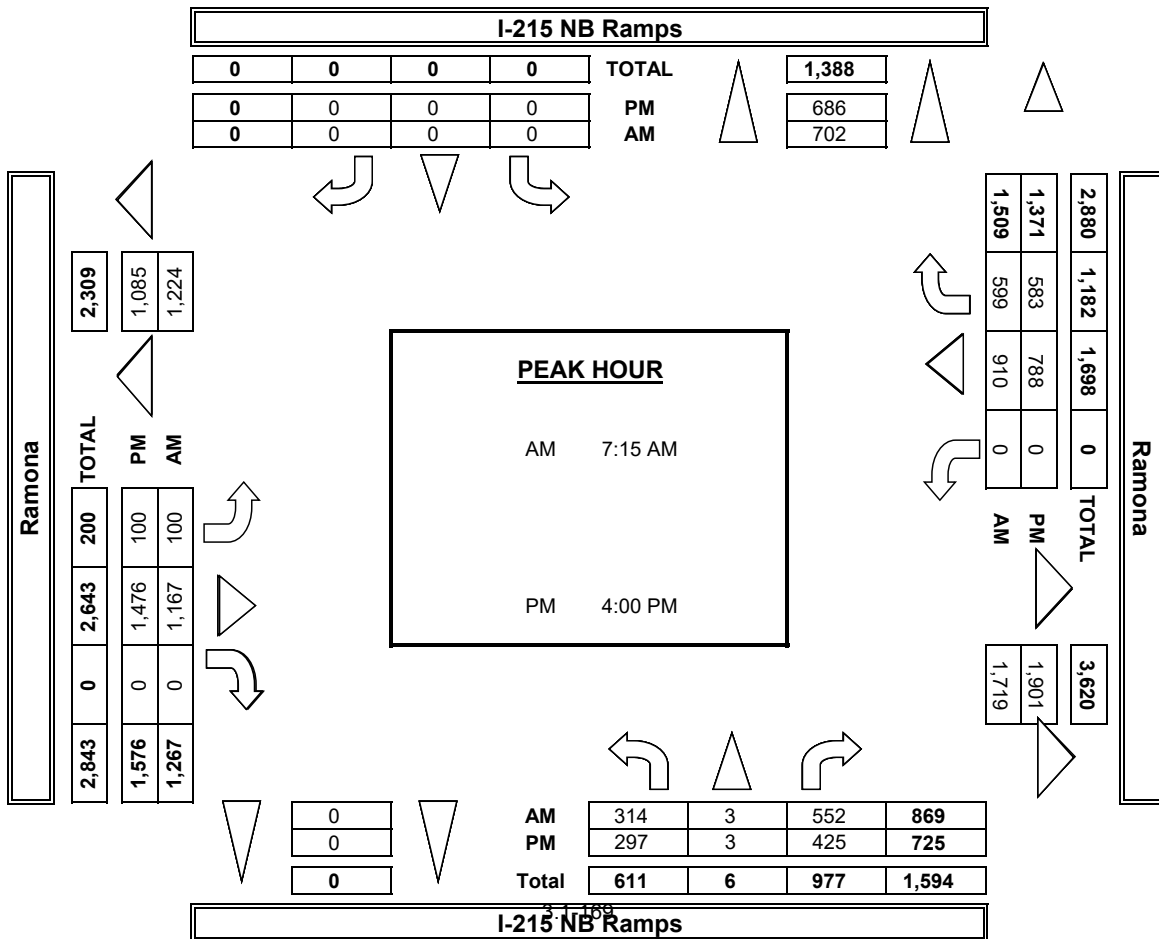
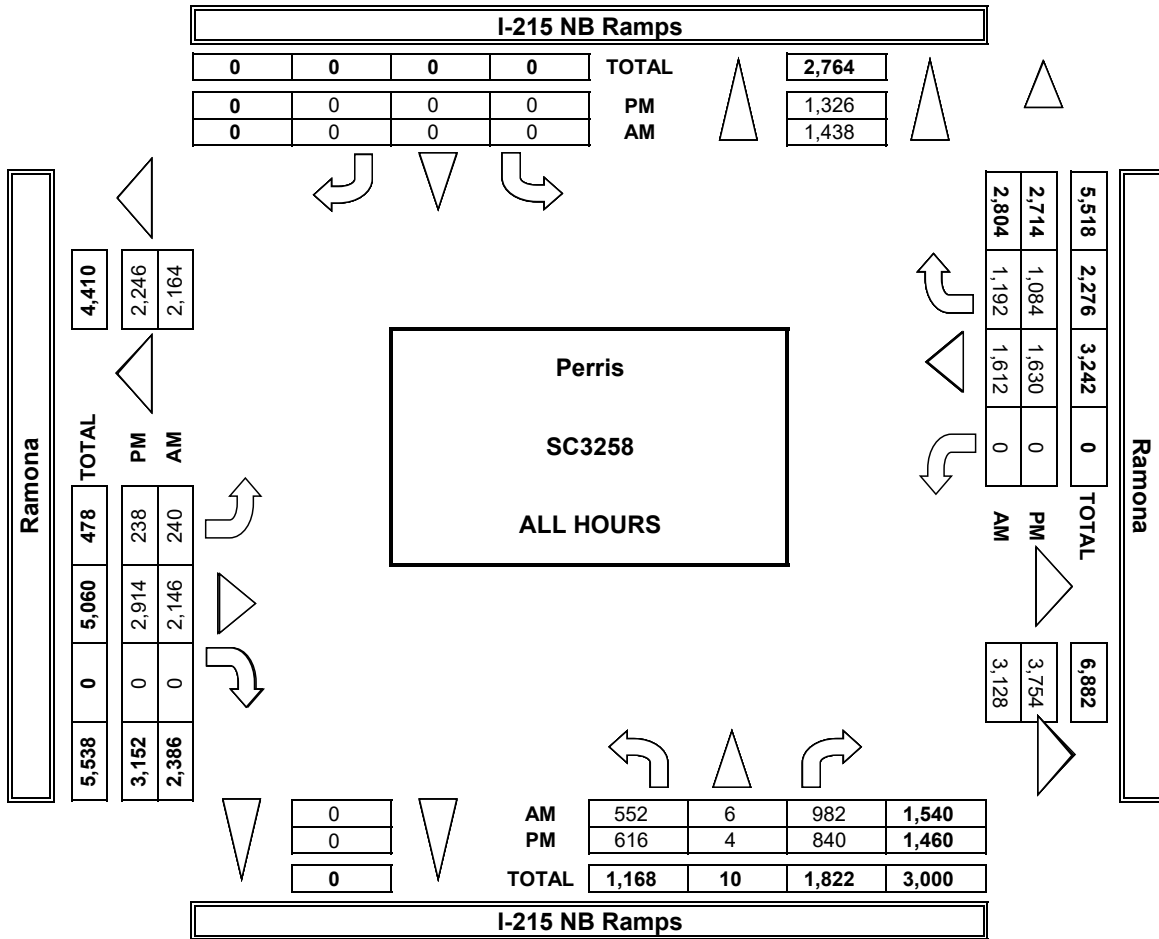


	ALL PED AND BIKE				
	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL	0	0	0	0	0
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0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

	PEDESTRIAN CROSSINGS				
	E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL	0	0	0	0	0
4:00 PM	0	0	0	1	1
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	1	1
5:45 PM	0	0	0	0	0
TOTAL	0	0	0	4	4

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

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 NB Ramps Ramona	PROJECT #: SC3258 LOCATION #: 2 CONTROL: SIGNAL
CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:		

LANES:	NORTHBOUND I-215 NB Ramps			SOUTHBOUND I-215 NB Ramps			EASTBOUND Ramona			WESTBOUND Ramona			TOTAL
	NL 1.5	NT 0.5	NR 1	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 2	WR 1	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR

AM	7:00 AM	7	0	5	0	0	0	1	53	0	0	18	11	95
	7:15 AM	10	0	1	0	0	0	4	27	0	0	26	19	87
	7:30 AM	7	0	6	0	0	0	0	31	0	0	26	14	84
	7:45 AM	8	1	5	0	0	0	5	31	0	0	21	10	81
	8:00 AM	8	0	10	0	0	0	2	28	0	0	24	9	81
	8:15 AM	8	1	5	0	0	0	3	21	0	0	20	8	66
	8:30 AM	7	0	7	0	0	0	5	27	0	0	11	11	68
	8:45 AM	7	0	8	0	0	0	5	17	0	0	21	11	69
	VOLUMES	62	2	47	0	0	0	25	235	0	0	167	93	631
	APPROACH %	56%	2%	42%	0%	0%	0%	10%	90%	0%	0%	64%	36%	
APP/DEPART	111	/	120	0	/	0	260	/	282	260	/	229	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	33	1	22	0	0	0	11	117	0	0	97	52	333	
APPROACH %	59%	2%	39%	0%	0%	0%	9%	91%	0%	0%	65%	35%		
PEAK HR FACTOR	0.778			0.000			0.889			0.828			0.957	
APP/DEPART	56	/	64	0	/	0	128	/	139	149	/	130	0	
PM	4:00 PM	7	1	4	0	0	0	0	26	0	0	11	9	58
	4:15 PM	9	1	13	0	0	0	1	24	0	0	7	7	62
	4:30 PM	13	0	6	0	0	0	2	26	0	0	10	8	65
	4:45 PM	4	0	8	0	0	0	1	23	0	0	4	8	48
	5:00 PM	3	0	4	0	0	0	3	24	0	0	9	0	43
	5:15 PM	4	0	5	0	0	0	2	18	0	0	17	0	46
	5:30 PM	2	0	3	0	0	0	3	15	0	0	12	4	39
	5:45 PM	5	0	1	0	0	0	1	22	0	0	5	2	36
	VOLUMES	47	2	44	0	0	0	13	178	0	0	75	38	397
	APPROACH %	51%	2%	47%	0%	0%	0%	7%	93%	0%	0%	66%	34%	
APP/DEPART	93	/	53	0	/	0	191	/	222	113	/	122	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	33	2	31	0	0	0	4	99	0	0	32	32	233	
APPROACH %	50%	3%	47%	0%	0%	0%	4%	96%	0%	0%	50%	50%		
PEAK HR FACTOR	0.717			0.000			0.920			0.800			0.896	
APP/DEPART	66	/	38	0	/	0	103	/	130	64	/	65	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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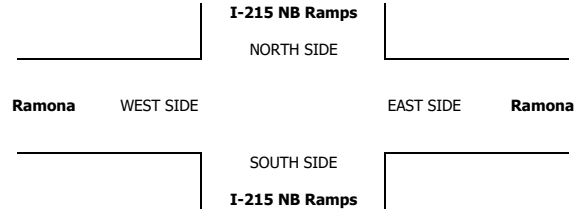
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0	0	0	4
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4	0	0	3
17	0	0	22

11	0	0	12
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	3
1	0	0	0
4	0	0	0
4	0	0	1
1	0	0	0
1	0	0	0
1	0	0	1
0	0	0	0
12	0	0	5

9	0	0	4
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INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 NB Ramps Ramona	PROJECT #: LOCATION #: CONTROL:	SC3258 2 SIGNAL
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM		▲	
		PM	◀ W	N	
		MD		▼	E ▶
		OTHER		S	
		OTHER			

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-215 NB Ramps			I-215 NB Ramps			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

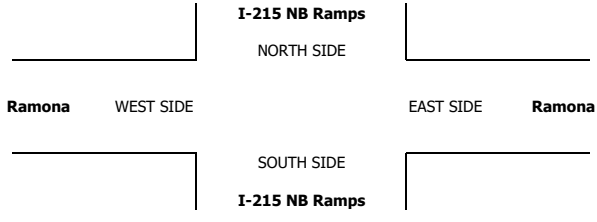
RTOR			
NRR	SRR	ERR	WRR
0	X	X	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	2
1	0	0	0
2	0	0	4

7:00 AM	0	0	2	0	0	0	5	9	0	0	1	1	18
7:15 AM	5	0	1	0	0	0	9	13	0	0	7	0	35
7:30 AM	2	0	3	0	0	0	5	3	0	0	0	5	18
7:45 AM	2	0	1	0	0	0	2	5	0	0	2	2	14
8:00 AM	4	0	0	0	0	0	3	6	0	0	3	2	18
8:15 AM	1	0	1	0	0	0	3	6	0	0	8	5	24
8:30 AM	0	0	0	0	0	0	5	5	0	0	0	6	16
8:45 AM	1	0	1	0	0	0	7	6	0	0	4	1	20
VOLUMES	15	0	9	0	0	0	39	53	0	0	25	22	163
APPROACH %	63%	0%	38%	0%	0%	0%	42%	58%	0%	0%	53%	47%	
APP/DEPART	24	/	61	0	/	0	92	/	62	47	/	40	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	13	0	5	0	0	0	19	27	0	0	12	9	85
APPROACH %	72%	0%	28%	0%	0%	0%	41%	59%	0%	0%	57%	43%	
PEAK HR FACTOR	0.750			0.000			0.523			0.750			0.607
APP/DEPART	18	/	28	0	/	0	46	/	32	21	/	25	0
4:00 PM	0	0	3	0	0	0	3	2	0	0	2	0	10
4:15 PM	1	0	1	0	0	0	1	6	0	0	1	1	11
4:30 PM	0	0	2	0	0	0	2	7	0	0	0	1	12
4:45 PM	2	0	2	0	0	0	3	4	0	0	2	3	16
5:00 PM	1	0	1	0	0	0	1	2	0	0	1	1	7
5:15 PM	2	0	0	0	0	0	0	2	0	0	1	1	6
5:30 PM	2	0	0	0	0	0	1	1	0	0	3	0	7
5:45 PM	0	0	1	0	0	0	0	2	0	0	4	3	10
VOLUMES	8	0	10	0	0	0	11	26	0	0	14	10	79
APPROACH %	44%	0%	56%	0%	0%	0%	30%	70%	0%	0%	58%	42%	
APP/DEPART	18	/	21	0	/	0	37	/	36	24	/	22	0
BEGIN PEAK HR	4:00 PM												
VOLUMES	3	0	8	0	0	0	9	19	0	0	5	5	49
APPROACH %	27%	0%	73%	0%	0%	0%	32%	68%	0%	0%	50%	50%	
PEAK HR FACTOR	0.688			0.000			0.778			0.500			0.766
APP/DEPART	11	/	14	0	/	0	28	/	27	10	/	8	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	2
1	0	0	1
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0	0	0	0
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0	0	0	3
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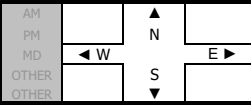


INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 1/25/22 TUESDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Perris I-215 NB Ramps Ramona	PROJECT #: LOCATION #: CONTROL:	SC3258 2 SIGNAL
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	I-215 NB Ramps			I-215 NB Ramps			Ramona			Ramona			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1.5	0.5	1	X	X	X	1	2	X	X	2	1	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0

AM	7:00 AM	12	0	8	0	0	0	12	15	0	0	4	10	61
	7:15 AM	7	0	7	0	0	0	3	16	0	0	14	13	60
	7:30 AM	8	0	2	0	0	0	3	21	0	0	11	14	59
	7:45 AM	5	0	5	0	0	0	5	25	0	0	9	10	59
	8:00 AM	7	0	8	0	0	0	6	19	0	0	6	16	62
	8:15 AM	8	0	6	0	0	0	5	25	0	0	9	16	69
	8:30 AM	1	0	4	0	0	0	6	33	0	0	3	11	58
	8:45 AM	9	0	6	0	0	0	8	24	0	0	10	19	76
	VOLUMES	57	0	46	0	0	0	48	178	0	0	66	109	504
	APPROACH %	55%	0%	45%	0%	0%	0%	21%	79%	0%	0%	38%	62%	
APP/DEPART	103	/	157	0	/	0	226	/	224	175	/	123	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	27	0	22	0	0	0	17	81	0	0	40	53	240	
APPROACH %	55%	0%	45%	0%	0%	0%	17%	83%	0%	0%	43%	57%		
PEAK HR FACTOR	0.817			0.000			0.817			0.861			0.968	
APP/DEPART	49	/	70	0	/	0	98	/	103	93	/	67	0	
PM	4:00 PM	1	0	1	0	0	0	2	11	0	0	4	7	26
	4:15 PM	6	0	2	0	0	0	2	10	0	0	8	7	35
	4:30 PM	6	0	2	0	0	0	0	12	0	0	3	6	29
	4:45 PM	3	0	1	0	0	0	1	13	0	0	4	4	26
	5:00 PM	0	0	1	0	0	0	1	14	0	0	8	7	31
	5:15 PM	5	0	0	0	0	0	4	13	0	0	3	13	38
	5:30 PM	4	0	1	0	0	0	2	7	0	0	4	8	26
	5:45 PM	2	0	1	0	0	0	1	10	0	0	4	4	22
	VOLUMES	27	0	9	0	0	0	13	90	0	0	38	56	233
	APPROACH %	75%	0%	25%	0%	0%	0%	13%	87%	0%	0%	40%	60%	
APP/DEPART	36	/	69	0	/	0	103	/	99	94	/	65	0	
BEGIN PEAK HR	4:00 PM													
VOLUMES	16	0	6	0	0	0	5	46	0	0	19	24	116	
APPROACH %	73%	0%	27%	0%	0%	0%	10%	90%	0%	0%	44%	56%		
PEAK HR FACTOR	0.688			0.000			0.911			0.717			0.829	
APP/DEPART	22	/	29	0	/	0	51	/	52	43	/	35	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

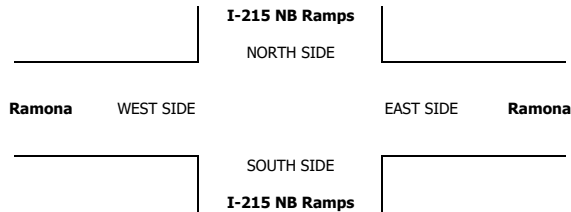
2	0	0	4
1	0	0	2
0	0	0	5
0	0	0	2
4	0	0	2
2	0	0	3
2	0	0	1
1	0	0	4
12	0	0	23

5	0	0	11
---	---	---	----

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	3
0	0	0	0
0	0	0	1
1	0	0	1
1	0	0	1
0	0	0	3
0	0	0	1
0	0	0	0
2	0	0	10

1	0	0	5
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Counts Unlimited, Inc.

County of Riverside
 Old Oleander Avenue
 W/ Harvill Avenue
 24 Hour Directional Classification Count

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

CRV001
 Site Code: 051-22112

Eastbound, Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	0	11	0	0	0	0	0	1	1	0	0	0	0	13
01:00	2	12	2	0	0	2	0	2	0	0	0	0	0	20
02:00	0	9	1	0	0	2	0	0	3	0	0	0	0	15
03:00	0	27	5	0	0	1	0	0	5	0	0	0	0	38
04:00	0	11	3	0	0	0	0	0	4	0	0	0	0	18
05:00	0	26	7	0	1	2	0	0	2	0	0	0	0	38
06:00	0	54	21	0	4	1	0	0	4	0	0	0	0	84
07:00	0	14	5	0	3	1	0	0	9	0	0	0	0	32
08:00	0	13	10	0	1	1	0	0	7	0	0	0	0	32
09:00	0	28	9	0	2	5	0	1	9	0	0	0	0	54
10:00	0	18	14	0	6	0	0	0	17	0	0	0	0	55
11:00	0	31	7	0	1	1	0	0	11	0	0	0	0	51
12 PM	0	24	2	0	5	4	0	0	14	0	0	0	0	49
13:00	0	53	10	0	2	4	0	0	8	0	0	0	0	77
14:00	0	52	14	0	6	6	0	1	13	0	0	0	0	92
15:00	0	29	12	0	4	3	0	0	8	0	0	0	0	56
16:00	0	26	1	0	3	13	0	0	6	0	0	0	0	49
17:00	0	21	5	0	0	2	0	0	3	0	0	0	0	31
18:00	0	6	2	0	0	0	0	1	6	0	0	0	0	15
19:00	0	18	1	0	0	7	0	0	7	0	0	0	0	33
20:00	0	3	0	0	0	4	0	0	13	0	0	0	0	20
21:00	0	9	0	0	0	1	0	0	5	0	0	0	0	15
22:00	0	21	3	0	0	0	0	0	3	0	0	0	0	27
23:00	0	4	0	0	0	0	0	0	6	0	0	0	0	10
Total	2	520	134	0	38	60	0	6	164	0	0	0	0	924
Percent	0.2%	56.3%	14.5%	0.0%	4.1%	6.5%	0.0%	0.6%	17.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	01:00	06:00	06:00		10:00	09:00		01:00	10:00					06:00
Vol.	2	54	21		6	5		2	17					84
PM Peak		13:00	14:00		14:00	16:00		14:00	12:00					14:00
Vol.		53	14		6	13		1	14					92
Grand Total	2	520	134	0	38	60	0	6	164	0	0	0	0	924
Percent	0.2%	56.3%	14.5%	0.0%	4.1%	6.5%	0.0%	0.6%	17.7%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

County of Riverside
 Harvill Avenue
 B/ Peregrine Way - Exel Worksite Entrance
 24 Hour Directional Classification Count

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

CRV002
 Site Code: 051-22112

Northbound, Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
02/08/22	0	47	11	0	0	1	0	1	10	0	0	0	0	70
01:00	1	31	7	0	0	1	0	0	4	0	0	0	0	44
02:00	0	36	4	0	1	1	0	0	0	0	0	0	0	42
03:00	0	64	11	0	2	3	0	0	7	0	0	0	0	87
04:00	0	198	37	0	3	3	0	0	7	0	0	0	0	248
05:00	1	242	38	2	1	7	0	0	8	0	1	0	0	300
06:00	1	306	85	4	12	12	1	2	19	2	0	0	0	444
07:00	1	467	112	5	20	4	0	5	20	0	1	0	0	635
08:00	0	323	82	6	16	6	3	4	24	0	0	0	0	464
09:00	1	203	79	1	13	10	2	1	10	0	0	1	0	321
10:00	0	209	67	0	15	15	2	3	36	1	0	0	0	348
11:00	2	237	71	3	18	16	2	5	20	0	0	0	0	374
12 PM	0	258	90	1	22	16	5	3	28	0	0	2	0	425
13:00	0	417	100	7	18	11	1	6	21	0	2	0	0	583
14:00	3	475	158	5	24	14	4	11	25	0	1	0	0	720
15:00	2	573	167	9	26	17	3	5	35	1	0	0	0	838
16:00	3	478	117	2	16	15	7	0	16	0	0	0	0	654
17:00	2	450	101	2	6	8	2	0	10	0	0	0	1	582
18:00	0	353	46	1	3	3	0	4	11	0	0	0	0	421
19:00	2	231	24	0	3	4	0	3	15	0	0	0	0	282
20:00	1	149	24	0	0	2	0	2	11	0	0	0	0	189
21:00	0	129	22	0	0	2	0	1	11	0	0	0	0	165
22:00	0	105	18	0	1	1	0	0	8	0	0	0	0	133
23:00	0	75	11	0	2	4	0	0	5	0	0	0	0	97
Total	20	6056	1482	48	222	176	32	56	361	4	5	3	1	8466
Percent	0.2%	71.5%	17.5%	0.6%	2.6%	2.1%	0.4%	0.7%	4.3%	0.0%	0.1%	0.0%	0.0%	
AM Peak	11:00	07:00	07:00	08:00	07:00	11:00	08:00	07:00	10:00	06:00	05:00	09:00		07:00
Vol.	2	467	112	6	20	16	3	5	36	2	1	1		635
PM Peak	14:00	15:00	15:00	15:00	15:00	15:00	16:00	14:00	15:00	15:00	13:00	12:00	17:00	15:00
Vol.	3	573	167	9	26	17	7	11	35	1	2	2	1	838
Grand Total	20	6056	1482	48	222	176	32	56	361	4	5	3	1	8466
Percent	0.2%	71.5%	17.5%	0.6%	2.6%	2.1%	0.4%	0.7%	4.3%	0.0%	0.1%	0.0%	0.0%	

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

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

DATE: Tuesday, May 10, 2022
JOB #: SC3419

CITY: Perris
LOCATION: CLASS2 Harvill N of Cajalco

AM TIME	NORTHBOUND													TOTAL	PM Time	NORTHBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:00	1	74	6	0	0	2	0	0	5	0	0	0	88	
0:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:15	0	54	3	0	2	2	0	0	3	0	2	0	66	
0:30	0	17	0	0	0	0	0	0	1	0	0	0	0	18	12:30	0	54	5	1	2	2	0	0	6	0	2	0	72	
0:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5	12:45	1	51	5	0	8	5	0	0	4	0	0	74		
1:00	1	6	0	0	0	0	0	0	2	0	0	0	0	9	13:00	0	43	4	0	2	4	0	0	4	0	1	0	58	
1:15	0	4	0	0	0	0	0	0	2	0	0	0	0	6	13:15	0	55	1	1	1	3	0	0	6	0	0	0	67	
1:30	0	4	0	0	0	0	0	0	1	0	0	0	0	5	13:30	0	105	7	0	0	2	0	0	3	0	1	0	118	
1:45	0	5	0	0	0	0	0	0	2	0	0	0	0	7	13:45	1	89	5	0	5	0	0	0	5	0	1	0	106	
2:00	0	3	0	0	0	1	0	0	3	0	0	0	0	7	14:00	0	85	4	0	2	1	0	0	2	0	0	0	94	
2:15	0	2	0	0	0	0	0	0	1	0	0	0	0	3	14:15	0	85	4	0	1	2	0	1	3	0	3	0	99	
2:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	14:30	1	162	9	0	1	1	0	0	4	0	0	0	178	
2:45	0	3	0	0	0	0	0	0	1	0	0	0	0	4	14:45	0	105	3	0	4	1	1	0	2	0	0	0	116	
3:00	0	6	0	0	0	1	0	0	2	0	0	0	0	9	15:00	0	99	3	0	1	0	0	0	1	0	1	0	105	
3:15	1	8	1	0	0	0	0	0	0	0	0	0	0	10	15:15	0	113	7	0	2	3	0	0	1	0	0	0	126	
3:30	0	14	0	0	0	1	0	0	1	0	0	0	0	16	15:30	0	120	10	0	2	0	0	0	2	0	0	0	134	
3:45	0	12	0	0	0	0	0	0	1	0	0	0	0	13	15:45	0	101	5	1	3	0	1	0	3	0	0	0	114	
4:00	0	18	0	0	1	0	0	0	2	0	0	0	0	21	16:00	0	96	8	0	0	2	1	0	2	0	2	0	111	
4:15	0	28	0	0	0	0	0	0	0	0	0	0	0	28	16:15	0	84	6	0	0	3	0	0	3	0	0	0	96	
4:30	0	21	0	0	2	1	0	0	6	0	0	0	0	30	16:30	0	92	8	2	1	1	0	0	0	0	0	0	104	
4:45	0	23	1	0	2	0	0	0	1	0	0	0	0	27	16:45	0	76	4	0	1	0	1	0	1	0	0	0	83	
5:00	0	27	0	0	1	0	0	0	4	0	0	0	0	32	17:00	1	63	5	0	0	1	0	0	3	0	0	0	73	
5:15	1	42	2	0	1	1	0	0	3	0	0	0	0	50	17:15	1	69	4	0	0	0	0	0	0	0	0	0	74	
5:30	1	53	3	0	3	1	0	0	5	0	0	0	0	66	17:30	0	69	2	0	1	1	0	0	1	0	0	0	74	
5:45	0	46	3	1	2	1	0	0	5	0	0	0	0	58	17:45	0	49	3	0	0	0	0	0	0	0	0	0	52	
6:00	0	50	6	3	5	0	0	0	1	0	0	0	0	65	18:00	0	56	4	0	0	0	0	0	2	0	0	0	62	
6:15	0	70	6	2	1	2	0	0	0	0	1	0	0	82	18:15	0	62	1	0	0	2	0	0	0	0	0	0	65	
6:30	0	117	9	1	3	1	0	0	3	0	0	0	0	134	18:30	0	58	1	0	0	0	0	0	2	0	0	0	61	
6:45	0	172	12	2	4	1	0	0	2	0	1	0	0	194	18:45	1	48	2	0	0	1	0	0	1	0	0	0	53	
7:00	0	164	4	0	5	1	1	0	4	0	1	0	0	180	19:00	0	40	2	0	0	1	0	0	3	0	0	0	46	
7:15	0	170	7	0	7	0	1	0	3	0	0	0	0	188	19:15	0	40	3	0	0	3	0	0	1	0	1	0	48	
7:30	0	161	12	0	6	1	0	0	3	0	1	0	0	184	19:30	0	37	0	0	0	0	0	0	1	0	0	0	38	
7:45	0	141	8	0	4	1	0	0	5	0	3	0	0	162	19:45	2	30	0	0	0	0	0	1	2	0	0	0	35	
8:00	0	123	5	0	2	1	0	0	5	0	0	0	0	136	20:00	0	31	0	0	0	0	0	1	0	0	0	0	32	
8:15	0	86	2	0	5	2	0	0	5	0	1	0	0	101	20:15	1	48	0	0	0	0	1	0	1	0	0	0	51	
8:30	0	57	5	0	2	0	0	0	2	0	1	0	0	67	20:30	0	29	1	0	0	0	0	0	1	0	0	0	31	
8:45	0	50	3	0	1	0	0	0	6	0	1	1	0	62	20:45	0	39	0	0	0	0	0	0	0	0	0	0	39	
9:00	0	60	8	0	1	0	0	0	5	0	0	0	0	74	21:00	0	36	1	0	0	0	0	0	1	0	0	0	38	
9:15	0	38	1	0	6	2	0	0	1	0	1	0	0	49	21:15	0	23	0	0	0	0	0	0	0	0	0	0	23	
9:30	0	36	9	0	1	3	0	0	2	0	0	0	0	51	21:30	0	15	0	0	0	0	0	0	1	0	0	0	16	
9:45	0	49	6	0	5	0	1	0	4	0	0	0	0	65	21:45	0	27	1	0	0	0	0	0	0	0	0	0	28	
10:00	1	55	4	0	2	1	0	0	4	0	0	0	0	67	22:00	0	24	1	0	0	0	0	0	0	0	0	0	25	
10:15	0	45	1	0	2	1	0	0	6	0	0	0	0	55	22:15	0	14	0	0	0	3	0	0	0	0	0	0	17	
10:30	0	52	5	0	1	1	0	0	12	0	0	0	0	71	22:30	0	18	0	0	0	0	0	0	1	0	0	0	19	
10:45	0	41	1	0	1	2	0	0	5	0	1	0	0	51	22:45	0	13	0	0	0	0	0	0	0	0	0	0	13	
11:00	1	65	7	0	2	2	0	0	7	0	0	0	0	84	23:00	0	14	0	0	0	0	0	0	0	0	0	0	14	
11:15	0	50	4	0	2	1	0	0	4	0	1	0	0	62	23:15	0	13	0	0	0	0	0	0	0	0	0	0	13	
11:30	0	50	5	0	2	3	0	0	4	0	0	0	0	64	23:30	0	11	0	0	0	0	0	0	0	0	0	0	11	
11:45	0	45	6	1	6	1	0	0	2	0	0	0	0	61	23:45	0	5	0	0	0	0	0	0	0	0	0	0	5	
TOTAL	6	2,308	146	10	88	34	3	0	138	0	13	1	0	2,747	TOTAL	10	2,724	138	5	39	46	5	3	81	0	14	0	0	3,065

AM PEAK HOUR 6:45 AM
AM PEAK VOLUME 746

PM PEAK HOUR 2:30 PM
PM PEAK VOLUME 525

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	16	5,032	284	15	127	80	8	3	219	0	27	1	0	5,812
% OF TOTAL	0.3%	86.6%	4.9%	0.3%	2.2%	1.4%	0.1%	0.1%	3.8%	0.0%	0.5%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13
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TOTAL: ALL	29	9,355	525	30	247	151	17	7	457	1	49	1	0	10,869
% OF TOTAL	0.5%	161.0%	9.0%	0.5%	4.2%	2.6%	0.3%	0.1%	7.9%	0.0%	0.8%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH FHWA CLASSIFICATION)

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

DATE: Tuesday, May 10, 2022
JOB #: SC3419

CITY: Perris
LOCATION: CLASS2 Harvill N of Cajalco

AM TIME	SOUTHBOUND													TOTAL	PM Time	SOUTHBOUND													TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12	13			1	2	3	4	5	6	7	8	9	10	11	12	13	
0:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7	12:00	0	56	4	0	2	3	0	0	6	0	0	0	71	
0:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3	12:15	0	58	9	0	0	1	0	0	11	0	0	0	79	
0:30	0	9	0	0	0	1	0	0	0	0	0	0	0	10	12:30	0	58	5	0	2	2	0	0	8	0	0	0	75	
0:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7	12:45	1	70	4	0	1	1	0	0	9	0	0	0	86	
1:00	1	4	0	0	0	0	0	0	0	0	0	0	0	5	13:00	2	53	3	0	1	0	0	0	3	0	2	0	64	
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3	13:15	0	46	2	0	3	0	0	0	3	0	0	0	54	
1:30	0	4	0	0	0	0	0	0	0	0	0	0	0	4	13:30	1	58	2	0	1	2	1	0	4	0	0	0	69	
1:45	0	10	0	0	0	0	1	0	0	0	0	0	0	11	13:45	0	59	4	0	2	1	0	0	4	0	1	0	71	
2:00	0	10	0	0	0	0	0	0	1	0	0	0	0	11	14:00	0	88	10	0	3	1	0	0	6	0	1	0	109	
2:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5	14:15	1	93	5	1	2	3	0	0	5	0	1	0	111	
2:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3	14:30	0	118	8	0	6	2	0	0	3	0	0	0	137	
2:45	0	2	0	0	0	1	0	0	0	0	0	0	0	3	14:45	0	134	6	0	6	2	1	0	4	0	2	0	155	
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2	15:00	0	120	7	1	4	2	1	0	3	0	1	0	139	
3:15	0	9	0	0	0	1	0	0	1	0	0	0	0	11	15:15	0	102	12	0	4	1	1	1	2	0	3	0	126	
3:30	0	8	1	0	1	0	0	0	0	0	0	0	0	10	15:30	0	94	3	1	2	1	0	0	2	0	0	0	103	
3:45	0	6	0	0	0	0	0	0	1	0	0	0	0	7	15:45	0	92	8	2	3	0	0	1	9	0	0	0	115	
4:00	0	10	1	0	0	1	0	0	0	0	0	0	0	12	16:00	0	73	7	1	1	1	0	0	4	0	0	0	87	
4:15	0	16	0	0	0	0	0	0	2	0	0	0	0	18	16:15	0	109	8	0	1	2	0	0	2	0	0	0	122	
4:30	0	27	0	0	0	0	0	0	0	0	0	0	0	27	16:30	0	98	6	1	2	0	0	0	4	0	0	0	111	
4:45	0	49	1	0	1	1	0	0	0	0	0	0	0	52	16:45	0	103	13	1	1	0	1	0	3	0	0	0	122	
5:00	0	34	0	0	0	0	0	0	0	0	0	0	0	34	17:00	0	93	3	1	3	0	0	0	1	0	0	0	101	
5:15	0	34	0	0	0	3	0	0	0	0	0	0	0	37	17:15	0	86	4	1	0	1	0	0	1	0	0	0	93	
5:30	0	45	0	0	2	0	0	0	0	0	0	0	0	47	17:30	0	85	4	1	0	0	0	0	2	0	1	0	93	
5:45	0	99	3	0	2	1	0	0	1	0	0	0	0	106	17:45	0	67	3	0	1	1	0	0	3	0	0	0	75	
6:00	0	44	1	0	0	0	0	0	0	0	0	0	0	45	18:00	0	78	6	0	1	0	0	0	3	0	0	0	88	
6:15	0	32	1	0	2	1	0	0	0	0	1	0	0	37	18:15	0	63	1	0	0	1	0	1	4	0	0	0	70	
6:30	0	40	3	0	1	0	1	0	4	0	2	0	0	51	18:30	0	64	3	0	0	0	0	0	4	0	0	0	71	
6:45	0	48	2	0	0	0	1	0	6	0	2	0	0	59	18:45	0	68	2	0	0	2	0	0	6	0	0	0	78	
7:00	0	36	3	0	1	0	0	0	6	0	0	0	0	46	19:00	0	69	1	0	1	0	0	0	3	0	0	0	74	
7:15	0	46	3	0	1	1	0	0	1	1	0	0	0	53	19:15	1	33	1	0	0	1	0	0	4	0	0	0	40	
7:30	1	55	4	0	2	3	1	0	4	0	0	0	0	70	19:30	0	31	0	0	1	0	0	0	5	0	0	0	37	
7:45	0	65	3	0	4	0	0	0	2	0	0	0	0	74	19:45	0	36	0	0	1	0	0	0	2	0	0	0	39	
8:00	0	82	4	0	3	0	0	0	4	0	0	0	0	93	20:00	3	36	1	0	0	0	0	0	0	0	0	0	40	
8:15	0	56	1	0	4	1	0	0	0	0	2	0	0	64	20:15	0	30	0	0	0	0	0	0	0	0	0	0	30	
8:30	1	66	5	1	4	1	0	0	4	0	0	0	0	82	20:30	0	28	0	0	0	1	0	0	3	0	0	0	32	
8:45	0	42	3	2	2	0	0	0	2	0	1	0	0	52	20:45	0	33	0	0	1	0	0	0	0	0	0	0	34	
9:00	0	37	2	1	1	0	0	0	2	0	0	0	0	43	21:00	0	23	0	0	0	0	0	0	2	0	0	0	25	
9:15	1	41	6	0	4	3	0	0	5	0	0	0	0	60	21:15	0	29	1	0	0	1	0	0	0	0	0	0	31	
9:30	0	35	6	0	0	2	0	0	8	0	0	0	0	51	21:30	0	22	0	0	0	0	0	0	0	0	0	0	22	
9:45	0	47	4	0	1	2	0	0	5	0	0	0	0	59	21:45	0	18	0	0	0	0	0	0	0	0	0	0	18	
10:00	0	48	5	0	3	2	0	0	5	0	1	0	0	64	22:00	0	21	0	0	0	1	0	0	0	0	0	0	22	
10:15	0	38	2	0	2	3	0	0	8	0	0	0	0	53	22:15	0	16	0	0	0	0	0	0	1	0	0	0	17	
10:30	0	46	2	0	2	0	0	1	6	0	0	0	0	57	22:30	0	20	0	0	0	0	0	0	1	0	0	0	21	
10:45	0	44	6	0	2	2	0	0	6	0	0	0	0	60	22:45	0	12	0	0	1	0	0	0	0	0	0	0	13	
11:00	0	46	5	0	0	1	0	0	4	0	0	0	0	56	23:00	0	10	0	0	0	0	0	0	1	0	0	0	11	
11:15	0	43	3	0	9	1	0	0	2	0	0	0	0	58	23:15	0	14	0	0	1	1	0	0	1	0	0	0	17	
11:30	0	50	4	0	5	2	0	0	3	0	0	0	0	64	23:30	0	15	0	0	1	1	0	0	0	0	0	0	17	
11:45	0	44	1	0	2	1	0	0	3	0	1	0	0	52	23:45	0	4	0	0	0	0	0	0	0	0	0	0	4	
TOTAL	4	1,537	85	4	61	35	4	1	96	1	10	0	0	1,838	TOTAL	9	2,786	156	11	59	36	5	3	142	0	12	0	0	3,219
AM PEAK HOUR														7:45 AM	PM PEAK HOUR														2:30 PM
AM PEAK VOLUME														313	PM PEAK VOLUME														557

CLASS 1	Class 1 — Motorcycles	CLASS 8	3 to 4 Axles, Single Trailer
CLASS 2	Passenger Cars	CLASS 9	5 Axles, Single Trailer
CLASS 3	2 Axles, 4-Tire Single Units	CLASS 10	6 or More Axles, Single Trailer
CLASS 4	Buses	CLASS 11	5 or Less Axles, Multi-Trailers
CLASS 5	2 Axles, 6-Tire Single Units	CLASS 12	6 Axles, Multi-Trailers
CLASS 6	3 Axles, Single Unit	CLASS 13	7 or More Axles, Multi-Trailers
CLASS 7	4 or More Axles, Single Unit		

TOTAL: AM+PM	13	4,323	241	15	120	71	9	4	238	1	22	0	0	5,057
% OF TOTAL	0.3%	85.5%	4.8%	0.3%	2.4%	1.4%	0.2%	0.1%	4.7%	0.0%	0.4%	0.0%	0.0%	100.0%

Class	1	2	3	4	5	6	7	8	9	10	11	12	13
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**APPENDIX 3.2: EXISTING (2022) CONDITIONS INTERSECTION
OPERATIONS ANALYSIS WORKSHEETS**

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Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑			↘						↕	
Traffic Vol, veh/h	0	15	0	0	17	5	0	0	0	4	0	0
Future Vol, veh/h	0	15	0	0	17	5	0	0	0	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	19	0	0	22	6	0	0	0	5	0	0

Major/Minor	Major1		Major2				Minor2			
Conflicting Flow All	28	0	-	-	-	0		44	44	25
Stage 1	-	-	-	-	-	-		25	25	-
Stage 2	-	-	-	-	-	-		19	19	-
Critical Hdwy	4.1	-	-	-	-	-		6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.4	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-		3.5	4	3.3
Pot Cap-1 Maneuver	1599	-	0	0	-	-		972	852	1057
Stage 1	-	-	0	0	-	-		1003	878	-
Stage 2	-	-	0	0	-	-		1009	884	-
Platoon blocked, %		-			-	-				
Mov Cap-1 Maneuver	1599	-	-	-	-	-		972	0	1057
Mov Cap-2 Maneuver	-	-	-	-	-	-		903	0	-
Stage 1	-	-	-	-	-	-		1003	0	-
Stage 2	-	-	-	-	-	-		1009	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1599	-	-	-	903
HCM Lane V/C Ratio	-	-	-	-	0.006
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Timings
2: Harvill Av. & Old Oleander Av.

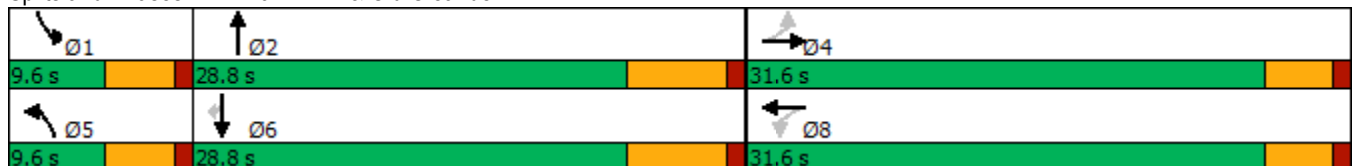


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	25	3	1	2	10	439	4	270	9
Future Volume (vph)	25	3	1	2	10	439	4	270	9
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.8	16.8	16.8	16.8	7.7	20.8	7.7	20.8	20.8
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.27	0.73	0.27	0.73	0.73
v/c Ratio	0.02	0.01	0.00	0.00	0.02	0.18	0.01	0.11	0.01
Control Delay	9.2	8.1	10.0	8.4	20.3	8.1	20.8	8.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	8.1	10.0	8.4	20.3	8.1	20.8	8.1	0.0
LOS	A	A	A	A	C	A	C	A	A
Approach Delay		9.0		8.7		8.3		8.0	
Approach LOS		A		A		A		A	

Intersection Summary

Cycle Length: 70	
Actuated Cycle Length: 28.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.18	
Intersection Signal Delay: 8.2	Intersection LOS: A
Intersection Capacity Utilization 33.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
 2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	3	4	1	2	3	10	439	2	4	270	9
Future Volume (veh/h)	25	3	4	1	2	3	10	439	2	4	270	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	27	3	4	1	2	3	11	467	2	4	287	10
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	377	61	82	375	57	86	27	1300	6	10	1240	553
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.01	0.35	0.35	0.01	0.34	0.34
Sat Flow, veh/h	1434	738	984	1431	686	1029	1810	3686	16	1810	3610	1610
Grp Volume(v), veh/h	27	0	7	1	0	5	11	229	240	4	287	10
Grp Sat Flow(s),veh/h/ln	1434	0	1723	1431	0	1715	1810	1805	1897	1810	1805	1610
Q Serve(g_s), s	0.5	0.0	0.1	0.0	0.0	0.1	0.2	2.6	2.6	0.1	1.6	0.1
Cycle Q Clear(g_c), s	0.6	0.0	0.1	0.1	0.0	0.1	0.2	2.6	2.6	0.1	1.6	0.1
Prop In Lane	1.00		0.57	1.00		0.60	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	377	0	143	375	0	143	27	637	669	10	1240	553
V/C Ratio(X)	0.07	0.00	0.05	0.00	0.00	0.04	0.41	0.36	0.36	0.40	0.23	0.02
Avail Cap(c_a), veh/h	1661	0	1687	1657	0	1680	328	1480	1555	328	2959	1320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	0.0	11.6	11.7	0.0	11.6	13.5	6.6	6.6	13.7	6.5	6.0
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	3.8	0.3	0.3	9.5	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.4	0.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	0.0	11.8	11.7	0.0	11.7	17.3	7.0	6.9	23.2	6.5	6.0
LnGrp LOS	B	A	B	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		34			6			480			301	
Approach Delay, s/veh		11.9			11.7			7.2			6.7	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	15.9		6.9	5.0	15.7		6.9				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+I1), s	2.1	4.6		2.6	2.2	3.6		2.1				
Green Ext Time (p_c), s	0.0	2.2		0.1	0.0	1.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y		Y	↑↑	↑↑	
Traffic Vol, veh/h	1	1	1	450	275	0
Future Vol, veh/h	1	1	1	450	275	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	165	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	1	1	479	293	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	535	147	293	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	480	880	1280	-	-	-
Stage 1	737	-	-	-	-	-
Stage 2	782	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	480	880	1280	-	-	-
Mov Cap-2 Maneuver	631	-	-	-	-	-
Stage 1	736	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1280	-	735	-	-
HCM Lane V/C Ratio	0.001	-	0.003	-	-
HCM Control Delay (s)	7.8	-	9.9	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

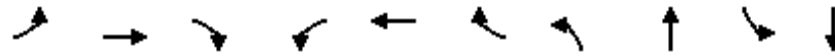
Intersection												
Int Delay, s/veh	0											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↵		↵		↕↕		↵	↕↕	
Traffic Vol, veh/h	0	0	0	0	0	0	0	451	0	3	273	0
Future Vol, veh/h	0	0	0	0	0	0	0	451	0	3	273	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	0	0	480	0	3	290	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	631	- 240	- 0 0 480 0 0
Stage 1	480	- -	- - - - -
Stage 2	151	- -	- - - - -
Critical Hdwy	6.8	- 6.9	- - - 4.1 - -
Critical Hdwy Stg 1	5.8	- -	- - - - -
Critical Hdwy Stg 2	5.8	- -	- - - - -
Follow-up Hdwy	3.5	- 3.3	- - - 2.2 - -
Pot Cap-1 Maneuver	418	0 767	0 - - 1093 - 0
Stage 1	594	0 -	0 - - - - 0
Stage 2	867	0 -	0 - - - - 0
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	417	0 767	- - - 1093 - -
Mov Cap-2 Maneuver	496	0 -	- - - - -
Stage 1	594	0 -	- - - - -
Stage 2	864	0 -	- - - - -

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	-	1093
HCM Lane V/C Ratio	-	-	-	0.003
HCM Control Delay (s)	-	-	0	0 8.3
HCM Lane LOS	-	-	A	A A
HCM 95th %tile Q(veh)	-	-	-	0

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

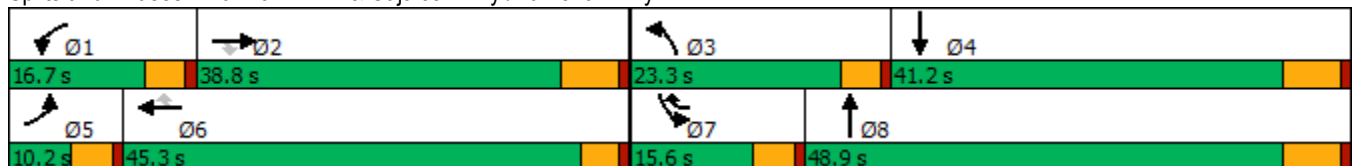


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↙	↑↑	↗	↙↗	↑↑	↗	↙↗	↑↔	↙↗	↑↔
Traffic Volume (vph)	47	680	50	167	677	102	297	337	189	116
Future Volume (vph)	47	680	50	167	677	102	297	337	189	116
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.5	27.8	27.8	9.9	36.1	50.6	14.5	42.9	9.9	38.4
Actuated g/C Ratio	0.05	0.25	0.25	0.09	0.32	0.45	0.13	0.38	0.09	0.34
v/c Ratio	0.58	0.82	0.10	0.58	0.63	0.14	0.71	0.33	0.66	0.13
Control Delay	80.7	48.2	0.4	58.3	35.5	3.6	56.6	25.0	61.5	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	80.7	48.2	0.4	58.3	35.5	3.6	56.6	25.0	61.5	24.0
LOS	F	D	A	E	D	A	E	C	E	C
Approach Delay		47.1			36.1			38.2		45.3
Approach LOS		D			D			D		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 112.3
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 40.8
 Intersection LOS: D
 Intersection Capacity Utilization 58.7%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↘		↘↗	↑↘	
Traffic Volume (veh/h)	47	680	50	167	677	102	297	337	75	189	116	27
Future Volume (veh/h)	47	680	50	167	677	102	297	337	75	189	116	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	731	3	180	728	42	319	362	27	203	125	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	874	390	246	993	566	390	1382	103	268	1102	232
Arrive On Green	0.04	0.24	0.24	0.07	0.28	0.28	0.11	0.41	0.41	0.08	0.37	0.37
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	3403	253	3510	2968	625
Grp Volume(v), veh/h	51	731	3	180	728	42	319	191	198	203	75	77
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1851	1755	1805	1788
Q Serve(g_s), s	2.9	20.2	0.1	5.3	19.3	1.8	9.3	7.4	7.5	6.0	2.9	3.0
Cycle Q Clear(g_c), s	2.9	20.2	0.1	5.3	19.3	1.8	9.3	7.4	7.5	6.0	2.9	3.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.35
Lane Grp Cap(c), veh/h	67	874	390	246	993	566	390	733	752	268	670	664
V/C Ratio(X)	0.77	0.84	0.01	0.73	0.73	0.07	0.82	0.26	0.26	0.76	0.11	0.12
Avail Cap(c_a), veh/h	96	1119	499	404	1401	748	624	733	752	367	670	664
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.2	37.9	30.3	47.9	34.6	22.7	45.7	20.7	20.8	47.6	21.7	21.7
Incr Delay (d2), s/veh	10.7	4.5	0.0	1.6	1.2	0.1	2.0	0.9	0.9	3.6	0.3	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	9.0	0.1	2.3	8.1	0.7	4.0	3.1	3.2	2.6	1.2	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	42.4	30.3	49.5	35.8	22.7	47.7	21.6	21.6	51.2	22.0	22.1
LnGrp LOS	E	D	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		785			950			708			355	
Approach Delay, s/veh		43.6			37.8			33.4			38.7	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	31.6	16.3	45.2	8.5	35.1	12.6	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	7.3	22.2	11.3	5.0	4.9	21.3	8.0	9.5				
Green Ext Time (p_c), s	0.1	3.2	0.4	0.7	0.0	4.4	0.1	2.0				

Intersection Summary

HCM 6th Ctrl Delay	38.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

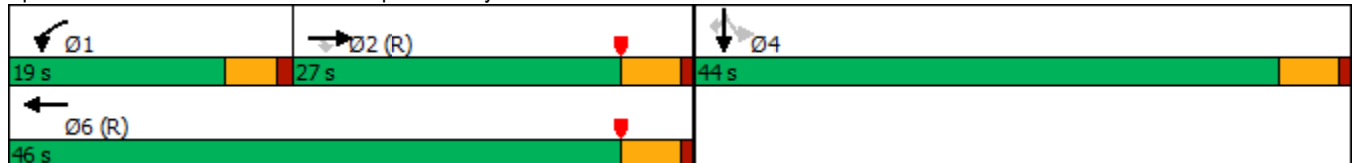


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	556	5	177	269	3	175
Future Volume (vph)	556	5	177	269	3	175
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	27.0	27.0	19.0	46.0	44.0	44.0
Total Split (%)	30.0%	30.0%	21.1%	51.1%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	28.0	28.0	12.5	45.0	35.0	35.0
Actuated g/C Ratio	0.31	0.31	0.14	0.50	0.39	0.39
v/c Ratio	0.52	0.01	0.73	0.16	0.86	0.25
Control Delay	29.2	0.0	54.1	5.0	38.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	0.0	54.1	5.0	38.4	3.4
LOS	C	A	D	A	D	A
Approach Delay	29.0			24.5	30.3	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 28.4
 Intersection LOS: C
 Intersection Capacity Utilization 136.9%
 ICU Level of Service H
 Analysis Period (min) 15













Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



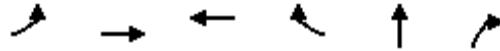
HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	556	5	177	269	0	0	0	0	579	3	175
Future Volume (veh/h)	0	556	5	177	269	0	0	0	0	579	3	175
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	579	3	184	280	0				603	3	86
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1254	559	222	1878	0				664	3	594
Arrive On Green	0.00	0.35	0.35	0.04	0.17	0.00				0.37	0.37	0.37
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1801	9	1610
Grp Volume(v), veh/h	0	579	3	184	280	0				606	0	86
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	11.2	0.1	9.1	5.9	0.0				28.6	0.0	3.2
Cycle Q Clear(g_c), s	0.0	11.2	0.1	9.1	5.9	0.0				28.6	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1254	559	222	1878	0				667	0	594
V/C Ratio(X)	0.00	0.46	0.01	0.83	0.15	0.00				0.91	0.00	0.14
Avail Cap(c_a), veh/h	0	1254	559	292	1878	0				784	0	698
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.8	19.2	42.2	20.3	0.0				27.0	0.0	18.9
Incr Delay (d2), s/veh	0.0	1.2	0.0	10.7	0.2	0.0				13.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.6	0.0	4.8	2.4	0.0				13.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	24.1	19.2	52.9	20.5	0.0				40.0	0.0	19.1
LnGrp LOS	A	C	B	D	C	A				D	A	B
Approach Vol, veh/h		582			464						692	
Approach Delay, s/veh		24.0			33.4						37.4	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	15.5	36.3		38.2		51.8						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	14.5	22.0		39.0		41.0						
Max Q Clear Time (g_c+I1), s	11.1	13.2		30.6		7.9						
Green Ext Time (p_c), s	0.1	1.6		2.6		1.1						
Intersection Summary												
HCM 6th Ctrl Delay				31.8								
HCM 6th LOS				C								

Timings
8: I-215 NB Ramps & Harley Knox Bl.

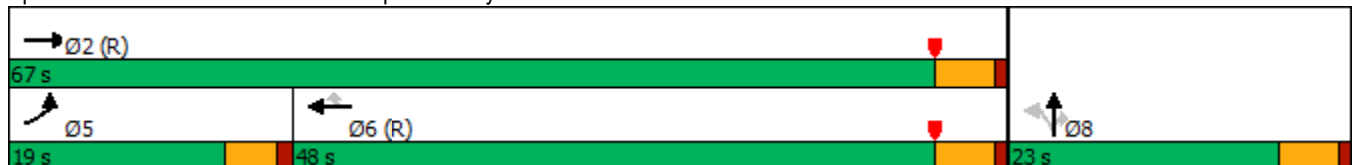


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↖	↗
Traffic Volume (vph)	362	773	434	1240	1	41
Future Volume (vph)	362	773	434	1240	1	41
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	19.0	67.0	48.0	48.0	23.0	23.0
Total Split (%)	21.1%	74.4%	53.3%	53.3%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	30.0	79.9	43.4	43.4	6.3	6.3
Actuated g/C Ratio	0.33	0.89	0.48	0.48	0.07	0.07
v/c Ratio	0.68	0.27	0.28	1.28	0.12	0.25
Control Delay	30.3	1.3	14.6	151.5	40.8	7.0
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	30.3	1.5	14.6	151.5	40.8	7.0
LOS	C	A	B	F	D	A
Approach Delay		10.7	116.0		15.2	
Approach LOS		B	F		B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.28
 Intersection Signal Delay: 72.4
 Intersection LOS: E
 Intersection Capacity Utilization 136.9%
 ICU Level of Service H
 Analysis Period (min) 15



















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



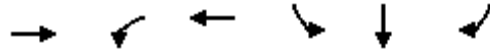
HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	362	773	0	0	434	1240	12	1	41	0	0	0
Future Volume (veh/h)	362	773	0	0	434	1240	12	1	41	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	411	878	0	0	493	1290	14	1	10			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	292	3116	0	0	2354	1050	44	3	42			
Arrive On Green	0.32	1.00	0.00	0.00	0.65	0.65	0.03	0.03	0.03			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1694	121	1610			
Grp Volume(v), veh/h	411	878	0	0	493	1290	15	0	10			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1815	0	1610			
Q Serve(g_s), s	14.5	0.0	0.0	0.0	5.0	58.7	0.7	0.0	0.5			
Cycle Q Clear(g_c), s	14.5	0.0	0.0	0.0	5.0	58.7	0.7	0.0	0.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	292	3116	0	0	2354	1050	47	0	42			
V/C Ratio(X)	1.41	0.28	0.00	0.00	0.21	1.23	0.32	0.00	0.24			
Avail Cap(c_a), veh/h	292	3116	0	0	2354	1050	363	0	322			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.85	0.85	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.5	0.0	0.0	0.0	6.3	15.7	43.1	0.0	43.0			
Incr Delay (d2), s/veh	201.0	0.2	0.0	0.0	0.2	111.5	3.9	0.0	2.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	21.0	0.1	0.0	0.0	1.5	48.1	0.4	0.0	0.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	231.5	0.2	0.0	0.0	6.5	127.1	46.9	0.0	45.9			
LnGrp LOS	F	A	A	A	A	F	D	A	D			
Approach Vol, veh/h		1289			1783			25				
Approach Delay, s/veh		73.9			93.8			46.5				
Approach LOS		E			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.7			19.0	63.7		7.3				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			14.5	43.0		18.0				
Max Q Clear Time (g_c+I1), s		2.0			16.5	60.7		2.7				
Green Ext Time (p_c), s		4.0			0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay					85.1							
HCM 6th LOS					F							

Timings
9: I-215 SB Ramps & Ramona Exwy.

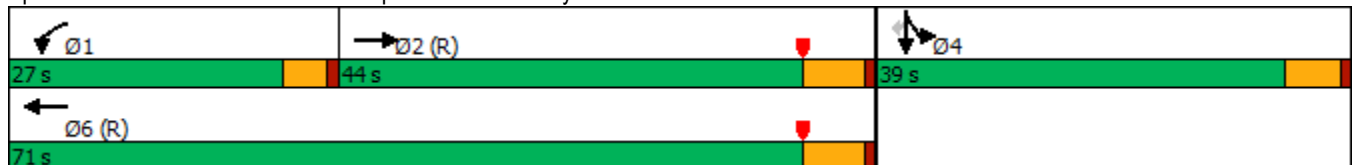


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	759	328	1121	817	2	210
Future Volume (vph)	759	328	1121	817	2	210
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.5	22.0	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.35	0.20	0.59	0.30	0.30	0.30
v/c Ratio	0.92	0.93	0.54	0.80	0.80	0.39
Control Delay	44.6	48.7	4.4	48.2	48.3	20.4
Queue Delay	0.6	0.0	0.7	61.7	61.7	0.0
Total Delay	45.2	48.7	5.1	109.9	110.0	20.4
LOS	D	D	A	F	F	C
Approach Delay	45.2		15.0		91.7	
Approach LOS	D		B		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 46.3
 Intersection LOS: D
 Intersection Capacity Utilization 148.5%
 ICU Level of Service H
 Analysis Period (min) 15

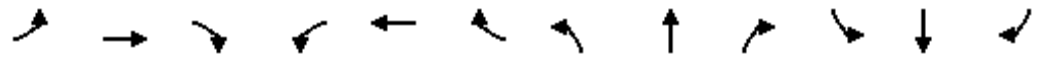
Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↑	↗
Traffic Volume (veh/h)	0	759	364	328	1121	0	0	0	0	817	2	210
Future Volume (veh/h)	0	759	364	328	1121	0	0	0	0	817	2	210
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	774	242	335	1144	0				835	0	151
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	940	294	365	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.12	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2792	843	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	518	498	335	1144	0				835	0	151
Grp Sat Flow(s),veh/h/ln	0	1805	1735	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	28.8	28.9	20.1	27.8	0.0				22.9	0.0	7.9
Cycle Q Clear(g_c), s	0.0	28.8	28.9	20.1	27.8	0.0				22.9	0.0	7.9
Prop In Lane	0.00		0.49	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	629	605	365	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.82	0.82	0.92	0.54	0.00				0.76	0.00	0.31
Avail Cap(c_a), veh/h	0	629	605	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.53	0.53	0.64	0.64	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.8	32.8	47.4	23.5	0.0				34.6	0.0	29.4
Incr Delay (d2), s/veh	0.0	6.5	6.8	19.7	0.6	0.0				4.9	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	12.9	12.4	11.3	12.5	0.0				10.4	0.0	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	39.3	39.6	67.1	24.1	0.0				39.5	0.0	31.0
LnGrp LOS	A	D	D	E	C	A				D	A	C
Approach Vol, veh/h		1016			1479						986	
Approach Delay, s/veh		39.4			33.8						38.2	
Approach LOS		D			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	26.7	44.3		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	22.1	30.9		24.9		29.8						
Green Ext Time (p_c), s	0.0	2.4		2.6		5.3						

Intersection Summary

HCM 6th Ctrl Delay	36.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.

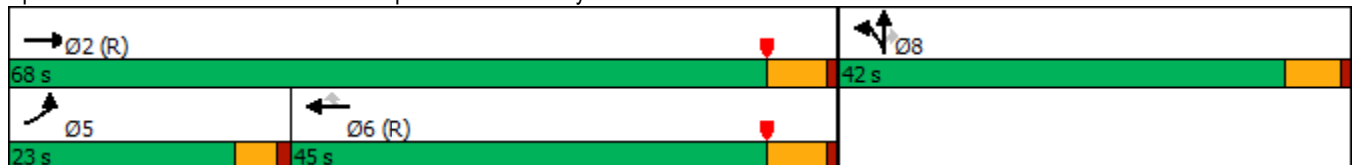


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	159	1417	1051	740	398	4	612
Future Volume (vph)	159	1417	1051	740	398	4	612
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	14.7	62.0	42.8	42.8	36.5	36.5	36.5
Actuated g/C Ratio	0.13	0.56	0.39	0.39	0.33	0.33	0.33
v/c Ratio	0.68	0.72	0.77	0.76	0.36	0.37	1.08
Control Delay	42.4	28.0	34.7	12.0	30.2	30.3	92.3
Queue Delay	0.0	49.5	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	77.5	34.7	12.0	30.2	30.3	92.3
LOS	D	E	C	B	C	C	F
Approach Delay		73.9	25.3			67.7	
Approach LOS		E	C			E	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 52.6
 Intersection LOS: D
 Intersection Capacity Utilization 148.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	159	1417	0	0	1051	740	398	4	612	0	0	0
Future Volume (veh/h)	159	1417	0	0	1051	740	398	4	612	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	164	1461	0	0	1084	615	413	0	479			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	193	2089	0	0	1557	695	1146	0	510			
Arrive On Green	0.21	1.00	0.00	0.00	0.43	0.43	0.32	0.00	0.32			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	164	1461	0	0	1084	615	413	0	479			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	9.6	0.0	0.0	0.0	26.8	38.7	9.7	0.0	31.8			
Cycle Q Clear(g_c), s	9.6	0.0	0.0	0.0	26.8	38.7	9.7	0.0	31.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	193	2089	0	0	1557	695	1146	0	510			
V/C Ratio(X)	0.85	0.70	0.00	0.00	0.70	0.89	0.36	0.00	0.94			
Avail Cap(c_a), veh/h	304	2089	0	0	1557	695	1201	0	534			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.4	0.0	0.0	0.0	25.4	28.8	29.0	0.0	36.6			
Incr Delay (d2), s/veh	4.7	0.7	0.0	0.0	2.6	15.4	0.2	0.0	24.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.9	0.2	0.0	0.0	11.1	16.5	4.1	0.0	15.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.1	0.7	0.0	0.0	28.0	44.2	29.2	0.0	60.8			
LnGrp LOS	D	A	A	A	C	D	C	A	E			
Approach Vol, veh/h		1625			1699			892				
Approach Delay, s/veh		5.4			33.9			46.2				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		69.7			16.2	53.5		40.3				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		2.0			11.6	40.7		33.8				
Green Ext Time (p_c), s		8.0			0.2	0.0		1.0				

Intersection Summary

HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙	↑			↘						↕	
Traffic Vol, veh/h	2	15	0	0	5	7	0	0	0	13	0	1
Future Vol, veh/h	2	15	0	0	5	7	0	0	0	13	0	1
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	27	0	0	9	13	0	0	0	24	0	2

Major/Minor	Major1		Major2				Minor2			
Conflicting Flow All	23	0	-	-	-	0		52	52	17
Stage 1	-	-	-	-	-	-		17	17	-
Stage 2	-	-	-	-	-	-		35	35	-
Critical Hdwy	4.1	-	-	-	-	-		6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.4	5.5	-
Follow-up Hdwy	2.2	-	-	-	-	-		3.5	4	3.3
Pot Cap-1 Maneuver	1605	-	0	0	-	-		962	843	1068
Stage 1	-	-	0	0	-	-		1011	885	-
Stage 2	-	-	0	0	-	-		993	870	-
Platoon blocked, %		-			-	-				
Mov Cap-1 Maneuver	1603	-	-	-	-	-		958	0	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-		893	0	-
Stage 1	-	-	-	-	-	-		1008	0	-
Stage 2	-	-	-	-	-	-		992	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.1
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1603	-	-	-	904
HCM Lane V/C Ratio	0.002	-	-	-	0.028
HCM Control Delay (s)	7.3	-	-	-	9.1
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Timings
2: Harvill Av. & Old Oleander Av.

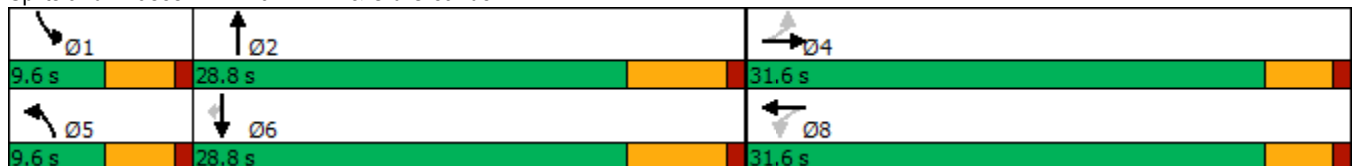


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	34	9	3	12	2	356	2	344	8
Future Volume (vph)	34	9	3	12	2	356	2	344	8
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.8	16.8	16.8	16.8	7.7	20.8	7.7	20.8	20.8
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.27	0.73	0.27	0.73	0.73
v/c Ratio	0.03	0.03	0.00	0.01	0.00	0.15	0.00	0.15	0.01
Control Delay	8.9	6.8	10.0	9.4	21.5	8.0	21.5	8.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	6.8	10.0	9.4	21.5	8.0	21.5	8.0	0.0
LOS	A	A	A	A	C	A	C	A	A
Approach Delay		8.0		9.5		8.1		7.9	
Approach LOS		A		A		A		A	

Intersection Summary

Cycle Length: 70	
Actuated Cycle Length: 28.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.15	
Intersection Signal Delay: 8.0	Intersection LOS: A
Intersection Capacity Utilization 33.7%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
 2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	9	15	3	12	0	2	356	0	2	344	8
Future Volume (veh/h)	34	9	15	3	12	0	2	356	0	2	344	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	38	10	10	3	13	0	2	396	0	2	382	9
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	425	112	112	418	245	0	6	1202	0	6	1202	536
Arrive On Green	0.13	0.13	0.13	0.13	0.13	0.00	0.00	0.33	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1423	872	872	1414	1900	0	1810	3705	0	1810	3610	1610
Grp Volume(v), veh/h	38	0	20	3	13	0	2	396	0	2	382	9
Grp Sat Flow(s),veh/h/ln	1423	0	1743	1414	1900	0	1810	1805	0	1810	1805	1610
Q Serve(g_s), s	0.7	0.0	0.3	0.1	0.2	0.0	0.0	2.4	0.0	0.0	2.3	0.1
Cycle Q Clear(g_c), s	0.9	0.0	0.3	0.3	0.2	0.0	0.0	2.4	0.0	0.0	2.3	0.1
Prop In Lane	1.00		0.50	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	425	0	225	418	245	0	6	1202	0	6	1202	536
V/C Ratio(X)	0.09	0.00	0.09	0.01	0.05	0.00	0.32	0.33	0.00	0.32	0.32	0.02
Avail Cap(c_a), veh/h	1578	0	1636	1563	1783	0	315	2836	0	315	2836	1265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	11.0	11.2	11.0	0.0	14.3	7.2	0.0	14.3	7.2	6.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.1	0.0	10.4	0.2	0.0	10.4	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	0.0	11.2	11.2	11.1	0.0	24.7	7.3	0.0	24.7	7.3	6.4
LnGrp LOS	B	A	B	B	B	A	C	A	A	C	A	A
Approach Vol, veh/h		58			16			398			393	
Approach Delay, s/veh		11.4			11.1			7.4			7.4	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	15.8		8.3	4.7	15.8		8.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+11), s	2.0	4.4		2.9	2.0	4.3		2.3				
Green Ext Time (p_c), s	0.0	2.1		0.2	0.0	2.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				7.7								
HCM 6th LOS				A								

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	4	3	358	362	0
Future Vol, veh/h	0	4	3	358	362	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	165	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	4	3	398	402	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	607	201	402	0	0
Stage 1	402	-	-	-	-
Stage 2	205	-	-	-	-
Critical Hdwy	6.8	6.9	4.1	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-
Pot Cap-1 Maneuver	433	813	1168	-	-
Stage 1	650	-	-	-	-
Stage 2	815	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	432	813	1168	-	-
Mov Cap-2 Maneuver	520	-	-	-	-
Stage 1	648	-	-	-	-
Stage 2	815	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.5	0.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1168	-	813	-	-
HCM Lane V/C Ratio	0.003	-	0.005	-	-
HCM Control Delay (s)	8.1	-	9.5	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

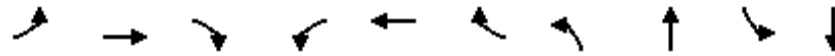
Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖		↗		↕		↖	↕	
Traffic Vol, veh/h	0	0	0	0	0	6	0	355	1	0	366	0
Future Vol, veh/h	0	0	0	0	0	6	0	355	1	0	366	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	0	-	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	0	0	0	0	7	0	394	1	0	407	0

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	599	- 198	- 0 0 395 0 0
Stage 1	395	- -	- - - - -
Stage 2	204	- -	- - - - -
Critical Hdwy	6.8	- 6.9	- - - 4.1 - -
Critical Hdwy Stg 1	5.8	- -	- - - - -
Critical Hdwy Stg 2	5.8	- -	- - - - -
Follow-up Hdwy	3.5	- 3.3	- - - 2.2 - -
Pot Cap-1 Maneuver	438	0 816	0 - - 1175 - 0
Stage 1	656	0 -	0 - - - - 0
Stage 2	816	0 -	0 - - - - 0
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	438	0 816	- - - 1175 - -
Mov Cap-2 Maneuver	526	0 -	- - - - -
Stage 1	656	0 -	- - - - -
Stage 2	816	0 -	- - - - -

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- -	816 1175	-
HCM Lane V/C Ratio	-	- -	0.008 -	-
HCM Control Delay (s)	-	- -	0 9.4 0	-
HCM Lane LOS	-	- -	A A A	-
HCM 95th %tile Q(veh)	-	- -	0 0	-

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

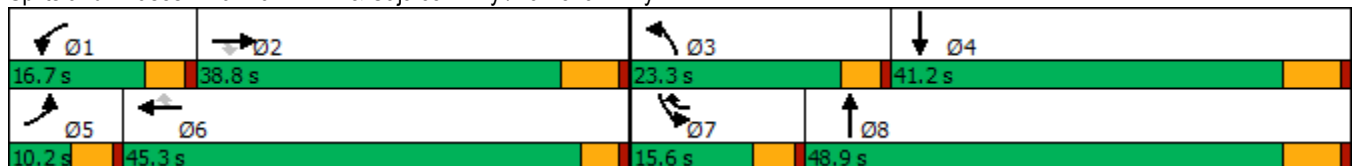


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↗	↘↗	↑↗
Traffic Volume (vph)	24	723	207	132	637	187	165	144	222	211
Future Volume (vph)	24	723	207	132	637	187	165	144	222	211
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.4	29.4	29.4	9.0	38.9	53.8	10.1	42.9	10.4	43.2
Actuated g/C Ratio	0.05	0.26	0.26	0.08	0.34	0.47	0.09	0.38	0.09	0.38
v/c Ratio	0.31	0.83	0.38	0.51	0.55	0.23	0.57	0.21	0.74	0.20
Control Delay	64.0	48.5	6.4	57.6	32.9	3.2	57.5	13.8	65.8	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	48.5	6.4	57.6	32.9	3.2	57.5	13.8	65.8	24.0
LOS	E	D	A	E	C	A	E	B	E	C
Approach Delay		39.7			30.5			30.4		43.8
Approach LOS		D			C			C		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 113.4
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 35.8
 Intersection LOS: D
 Intersection Capacity Utilization 56.8%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖↗	↑↑	↗	↖↗	↑↘		↖↗	↑↘	
Traffic Volume (veh/h)	24	723	207	132	637	187	165	144	125	222	211	35
Future Volume (veh/h)	24	723	207	132	637	187	165	144	125	222	211	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	777	110	142	685	121	177	155	66	239	227	27
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	46	918	409	205	1038	602	245	998	407	302	1352	159
Arrive On Green	0.03	0.25	0.25	0.06	0.29	0.29	0.07	0.40	0.40	0.09	0.42	0.42
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	2501	1020	3510	3253	383
Grp Volume(v), veh/h	26	777	110	142	685	121	177	110	111	239	125	129
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1716	1755	1805	1831
Q Serve(g_s), s	1.5	21.9	5.8	4.2	17.8	5.4	5.3	4.2	4.4	7.1	4.6	4.7
Cycle Q Clear(g_c), s	1.5	21.9	5.8	4.2	17.8	5.4	5.3	4.2	4.4	7.1	4.6	4.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.21
Lane Grp Cap(c), veh/h	46	918	409	205	1038	602	245	721	685	302	750	761
V/C Ratio(X)	0.57	0.85	0.27	0.69	0.66	0.20	0.72	0.15	0.16	0.79	0.17	0.17
Avail Cap(c_a), veh/h	95	1100	491	397	1377	753	614	721	685	361	750	761
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.6	37.9	31.9	49.4	33.5	22.7	48.7	20.6	20.6	47.9	19.6	19.6
Incr Delay (d2), s/veh	4.1	5.4	0.3	1.6	0.7	0.2	1.5	0.4	0.5	7.8	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	9.8	2.2	1.8	7.4	2.0	2.3	1.7	1.8	3.3	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.7	43.3	32.3	51.0	34.2	22.8	50.3	21.0	21.1	55.8	20.1	20.1
LnGrp LOS	E	D	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		913			948			398			493	
Approach Delay, s/veh		42.3			35.3			34.1			37.4	
Approach LOS		D			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	33.4	12.1	50.7	7.3	37.0	13.8	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	6.2	23.9	7.3	6.7	3.5	19.8	9.1	6.4				
Green Ext Time (p_c), s	0.1	3.3	0.2	1.2	0.0	4.5	0.1	1.1				

Intersection Summary

HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	385	86	323	193	0	181
Future Volume (vph)	385	86	323	193	0	181
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	26.0	26.0	30.0	56.0	34.0	34.0
Total Split (%)	28.9%	28.9%	33.3%	62.2%	37.8%	37.8%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	29.5	29.5	20.6	54.6	25.4	25.4
Actuated g/C Ratio	0.33	0.33	0.23	0.61	0.28	0.28
v/c Ratio	0.34	0.15	0.82	0.09	0.81	0.32
Control Delay	26.4	7.3	60.4	14.5	42.4	5.0
Queue Delay	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	26.4	7.3	60.9	14.5	42.4	5.0
LOS	C	A	E	B	D	A
Approach Delay	22.9			43.5	30.5	
Approach LOS	C			D	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 32.5
 Intersection LOS: C
 Intersection Capacity Utilization 68.0%
 ICU Level of Service C
 Analysis Period (min) 15













Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



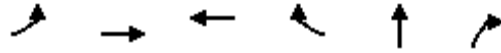
HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	385	86	323	193	0	0	0	0	390	0	181
Future Volume (veh/h)	0	385	86	323	193	0	0	0	0	390	0	181
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	405	52	340	203	0				411	0	98
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1350	602	372	2273	0				469	0	418
Arrive On Green	0.00	0.37	0.37	0.34	1.00	0.00				0.26	0.00	0.26
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1810	0	1610
Grp Volume(v), veh/h	0	405	52	340	203	0				411	0	98
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	7.1	1.9	16.2	0.0	0.0				19.6	0.0	4.3
Cycle Q Clear(g_c), s	0.0	7.1	1.9	16.2	0.0	0.0				19.6	0.0	4.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1350	602	372	2273	0				469	0	418
V/C Ratio(X)	0.00	0.30	0.09	0.91	0.09	0.00				0.88	0.00	0.23
Avail Cap(c_a), veh/h	0	1350	602	513	2273	0				583	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.9	18.2	28.8	0.0	0.0				31.9	0.0	26.3
Incr Delay (d2), s/veh	0.0	0.6	0.3	13.9	0.1	0.0				12.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	0.7	7.2	0.0	0.0				9.9	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	20.4	18.5	42.7	0.1	0.0				43.9	0.0	26.6
LnGrp LOS	A	C	B	D	A	A				D	A	C
Approach Vol, veh/h		457			543						509	
Approach Delay, s/veh		20.2			26.7						40.6	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.0	38.6		28.3		61.7						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	25.5	21.0		29.0		51.0						
Max Q Clear Time (g_c+I1), s	18.2	9.1		21.6		2.0						
Green Ext Time (p_c), s	0.3	1.5		1.8		0.9						
Intersection Summary												
HCM 6th Ctrl Delay				29.4								
HCM 6th LOS				C								

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↶	↷	↷	↷	↷	↷
Traffic Volume (vph)	218	557	497	640	1	218
Future Volume (vph)	218	557	497	640	1	218
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	25.0	67.0	42.0	42.0	23.0	23.0
Total Split (%)	27.8%	74.4%	46.7%	46.7%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	16.1	72.0	51.5	51.5	8.0	8.0
Actuated g/C Ratio	0.18	0.80	0.57	0.57	0.09	0.09
v/c Ratio	0.74	0.21	0.26	0.58	0.13	0.66
Control Delay	57.2	3.1	11.4	3.9	37.7	14.6
Queue Delay	0.0	0.1	0.0	0.0	0.1	0.0
Total Delay	57.2	3.2	11.4	3.9	37.8	14.6
LOS	E	A	B	A	D	B
Approach Delay		18.4	7.2		16.5	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 12.3
 Intersection LOS: B
 Intersection Capacity Utilization 68.0%
 ICU Level of Service C
 Analysis Period (min) 15





















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



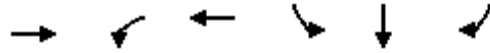
HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	218	557	0	0	497	640	18	1	218	0	0	0
Future Volume (veh/h)	218	557	0	0	497	640	18	1	218	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	237	605	0	0	540	637	20	1	87			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	277	2947	0	0	2215	988	125	6	117			
Arrive On Green	0.10	0.55	0.00	0.00	0.61	0.61	0.07	0.07	0.07			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1727	86	1610			
Grp Volume(v), veh/h	237	605	0	0	540	637	21	0	87			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1814	0	1610			
Q Serve(g_s), s	11.6	7.7	0.0	0.0	6.1	22.8	1.0	0.0	4.8			
Cycle Q Clear(g_c), s	11.6	7.7	0.0	0.0	6.1	22.8	1.0	0.0	4.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	277	2947	0	0	2215	988	131	0	117			
V/C Ratio(X)	0.86	0.21	0.00	0.00	0.24	0.64	0.16	0.00	0.75			
Avail Cap(c_a), veh/h	412	2947	0	0	2215	988	363	0	322			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.95	0.95	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.4	5.5	0.0	0.0	7.9	11.1	39.2	0.0	40.9			
Incr Delay (d2), s/veh	7.2	0.1	0.0	0.0	0.3	3.2	0.6	0.0	9.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.9	2.2	0.0	0.0	2.2	8.0	0.5	0.0	2.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	5.6	0.0	0.0	8.2	14.4	39.7	0.0	50.0			
LnGrp LOS	D	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		842			1177			108				
Approach Delay, s/veh		17.2			11.5			48.0				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		78.5			18.3	60.2		11.5				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			20.5	37.0		18.0				
Max Q Clear Time (g_c+I1), s		9.7			13.6	24.8		6.8				
Green Ext Time (p_c), s		3.0			0.2	3.3		0.2				
Intersection Summary												
HCM 6th Ctrl Delay				15.6								
HCM 6th LOS				B								

Timings
9: I-215 SB Ramps & Ramona Exwy.

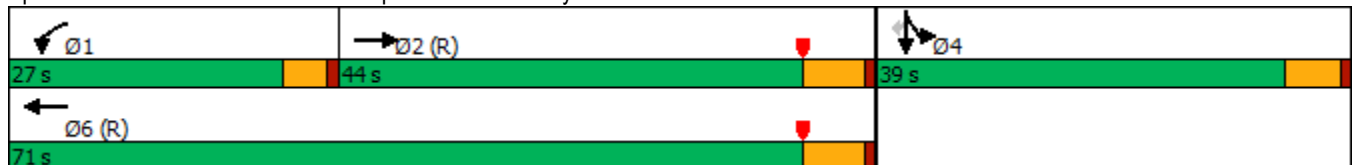


Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	911	369	915	853	8	184
Future Volume (vph)	911	369	915	853	8	184
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.0	22.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.35	0.20	0.59	0.30	0.30	0.30
v/c Ratio	1.03	1.01	0.43	0.83	0.84	0.32
Control Delay	69.1	69.7	5.2	50.4	51.6	10.3
Queue Delay	12.9	0.0	0.4	72.5	72.1	0.0
Total Delay	82.0	69.7	5.6	122.9	123.7	10.3
LOS	F	E	A	F	F	B
Approach Delay	82.0		24.0		103.4	
Approach LOS	F		C		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 67.5
 Intersection LOS: E
 Intersection Capacity Utilization 138.9%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↑	↗
Traffic Volume (veh/h)	0	911	348	369	915	0	0	0	0	853	8	184
Future Volume (veh/h)	0	911	348	369	915	0	0	0	0	853	8	184
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	920	244	373	924	0				868	0	127
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	975	258	370	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.12	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2918	747	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	588	576	373	924	0				868	0	127
Grp Sat Flow(s),veh/h/ln	0	1805	1765	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	34.8	34.9	22.5	21.5	0.0				24.1	0.0	6.6
Cycle Q Clear(g_c), s	0.0	34.8	34.9	22.5	21.5	0.0				24.1	0.0	6.6
Prop In Lane	0.00		0.42	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	624	610	370	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.94	0.95	1.01	0.43	0.00				0.79	0.00	0.26
Avail Cap(c_a), veh/h	0	624	610	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.48	0.48	0.79	0.79	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.9	35.0	48.2	21.5	0.0				35.0	0.0	28.9
Incr Delay (d2), s/veh	0.0	14.5	15.1	43.5	0.5	0.0				5.7	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	16.6	16.4	14.8	9.7	0.0				11.0	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	49.5	50.1	91.8	22.0	0.0				40.7	0.0	30.2
LnGrp LOS	A	D	D	F	C	A				D	A	C
Approach Vol, veh/h		1164			1297						995	
Approach Delay, s/veh		49.8			42.0						39.4	
Approach LOS		D			D						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	27.0	44.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	24.5	36.9		26.1		23.5						
Green Ext Time (p_c), s	0.0	0.6		2.4		4.0						

Intersection Summary

HCM 6th Ctrl Delay	43.9
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	121	1643	913	652	371	4	461
Future Volume (vph)	121	1643	913	652	371	4	461
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	13.1	65.2	47.6	47.6	33.3	33.3	33.3
Actuated g/C Ratio	0.12	0.59	0.43	0.43	0.30	0.30	0.30
v/c Ratio	0.60	0.82	0.62	0.67	0.38	0.39	0.91
Control Delay	39.1	30.9	28.0	7.4	31.7	31.9	52.7
Queue Delay	0.0	48.6	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	79.4	28.0	7.4	31.7	31.9	52.7
LOS	D	E	C	A	C	C	D
Approach Delay		76.7	19.4			43.3	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 48.4
 Intersection LOS: D
 Intersection Capacity Utilization 138.9%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)
 09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↑↑			↑↑	↗	↗	↖	↖			
Traffic Volume (veh/h)	121	1643	0	0	913	652	371	4	461	0	0	0
Future Volume (veh/h)	121	1643	0	0	913	652	371	4	461	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	129	1748	0	0	971	544	398	0	409			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	157	2220	0	0	1759	783	1015	0	452			
Arrive On Green	0.17	1.00	0.00	0.00	0.49	0.49	0.28	0.00	0.28			
Sat Flow, veh/h	1810	3705	0	0	3705	1607	3619	0	1610			
Grp Volume(v), veh/h	129	1748	0	0	971	544	398	0	409			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1607	1810	0	1610			
Q Serve(g_s), s	7.6	0.0	0.0	0.0	20.8	28.9	9.8	0.0	27.0			
Cycle Q Clear(g_c), s	7.6	0.0	0.0	0.0	20.8	28.9	9.8	0.0	27.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	157	2220	0	0	1759	783	1015	0	452			
V/C Ratio(X)	0.82	0.79	0.00	0.00	0.55	0.69	0.39	0.00	0.91			
Avail Cap(c_a), veh/h	304	2220	0	0	1759	783	1201	0	534			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.14	0.14	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.6	0.0	0.0	0.0	19.8	21.9	32.0	0.0	38.2			
Incr Delay (d2), s/veh	1.6	0.4	0.0	0.0	1.3	5.0	0.2	0.0	17.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.1	0.1	0.0	0.0	8.2	10.8	4.2	0.0	12.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	0.4	0.0	0.0	21.0	26.9	32.2	0.0	55.4			
LnGrp LOS	D	A	A	A	C	C	C	A	E			
Approach Vol, veh/h		1877			1515			807				
Approach Delay, s/veh		3.6			23.1			44.0				
Approach LOS		A			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.7			14.0	59.6		36.3				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		2.0			9.6	30.9		29.0				
Green Ext Time (p_c), s		11.2			0.2	3.4		1.9				

Intersection Summary

HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

**APPENDIX 3.3: EXISTING (2022) CONDITIONS TRAFFIC SIGNAL
WARRANT ANALYSIS WORKSHEETS**

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2022) Conditions - Weekday PM Peak Hour**

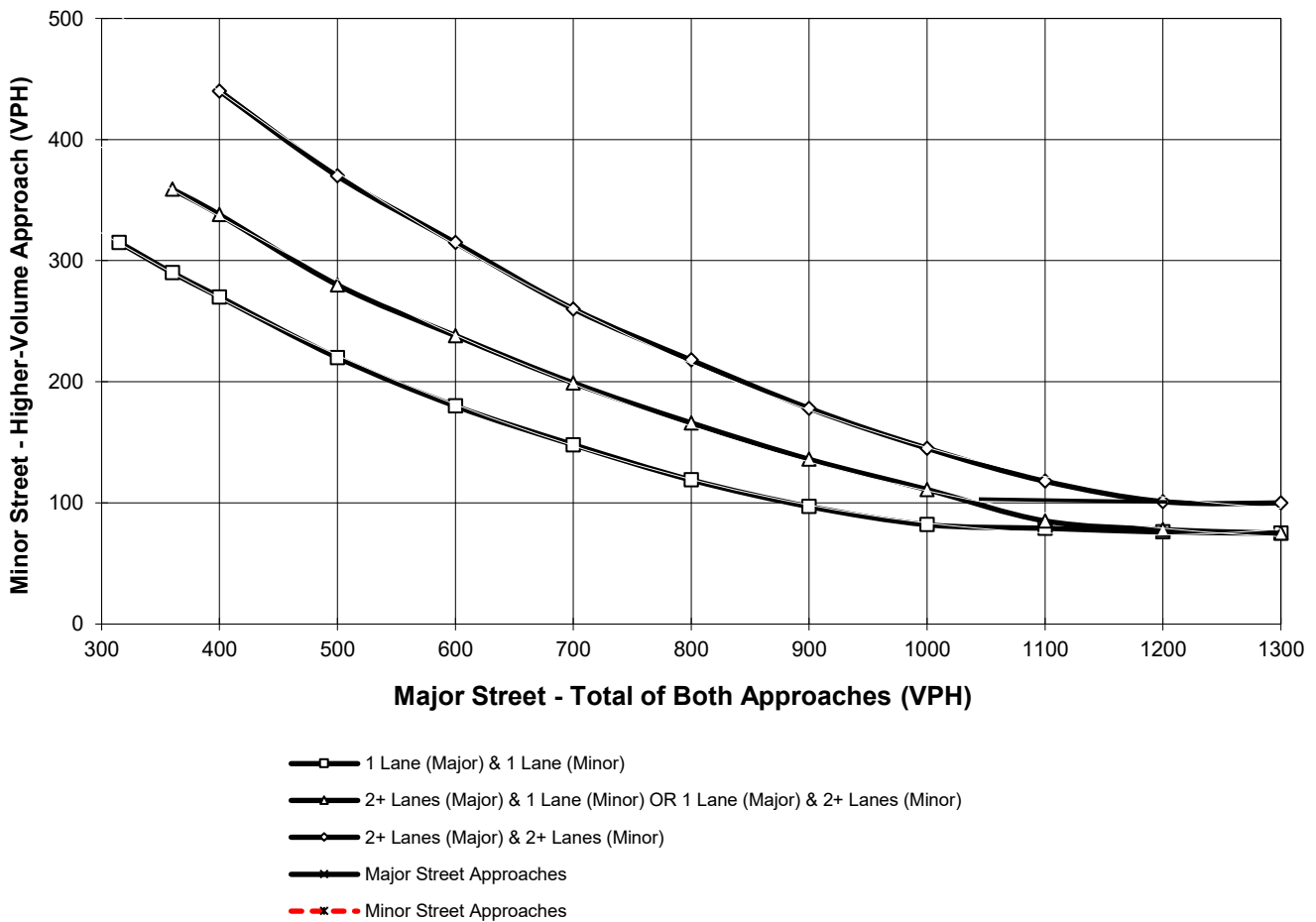
Major Street Name = **Old Oleander Av.**

Total of Both Approaches (VPH) = **29**
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 1**

High Volume Approach (VPH) = **14**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2022) Conditions - Weekday PM Peak Hour**

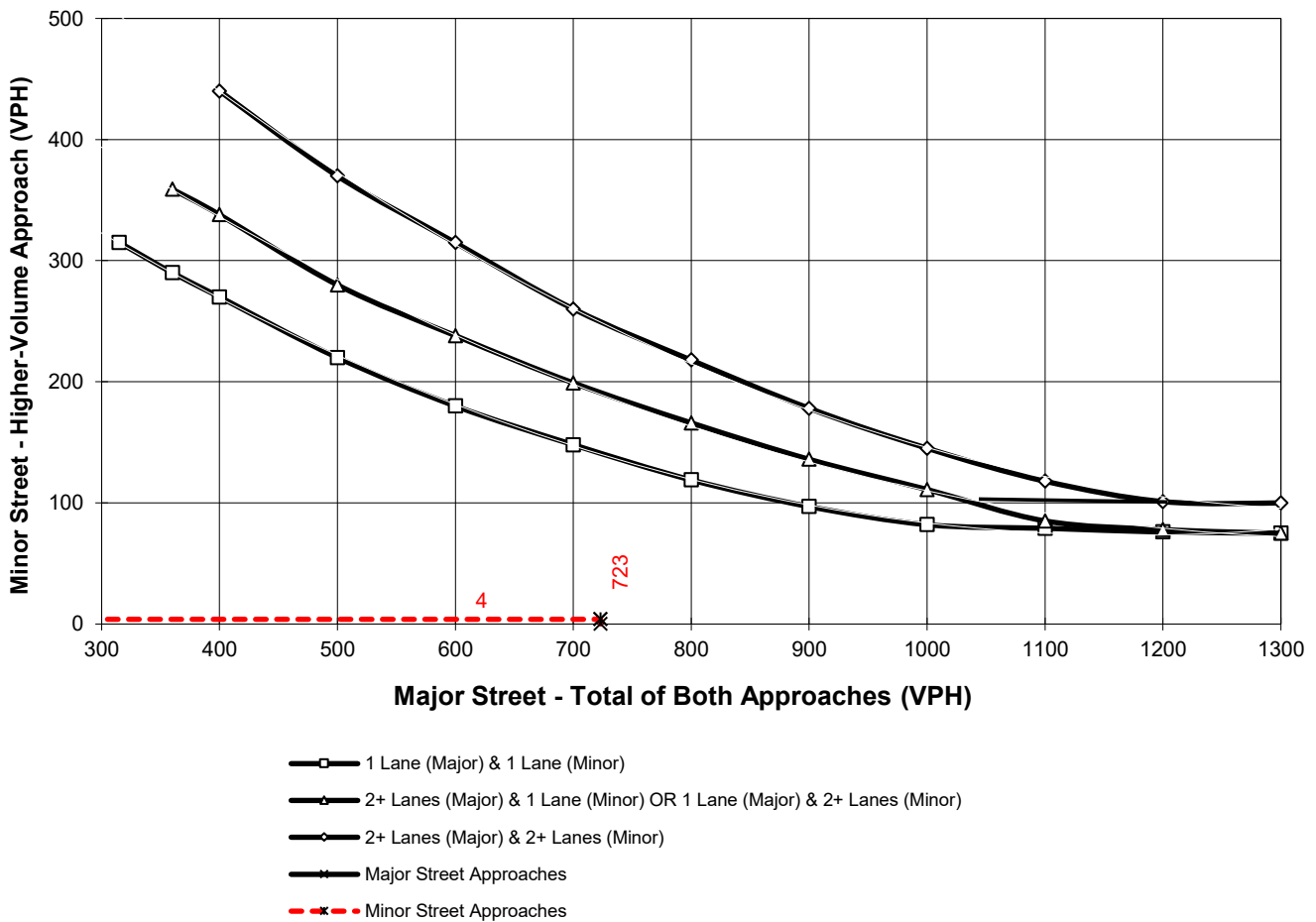
Major Street Name = **Harvill Av.**

Total of Both Approaches (VPH) = **723**
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **Peregrine Wy.**

High Volume Approach (VPH) = **4**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **Existing (2022) Conditions - Weekday PM Peak Hour**

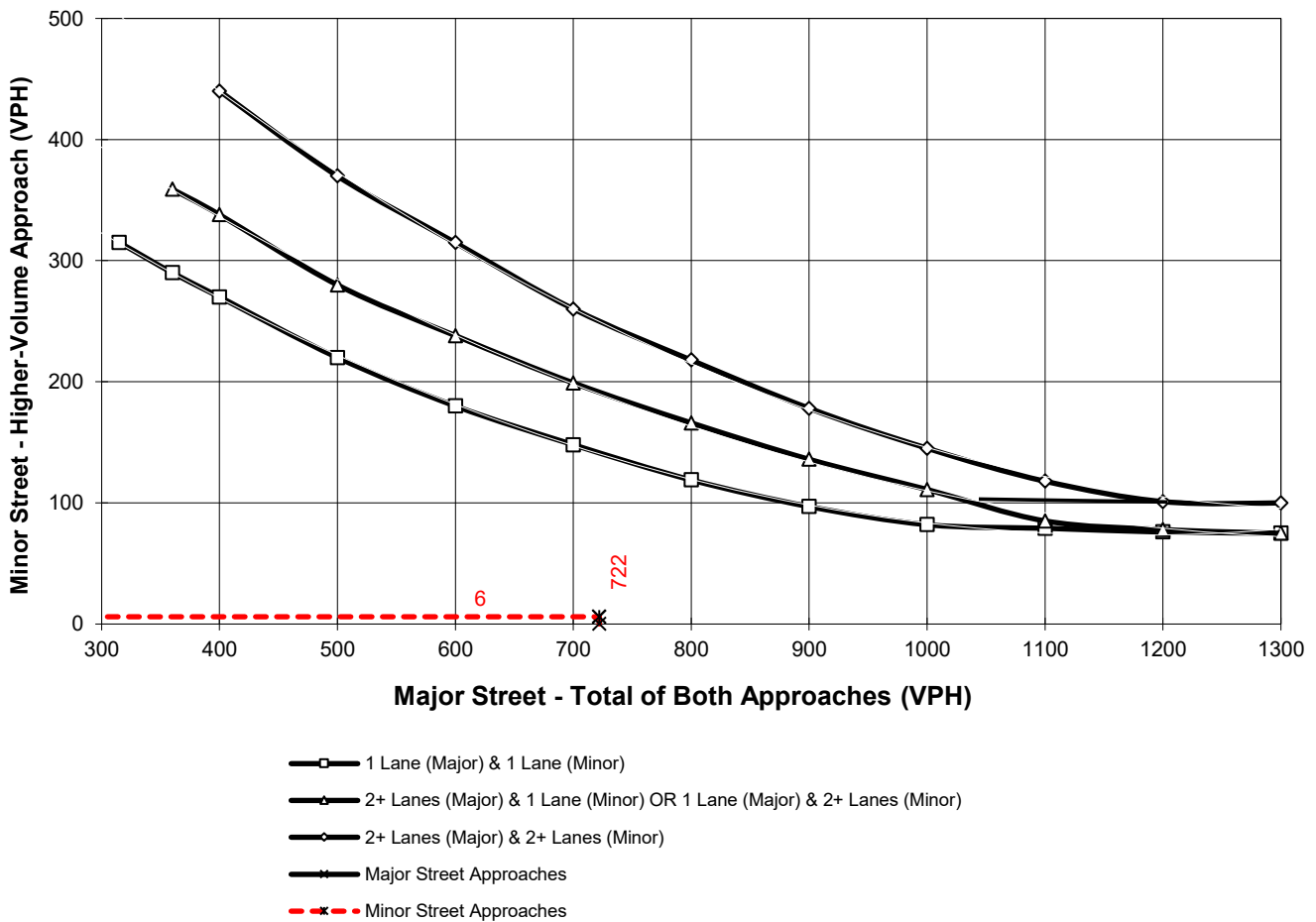
Major Street Name = **Harvill Av.**

Total of Both Approaches (VPH) = **722**
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **America's Tire**

High Volume Approach (VPH) = **6**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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**APPENDIX 3.4: EXISTING (2022) CONDITIONS FREEWAY OFF-RAMP
QUEUING ANALYSIS WORKSHEETS**

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Queues

7: I-215 SB Ramps & Harley Knox Bl.



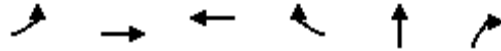
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	579	5	184	280	606	182
v/c Ratio	0.52	0.01	0.73	0.16	0.86	0.25
Control Delay	29.2	0.0	54.1	5.0	38.4	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	0.0	54.1	5.0	38.4	3.4
Queue Length 50th (ft)	148	0	89	13	298	0
Queue Length 95th (ft)	213	0	#70	11	425	36
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1134	561	293	1811	786	804
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.01	0.63	0.15	0.77	0.23

Intersection Summary

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

Queues

8: I-215 NB Ramps & Harley Knox Bl.



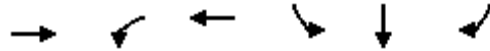
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	411	878	493	1409	15	47
v/c Ratio	0.68	0.27	0.28	1.28	0.12	0.25
Control Delay	30.3	1.3	14.6	151.5	40.8	7.0
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	30.3	1.5	14.6	151.5	40.8	7.0
Queue Length 50th (ft)	225	39	85	~838	8	0
Queue Length 95th (ft)	m#349	46	115	#1052	26	13
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	601	3203	1738	1097	362	386
Starvation Cap Reductn	0	1340	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.47	0.28	1.28	0.04	0.12

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1145	335	1144	417	419	214
v/c Ratio	0.92	0.93	0.54	0.80	0.80	0.39
Control Delay	44.6	48.7	4.4	48.2	48.3	20.4
Queue Delay	0.6	0.0	0.7	61.7	61.7	0.0
Total Delay	45.2	48.7	5.1	109.9	110.0	20.4
Queue Length 50th (ft)	383	93	54	284	285	70
Queue Length 95th (ft)	#523	m#346	24	#445	#448	138
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1248	369	2133	522	523	549
Starvation Cap Reductn	0	0	579	0	0	0
Spillback Cap Reductn	14	0	0	325	326	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.91	0.74	2.12	2.13	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	164	1461	1084	763	205	209	631
v/c Ratio	0.68	0.72	0.77	0.76	0.36	0.37	1.08
Control Delay	42.4	28.0	34.7	12.0	30.2	30.3	92.3
Queue Delay	0.0	49.5	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	77.5	34.7	12.0	30.2	30.3	92.3
Queue Length 50th (ft)	120	576	349	76	114	117	~462
Queue Length 95th (ft)	m127	m634	457	268	184	187	#685
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2034	1403	1000	569	570	585
Starvation Cap Reductn	0	1006	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	1.42	0.77	0.76	0.36	0.37	1.08

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

7: I-215 SB Ramps & Harley Knox Bl.

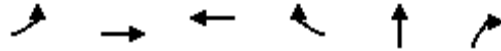


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	405	91	340	203	411	191
v/c Ratio	0.34	0.15	0.82	0.09	0.81	0.32
Control Delay	26.4	7.3	60.4	14.5	42.4	5.0
Queue Delay	0.0	0.0	0.4	0.0	0.0	0.0
Total Delay	26.4	7.3	60.9	14.5	42.4	5.0
Queue Length 50th (ft)	93	0	213	23	213	0
Queue Length 95th (ft)	152	37	300	100	304	45
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1189	593	511	2204	589	655
Starvation Cap Reductn	0	0	24	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.15	0.70	0.09	0.70	0.29

Intersection Summary

Queues

8: I-215 NB Ramps & Harley Knox Bl.

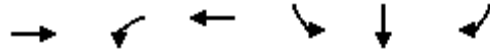


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	237	605	540	696	21	237
v/c Ratio	0.74	0.21	0.26	0.58	0.13	0.66
Control Delay	57.2	3.1	11.4	3.9	37.7	14.6
Queue Delay	0.0	0.1	0.0	0.0	0.1	0.0
Total Delay	57.2	3.2	11.4	3.9	37.8	14.6
Queue Length 50th (ft)	148	45	72	9	11	0
Queue Length 95th (ft)	m218	42	140	84	32	64
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	417	2889	2064	1205	362	512
Starvation Cap Reductn	0	1204	0	0	0	0
Spillback Cap Reductn	0	0	42	0	55	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.36	0.27	0.58	0.07	0.46

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
 9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1272	373	924	431	439	186
v/c Ratio	1.03	1.01	0.43	0.83	0.84	0.32
Control Delay	69.1	69.7	5.2	50.4	51.6	10.3
Queue Delay	12.9	0.0	0.4	72.5	72.1	0.0
Total Delay	82.0	69.7	5.6	122.9	123.7	10.3
Queue Length 50th (ft)	~494	~242	74	296	304	24
Queue Length 95th (ft)	#633	#441	22	#468	#481	78
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1231	369	2133	522	523	588
Starvation Cap Reductn	0	0	659	0	0	0
Spillback Cap Reductn	40	0	0	414	415	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.07	1.01	0.63	3.99	4.06	0.32

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	129	1748	971	694	197	202	490
v/c Ratio	0.60	0.82	0.62	0.67	0.38	0.39	0.91
Control Delay	39.1	30.9	28.0	7.4	31.7	31.9	52.7
Queue Delay	0.0	48.6	0.0	0.0	0.0	0.0	0.0
Total Delay	39.1	79.4	28.0	7.4	31.7	31.9	52.7
Queue Length 50th (ft)	88	664	289	32	109	112	276
Queue Length 95th (ft)	m82	m661	392	164	176	181	#457
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2139	1562	1038	569	570	585
Starvation Cap Reductn	0	992	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.52	0.62	0.67	0.35	0.35	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 5.1: EAP (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵			↕			↕	
Traffic Vol, veh/h	0	15	0	6	18	5	0	0	5	4	0	0
Future Vol, veh/h	0	15	0	6	18	5	0	0	5	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	19	0	8	23	6	0	0	6	5	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	29	0	0	19	0	0	61	64	19	64	61	26
Stage 1	-	-	-	-	-	-	19	19	-	42	42	-
Stage 2	-	-	-	-	-	-	42	45	-	22	19	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1597	-	-	1611	-	-	939	831	1065	935	834	1056
Stage 1	-	-	-	-	-	-	1005	884	-	978	864	-
Stage 2	-	-	-	-	-	-	978	861	-	1002	884	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1597	-	-	1611	-	-	935	827	1065	926	830	1056
Mov Cap-2 Maneuver	-	-	-	-	-	-	876	773	-	871	774	-
Stage 1	-	-	-	-	-	-	1005	884	-	978	860	-
Stage 2	-	-	-	-	-	-	973	857	-	996	884	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.5	8.4	9.2
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1065	1597	-	-	1611	-	-	871
HCM Lane V/C Ratio	0.006	-	-	-	0.005	-	-	0.006
HCM Control Delay (s)	8.4	0	-	-	7.2	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Timings
2: Harvill Av. & Old Oleander Av.

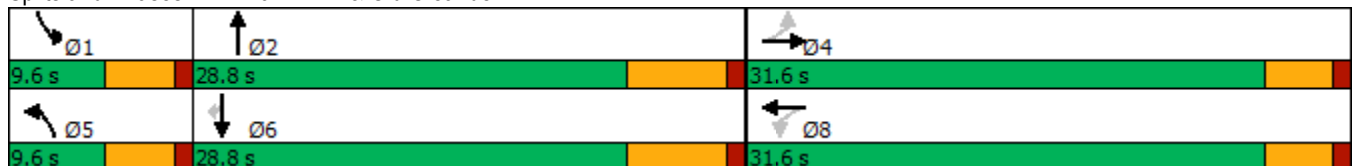


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	32	3	1	2	11	469	4	294	15
Future Volume (vph)	32	3	1	2	11	469	4	294	15
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.3	15.3	15.3	15.3	6.9	22.0	6.9	22.0	22.0
Actuated g/C Ratio	0.51	0.51	0.51	0.51	0.23	0.73	0.23	0.73	0.73
v/c Ratio	0.04	0.01	0.00	0.01	0.03	0.19	0.01	0.12	0.01
Control Delay	9.2	8.3	10.0	8.6	20.5	8.0	21.0	8.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	8.3	10.0	8.6	20.5	8.0	21.0	8.0	0.0
LOS	A	A	A	A	C	A	C	A	A
Approach Delay		9.0		8.8		8.3		7.7	
Approach LOS		A		A		A		A	

Intersection Summary

Cycle Length: 70	
Actuated Cycle Length: 30	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.19	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 33.7%	ICU Level of Service A
Analysis Period (min) 15	























Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	3	4	1	2	3	11	469	2	4	294	15
Future Volume (veh/h)	32	3	4	1	2	3	11	469	2	4	294	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	3	4	1	2	3	12	499	2	4	313	16
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	392	72	96	391	67	100	29	1286	5	10	1222	545
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.02	0.35	0.35	0.01	0.34	0.34
Sat Flow, veh/h	1434	738	984	1431	686	1029	1810	3688	15	1810	3610	1610
Grp Volume(v), veh/h	34	0	7	1	0	5	12	244	257	4	313	16
Grp Sat Flow(s),veh/h/ln	1434	0	1723	1431	0	1715	1810	1805	1897	1810	1805	1610
Q Serve(g_s), s	0.6	0.0	0.1	0.0	0.0	0.1	0.2	2.9	2.9	0.1	1.8	0.2
Cycle Q Clear(g_c), s	0.7	0.0	0.1	0.1	0.0	0.1	0.2	2.9	2.9	0.1	1.8	0.2
Prop In Lane	1.00		0.57	1.00		0.60	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	392	0	168	391	0	167	29	630	662	10	1222	545
V/C Ratio(X)	0.09	0.00	0.04	0.00	0.00	0.03	0.42	0.39	0.39	0.40	0.26	0.03
Avail Cap(c_a), veh/h	1630	0	1656	1626	0	1648	322	1452	1526	322	2904	1295
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	11.5	11.5	0.0	11.5	13.7	6.9	6.9	13.9	6.7	6.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	0.1	3.5	0.4	0.4	9.6	0.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.5	0.0	0.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	11.6	11.5	0.0	11.5	17.2	7.3	7.3	23.5	6.8	6.2
LnGrp LOS	B	A	B	B	A	B	B	A	A	C	A	A
Approach Vol, veh/h		41			6			513			333	
Approach Delay, s/veh		11.8			11.5			7.5			7.0	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	16.0		7.3	5.0	15.7		7.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+I1), s	2.1	4.9		2.7	2.2	3.8		2.1				
Green Ext Time (p_c), s	0.0	2.3		0.1	0.0	1.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				7.5								
HCM 6th LOS				A								

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	1	0	481	297	2
Future Vol, veh/h	0	1	0	481	297	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	512	316	2

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	159	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	864	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	864	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	864	-	-
HCM Lane V/C Ratio	-	0.001	-	-
HCM Control Delay (s)	-	9.2	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↕			↕	
Traffic Vol, veh/h	1	0	1	0	0	0	5	481	0	0	297	2
Future Vol, veh/h	1	0	1	0	0	0	5	481	0	0	297	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	1	0	0	0	5	523	0	0	323	2

Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	596	857	163				325	0	-	-	-	0
Stage 1	324	324	-				-	-	-	-	-	-
Stage 2	272	533	-				-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9				4.1	-	-	-	-	-
Critical Hdwy Stg 1	5.8	5.5	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-				-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3				2.2	-	-	-	-	-
Pot Cap-1 Maneuver	440	297	859				1246	-	0	0	-	-
Stage 1	711	653	-				-	-	0	0	-	-
Stage 2	755	528	-				-	-	0	0	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	438	0	859				1246	-	-	-	-	-
Mov Cap-2 Maneuver	533	0	-				-	-	-	-	-	-
Stage 1	708	0	-				-	-	-	-	-	-
Stage 2	755	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1246	-	658	-	-
HCM Lane V/C Ratio	0.004	-	0.003	-	-
HCM Control Delay (s)	7.9	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

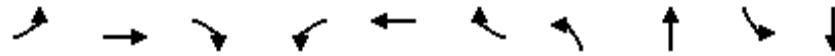
Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	3	0	0	0	7	483	0	3	291	4
Future Vol, veh/h	3	0	3	0	0	0	7	483	0	3	291	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	100	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	3	0	0	0	7	514	0	3	310	4

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	589	846	157	689	848	257	314	0	0	514	0	0
Stage 1	318	318	-	528	528	-	-	-	-	-	-	-
Stage 2	271	528	-	161	320	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	396	301	867	336	301	748	1258	-	-	1062	-	-
Stage 1	673	657	-	507	531	-	-	-	-	-	-	-
Stage 2	717	531	-	831	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	394	298	867	333	298	748	1258	-	-	1062	-	-
Mov Cap-2 Maneuver	394	298	-	419	399	-	-	-	-	-	-	-
Stage 1	669	655	-	504	528	-	-	-	-	-	-	-
Stage 2	713	528	-	826	654	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.7	0	0.1	0.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1258	-	-	542	-	-	1062	-	-
HCM Lane V/C Ratio	0.006	-	-	0.012	-	-	0.003	-	-
HCM Control Delay (s)	7.9	-	-	11.7	0	0	8.4	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	-	-	0	-	-

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

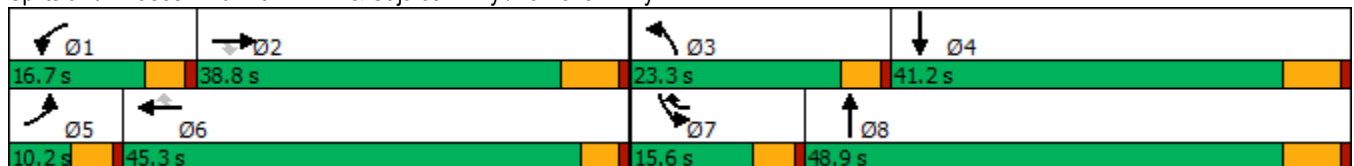


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↘	↘↗	↑↘
Traffic Volume (vph)	51	721	53	177	718	116	315	359	204	123
Future Volume (vph)	51	721	53	177	718	116	315	359	204	123
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.5	29.1	29.1	10.2	37.7	52.3	15.1	42.9	10.1	37.9
Actuated g/C Ratio	0.05	0.26	0.26	0.09	0.33	0.46	0.13	0.38	0.09	0.33
v/c Ratio	0.64	0.84	0.10	0.61	0.65	0.15	0.73	0.35	0.70	0.14
Control Delay	86.8	49.7	0.4	59.5	35.9	3.6	57.8	26.0	64.3	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.8	49.7	0.4	59.5	35.9	3.6	57.8	26.0	64.3	25.1
LOS	F	D	A	E	D	A	E	C	E	C
Approach Delay		48.9			36.3			39.3		47.6
Approach LOS		D			D			D		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 114
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 42.0
 Intersection LOS: D
 Intersection Capacity Utilization 61.3%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	721	53	177	718	116	315	359	80	204	123	28
Future Volume (veh/h)	51	721	53	177	718	116	315	359	80	204	123	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	55	775	6	190	772	57	339	386	32	219	132	28
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	71	907	405	254	1027	588	408	1334	110	282	1072	222
Arrive On Green	0.04	0.25	0.25	0.07	0.28	0.28	0.12	0.40	0.40	0.08	0.36	0.36
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	3373	278	3510	2978	616
Grp Volume(v), veh/h	55	775	6	190	772	57	339	206	212	219	79	81
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1846	1755	1805	1789
Q Serve(g_s), s	3.3	22.1	0.3	5.7	21.0	2.5	10.2	8.4	8.5	6.6	3.1	3.3
Cycle Q Clear(g_c), s	3.3	22.1	0.3	5.7	21.0	2.5	10.2	8.4	8.5	6.6	3.1	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.15	1.00		0.34
Lane Grp Cap(c), veh/h	71	907	405	254	1027	588	408	714	730	282	649	644
V/C Ratio(X)	0.77	0.85	0.01	0.75	0.75	0.10	0.83	0.29	0.29	0.78	0.12	0.13
Avail Cap(c_a), veh/h	94	1090	486	394	1365	738	608	714	730	358	649	644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	38.5	30.4	49.1	35.1	22.6	46.6	22.2	22.3	48.7	23.1	23.2
Incr Delay (d2), s/veh	17.5	5.8	0.0	1.6	1.7	0.1	3.8	1.0	1.0	6.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.9	0.1	2.5	8.9	0.9	4.5	3.5	3.6	3.0	1.3	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	44.4	30.4	50.7	36.8	22.6	50.5	23.3	23.3	54.6	23.5	23.6
LnGrp LOS	E	D	C	D	D	C	D	C	C	D	C	C
Approach Vol, veh/h		836			1019			757				379
Approach Delay, s/veh		45.9			38.6			35.4				41.5
Approach LOS		D			D			D				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	33.3	17.2	45.0	8.8	36.9	13.3	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	7.7	24.1	12.2	5.3	5.3	23.0	8.6	10.5				
Green Ext Time (p_c), s	0.1	3.0	0.4	0.7	0.0	4.6	0.1	2.2				

Intersection Summary

HCM 6th Ctrl Delay	40.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

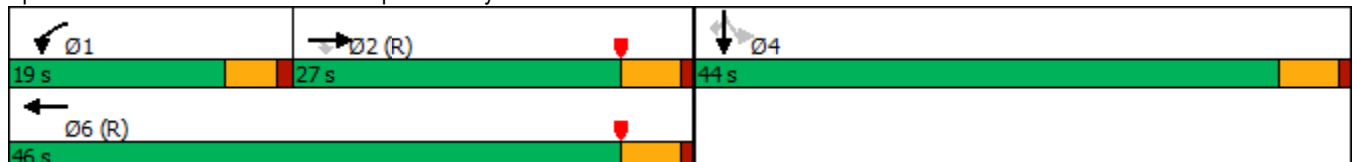


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↖	↑↑	↙	↖
Traffic Volume (vph)	598	5	187	285	3	198
Future Volume (vph)	598	5	187	285	3	198
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	27.0	27.0	19.0	46.0	44.0	44.0
Total Split (%)	30.0%	30.0%	21.1%	51.1%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	26.7	26.7	12.8	44.0	36.0	36.0
Actuated g/C Ratio	0.30	0.30	0.14	0.49	0.40	0.40
v/c Ratio	0.58	0.01	0.76	0.17	0.89	0.27
Control Delay	31.0	0.0	53.0	4.7	40.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	0.0	53.0	4.7	40.6	3.3
LOS	C	A	D	A	D	A
Approach Delay	30.7			23.9	31.6	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 29.4
 Intersection LOS: C
 Intersection Capacity Utilization 144.6%
 ICU Level of Service H
 Analysis Period (min) 15













Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



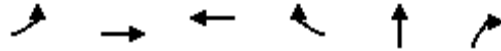
HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	598	5	187	285	0	0	0	0	614	3	198
Future Volume (veh/h)	0	598	5	187	285	0	0	0	0	614	3	198
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	623	3	195	297	0				640	3	110
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1166	520	233	1813	0				697	3	623
Arrive On Green	0.00	0.32	0.32	0.04	0.17	0.00				0.39	0.39	0.39
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1801	8	1610
Grp Volume(v), veh/h	0	623	3	195	297	0				643	0	110
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	12.7	0.1	9.6	6.3	0.0				30.4	0.0	4.0
Cycle Q Clear(g_c), s	0.0	12.7	0.1	9.6	6.3	0.0				30.4	0.0	4.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1166	520	233	1813	0				700	0	623
V/C Ratio(X)	0.00	0.53	0.01	0.84	0.16	0.00				0.92	0.00	0.18
Avail Cap(c_a), veh/h	0	1166	520	292	1813	0				784	0	698
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.96	0.96	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	24.9	20.7	42.1	21.3	0.0				26.2	0.0	18.2
Incr Delay (d2), s/veh	0.0	1.8	0.0	12.5	0.2	0.0				14.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	0.0	5.2	2.6	0.0				14.6	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	26.7	20.7	54.7	21.5	0.0				41.1	0.0	18.3
LnGrp LOS	A	C	C	D	C	A				D	A	B
Approach Vol, veh/h		626			492						753	
Approach Delay, s/veh		26.6			34.7						37.7	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.1	34.1		39.8		50.2						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	14.5	22.0		39.0		41.0						
Max Q Clear Time (g_c+I1), s	11.6	14.7		32.4		8.3						
Green Ext Time (p_c), s	0.1	1.6		2.4		1.1						
Intersection Summary												
HCM 6th Ctrl Delay				33.2								
HCM 6th LOS				C								

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↖	↗
Traffic Volume (vph)	392	820	461	1315	1	43
Future Volume (vph)	392	820	461	1315	1	43
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	19.0	67.0	48.0	48.0	23.0	23.0
Total Split (%)	21.1%	74.4%	53.3%	53.3%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	30.4	79.9	43.0	43.0	6.3	6.3
Actuated g/C Ratio	0.34	0.89	0.48	0.48	0.07	0.07
v/c Ratio	0.73	0.29	0.30	1.37	0.12	0.26
Control Delay	31.2	1.4	15.0	189.4	40.8	7.5
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	31.2	1.6	15.0	189.4	40.8	7.5
LOS	C	A	B	F	D	A
Approach Delay		11.2	144.1		15.3	
Approach LOS		B	F		B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.37
 Intersection Signal Delay: 88.8
 Intersection LOS: F
 Intersection Capacity Utilization 144.6%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



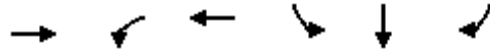
HCM 6th Signalized Intersection Summary
8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	392	820	0	0	461	1315	12	1	43	0	0	0
Future Volume (veh/h)	392	820	0	0	461	1315	12	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	445	932	0	0	524	1375	14	1	12			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	292	3110	0	0	2348	1047	46	3	44			
Arrive On Green	0.32	1.00	0.00	0.00	0.65	0.65	0.03	0.03	0.03			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1694	121	1610			
Grp Volume(v), veh/h	445	932	0	0	524	1375	15	0	12			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1815	0	1610			
Q Serve(g_s), s	14.5	0.0	0.0	0.0	5.3	58.5	0.7	0.0	0.7			
Cycle Q Clear(g_c), s	14.5	0.0	0.0	0.0	5.3	58.5	0.7	0.0	0.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	292	3110	0	0	2348	1047	50	0	44			
V/C Ratio(X)	1.53	0.30	0.00	0.00	0.22	1.31	0.30	0.00	0.27			
Avail Cap(c_a), veh/h	292	3110	0	0	2348	1047	363	0	322			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.5	0.0	0.0	0.0	6.4	15.7	42.9	0.0	42.9			
Incr Delay (d2), s/veh	250.3	0.2	0.0	0.0	0.2	147.6	3.4	0.0	3.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	25.0	0.1	0.0	0.0	1.7	58.5	0.4	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	280.8	0.2	0.0	0.0	6.6	163.3	46.3	0.0	46.2			
LnGrp LOS	F	A	A	A	A	F	D	A	D			
Approach Vol, veh/h		1377			1899			27				
Approach Delay, s/veh		90.9			120.1			46.3				
Approach LOS		F			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.5			19.0	63.5		7.5				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			14.5	43.0		18.0				
Max Q Clear Time (g_c+I1), s		2.0			16.5	60.5		2.7				
Green Ext Time (p_c), s		4.3			0.0	0.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay					107.3							
HCM 6th LOS					F							

Timings
9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	414	280	959	843	2	167
Future Volume (vph)	414	280	959	843	2	167
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	39.8	20.7	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.36	0.19	0.59	0.30	0.30	0.30
v/c Ratio	0.54	0.84	0.46	0.82	0.83	0.30
Control Delay	22.6	40.2	5.6	50.2	50.4	11.0
Queue Delay	0.0	0.0	0.5	53.1	53.0	0.0
Total Delay	22.6	40.2	6.1	103.3	103.4	11.0
LOS	C	D	A	F	F	B
Approach Delay	22.6		13.8		88.2	
Approach LOS	C		B		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 41.3
 Intersection LOS: D
 Intersection Capacity Utilization 120.4%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↑	↖
Traffic Volume (veh/h)	0	414	293	280	959	0	0	0	0	843	2	167
Future Volume (veh/h)	0	414	293	280	959	0	0	0	0	843	2	167
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	422	170	286	979	0				861	0	107
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	937	373	320	2133	0				1102	0	490
Arrive On Green	0.00	0.37	0.37	0.11	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2605	1000	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	302	290	286	979	0				861	0	107
Grp Sat Flow(s),veh/h/ln	0	1805	1705	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	13.9	14.1	17.2	23.0	0.0				23.9	0.0	5.4
Cycle Q Clear(g_c), s	0.0	13.9	14.1	17.2	23.0	0.0				23.9	0.0	5.4
Prop In Lane	0.00		0.59	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	674	637	320	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.45	0.46	0.89	0.46	0.00				0.78	0.00	0.22
Avail Cap(c_a), veh/h	0	674	637	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.48	0.48	0.80	0.80	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	25.9	26.0	48.2	21.9	0.0				34.9	0.0	28.5
Incr Delay (d2), s/veh	0.0	1.0	1.1	17.9	0.6	0.0				5.5	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.8	5.6	9.5	10.4	0.0				10.8	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	27.0	27.2	66.0	22.5	0.0				40.4	0.0	29.5
LnGrp LOS	A	C	C	E	C	A				D	A	C
Approach Vol, veh/h		592			1265						968	
Approach Delay, s/veh		27.1			32.4						39.2	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	23.9	47.1		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	19.2	16.1		25.9		25.0						
Green Ext Time (p_c), s	0.3	1.9		2.4		4.3						

Intersection Summary

HCM 6th Ctrl Delay	33.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↙	↕	↙	↘	↙	↕	↘
Traffic Volume (vph)	126	1136	917	589	323	4	487
Future Volume (vph)	126	1136	917	589	323	4	487
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	13.2	64.8	47.1	47.1	33.7	33.7	33.7
Actuated g/C Ratio	0.12	0.59	0.43	0.43	0.31	0.31	0.31
v/c Ratio	0.60	0.55	0.61	0.60	0.32	0.32	0.92
Control Delay	50.7	14.1	27.9	6.2	30.4	30.3	54.5
Queue Delay	0.0	24.6	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	38.7	27.9	6.2	30.4	30.3	54.5
LOS	D	D	C	A	C	C	D
Approach Delay		39.9	19.4			44.8	
Approach LOS		D	B			D	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 32.4
 Intersection LOS: C
 Intersection Capacity Utilization 120.4%
 ICU Level of Service H
 Analysis Period (min) 15






















Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	126	1136	0	0	917	589	323	4	487	0	0	0
Future Volume (veh/h)	126	1136	0	0	917	589	323	4	487	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	130	1171	0	0	945	459	336	0	350			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	158	2347	0	0	1884	840	888	0	395			
Arrive On Green	0.17	1.00	0.00	0.00	0.52	0.52	0.25	0.00	0.25			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	130	1171	0	0	945	459	336	0	350			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	7.6	0.0	0.0	0.0	18.7	21.0	8.5	0.0	23.1			
Cycle Q Clear(g_c), s	7.6	0.0	0.0	0.0	18.7	21.0	8.5	0.0	23.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	158	2347	0	0	1884	840	888	0	395			
V/C Ratio(X)	0.82	0.50	0.00	0.00	0.50	0.55	0.38	0.00	0.89			
Avail Cap(c_a), veh/h	304	2347	0	0	1884	840	1201	0	534			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	44.6	0.0	0.0	0.0	17.0	17.6	34.5	0.0	40.0			
Incr Delay (d2), s/veh	7.5	0.5	0.0	0.0	1.0	2.5	0.3	0.0	13.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.4	0.2	0.0	0.0	7.2	7.5	3.6	0.0	10.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	0.5	0.0	0.0	18.0	20.1	34.8	0.0	53.0			
LnGrp LOS	D	A	A	A	B	C	C	A	D			
Approach Vol, veh/h		1301			1404			686				
Approach Delay, s/veh		5.7			18.7			44.1				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.5			14.1	63.4		32.5				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		2.0			9.6	23.0		25.1				
Green Ext Time (p_c), s		5.6			0.2	4.4		1.9				

Intersection Summary

HCM 6th Ctrl Delay	18.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	15	0	3	5	7	0	0	4	14	0	1
Future Vol, veh/h	2	15	0	3	5	7	0	0	4	14	0	1
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	27	0	5	9	13	0	0	7	25	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	23	0	0	27	0	0	62	68	27	66	62	17
Stage 1	-	-	-	-	-	-	35	35	-	27	27	-
Stage 2	-	-	-	-	-	-	27	33	-	39	35	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1605	-	-	1600	-	-	938	826	1054	932	833	1068
Stage 1	-	-	-	-	-	-	986	870	-	996	877	-
Stage 2	-	-	-	-	-	-	996	872	-	981	870	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1603	-	-	1600	-	-	932	821	1054	921	828	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	875	770	-	866	774	-
Stage 1	-	-	-	-	-	-	984	868	-	993	873	-
Stage 2	-	-	-	-	-	-	991	869	-	972	868	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.9			1.5			8.4			9.2		
HCM LOS							A			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	1054	1603	-	-	1600	-	-	877
HCM Lane V/C Ratio	0.007	0.002	-	-	0.003	-	-	0.031
HCM Control Delay (s)	8.4	7.3	-	-	7.3	-	-	9.2
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Timings
2: Harvill Av. & Old Oleander Av.

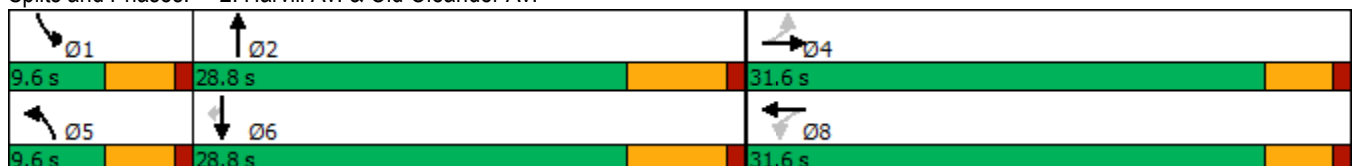


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	40	10	3	13	2	388	2	368	11
Future Volume (vph)	40	10	3	13	2	388	2	368	11
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.8	16.8	16.8	16.8	7.7	20.8	7.7	20.8	20.8
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.27	0.73	0.27	0.73	0.73
v/c Ratio	0.04	0.03	0.00	0.01	0.00	0.16	0.00	0.16	0.01
Control Delay	8.8	6.7	10.0	9.5	21.5	8.0	21.5	8.0	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.8	6.7	10.0	9.5	21.5	8.0	21.5	8.0	0.0
LOS	A	A	A	A	C	A	C	A	A
Approach Delay		8.0		9.6		8.1		7.9	
Approach LOS		A		A		A		A	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 28.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.16
 Intersection Signal Delay: 8.0
 Intersection LOS: A
 Intersection Capacity Utilization 33.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
 2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↘		↗	↘		↗	↕		↗	↕	↗
Traffic Volume (veh/h)	40	10	16	3	13	0	2	388	0	2	368	11
Future Volume (veh/h)	40	10	16	3	13	0	2	388	0	2	368	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	44	11	11	3	14	0	2	431	0	2	409	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	438	124	124	430	269	0	6	1194	0	6	1194	532
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.00	0.00	0.33	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1422	872	872	1412	1900	0	1810	3705	0	1810	3610	1610
Grp Volume(v), veh/h	44	0	22	3	14	0	2	431	0	2	409	12
Grp Sat Flow(s),veh/h/ln	1422	0	1743	1412	1900	0	1810	1805	0	1810	1805	1610
Q Serve(g_s), s	0.8	0.0	0.3	0.1	0.2	0.0	0.0	2.7	0.0	0.0	2.5	0.1
Cycle Q Clear(g_c), s	1.0	0.0	0.3	0.4	0.2	0.0	0.0	2.7	0.0	0.0	2.5	0.1
Prop In Lane	1.00		0.50	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	0	247	430	269	0	6	1194	0	6	1194	532
V/C Ratio(X)	0.10	0.00	0.09	0.01	0.05	0.00	0.32	0.36	0.00	0.32	0.34	0.02
Avail Cap(c_a), veh/h	1545	0	1604	1529	1748	0	308	2780	0	308	2780	1240
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	0.0	10.9	11.1	10.9	0.0	14.6	7.5	0.0	14.6	7.4	6.6
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.0	0.1	0.0	10.9	0.2	0.0	10.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	0.0	11.1	11.1	11.0	0.0	25.5	7.6	0.0	25.5	7.6	6.6
LnGrp LOS	B	A	B	B	B	A	C	A	A	C	A	A
Approach Vol, veh/h		66			17			433			423	
Approach Delay, s/veh		11.3			11.0			7.7			7.6	
Approach LOS		B			B			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	15.9		8.8	4.7	15.9		8.8				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+1), s	2.0	4.7		3.0	2.0	4.5		2.4				
Green Ext Time (p_c), s	0.0	2.3		0.2	0.0	2.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	6	0	390	387	1
Future Vol, veh/h	0	6	0	390	387	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	0	433	430	1

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	216	-	0	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	795	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	795	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT EBLn1	SBT	SBR
Capacity (veh/h)	- 795	-	-
HCM Lane V/C Ratio	- 0.008	-	-
HCM Control Delay (s)	- 9.6	-	-
HCM Lane LOS	- A	-	-
HCM 95th %tile Q(veh)	- 0	-	-

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔					↔	↑↑			↑↑	
Traffic Vol, veh/h	4	0	4	0	0	0	2	386	0	0	392	1
Future Vol, veh/h	4	0	4	0	0	0	2	386	0	0	392	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	0	4	0	0	0	2	420	0	0	426	1

Major/Minor	Minor2			Major1			Major2					
Conflicting Flow All	641	851	214				427	0	-	-	-	0
Stage 1	427	427	-				-	-	-	-	-	-
Stage 2	214	424	-				-	-	-	-	-	-
Critical Hdwy	6.8	6.5	6.9				4.1	-	-	-	-	-
Critical Hdwy Stg 1	5.8	5.5	-				-	-	-	-	-	-
Critical Hdwy Stg 2	5.8	5.5	-				-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3				2.2	-	-	-	-	-
Pot Cap-1 Maneuver	412	299	797				1143	-	0	0	-	-
Stage 1	632	589	-				-	-	0	0	-	-
Stage 2	807	590	-				-	-	0	0	-	-
Platoon blocked, %								-			-	-
Mov Cap-1 Maneuver	411	0	797				1143	-	-	-	-	-
Mov Cap-2 Maneuver	504	0	-				-	-	-	-	-	-
Stage 1	631	0	-				-	-	-	-	-	-
Stage 2	807	0	-				-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1143	-	618	-	-
HCM Lane V/C Ratio	0.002	-	0.014	-	-
HCM Control Delay (s)	8.2	-	10.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

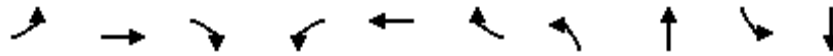
Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	7	0	0	6	3	379	1	0	394	2
Future Vol, veh/h	3	0	7	0	0	6	3	379	1	0	394	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	100	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	8	0	0	7	3	421	1	0	438	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	656	867	220	647	868	211	440	0	0	422	0	0
Stage 1	439	439	-	428	428	-	-	-	-	-	-	-
Stage 2	217	428	-	219	440	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	355	293	790	360	293	801	1131	-	-	1148	-	-
Stage 1	572	582	-	581	588	-	-	-	-	-	-	-
Stage 2	771	588	-	769	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	351	292	790	356	292	801	1131	-	-	1148	-	-
Mov Cap-2 Maneuver	351	292	-	456	399	-	-	-	-	-	-	-
Stage 1	570	582	-	579	586	-	-	-	-	-	-	-
Stage 2	763	586	-	761	581	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.4		9.5		0.1		0	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1131	-	-	574	-	801	1148	-	-
HCM Lane V/C Ratio	0.003	-	-	0.019	-	0.008	-	-	-
HCM Control Delay (s)	8.2	-	-	11.4	0	9.5	0	-	-
HCM Lane LOS	A	-	-	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	0	-	-

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

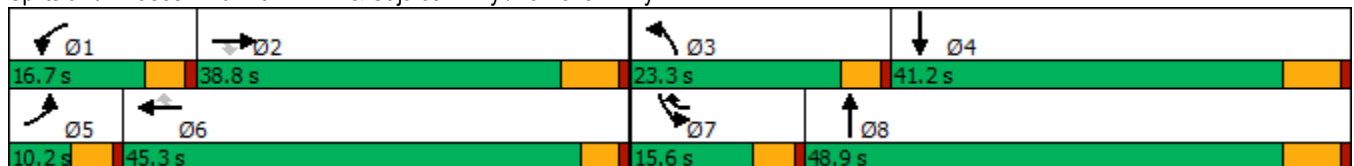


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↘	↘↗	↑↘
Traffic Volume (vph)	26	767	220	140	676	202	175	154	244	227
Future Volume (vph)	26	767	220	140	676	202	175	154	244	227
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.4	30.4	30.4	9.3	40.1	55.2	10.6	42.8	10.7	42.9
Actuated g/C Ratio	0.05	0.26	0.26	0.08	0.35	0.48	0.09	0.37	0.09	0.37
v/c Ratio	0.33	0.86	0.39	0.54	0.58	0.24	0.58	0.23	0.81	0.22
Control Delay	65.3	50.9	6.3	58.4	33.3	3.1	58.0	14.1	71.1	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.3	50.9	6.3	58.4	33.3	3.1	58.0	14.1	71.1	24.9
LOS	E	D	A	E	C	A	E	B	E	C
Approach Delay		41.6			30.8			30.7		47.0
Approach LOS		D			C			C		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 114.8
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 37.2
 Intersection LOS: D
 Intersection Capacity Utilization 58.8%
 ICU Level of Service B
 Analysis Period (min) 15

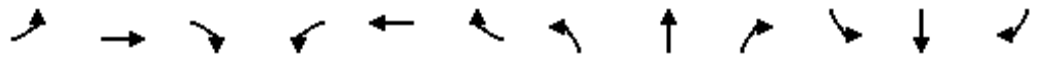
Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	767	220	140	676	202	175	154	132	244	227	39
Future Volume (veh/h)	26	767	220	140	676	202	175	154	132	244	227	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	28	825	124	151	727	137	188	166	74	262	244	31
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	47	950	424	213	1074	627	254	956	408	322	1315	165
Arrive On Green	0.03	0.26	0.26	0.06	0.30	0.30	0.07	0.39	0.39	0.09	0.41	0.41
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	2463	1052	3510	3227	405
Grp Volume(v), veh/h	28	825	124	151	727	137	188	120	120	262	135	140
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1711	1755	1805	1827
Q Serve(g_s), s	1.7	24.0	6.8	4.6	19.5	6.2	5.8	4.8	5.1	8.1	5.3	5.4
Cycle Q Clear(g_c), s	1.7	24.0	6.8	4.6	19.5	6.2	5.8	4.8	5.1	8.1	5.3	5.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		0.22
Lane Grp Cap(c), veh/h	47	950	424	213	1074	627	254	700	664	322	736	745
V/C Ratio(X)	0.59	0.87	0.29	0.71	0.68	0.22	0.74	0.17	0.18	0.81	0.18	0.19
Avail Cap(c_a), veh/h	92	1070	477	386	1339	745	597	700	664	351	736	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.0	38.7	32.4	50.7	34.0	22.4	50.0	22.1	22.2	49.0	20.9	20.9
Incr Delay (d2), s/veh	4.3	7.2	0.4	1.6	1.0	0.2	1.6	0.5	0.6	11.4	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	11.0	2.6	2.0	8.2	2.3	2.5	2.0	2.0	3.9	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.3	45.9	32.8	52.3	35.0	22.6	51.6	22.6	22.8	60.4	21.4	21.5
LnGrp LOS	E	D	C	D	C	C	D	C	C	E	C	C
Approach Vol, veh/h		977			1015			428			537	
Approach Delay, s/veh		44.6			35.9			35.4			40.5	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	35.1	12.6	51.0	7.5	38.9	14.7	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	6.6	26.0	7.8	7.4	3.7	21.5	10.1	7.1				
Green Ext Time (p_c), s	0.1	2.9	0.2	1.3	0.0	4.7	0.1	1.2				

Intersection Summary

HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

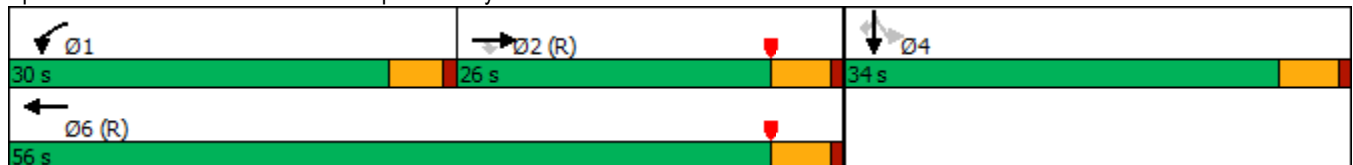


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	420	91	342	204	0	198
Future Volume (vph)	420	91	342	204	0	198
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	26.0	26.0	30.0	56.0	34.0	34.0
Total Split (%)	28.9%	28.9%	33.3%	62.2%	37.8%	37.8%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	27.6	27.6	21.4	53.5	26.5	26.5
Actuated g/C Ratio	0.31	0.31	0.24	0.59	0.29	0.29
v/c Ratio	0.40	0.17	0.84	0.10	0.82	0.33
Control Delay	28.2	7.3	59.9	12.7	42.4	4.8
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	28.2	7.3	60.6	12.7	42.4	4.8
LOS	C	A	E	B	D	A
Approach Delay	24.5			42.7	30.3	
Approach LOS	C			D	C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 32.6
 Intersection LOS: C
 Intersection Capacity Utilization 71.7%
 ICU Level of Service C
 Analysis Period (min) 15

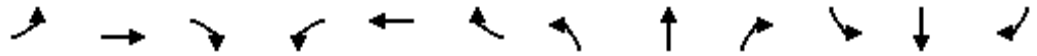
Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

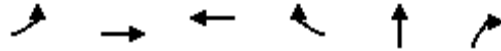
MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑						↖	↗
Traffic Volume (veh/h)	0	420	91	342	204	0	0	0	0	413	0	198
Future Volume (veh/h)	0	420	91	342	204	0	0	0	0	413	0	198
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	442	57	360	215	0				435	0	115
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1267	565	391	2229	0				491	0	437
Arrive On Green	0.00	0.35	0.35	0.36	1.00	0.00				0.27	0.00	0.27
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1810	0	1610
Grp Volume(v), veh/h	0	442	57	360	215	0				435	0	115
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	8.1	2.1	17.1	0.0	0.0				20.7	0.0	5.0
Cycle Q Clear(g_c), s	0.0	8.1	2.1	17.1	0.0	0.0				20.7	0.0	5.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1267	565	391	2229	0				491	0	437
V/C Ratio(X)	0.00	0.35	0.10	0.92	0.10	0.00				0.89	0.00	0.26
Avail Cap(c_a), veh/h	0	1267	565	513	2229	0				583	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.97	0.97	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.6	19.6	28.0	0.0	0.0				31.4	0.0	25.7
Incr Delay (d2), s/veh	0.0	0.8	0.4	16.0	0.1	0.0				13.5	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	0.8	7.7	0.0	0.0				10.6	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.4	20.0	44.0	0.1	0.0				44.9	0.0	26.0
LnGrp LOS	A	C	C	D	A	A				D	A	C
Approach Vol, veh/h		499			575						550	
Approach Delay, s/veh		22.1			27.6						41.0	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	24.0	36.6		29.4		60.6						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	25.5	21.0		29.0		51.0						
Max Q Clear Time (g_c+I1), s	19.1	10.1		22.7		2.0						
Green Ext Time (p_c), s	0.3	1.6		1.7		1.0						
Intersection Summary												
HCM 6th Ctrl Delay				30.4								
HCM 6th LOS				C								

Timings
8: I-215 NB Ramps & Harley Knox Bl.

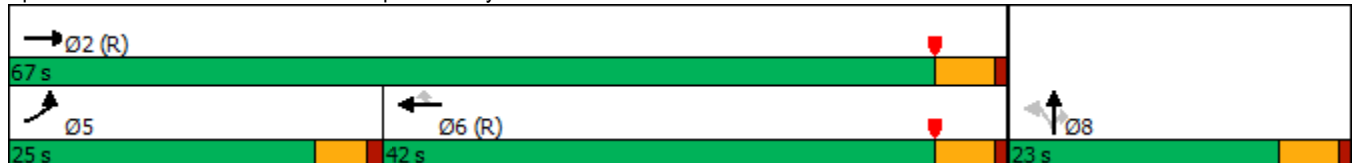


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↶	↷	↷	↷	↷	↷
Traffic Volume (vph)	242	591	527	679	1	231
Future Volume (vph)	242	591	527	679	1	231
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	25.0	67.0	42.0	42.0	23.0	23.0
Total Split (%)	27.8%	74.4%	46.7%	46.7%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	17.3	72.0	50.2	50.2	8.0	8.0
Actuated g/C Ratio	0.19	0.80	0.56	0.56	0.09	0.09
v/c Ratio	0.76	0.22	0.28	0.62	0.14	0.67
Control Delay	53.4	2.7	12.3	5.4	37.7	14.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	53.4	2.8	12.4	5.4	37.7	14.6
LOS	D	A	B	A	D	B
Approach Delay		17.5	8.4		16.5	
Approach LOS		B	A		B	

Intersection Summary



















Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 12.6
 Intersection LOS: B
 Intersection Capacity Utilization 71.7%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.

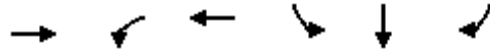


HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)
 09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	591	0	0	527	679	19	1	231	0	0	0
Future Volume (veh/h)	242	591	0	0	527	679	19	1	231	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	263	642	0	0	573	679	21	1	101			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	303	2911	0	0	2127	949	143	7	133			
Arrive On Green	0.11	0.54	0.00	0.00	0.59	0.59	0.08	0.08	0.08			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1731	82	1610			
Grp Volume(v), veh/h	263	642	0	0	573	679	22	0	101			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1813	0	1610			
Q Serve(g_s), s	12.9	8.4	0.0	0.0	7.0	27.0	1.0	0.0	5.5			
Cycle Q Clear(g_c), s	12.9	8.4	0.0	0.0	7.0	27.0	1.0	0.0	5.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	303	2911	0	0	2127	949	149	0	133			
V/C Ratio(X)	0.87	0.22	0.00	0.00	0.27	0.72	0.15	0.00	0.76			
Avail Cap(c_a), veh/h	412	2911	0	0	2127	949	363	0	322			
HCM Platoon Ratio	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.0	5.9	0.0	0.0	9.0	13.1	38.4	0.0	40.4			
Incr Delay (d2), s/veh	10.3	0.2	0.0	0.0	0.3	4.6	0.4	0.0	8.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.8	2.6	0.0	0.0	2.6	9.9	0.5	0.0	2.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	6.1	0.0	0.0	9.3	17.7	38.8	0.0	49.1			
LnGrp LOS	D	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		905			1252			123				
Approach Delay, s/veh		18.7			13.9			47.2				
Approach LOS		B			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			19.6	58.0		12.4				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			20.5	37.0		18.0				
Max Q Clear Time (g_c+I1), s		10.4			14.9	29.0		7.5				
Green Ext Time (p_c), s		3.2			0.2	2.9		0.3				
Intersection Summary												
HCM 6th Ctrl Delay					17.6							
HCM 6th LOS					B							

Timings
9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	634	322	749	802	8	146
Future Volume (vph)	634	322	749	802	8	146
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.7	21.8	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.35	0.20	0.59	0.30	0.30	0.30
v/c Ratio	0.74	0.91	0.35	0.78	0.79	0.25
Control Delay	33.1	51.8	6.8	46.5	47.5	5.8
Queue Delay	0.0	0.0	0.3	55.8	55.6	0.0
Total Delay	33.1	51.8	7.0	102.4	103.0	5.8
LOS	C	D	A	F	F	A
Approach Delay	33.1		20.5		87.9	
Approach LOS	C		C		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 46.3
 Intersection LOS: D
 Intersection Capacity Utilization 113.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↖	↖
Traffic Volume (veh/h)	0	634	284	322	749	0	0	0	0	802	8	146
Future Volume (veh/h)	0	634	284	322	749	0	0	0	0	802	8	146
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	640	179	325	757	0				816	0	88
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	985	275	356	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.12	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2881	778	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	414	405	325	757	0				816	0	88
Grp Sat Flow(s),veh/h/ln	0	1805	1760	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	21.2	21.2	19.5	17.0	0.0				22.3	0.0	4.4
Cycle Q Clear(g_c), s	0.0	21.2	21.2	19.5	17.0	0.0				22.3	0.0	4.4
Prop In Lane	0.00		0.44	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	638	622	356	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.65	0.65	0.91	0.35	0.00				0.74	0.00	0.18
Avail Cap(c_a), veh/h	0	638	622	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.41	0.41	0.90	0.90	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	29.9	29.9	47.6	20.0	0.0				34.3	0.0	28.1
Incr Delay (d2), s/veh	0.0	2.1	2.2	24.0	0.4	0.0				4.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.0	8.8	11.4	7.7	0.0				10.0	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	32.0	32.1	71.6	20.4	0.0				38.8	0.0	28.9
LnGrp LOS	A	C	C	E	C	A				D	A	C
Approach Vol, veh/h		819			1082						904	
Approach Delay, s/veh		32.0			35.8						37.9	
Approach LOS		C			D						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	26.1	44.9		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	21.5	23.2		24.3		19.0						
Green Ext Time (p_c), s	0.1	2.5		2.5		3.1						

Intersection Summary

HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.

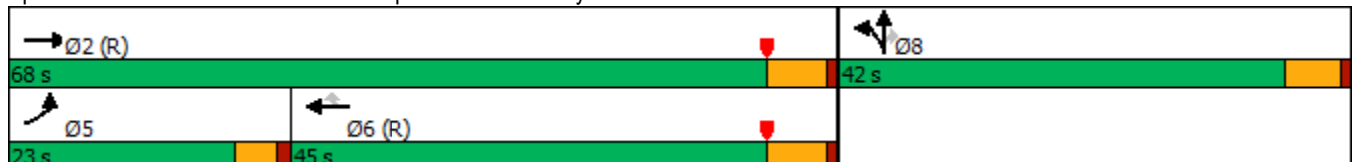


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↖	↗
Traffic Volume (vph)	96	1343	774	519	298	4	367
Future Volume (vph)	96	1343	774	519	298	4	367
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	11.5	70.3	54.3	54.3	28.2	28.2	28.2
Actuated g/C Ratio	0.10	0.64	0.49	0.49	0.26	0.26	0.26
v/c Ratio	0.54	0.62	0.46	0.52	0.37	0.36	0.83
Control Delay	41.4	19.3	21.3	3.9	34.5	34.3	46.1
Queue Delay	0.0	48.1	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	67.5	21.3	3.9	34.5	34.3	46.1
LOS	D	E	C	A	C	C	D
Approach Delay		65.7	14.3			40.8	
Approach LOS		E	B			D	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 41.3
 Intersection LOS: D
 Intersection Capacity Utilization 113.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	96	1343	0	0	774	519	298	4	367	0	0	0
Future Volume (veh/h)	96	1343	0	0	774	519	298	4	367	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	102	1429	0	0	823	402	320	0	309			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	128	2437	0	0	2033	906	798	0	355			
Arrive On Green	0.14	1.00	0.00	0.00	0.56	0.56	0.22	0.00	0.22			
Sat Flow, veh/h	1810	3705	0	0	3705	1608	3619	0	1610			
Grp Volume(v), veh/h	102	1429	0	0	823	402	320	0	309			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1608	1810	0	1610			
Q Serve(g_s), s	6.0	0.0	0.0	0.0	14.2	16.0	8.3	0.0	20.4			
Cycle Q Clear(g_c), s	6.0	0.0	0.0	0.0	14.2	16.0	8.3	0.0	20.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	128	2437	0	0	2033	906	798	0	355			
V/C Ratio(X)	0.80	0.59	0.00	0.00	0.40	0.44	0.40	0.00	0.87			
Avail Cap(c_a), veh/h	304	2437	0	0	2033	906	1201	0	534			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.58	0.58	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.5	0.0	0.0	0.0	13.6	14.0	36.7	0.0	41.4			
Incr Delay (d2), s/veh	6.5	0.6	0.0	0.0	0.6	1.6	0.3	0.0	9.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.7	0.2	0.0	0.0	5.3	5.5	3.6	0.0	8.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.9	0.6	0.0	0.0	14.2	15.6	37.0	0.0	51.2			
LnGrp LOS	D	A	A	A	B	B	D	A	D			
Approach Vol, veh/h		1531			1225			629				
Approach Delay, s/veh		4.1			14.6			44.0				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		80.2			12.3	68.0		29.8				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		2.0			8.0	18.0		22.4				
Green Ext Time (p_c), s		7.7			0.1	3.9		1.9				

Intersection Summary

HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 5.2: EAP (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2025) Conditions - Weekday PM Peak Hour**

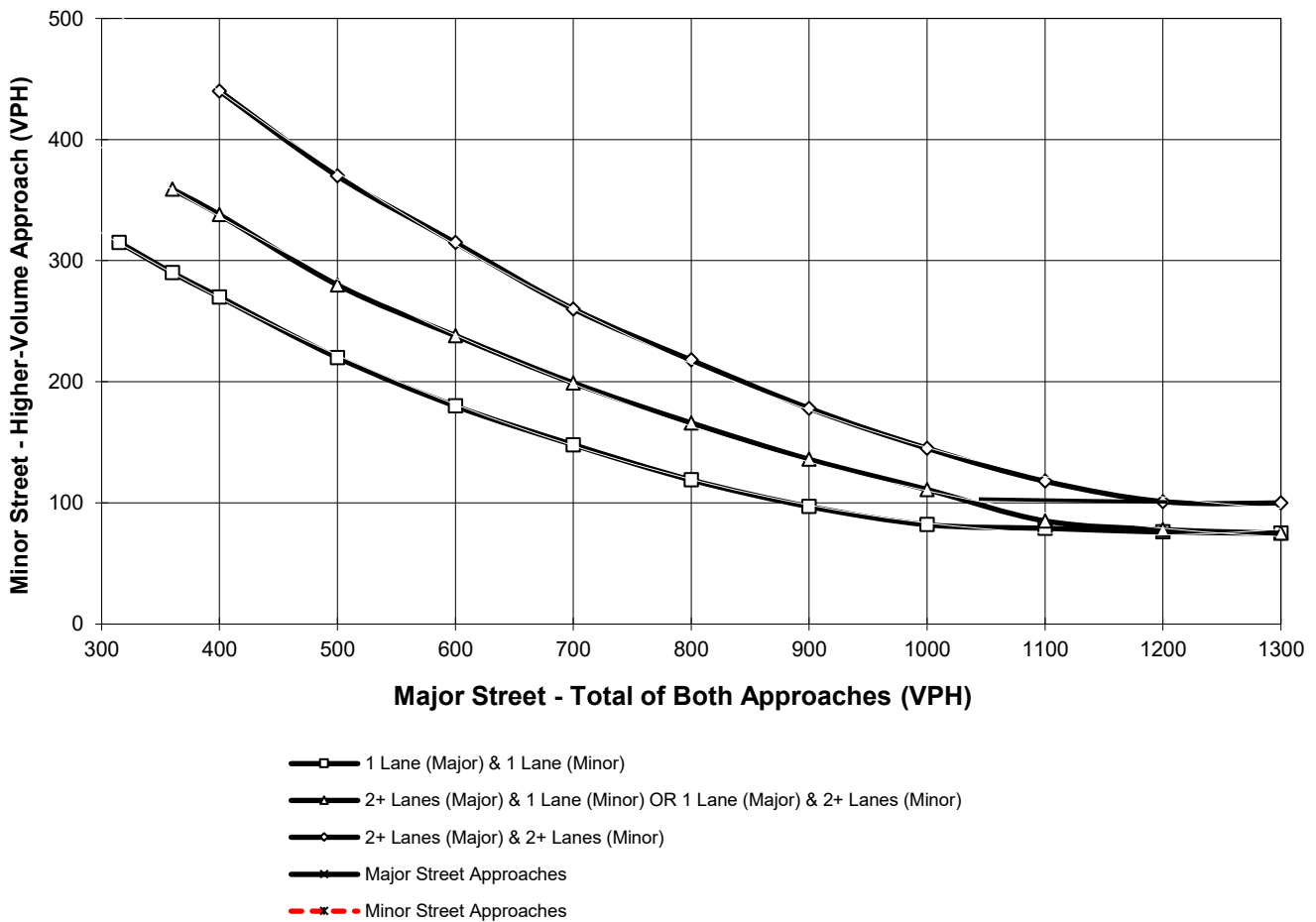
Major Street Name = **Old Oleander Av.**

Total of Both Approaches (VPH) = **32**
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 1**

High Volume Approach (VPH) = **15**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

	<u> </u>	<u> </u>	<u> </u>		TRAFFIC CONDITIONS	EAP (2025)
DIST	CO	RTE	PM	CALC	<u>CS</u>	DATE <u>09/23/22</u>
Jurisdiction: <u>County of Riverside</u>				CHK	<u>CS</u>	DATE <u>09/23/22</u>
Major Street: <u>Harvill Av.</u>				Critical Approach Speed (Major)		<u>50</u> mph
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Minor)		<u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>9,135</u> vpd				Minor Street Future ADT = <u>76</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>
RURAL (R)						

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
	XX				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + 9,135	1 76	9,600	6,720 *	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + 9,135	1 76	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more					
	A				
	4%				
	B				
	9%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAP (2025) Conditions - Weekday PM Peak Hour**

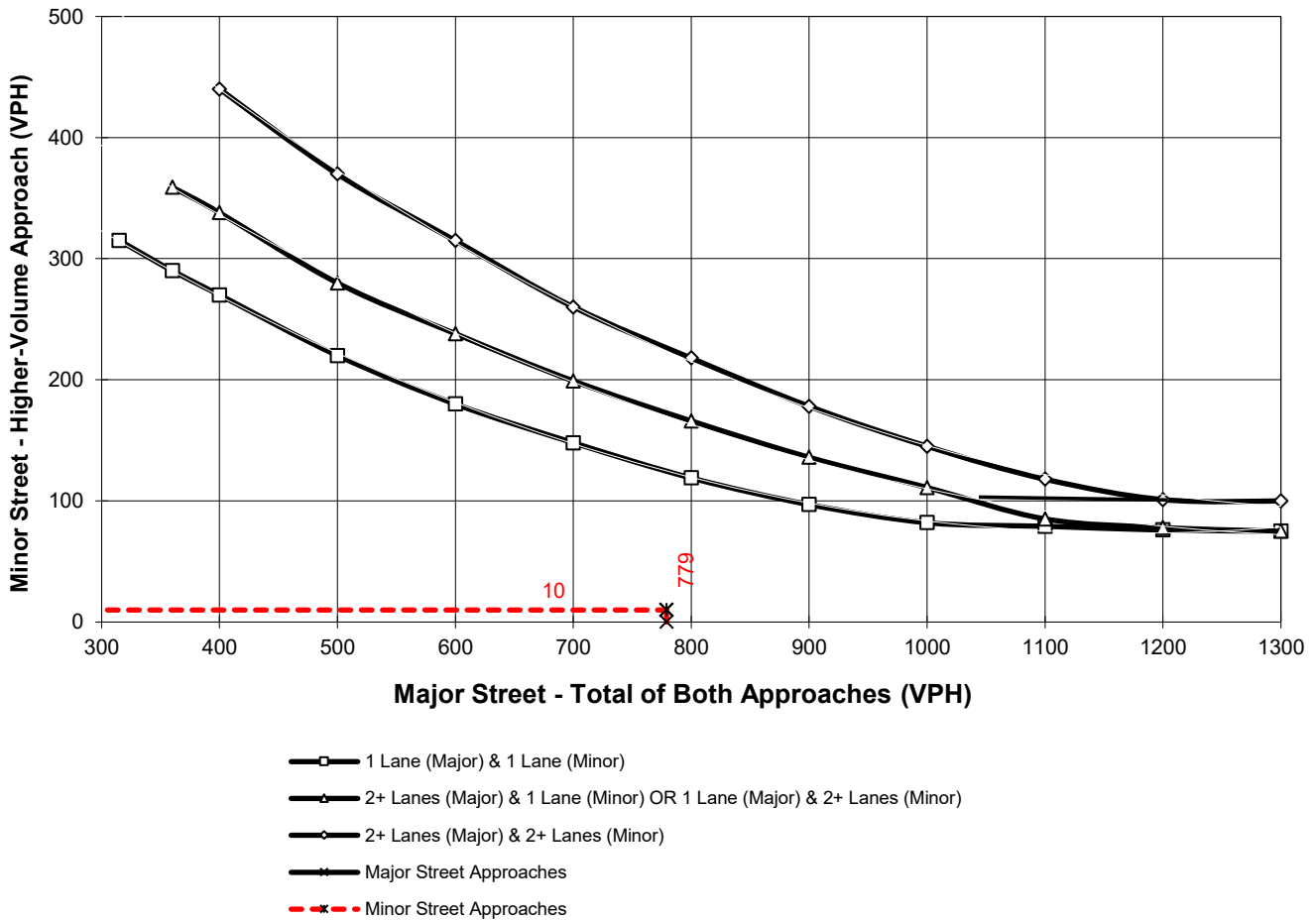
Major Street Name = **Harvill Av.**

Total of Both Approaches (VPH) = **779**
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **America's Tire**

High Volume Approach (VPH) = **10**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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**APPENDIX 5.3: EAP (2025) CONDITIONS FREEWAY OFF-RAMP
QUEUING ANALYSIS WORKSHEETS**

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Queues

7: I-215 SB Ramps & Harley Knox Bl.



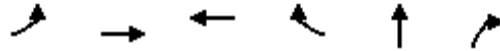
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	623	5	195	297	643	206
v/c Ratio	0.58	0.01	0.76	0.17	0.89	0.27
Control Delay	31.0	0.0	53.0	4.7	40.6	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	0.0	53.0	4.7	40.6	3.3
Queue Length 50th (ft)	168	0	55	11	314	0
Queue Length 95th (ft)	231	0	#84	12	#506	38
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1071	535	290	1764	784	816
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.01	0.67	0.17	0.82	0.25

Intersection Summary

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

Queues

8: I-215 NB Ramps & Harley Knox Bl.



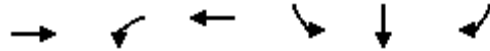
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	445	932	524	1494	15	49
v/c Ratio	0.73	0.29	0.30	1.37	0.12	0.26
Control Delay	31.2	1.4	15.0	189.4	40.8	7.5
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	31.2	1.6	15.0	189.4	40.8	7.5
Queue Length 50th (ft)	240	30	91	~945	8	0
Queue Length 95th (ft)	m#377	63	123	#1158	26	15
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	609	3203	1724	1091	362	386
Starvation Cap Reductn	0	1388	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.51	0.30	1.37	0.04	0.13

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	721	286	979	430	432	170
v/c Ratio	0.54	0.84	0.46	0.82	0.83	0.30
Control Delay	22.6	40.2	5.6	50.2	50.4	11.0
Queue Delay	0.0	0.0	0.5	53.1	53.0	0.0
Total Delay	22.6	40.2	6.1	103.3	103.4	11.0
Queue Length 50th (ft)	161	100	102	295	296	24
Queue Length 95th (ft)	223	#289	20	#468	#469	77
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1333	369	2133	522	523	576
Starvation Cap Reductn	0	0	664	0	0	0
Spillback Cap Reductn	16	0	0	157	157	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.78	0.67	1.18	1.18	0.30

Intersection Summary

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

Queues

10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	130	1171	945	607	170	167	502
v/c Ratio	0.60	0.55	0.61	0.60	0.32	0.32	0.92
Control Delay	50.7	14.1	27.9	6.2	30.4	30.3	54.5
Queue Delay	0.0	24.6	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	38.7	27.9	6.2	30.4	30.3	54.5
Queue Length 50th (ft)	91	444	279	21	93	91	287
Queue Length 95th (ft)	142	522	378	124	153	151	#478
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2126	1546	1010	569	570	585
Starvation Cap Reductn	0	995	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	1.04	0.61	0.60	0.30	0.29	0.86

Intersection Summary

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

Queues

7: I-215 SB Ramps & Harley Knox Bl.

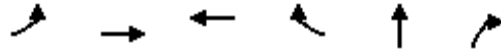


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	442	96	360	215	435	208
v/c Ratio	0.40	0.17	0.84	0.10	0.82	0.33
Control Delay	28.2	7.3	59.9	12.7	42.4	4.8
Queue Delay	0.0	0.0	0.7	0.0	0.0	0.0
Total Delay	28.2	7.3	60.6	12.7	42.4	4.8
Queue Length 50th (ft)	108	0	225	24	222	0
Queue Length 95th (ft)	166	38	313	100	328	46
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	1127	570	511	2168	593	670
Starvation Cap Reductn	0	0	28	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.17	0.75	0.10	0.73	0.31

Intersection Summary

Queues

8: I-215 NB Ramps & Harley Knox Bl.



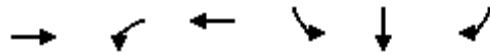
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	263	642	573	738	22	251
v/c Ratio	0.76	0.22	0.28	0.62	0.14	0.67
Control Delay	53.4	2.7	12.3	5.4	37.7	14.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	53.4	2.8	12.4	5.4	37.7	14.6
Queue Length 50th (ft)	164	46	80	25	12	0
Queue Length 95th (ft)	m180	23	155	147	32	65
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	423	2886	2012	1181	362	523
Starvation Cap Reductn	0	1192	0	0	0	0
Spillback Cap Reductn	0	0	68	0	36	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.38	0.29	0.62	0.07	0.48

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	927	325	757	405	413	147
v/c Ratio	0.74	0.91	0.35	0.78	0.79	0.25
Control Delay	33.1	51.8	6.8	46.5	47.5	5.8
Queue Delay	0.0	0.0	0.3	55.8	55.6	0.0
Total Delay	33.1	51.8	7.0	102.4	103.0	5.8
Queue Length 50th (ft)	280	224	137	273	280	0
Queue Length 95th (ft)	358	#354	21	#424	#437	46
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1258	369	2133	522	523	594
Starvation Cap Reductn	0	0	692	0	0	0
Spillback Cap Reductn	8	0	0	207	208	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.88	0.53	1.29	1.31	0.25

Intersection Summary

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

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	102	1429	823	552	162	159	390
v/c Ratio	0.54	0.62	0.46	0.52	0.37	0.36	0.83
Control Delay	41.4	19.3	21.3	3.9	34.5	34.3	46.1
Queue Delay	0.0	48.1	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	67.5	21.3	3.9	34.5	34.3	46.1
Queue Length 50th (ft)	69	516	195	0	98	96	214
Queue Length 95th (ft)	m87	578	308	70	147	144	302
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2308	1783	1063	569	571	585
Starvation Cap Reductn	0	1007	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	1.10	0.46	0.52	0.28	0.28	0.67

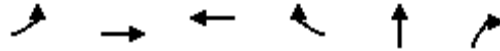
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 5.4: EAP (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↗	↑↑	↑↑	↖	↖	↖
Traffic Volume (vph)	392	820	461	1315	1	43
Future Volume (vph)	392	820	461	1315	1	43
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	14.0	67.0	53.0	53.0	23.0	23.0
Total Split (%)	15.6%	74.4%	58.9%	58.9%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	20.1	79.9	53.3	53.3	6.3	6.3
Actuated g/C Ratio	0.22	0.89	0.59	0.59	0.07	0.07
v/c Ratio	0.57	0.29	0.25	1.20	0.12	0.26
Control Delay	27.8	1.4	9.8	111.7	40.8	7.5
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	27.8	1.6	9.8	111.7	40.8	7.5
LOS	C	A	A	F	D	A
Approach Delay		10.1	85.2		15.3	
Approach LOS		B	F		B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.20
 Intersection Signal Delay: 54.0
 Intersection LOS: D
 Intersection Capacity Utilization 144.6%
 ICU Level of Service H
 Analysis Period (min) 15






















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



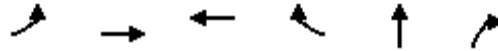
HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

08/02/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 							
Traffic Volume (veh/h)	392	820	0	0	461	1315	12	1	43	0	0	0
Future Volume (veh/h)	392	820	0	0	461	1315	12	1	43	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	445	932	0	0	524	897	14	1	12			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	371	3110	0	0	2549	1137	46	3	44			
Arrive On Green	0.21	1.00	0.00	0.00	0.71	0.71	0.03	0.03	0.03			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1694	121	1610			
Grp Volume(v), veh/h	445	932	0	0	524	897	15	0	12			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1815	0	1610			
Q Serve(g_s), s	9.5	0.0	0.0	0.0	4.5	33.3	0.7	0.0	0.7			
Cycle Q Clear(g_c), s	9.5	0.0	0.0	0.0	4.5	33.3	0.7	0.0	0.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.93		1.00			
Lane Grp Cap(c), veh/h	371	3110	0	0	2549	1137	50	0	44			
V/C Ratio(X)	1.20	0.30	0.00	0.00	0.21	0.79	0.30	0.00	0.27			
Avail Cap(c_a), veh/h	371	3110	0	0	2549	1137	363	0	322			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.79	0.79	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	35.5	0.0	0.0	0.0	4.5	8.8	42.9	0.0	42.9			
Incr Delay (d2), s/veh	109.4	0.2	0.0	0.0	0.2	5.6	3.4	0.0	3.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.0	0.1	0.0	0.0	1.2	9.5	0.4	0.0	0.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.9	0.2	0.0	0.0	4.7	14.4	46.3	0.0	46.2			
LnGrp LOS	F	A	A	A	A	B	D	A	D			
Approach Vol, veh/h		1377			1421			27				
Approach Delay, s/veh		47.0			10.8			46.3				
Approach LOS		D			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		82.5			14.0	68.5		7.5				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			9.5	48.0		18.0				
Max Q Clear Time (g_c+I1), s		2.0			11.5	35.3		2.7				
Green Ext Time (p_c), s		4.3			0.0	3.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay					28.8							
HCM 6th LOS					C							

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↗	↑↑	↑↑	↖	↖	↖
Traffic Volume (vph)	242	591	527	679	1	231
Future Volume (vph)	242	591	527	679	1	231
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	17.0	67.0	50.0	50.0	23.0	23.0
Total Split (%)	18.9%	74.4%	55.6%	55.6%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	11.1	72.0	56.4	56.4	8.0	8.0
Actuated g/C Ratio	0.12	0.80	0.63	0.63	0.09	0.09
v/c Ratio	0.61	0.22	0.25	0.58	0.14	0.67
Control Delay	39.5	4.9	8.6	3.5	37.7	14.6
Queue Delay	0.0	0.2	0.0	0.0	0.1	0.0
Total Delay	39.5	5.0	8.6	3.5	37.8	14.6
LOS	D	A	A	A	D	B
Approach Delay		15.1	5.8		16.5	
Approach LOS		B	A		B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 10.3
 Intersection LOS: B
 Intersection Capacity Utilization 65.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)
 08/02/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	242	591	0	0	527	679	19	1	231	0	0	0
Future Volume (veh/h)	242	591	0	0	527	679	19	1	231	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	263	642	0	0	573	466	21	1	101			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	345	2912	0	0	2376	1060	142	7	132			
Arrive On Green	0.03	0.27	0.00	0.00	0.66	0.66	0.08	0.08	0.08			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1731	82	1610			
Grp Volume(v), veh/h	263	642	0	0	573	466	22	0	101			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1813	0	1610			
Q Serve(g_s), s	6.7	12.5	0.0	0.0	5.8	12.5	1.0	0.0	5.5			
Cycle Q Clear(g_c), s	6.7	12.5	0.0	0.0	5.8	12.5	1.0	0.0	5.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.95		1.00			
Lane Grp Cap(c), veh/h	345	2912	0	0	2376	1060	149	0	132			
V/C Ratio(X)	0.76	0.22	0.00	0.00	0.24	0.44	0.15	0.00	0.76			
Avail Cap(c_a), veh/h	488	2912	0	0	2376	1060	363	0	322			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.5	11.0	0.0	0.0	6.2	7.4	38.4	0.0	40.4			
Incr Delay (d2), s/veh	2.3	0.2	0.0	0.0	0.2	1.3	0.5	0.0	8.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	4.9	0.0	0.0	1.8	3.7	0.5	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.8	11.1	0.0	0.0	6.5	8.7	38.8	0.0	49.2			
LnGrp LOS	D	B	A	A	A	A	D	A	D			
Approach Vol, veh/h		905			1039			123				
Approach Delay, s/veh		20.9			7.5			47.3				
Approach LOS		C			A			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		77.6			13.4	64.2		12.4				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			12.5	45.0		18.0				
Max Q Clear Time (g_c+I1), s		14.5			8.7	14.5		7.5				
Green Ext Time (p_c), s		2.7			0.2	3.2		0.2				

Intersection Summary

HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.1: EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵		↵	↵			↕			↕	
Traffic Vol, veh/h	0	88	0	6	195	5	0	0	5	4	0	0
Future Vol, veh/h	0	88	0	6	195	5	0	0	5	4	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	0	113	0	8	250	6	0	0	6	5	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	256	0	0	113	0	0	382	385	113	385	382	253
Stage 1	-	-	-	-	-	-	113	113	-	269	269	-
Stage 2	-	-	-	-	-	-	269	272	-	116	113	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1321	-	-	1489	-	-	580	552	945	577	554	791
Stage 1	-	-	-	-	-	-	897	806	-	741	690	-
Stage 2	-	-	-	-	-	-	741	688	-	894	806	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1321	-	-	1489	-	-	578	549	945	571	551	791
Mov Cap-2 Maneuver	-	-	-	-	-	-	624	582	-	621	583	-
Stage 1	-	-	-	-	-	-	897	806	-	741	687	-
Stage 2	-	-	-	-	-	-	737	685	-	888	806	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			0.2			8.8			10.8		
HCM LOS							A			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	945	1321	-	-	1489	-	-	621
HCM Lane V/C Ratio	0.007	-	-	-	0.005	-	-	0.008
HCM Control Delay (s)	8.8	0	-	-	7.4	-	-	10.8
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Timings
2: Harvill Av. & Old Oleander Av.

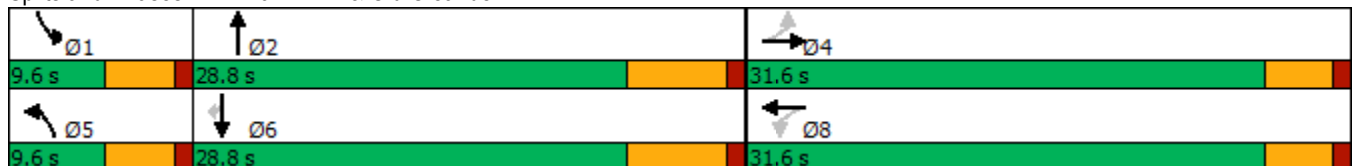


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	90	3	1	2	52	547	4	546	151
Future Volume (vph)	90	3	1	2	52	547	4	546	151
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	15.5	15.5	15.5	15.5	6.9	23.6	6.9	22.0	22.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.19	0.65	0.19	0.61	0.61
v/c Ratio	0.16	0.03	0.00	0.01	0.16	0.25	0.01	0.27	0.15
Control Delay	13.1	7.6	13.0	10.6	23.5	9.1	24.5	10.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.1	7.6	13.0	10.6	23.5	9.1	24.5	10.8	3.8
LOS	B	A	B	B	C	A	C	B	A
Approach Delay		12.0		11.0		10.4		9.4	
Approach LOS		B		B		B		A	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 36.3
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay: 10.0
 Intersection LOS: B
 Intersection Capacity Utilization 43.8%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	↖
Traffic Volume (veh/h)	90	3	19	1	2	3	52	547	2	4	546	151
Future Volume (veh/h)	90	3	19	1	2	3	52	547	2	4	546	151
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	96	3	20	1	2	3	55	582	2	4	581	161
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	489	42	282	471	135	203	107	1292	4	10	1069	477
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.06	0.35	0.35	0.01	0.30	0.30
Sat Flow, veh/h	1434	214	1429	1410	686	1029	1810	3690	13	1810	3610	1610
Grp Volume(v), veh/h	96	0	23	1	0	5	55	285	299	4	581	161
Grp Sat Flow(s),veh/h/ln	1434	0	1643	1410	0	1715	1810	1805	1898	1810	1805	1610
Q Serve(g_s), s	2.0	0.0	0.4	0.0	0.0	0.1	1.0	4.2	4.2	0.1	4.7	2.7
Cycle Q Clear(g_c), s	2.1	0.0	0.4	0.4	0.0	0.1	1.0	4.2	4.2	0.1	4.7	2.7
Prop In Lane	1.00		0.87	1.00		0.60	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	489	0	324	471	0	338	107	632	664	10	1069	477
V/C Ratio(X)	0.20	0.00	0.07	0.00	0.00	0.01	0.51	0.45	0.45	0.41	0.54	0.34
Avail Cap(c_a), veh/h	1329	0	1288	1298	0	1344	263	1184	1245	263	2369	1056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.0	0.0	11.3	11.4	0.0	11.1	15.7	8.6	8.6	17.1	10.2	9.5
Incr Delay (d2), s/veh	0.2	0.0	0.1	0.0	0.0	0.0	1.4	0.5	0.5	9.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	0.1	0.0	0.0	0.0	0.3	0.9	0.9	0.0	1.1	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.2	0.0	11.3	11.4	0.0	11.1	17.1	9.1	9.1	26.7	10.6	9.9
LnGrp LOS	B	A	B	B	A	B	B	A	A	C	B	A
Approach Vol, veh/h		119			6			639			746	
Approach Delay, s/veh		12.0			11.2			9.8			10.5	
Approach LOS		B			B			A			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.8	18.3		11.4	6.6	16.4		11.4				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+I1), s	2.1	6.2		4.1	3.0	6.7		2.4				
Green Ext Time (p_c), s	0.0	2.7		0.3	0.0	3.6		0.0				

Intersection Summary

HCM 6th Ctrl Delay	10.3
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	1	0	600	565	2
Future Vol, veh/h	0	1	0	600	565	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	2	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	1	0	638	601	2

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	302	-	0	0
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	700	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	700	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	700	-	-
HCM Lane V/C Ratio	-	0.002	-	-
HCM Control Delay (s)	-	10.2	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑		↕	↑↑	
Traffic Vol, veh/h	1	0	1	0	0	1	5	599	1	4	561	2
Future Vol, veh/h	1	0	1	0	0	1	5	599	1	4	561	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	1	0	0	1	5	651	1	4	610	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	955	1281	306	975	1282	326	612	0	0	652	0	0
Stage 1	619	619	-	662	662	-	-	-	-	-	-	-
Stage 2	336	662	-	313	620	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	216	167	696	209	167	676	977	-	-	944	-	-
Stage 1	448	483	-	422	462	-	-	-	-	-	-	-
Stage 2	657	462	-	678	483	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	214	165	696	207	165	676	977	-	-	944	-	-
Mov Cap-2 Maneuver	214	165	-	322	289	-	-	-	-	-	-	-
Stage 1	446	481	-	420	460	-	-	-	-	-	-	-
Stage 2	653	460	-	674	481	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.1		10.3		0.1		0.1	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	977	-	-	327	676	944	-	-
HCM Lane V/C Ratio	0.006	-	-	0.007	0.002	0.005	-	-
HCM Control Delay (s)	8.7	-	-	16.1	10.3	8.8	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

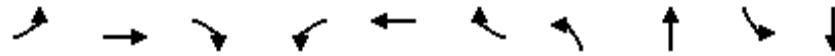
Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	15	0	7	3	0	5	20	585	9	10	510	42
Future Vol, veh/h	15	0	7	3	0	5	20	585	9	10	510	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	100	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	16	0	7	3	0	5	21	622	10	11	543	45

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	941	1262	294	963	1279	316	588	0	0	632	0	0
Stage 1	588	588	-	669	669	-	-	-	-	-	-	-
Stage 2	353	674	-	294	610	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	221	171	708	213	167	686	997	-	-	960	-	-
Stage 1	467	499	-	418	459	-	-	-	-	-	-	-
Stage 2	642	457	-	695	488	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	214	166	708	206	162	686	997	-	-	960	-	-
Mov Cap-2 Maneuver	214	166	-	316	282	-	-	-	-	-	-	-
Stage 1	457	494	-	409	449	-	-	-	-	-	-	-
Stage 2	624	447	-	680	483	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.3	12.6	0.3	0.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	997	-	-	275	316	686	960	-	-
HCM Lane V/C Ratio	0.021	-	-	0.085	0.01	0.008	0.011	-	-
HCM Control Delay (s)	8.7	-	-	19.3	16.5	10.3	8.8	-	-
HCM Lane LOS	A	-	-	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0	0	0	-	-

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

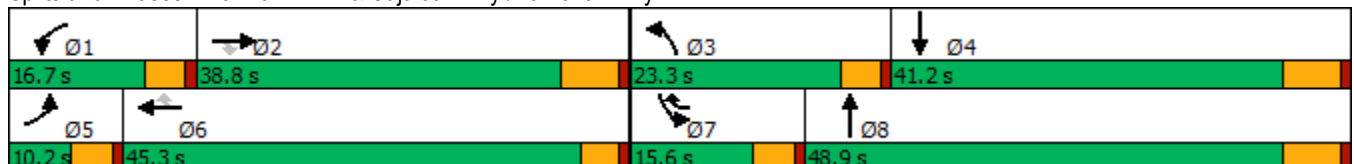


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↑	↘↗	↑↑
Traffic Volume (vph)	192	841	218	640	1130	761	373	434	427	229
Future Volume (vph)	192	841	218	640	1130	761	373	434	427	229
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.6	32.6	32.6	12.1	40.8	56.3	16.9	42.7	11.0	36.8
Actuated g/C Ratio	0.05	0.27	0.27	0.10	0.34	0.47	0.14	0.36	0.09	0.31
v/c Ratio	2.45	0.92	0.39	1.95	0.99	0.96	0.81	0.57	1.43	0.31
Control Delay	711.9	58.0	7.3	466.5	63.1	48.6	63.6	28.8	249.8	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	711.9	58.0	7.3	466.5	63.1	48.6	63.6	28.8	249.8	28.9
LOS	F	E	A	F	E	D	E	C	F	C
Approach Delay		149.4			160.7			41.2		156.6
Approach LOS		F			F			D		F

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 2.45
 Intersection Signal Delay: 135.2
 Intersection LOS: F
 Intersection Capacity Utilization 91.4%
 ICU Level of Service F
 Analysis Period (min) 15

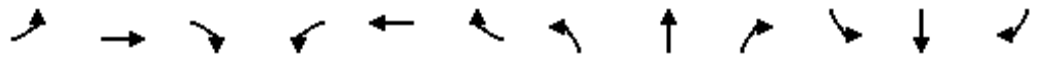
Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	192	841	218	640	1130	761	373	434	240	427	229	83
Future Volume (veh/h)	192	841	218	640	1130	761	373	434	240	427	229	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	904	183	688	1215	750	401	467	204	459	246	87
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	83	1017	454	349	1210	685	459	856	371	317	818	282
Arrive On Green	0.05	0.28	0.28	0.10	0.34	0.34	0.13	0.35	0.35	0.09	0.31	0.31
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	2441	1058	3510	2634	908
Grp Volume(v), veh/h	206	904	183	688	1215	750	401	344	327	459	167	166
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1694	1755	1805	1737
Q Serve(g_s), s	5.6	29.2	11.2	12.1	40.8	40.8	13.6	18.6	18.9	11.0	8.5	8.9
Cycle Q Clear(g_c), s	5.6	29.2	11.2	12.1	40.8	40.8	13.6	18.6	18.9	11.0	8.5	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		0.52
Lane Grp Cap(c), veh/h	83	1017	454	349	1210	685	459	633	594	317	561	539
V/C Ratio(X)	2.47	0.89	0.40	1.97	1.00	1.09	0.87	0.54	0.55	1.45	0.30	0.31
Avail Cap(c_a), veh/h	83	1017	454	349	1210	685	539	633	594	317	561	539
HCM Platoon Ratio	1.00	1.00	1.00	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	58.0	41.9	35.4	54.8	40.5	34.9	51.9	31.7	31.8	55.3	31.9	32.0
Incr Delay (d2), s/veh	697.8	9.7	0.6	447.3	26.8	63.0	11.9	3.3	3.6	217.9	1.4	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.6	13.7	4.3	26.8	21.5	30.6	6.5	8.3	7.9	14.3	3.8	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	755.9	51.6	36.0	502.1	67.3	97.9	63.8	35.0	35.4	273.3	33.2	33.5
LnGrp LOS	F	D	D	F	F	F	E	D	D	F	C	C
Approach Vol, veh/h		1293			2653			1072			792	
Approach Delay, s/veh		161.6			188.7			45.9			172.4	
Approach LOS		F			F			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.7	40.5	20.5	44.0	10.2	47.0	15.6	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	14.1	31.2	15.6	10.9	7.6	42.8	13.0	20.9				
Green Ext Time (p_c), s	0.0	0.9	0.3	1.7	0.0	0.0	0.0	3.7				

Intersection Summary

HCM 6th Ctrl Delay	154.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

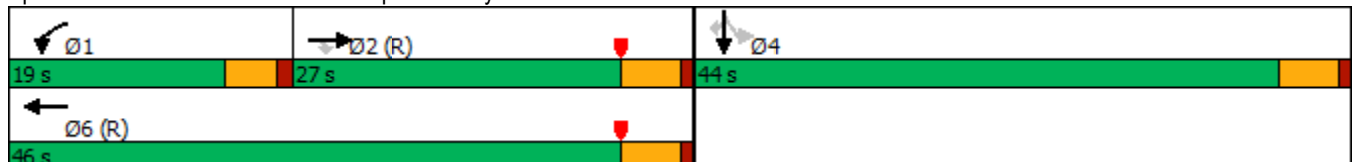


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	763	27	241	389	3	614
Future Volume (vph)	763	27	241	389	3	614
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	27.0	27.0	19.0	46.0	44.0	44.0
Total Split (%)	30.0%	30.0%	21.1%	51.1%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	21.9	21.9	14.0	40.4	39.6	39.6
Actuated g/C Ratio	0.24	0.24	0.16	0.45	0.44	0.44
v/c Ratio	0.91	0.06	0.89	0.25	1.45	0.71
Control Delay	48.7	0.3	61.0	7.2	234.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	1.3	0.0
Total Delay	48.7	0.3	61.0	7.2	236.0	14.1
LOS	D	A	E	A	F	B
Approach Delay	47.0			27.8	156.8	
Approach LOS	D			C	F	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 140
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.45
 Intersection Signal Delay: 103.3
 Intersection LOS: F
 Intersection Capacity Utilization 197.4%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

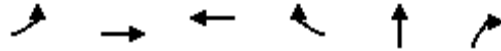


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘	↑↑						↖	↗
Traffic Volume (veh/h)	0	763	27	241	389	0	0	0	0	1104	3	614
Future Volume (veh/h)	0	763	27	241	389	0	0	0	0	1104	3	614
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	795	26	251	405	0				1150	3	544
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	888	396	289	1645	0				782	2	698
Arrive On Green	0.00	0.25	0.25	0.05	0.15	0.00				0.43	0.43	0.43
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1805	5	1610
Grp Volume(v), veh/h	0	795	26	251	405	0				1153	0	544
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	19.2	1.1	12.4	8.9	0.0				39.0	0.0	26.0
Cycle Q Clear(g_c), s	0.0	19.2	1.1	12.4	8.9	0.0				39.0	0.0	26.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	888	396	289	1645	0				784	0	698
V/C Ratio(X)	0.00	0.90	0.07	0.87	0.25	0.00				1.47	0.00	0.78
Avail Cap(c_a), veh/h	0	888	396	292	1645	0				784	0	698
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.94	0.94	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	32.8	26.0	41.7	24.6	0.0				25.5	0.0	21.8
Incr Delay (d2), s/veh	0.0	13.5	0.3	21.2	0.3	0.0				218.6	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	0.4	7.6	3.9	0.0				62.3	0.0	9.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	46.3	26.3	62.9	24.9	0.0				244.1	0.0	27.5
LnGrp LOS	A	D	C	E	C	A				F	A	C
Approach Vol, veh/h		821			656						1697	
Approach Delay, s/veh		45.7			39.5						174.6	
Approach LOS		D			D						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	18.9	27.1		44.0		46.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	14.5	22.0		39.0		41.0						
Max Q Clear Time (g_c+I1), s	14.4	21.2		41.0		10.9						
Green Ext Time (p_c), s	0.0	0.3		0.0		1.6						

Intersection Summary

HCM 6th Ctrl Delay	113.3
HCM 6th LOS	F

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↷	↷
Traffic Volume (vph)	529	1338	559	1481	1	252
Future Volume (vph)	529	1338	559	1481	1	252
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	19.0	67.0	48.0	48.0	23.0	23.0
Total Split (%)	21.1%	74.4%	53.3%	53.3%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	16.8	64.3	43.0	43.0	15.7	15.7
Actuated g/C Ratio	0.19	0.71	0.48	0.48	0.17	0.17
v/c Ratio	1.78	0.59	0.37	1.55	0.26	0.83
Control Delay	377.8	8.2	15.7	270.0	33.3	45.8
Queue Delay	0.0	17.7	0.0	0.0	0.0	0.0
Total Delay	377.8	25.9	15.7	270.0	33.3	45.8
LOS	F	C	B	F	C	D
Approach Delay		125.6	200.4		43.0	
Approach LOS		F	F		D	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.78
 Intersection Signal Delay: 155.3
 Intersection LOS: F
 Intersection Capacity Utilization 197.4%
 ICU Level of Service H
 Analysis Period (min) 15



















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



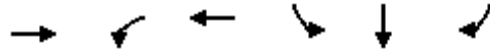
HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	529	1338	0	0	559	1481	72	1	252	0	0	0
Future Volume (veh/h)	529	1338	0	0	559	1481	72	1	252	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	601	1520	0	0	635	1564	82	1	249			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	292	2572	0	0	1810	807	315	4	284			
Arrive On Green	0.32	1.00	0.00	0.00	0.50	0.50	0.18	0.18	0.18			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1789	22	1610			
Grp Volume(v), veh/h	601	1520	0	0	635	1564	83	0	249			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1811	0	1610			
Q Serve(g_s), s	14.5	0.0	0.0	0.0	9.6	45.1	3.6	0.0	13.6			
Cycle Q Clear(g_c), s	14.5	0.0	0.0	0.0	9.6	45.1	3.6	0.0	13.6			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	292	2572	0	0	1810	807	319	0	284			
V/C Ratio(X)	2.06	0.59	0.00	0.00	0.35	1.94	0.26	0.00	0.88			
Avail Cap(c_a), veh/h	292	2572	0	0	1810	807	362	0	322			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.30	0.30	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	30.5	0.0	0.0	0.0	13.6	22.4	32.0	0.0	36.1			
Incr Delay (d2), s/veh	481.2	0.3	0.0	0.0	0.5	426.2	0.4	0.0	21.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	43.7	0.1	0.0	0.0	3.6	110.0	1.5	0.0	6.7			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	511.7	0.3	0.0	0.0	14.1	448.6	32.4	0.0	57.2			
LnGrp LOS	F	A	A	A	B	F	C	A	E			
Approach Vol, veh/h		2121			2199			332				
Approach Delay, s/veh		145.2			323.2			51.0				
Approach LOS		F			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		69.1			19.0	50.1		20.9				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			14.5	43.0		18.0				
Max Q Clear Time (g_c+I1), s		2.0			16.5	47.1		15.6				
Green Ext Time (p_c), s		9.1			0.0	0.0		0.3				
Intersection Summary												
HCM 6th Ctrl Delay					222.6							
HCM 6th LOS					F							

Timings
9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	785	547	1878	1847	2	780
Future Volume (vph)	785	547	1878	1847	2	780
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.0	22.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.35	0.20	0.59	0.30	0.30	0.30
v/c Ratio	1.02	1.51	0.90	1.80	1.81	1.47
Control Delay	64.6	260.2	10.3	396.2	397.2	248.0
Queue Delay	6.9	0.0	46.1	12.5	12.5	0.0
Total Delay	71.5	260.2	56.3	408.7	409.7	248.0
LOS	E	F	E	F	F	F
Approach Delay	71.5		102.3		361.4	
Approach LOS	E		F		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.81
 Intersection Signal Delay: 204.1
 Intersection LOS: F
 Intersection Capacity Utilization 238.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↖	↑↑	↖
Traffic Volume (veh/h)	0	785	473	547	1878	0	0	0	0	1847	2	780
Future Volume (veh/h)	0	785	473	547	1878	0	0	0	0	1847	2	780
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	801	354	558	1916	0				1886	0	733
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	838	369	370	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.12	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2522	1069	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	595	560	558	1916	0				1886	0	733
Grp Sat Flow(s),veh/h/ln	0	1805	1691	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	35.4	35.6	22.5	55.3	0.0				33.5	0.0	33.5
Cycle Q Clear(g_c), s	0.0	35.4	35.6	22.5	55.3	0.0				33.5	0.0	33.5
Prop In Lane	0.00		0.63	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	624	584	370	2133	0				1102	0	490
V/C Ratio(X)	0.00	0.95	0.96	1.51	0.90	0.00				1.71	0.00	1.49
Avail Cap(c_a), veh/h	0	624	584	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	35.2	35.2	48.2	32.4	0.0				38.3	0.0	38.3
Incr Delay (d2), s/veh	0.0	4.5	5.0	229.7	0.7	0.0				323.9	0.0	233.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	15.2	14.4	34.0	24.7	0.0				63.6	0.0	44.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	39.6	40.2	278.0	33.0	0.0				362.2	0.0	271.5
LnGrp LOS	A	D	D	F	C	A				F	A	F
Approach Vol, veh/h		1155			2474						2619	
Approach Delay, s/veh		39.9			88.3						336.8	
Approach LOS		D			F						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	27.0	44.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	24.5	37.6		35.5		57.3						
Green Ext Time (p_c), s	0.0	0.2		0.0		5.2						

Intersection Summary

HCM 6th Ctrl Delay	183.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.

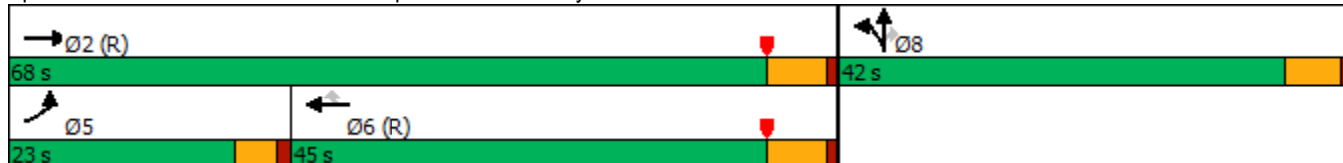


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↖	↗
Traffic Volume (vph)	320	2316	1519	1471	906	4	808
Future Volume (vph)	320	2316	1519	1471	906	4	808
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	18.5	62.0	39.0	39.0	36.5	36.5	36.5
Actuated g/C Ratio	0.17	0.56	0.35	0.35	0.33	0.33	0.33
v/c Ratio	1.09	1.17	1.22	1.44	0.82	0.83	1.42
Control Delay	94.9	104.0	140.8	222.9	47.3	47.7	229.0
Queue Delay	0.0	2.4	0.9	0.0	0.0	0.0	0.0
Total Delay	94.9	106.4	141.7	222.9	47.3	47.7	229.0
LOS	F	F	F	F	D	D	F
Approach Delay		105.0	181.7			132.8	
Approach LOS		F	F			F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 142.7
 Intersection LOS: F
 Intersection Capacity Utilization 238.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)
 09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↖	↗			
Traffic Volume (veh/h)	320	2316	0	0	1519	1471	906	4	808	0	0	0
Future Volume (veh/h)	320	2316	0	0	1519	1471	906	4	808	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	330	2388	0	0	1566	1368	937	0	681			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	304	2035	0	0	1280	571	1201	0	534			
Arrive On Green	0.22	0.75	0.00	0.00	0.35	0.35	0.33	0.00	0.33			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	3619	0	1610			
Grp Volume(v), veh/h	330	2388	0	0	1566	1368	937	0	681			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1810	0	1610			
Q Serve(g_s), s	18.5	62.0	0.0	0.0	39.0	39.0	25.7	0.0	36.5			
Cycle Q Clear(g_c), s	18.5	62.0	0.0	0.0	39.0	39.0	25.7	0.0	36.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	304	2035	0	0	1280	571	1201	0	534			
V/C Ratio(X)	1.08	1.17	0.00	0.00	1.22	2.40	0.78	0.00	1.27			
Avail Cap(c_a), veh/h	304	2035	0	0	1280	571	1201	0	534			
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	42.7	13.8	0.0	0.0	35.5	35.5	33.1	0.0	36.8			
Incr Delay (d2), s/veh	43.9	78.7	0.0	0.0	107.8	633.7	3.4	0.0	137.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	11.0	32.9	0.0	0.0	34.9	114.6	11.2	0.0	33.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.6	92.4	0.0	0.0	143.3	669.2	36.5	0.0	174.4			
LnGrp LOS	F	F	A	A	F	F	D	A	F			
Approach Vol, veh/h		2718			2934			1618				
Approach Delay, s/veh		91.7			388.5			94.5				
Approach LOS		F			F			F				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		68.0			23.0	45.0		42.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		64.0			20.5	41.0		38.5				
Green Ext Time (p_c), s		0.0			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	212.1
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Vol, veh/h	2	235	0	3	103	7	0	0	4	14	0	1
Future Vol, veh/h	2	235	0	3	103	7	0	0	4	14	0	1
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	55	55	55	55	55	55	55	55	55	55	55	55
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	427	0	5	187	13	0	0	7	25	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	0	427	0	0	640	646	427	644	640	195
Stage 1	-	-	-	-	-	-	435	435	-	205	205	-
Stage 2	-	-	-	-	-	-	205	211	-	439	435	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1383	-	-	1143	-	-	391	393	632	389	396	851
Stage 1	-	-	-	-	-	-	604	584	-	802	736	-
Stage 2	-	-	-	-	-	-	802	731	-	601	584	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1382	-	-	1143	-	-	388	390	632	382	393	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	482	467	-	474	468	-
Stage 1	-	-	-	-	-	-	602	582	-	799	732	-
Stage 2	-	-	-	-	-	-	797	727	-	592	582	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			0.2			10.8			12.8		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	632	1382	-	-	1143	-	-	488
HCM Lane V/C Ratio	0.012	0.003	-	-	0.005	-	-	0.056
HCM Control Delay (s)	10.8	7.6	-	-	8.2	-	-	12.8
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.2

Timings
2: Harvill Av. & Old Oleander Av.

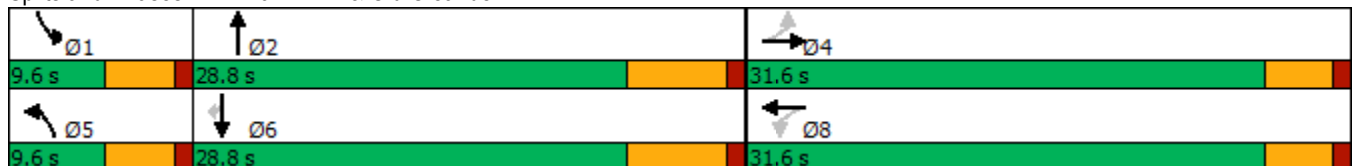


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗	↗
Traffic Volume (vph)	214	10	3	13	23	783	2	519	88
Future Volume (vph)	214	10	3	13	23	783	2	519	88
Turn Type	Perm	NA	Perm	NA	Prot	NA	Prot	NA	Perm
Protected Phases		4		8	5	2	1	6	
Permitted Phases	4		8						6
Detector Phase	4	4	8	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	10.0
Minimum Split (s)	31.6	31.6	22.6	22.6	9.6	24.2	9.6	28.2	28.2
Total Split (s)	31.6	31.6	31.6	31.6	9.6	28.8	9.6	28.8	28.8
Total Split (%)	45.1%	45.1%	45.1%	45.1%	13.7%	41.1%	13.7%	41.1%	41.1%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	5.2	3.6	5.2	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	4.6	4.6	4.6	4.6	6.2	4.6	6.2	6.2
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.8	14.8	13.0	13.0	5.4	16.8	5.4	16.8	16.8
Actuated g/C Ratio	0.33	0.33	0.29	0.29	0.12	0.38	0.12	0.38	0.38
v/c Ratio	0.50	0.13	0.01	0.03	0.12	0.64	0.01	0.42	0.15
Control Delay	17.3	5.3	13.7	13.7	25.7	15.3	25.5	12.8	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.3	5.3	13.7	13.7	25.7	15.3	25.5	12.8	4.5
LOS	B	A	B	B	C	B	C	B	A
Approach Delay		14.3		13.7		15.6		11.7	
Approach LOS		B		B		B		B	

Intersection Summary

Cycle Length: 70
 Actuated Cycle Length: 44.6
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 14.0
 Intersection LOS: B
 Intersection Capacity Utilization 49.2%
 ICU Level of Service A
 Analysis Period (min) 15























Splits and Phases: 2: Harvill Av. & Old Oleander Av.



HCM 6th Signalized Intersection Summary
 2: Harvill Av. & Old Oleander Av.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	10	62	3	13	0	23	783	0	2	519	88
Future Volume (veh/h)	214	10	62	3	13	0	23	783	0	2	519	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	238	11	62	3	14	0	26	870	0	2	577	98
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	523	61	343	465	465	0	57	1308	0	5	1205	537
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.00	0.03	0.36	0.00	0.00	0.33	0.33
Sat Flow, veh/h	1422	248	1400	1348	1900	0	1810	3705	0	1810	3610	1610
Grp Volume(v), veh/h	238	0	73	3	14	0	26	870	0	2	577	98
Grp Sat Flow(s),veh/h/ln	1422	0	1648	1348	1900	0	1810	1805	0	1810	1805	1610
Q Serve(g_s), s	6.0	0.0	1.4	0.1	0.2	0.0	0.6	8.0	0.0	0.0	5.0	1.7
Cycle Q Clear(g_c), s	6.3	0.0	1.4	1.5	0.2	0.0	0.6	8.0	0.0	0.0	5.0	1.7
Prop In Lane	1.00		0.85	1.00		0.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	523	0	404	465	465	0	57	1308	0	5	1205	537
V/C Ratio(X)	0.46	0.00	0.18	0.01	0.03	0.00	0.46	0.66	0.00	0.40	0.48	0.18
Avail Cap(c_a), veh/h	1146	0	1127	1057	1299	0	229	2066	0	229	2066	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	0.0	11.8	12.4	11.3	0.0	18.8	10.6	0.0	19.7	10.4	9.3
Incr Delay (d2), s/veh	0.6	0.0	0.2	0.0	0.0	0.0	2.1	0.6	0.0	18.3	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	1.7	0.0	0.5	0.0	0.1	0.0	0.2	1.9	0.0	0.0	1.3	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	12.0	12.4	11.4	0.0	20.9	11.2	0.0	38.0	10.7	9.5
LnGrp LOS	B	A	B	B	B	A	C	B	A	D	B	A
Approach Vol, veh/h		311			17			896			677	
Approach Delay, s/veh		13.8			11.5			11.4			10.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.7	20.5		14.3	5.8	19.4		14.3				
Change Period (Y+Rc), s	4.6	6.2		4.6	4.6	6.2		4.6				
Max Green Setting (Gmax), s	5.0	22.6		27.0	5.0	22.6		27.0				
Max Q Clear Time (g_c+11), s	2.0	10.0		8.3	2.6	7.0		3.5				
Green Ext Time (p_c), s	0.0	4.3		1.1	0.0	3.3		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				11.5								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑	↑↑	
Traffic Vol, veh/h	0	6	0	806	584	1
Future Vol, veh/h	0	6	0	806	584	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	7	0	896	649	1

Major/Minor	Minor2	Major1	Major2		
Conflicting Flow All	-	325	-	0	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-
Pot Cap-1 Maneuver	0	677	0	-	-
Stage 1	0	-	0	-	-
Stage 2	0	-	0	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	-	677	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-
Stage 1	-	-	-	-	-
Stage 2	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	677	-	-
HCM Lane V/C Ratio	-	0.01	-	-
HCM Control Delay (s)	-	10.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0	-	-

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑↑		↕	↑↑	
Traffic Vol, veh/h	4	0	4	2	0	5	2	796	1	2	587	1
Future Vol, veh/h	4	0	4	2	0	5	2	796	1	2	587	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	4	0	4	2	0	5	2	865	1	2	638	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1080	1513	320	1193	1513	433	639	0	0	866	0	0
Stage 1	643	643	-	870	870	-	-	-	-	-	-	-
Stage 2	437	870	-	323	643	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	175	121	682	145	121	576	955	-	-	786	-	-
Stage 1	433	472	-	317	372	-	-	-	-	-	-	-
Stage 2	574	372	-	669	472	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	173	120	682	144	120	576	955	-	-	786	-	-
Mov Cap-2 Maneuver	173	120	-	144	120	-	-	-	-	-	-	-
Stage 1	432	471	-	316	371	-	-	-	-	-	-	-
Stage 2	567	371	-	663	471	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.5	16.9	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	955	-	-	276	310	786	-
HCM Lane V/C Ratio	0.002	-	-	0.032	0.025	0.003	-
HCM Control Delay (s)	8.8	-	-	18.5	16.9	9.6	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

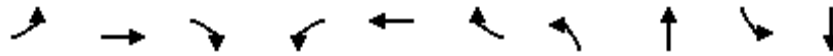
Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕		↕	↕	
Traffic Vol, veh/h	42	0	21	10	0	11	9	746	5	3	573	17
Future Vol, veh/h	42	0	21	10	0	11	9	746	5	3	573	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	0	-	-	100	-	-	130	-	-
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	47	0	23	11	0	12	10	829	6	3	637	19

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1088	1508	328	1177	1514	418	656	0	0	835	0	0
Stage 1	653	653	-	852	852	-	-	-	-	-	-	-
Stage 2	435	855	-	325	662	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	173	122	674	149	121	589	941	-	-	807	-	-
Stage 1	427	467	-	325	379	-	-	-	-	-	-	-
Stage 2	575	378	-	667	462	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	168	120	674	142	119	589	941	-	-	807	-	-
Mov Cap-2 Maneuver	168	120	-	249	240	-	-	-	-	-	-	-
Stage 1	422	465	-	321	375	-	-	-	-	-	-	-
Stage 2	557	374	-	642	460	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	28.2		15.4		0.1		0	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	941	-	-	224	249	589	807	-	-
HCM Lane V/C Ratio	0.011	-	-	0.313	0.045	0.021	0.004	-	-
HCM Control Delay (s)	8.9	-	-	28.2	20.1	11.2	9.5	-	-
HCM Lane LOS	A	-	-	D	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.1	0.1	0	-	-

Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

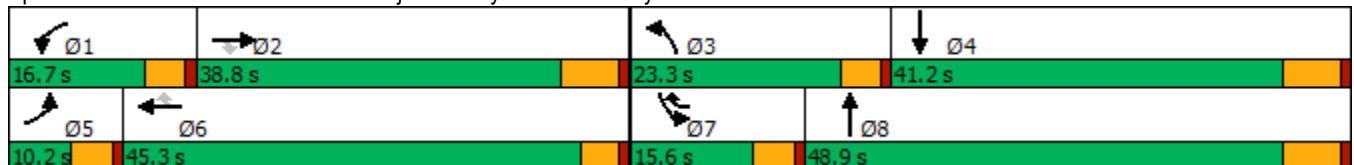


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑	↗	↘↗	↑↑	↗	↘↗	↑↗	↘↗	↑↗
Traffic Volume (vph)	124	1238	297	350	929	477	312	241	920	321
Future Volume (vph)	124	1238	297	350	929	477	312	241	920	321
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	10.2	38.8	38.8	16.7	45.3	15.6	23.3	48.9	15.6	41.2
Total Split (%)	8.5%	32.3%	32.3%	13.9%	37.8%	13.0%	19.4%	40.8%	13.0%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	5.6	32.6	32.6	12.1	40.8	56.3	15.5	42.7	11.0	38.2
Actuated g/C Ratio	0.05	0.27	0.27	0.10	0.34	0.47	0.13	0.36	0.09	0.32
v/c Ratio	1.58	1.36	0.54	1.07	0.81	0.54	0.74	0.94dr	3.08	0.46
Control Delay	348.3	203.2	16.7	117.3	42.6	7.9	60.6	30.8	963.6	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	348.3	203.2	16.7	117.3	42.6	7.9	60.6	30.8	963.6	29.1
LOS	F	F	B	F	D	A	E	C	F	C
Approach Delay		180.6			48.0			38.9		636.3
Approach LOS		F			D			D		F

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 3.08
 Intersection Signal Delay: 222.5
 Intersection LOS: F
 Intersection Capacity Utilization 114.2%
 ICU Level of Service H
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗	↘	↘↗	↗	↘	↘↗	↗		↘↗	↗	
Traffic Volume (veh/h)	124	1238	297	350	929	477	312	241	591	920	321	175
Future Volume (veh/h)	124	1238	297	350	929	477	312	241	591	920	321	175
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	133	1331	206	376	999	433	335	259	567	989	345	177
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	84	981	437	354	1176	672	396	642	573	322	778	392
Arrive On Green	0.05	0.27	0.27	0.10	0.33	0.33	0.11	0.36	0.36	0.09	0.33	0.33
Sat Flow, veh/h	1810	3610	1610	3510	3610	1610	3510	1805	1610	3510	2324	1170
Grp Volume(v), veh/h	133	1331	206	376	999	433	335	259	567	989	266	256
Grp Sat Flow(s),veh/h/ln	1810	1805	1610	1755	1805	1610	1755	1805	1610	1755	1805	1689
Q Serve(g_s), s	5.6	32.6	12.8	12.1	31.0	25.7	11.2	12.9	42.0	11.0	13.8	14.2
Cycle Q Clear(g_c), s	5.6	32.6	12.8	12.1	31.0	25.7	11.2	12.9	42.0	11.0	13.8	14.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	84	981	437	354	1176	672	396	642	573	322	604	565
V/C Ratio(X)	1.57	1.36	0.47	1.06	0.85	0.64	0.85	0.40	0.99	3.07	0.44	0.45
Avail Cap(c_a), veh/h	84	981	437	354	1227	695	547	642	573	322	604	565
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.2	43.7	36.5	53.9	37.7	27.8	52.2	29.1	38.4	54.5	31.2	31.3
Incr Delay (d2), s/veh	307.8	167.4	0.8	65.3	5.6	2.0	6.5	1.9	35.1	941.2	2.3	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	36.6	4.9	8.4	13.8	9.6	5.1	5.7	21.1	46.8	6.1	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	365.0	211.1	37.3	119.2	43.3	29.8	58.7	30.9	73.6	995.7	33.5	33.9
LnGrp LOS	F	F	D	F	D	C	E	C	E	F	C	C
Approach Vol, veh/h		1670			1808			1161			1511	
Approach Delay, s/veh		201.9			55.9			59.8			663.4	
Approach LOS		F			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.7	38.8	18.1	46.4	10.2	45.3	15.6	48.9				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	12.1	32.6	18.7	35.0	5.6	* 41	11.0	42.7				
Max Q Clear Time (g_c+I1), s	14.1	34.6	13.2	16.2	7.6	33.0	13.0	44.0				
Green Ext Time (p_c), s	0.0	0.0	0.3	2.6	0.0	4.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	245.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

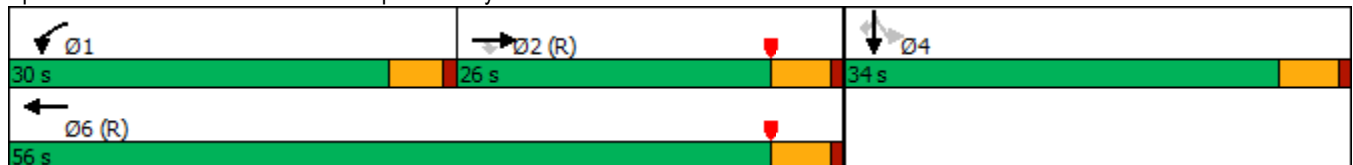


Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↙	↑↑	↙	↙
Traffic Volume (vph)	952	161	557	253	0	375
Future Volume (vph)	952	161	557	253	0	375
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	2		1	6	4	
Permitted Phases		2				4
Detector Phase	2	2	1	6	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0
Total Split (s)	26.0	26.0	30.0	56.0	34.0	34.0
Total Split (%)	28.9%	28.9%	33.3%	62.2%	37.8%	37.8%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	C-Min	C-Min	None	C-Min	None	None
Act Effct Green (s)	21.0	21.0	25.5	51.0	29.0	29.0
Actuated g/C Ratio	0.23	0.23	0.28	0.57	0.32	0.32
v/c Ratio	1.19	0.33	1.15	0.13	1.13	0.50
Control Delay	129.9	6.7	114.6	20.6	108.9	4.9
Queue Delay	1.2	0.0	1.0	0.0	2.6	0.0
Total Delay	131.1	6.7	115.6	20.6	111.5	4.9
LOS	F	A	F	C	F	A
Approach Delay	113.2			85.9	71.4	
Approach LOS	F			F	E	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.19
 Intersection Signal Delay: 91.4
 Intersection LOS: F
 Intersection Capacity Utilization 158.3%
 ICU Level of Service H
 Analysis Period (min) 15













Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



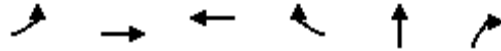
HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↖	↑↑						↖	↗
Traffic Volume (veh/h)	0	952	161	557	253	0	0	0	0	623	0	375
Future Volume (veh/h)	0	952	161	557	253	0	0	0	0	623	0	375
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1002	130	586	266	0				656	0	302
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	842	376	513	2046	0				583	0	519
Arrive On Green	0.00	0.23	0.23	0.47	0.95	0.00				0.32	0.00	0.32
Sat Flow, veh/h	0	3705	1610	1810	3705	0				1810	0	1610
Grp Volume(v), veh/h	0	1002	130	586	266	0				656	0	302
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	21.0	6.1	25.5	0.4	0.0				29.0	0.0	14.1
Cycle Q Clear(g_c), s	0.0	21.0	6.1	25.5	0.4	0.0				29.0	0.0	14.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	842	376	513	2046	0				583	0	519
V/C Ratio(X)	0.00	1.19	0.35	1.14	0.13	0.00				1.13	0.00	0.58
Avail Cap(c_a), veh/h	0	842	376	513	2046	0				583	0	519
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.81	0.81	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	34.5	28.8	23.7	1.1	0.0				30.5	0.0	25.4
Incr Delay (d2), s/veh	0.0	97.1	2.5	82.1	0.1	0.0				76.7	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	20.3	2.6	19.8	0.2	0.0				24.5	0.0	5.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	131.6	31.3	105.9	1.2	0.0				107.2	0.0	27.1
LnGrp LOS	A	F	C	F	A	A				F	A	C
Approach Vol, veh/h		1132			852						958	
Approach Delay, s/veh		120.1			73.2						81.9	
Approach LOS		F			E						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.0	26.0		34.0		56.0						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	25.5	21.0		29.0		51.0						
Max Q Clear Time (g_c+I1), s	27.5	23.0		31.0		2.4						
Green Ext Time (p_c), s	0.0	0.0		0.0		1.2						
Intersection Summary												
HCM 6th Ctrl Delay			94.1									
HCM 6th LOS			F									

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖	↗↗	↗↗	↖	↖	↖
Traffic Volume (vph)	693	883	761	1227	1	296
Future Volume (vph)	693	883	761	1227	1	296
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	25.0	67.0	42.0	42.0	23.0	23.0
Total Split (%)	27.8%	74.4%	46.7%	46.7%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	25.1	66.6	37.0	37.0	13.4	13.4
Actuated g/C Ratio	0.28	0.74	0.41	0.41	0.15	0.15
v/c Ratio	1.49	0.36	0.56	1.38	0.20	0.83
Control Delay	255.4	1.6	22.0	196.4	33.1	34.4
Queue Delay	0.0	0.4	1.0	0.0	0.3	0.0
Total Delay	255.5	2.0	23.0	196.4	33.4	34.4
LOS	F	A	C	F	C	C
Approach Delay		113.4	130.1		34.2	
Approach LOS		F	F		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.49
 Intersection Signal Delay: 114.9
 Intersection LOS: F
 Intersection Capacity Utilization 158.3%
 ICU Level of Service H
 Analysis Period (min) 15





















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



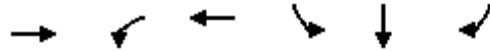
HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Future Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	753	960	0	0	827	1275	53	1	172			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	412	2737	0	0	1735	774	232	4	210			
Arrive On Green	0.23	0.76	0.00	0.00	0.48	0.48	0.13	0.13	0.13			
Sat Flow, veh/h	1810	3705	0	0	3705	1610	1778	34	1610			
Grp Volume(v), veh/h	753	960	0	0	827	1275	54	0	172			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1610	1811	0	1610			
Q Serve(g_s), s	20.5	7.9	0.0	0.0	13.9	43.2	2.4	0.0	9.4			
Cycle Q Clear(g_c), s	20.5	7.9	0.0	0.0	13.9	43.2	2.4	0.0	9.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	412	2737	0	0	1735	774	237	0	210			
V/C Ratio(X)	1.83	0.35	0.00	0.00	0.48	1.65	0.23	0.00	0.82			
Avail Cap(c_a), veh/h	412	2737	0	0	1735	774	362	0	322			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.8	3.6	0.0	0.0	15.8	23.4	35.1	0.0	38.1			
Incr Delay (d2), s/veh	373.0	0.0	0.0	0.0	0.9	297.4	0.5	0.0	9.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	51.5	2.1	0.0	0.0	5.6	79.0	1.1	0.0	4.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	407.7	3.6	0.0	0.0	16.7	320.7	35.5	0.0	47.4			
LnGrp LOS	F	A	A	A	B	F	D	A	D			
Approach Vol, veh/h		1713			2102			226				
Approach Delay, s/veh		181.3			201.1			44.6				
Approach LOS		F			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.2			25.0	48.2		16.8				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			20.5	37.0		18.0				
Max Q Clear Time (g_c+1), s		9.9			22.5	45.2		11.4				
Green Ext Time (p_c), s		5.4			0.0	0.0		0.4				
Intersection Summary												
HCM 6th Ctrl Delay					183.9							
HCM 6th LOS					F							

Timings
9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↖	↑↑	↖	↖	↖
Traffic Volume (vph)	1622	844	1240	2002	8	418
Future Volume (vph)	1622	844	1240	2002	8	418
Turn Type	NA	Prot	NA	Split	NA	Perm
Protected Phases	2	1	6	4	4	
Permitted Phases						4
Detector Phase	2	1	6	4	4	4
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	44.0	27.0	71.0	39.0	39.0	39.0
Total Split (%)	40.0%	24.5%	64.5%	35.5%	35.5%	35.5%
Yellow Time (s)	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes				
Recall Mode	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	38.0	22.5	65.0	33.5	33.5	33.5
Actuated g/C Ratio	0.35	0.20	0.59	0.30	0.30	0.30
v/c Ratio	2.04	2.31	0.59	1.94	1.95	0.78
Control Delay	493.0	612.2	3.7	453.7	458.8	39.8
Queue Delay	0.7	0.0	0.8	28.8	28.8	0.0
Total Delay	493.7	612.2	4.5	482.6	487.6	39.8
LOS	F	F	A	F	F	D
Approach Delay	493.7		250.6		408.5	
Approach LOS	F		F		F	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.31
 Intersection Signal Delay: 392.2
 Intersection LOS: F
 Intersection Capacity Utilization 280.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↘	↖	↗
Traffic Volume (veh/h)	0	1622	899	844	1240	0	0	0	0	2002	8	418
Future Volume (veh/h)	0	1622	899	844	1240	0	0	0	0	2002	8	418
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1638	800	853	1253	0				2028	0	363
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	836	377	370	2133	0				1102	0	490
Arrive On Green	0.00	0.35	0.35	0.12	0.35	0.00				0.30	0.00	0.30
Sat Flow, veh/h	0	2514	1090	1810	3705	0				3619	0	1610
Grp Volume(v), veh/h	0	1188	1250	853	1253	0				2028	0	363
Grp Sat Flow(s),veh/h/ln	0	1805	1704	1810	1805	0				1810	0	1610
Q Serve(g_s), s	0.0	38.0	38.0	22.5	31.1	0.0				33.5	0.0	22.3
Cycle Q Clear(g_c), s	0.0	38.0	38.0	22.5	31.1	0.0				33.5	0.0	22.3
Prop In Lane	0.00		0.64	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	624	589	370	2133	0				1102	0	490
V/C Ratio(X)	0.00	1.90	2.12	2.30	0.59	0.00				1.84	0.00	0.74
Avail Cap(c_a), veh/h	0	624	589	370	2133	0				1102	0	490
HCM Platoon Ratio	1.00	1.00	1.00	0.60	0.60	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.09	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	36.0	36.0	48.2	24.6	0.0				38.3	0.0	34.3
Incr Delay (d2), s/veh	0.0	407.7	506.4	587.8	0.1	0.0				381.6	0.0	9.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	86.1	97.4	70.8	13.8	0.0				72.4	0.0	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	443.7	542.4	636.1	24.7	0.0				419.8	0.0	44.0
LnGrp LOS	A	F	F	F	C	A				F	A	D
Approach Vol, veh/h		2438			2106						2391	
Approach Delay, s/veh		494.3			272.3						362.7	
Approach LOS		F			F						F	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	27.0	44.0		39.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	22.5	38.0		33.5		65.0						
Max Q Clear Time (g_c+I1), s	24.5	40.0		35.5		33.1						
Green Ext Time (p_c), s	0.0	0.0		0.0		6.0						

Intersection Summary

HCM 6th Ctrl Delay	381.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶	↷	↶	↷	↶	↷	↷
Traffic Volume (vph)	695	2932	1496	1722	589	4	561
Future Volume (vph)	695	2932	1496	1722	589	4	561
Turn Type	Prot	NA	NA	Perm	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				6			8
Detector Phase	5	2	6	6	8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0	26.0	10.5	10.5	10.5
Total Split (s)	23.0	68.0	45.0	45.0	42.0	42.0	42.0
Total Split (%)	20.9%	61.8%	40.9%	40.9%	38.2%	38.2%	38.2%
Yellow Time (s)	3.5	5.0	5.0	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	6.0	5.5	5.5	5.5
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	C-Max	C-Max	C-Max	None	None	None
Act Effct Green (s)	18.5	62.0	39.0	39.0	36.5	36.5	36.5
Actuated g/C Ratio	0.17	0.56	0.35	0.35	0.33	0.33	0.33
v/c Ratio	2.44	1.53	1.24	1.79	0.55	0.56	1.02
Control Delay	669.0	265.7	148.9	377.9	34.5	34.7	75.3
Queue Delay	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Total Delay	669.0	268.0	148.9	377.9	34.5	34.7	75.3
LOS	F	F	F	F	C	C	E
Approach Delay		344.8	271.5			54.4	
Approach LOS		F	F			D	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 2.44
 Intersection Signal Delay: 273.4
 Intersection LOS: F
 Intersection Capacity Utilization 280.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)
 09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑			↑↑	↗	↘	↗	↗			
Traffic Volume (veh/h)	695	2932	0	0	1496	1722	589	4	561	0	0	0
Future Volume (veh/h)	695	2932	0	0	1496	1722	589	4	561	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	739	3119	0	0	1591	1682	630	0	516			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	304	2035	0	0	1280	569	1201	0	534			
Arrive On Green	0.17	0.56	0.00	0.00	0.35	0.35	0.33	0.00	0.33			
Sat Flow, veh/h	1810	3705	0	0	3705	1606	3619	0	1610			
Grp Volume(v), veh/h	739	3119	0	0	1591	1682	630	0	516			
Grp Sat Flow(s),veh/h/ln	1810	1805	0	0	1805	1606	1810	0	1610			
Q Serve(g_s), s	18.5	62.0	0.0	0.0	39.0	39.0	15.5	0.0	34.7			
Cycle Q Clear(g_c), s	18.5	62.0	0.0	0.0	39.0	39.0	15.5	0.0	34.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	304	2035	0	0	1280	569	1201	0	534			
V/C Ratio(X)	2.43	1.53	0.00	0.00	1.24	2.95	0.52	0.00	0.97			
Avail Cap(c_a), veh/h	304	2035	0	0	1280	569	1201	0	534			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	45.8	24.0	0.0	0.0	35.5	35.5	29.7	0.0	36.1			
Incr Delay (d2), s/veh	643.6	240.0	0.0	0.0	116.1	884.0	0.4	0.0	30.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	62.3	90.1	0.0	0.0	36.4	153.9	6.5	0.0	17.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	689.4	264.0	0.0	0.0	151.6	919.5	30.2	0.0	66.4			
LnGrp LOS	F	F	A	A	F	F	C	A	E			
Approach Vol, veh/h		3858			3273			1146				
Approach Delay, s/veh		345.5			546.2			46.5				
Approach LOS		F			F			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		68.0			23.0	45.0		42.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		62.0			18.5	39.0		36.5				
Max Q Clear Time (g_c+I1), s		64.0			20.5	41.0		36.7				
Green Ext Time (p_c), s		0.0			0.0	0.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	383.5
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

APPENDIX 6.2: EAPC (2025) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2025) Conditions - Weekday PM Peak Hour**

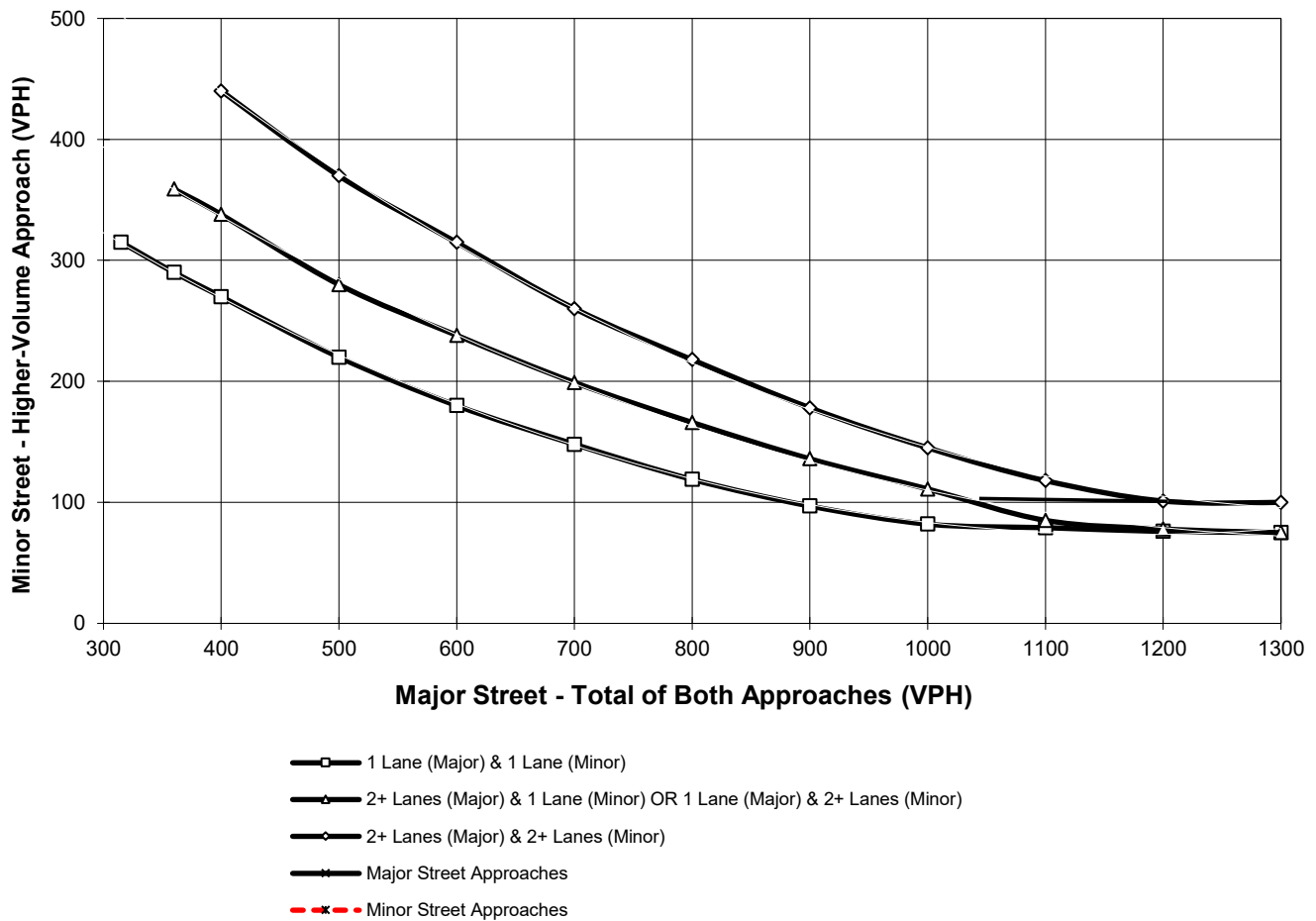
Major Street Name = **Old Oleander Av.**

Total of Both Approaches (VPH) = **42**
 Number of Approach Lanes Major Street = **1**

Minor Street Name = **Driveway 1**

High Volume Approach (VPH) = **15**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>EAPC (2025)</u>
Jurisdiction: <u>County of Riverside</u>				<u>CS</u>		<u>DATE 09/23/22</u>
Major Street: <u>Harvill Av.</u>				<u>CS</u>		<u>DATE 09/23/22</u>
Minor Street: <u>Driveway 2</u>					Critical Approach Speed (Major) <u>50</u> mph	
					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes = <u>1</u>	lane			
Major Street Future ADT = <u>10,059</u>	vpd	Minor Street Future ADT = <u>331</u>	vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);	<input checked="" type="checkbox"/>	or	<input type="checkbox"/>			RURAL (R)
In built up area of isolated community of < 10,000 population	<input type="checkbox"/>					

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	XX <u>Not Satisfied</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	8,000	5,600	2,400	1,680
<u>2 + 10,059</u>	<u>1 331</u>	9,600	6,720 *	2,400	1,680
<u>2 +</u>	<u>2 +</u>	9,600	6,720	3,200	2,240
<u>1</u>	<u>2 +</u>	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	XX <u>Not Satisfied</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1</u>	<u>1</u>	12,000	8,400	1,200	850
<u>2 + 10,059</u>	<u>1 331</u>	14,400	10,080	1,200	850
<u>2 +</u>	<u>2 +</u>	14,400	10,080	1,600	1,120
<u>1</u>	<u>2 +</u>	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	XX <u>Not Satisfied</u>				
No one condition satisfied, but following conditions fulfilled 80% of more					
	A <u>20%</u>	B <u>39%</u>			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 64 km/h OR ABOVE 40 mph ON MAJOR STREET)

Traffic Conditions = **EAPC (2025) Conditions - Weekday PM Peak Hour**

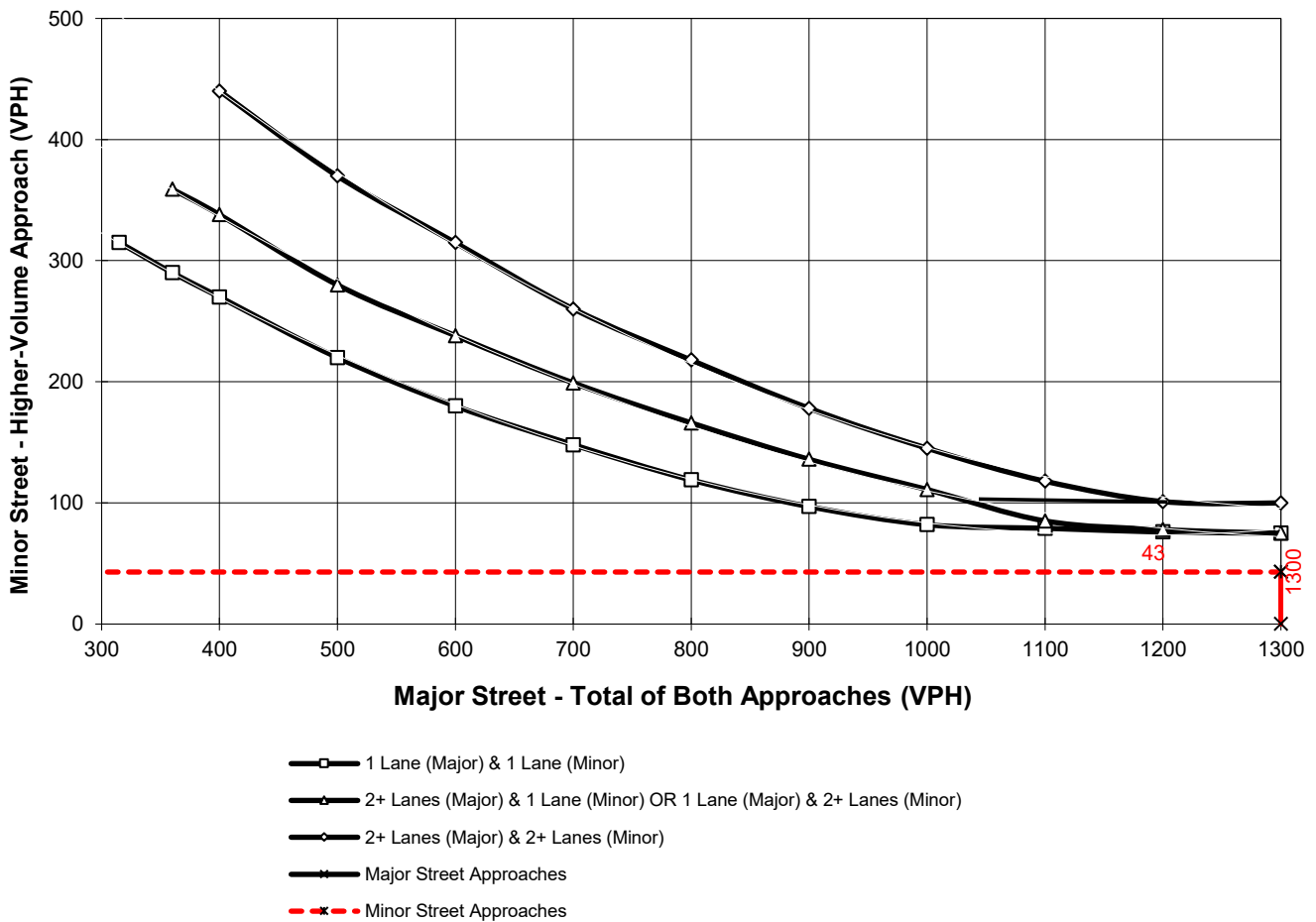
Major Street Name = **Harvill Av.**

Total of Both Approaches (VPH) = **2047**
 Number of Approach Lanes Major Street = **2**

Minor Street Name = **America's Tire**

High Volume Approach (VPH) = **43**
 Number of Approach Lanes Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



*Note: 100 vph applies as the lower threshold for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold for a minor-street approach with one lane

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**APPENDIX 6.3: EAPC (2025) CONDITIONS FREEWAY OFF-RAMP
QUEUING ANALYSIS WORKSHEETS**

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Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	795	28	251	405	1153	640
v/c Ratio	0.91	0.06	0.89	0.25	1.45	0.71
Control Delay	48.7	0.3	61.0	7.2	234.7	14.1
Queue Delay	0.0	0.0	0.0	0.0	1.3	0.0
Total Delay	48.7	0.3	61.0	7.2	236.0	14.1
Queue Length 50th (ft)	231	0	67	22	~910	129
Queue Length 95th (ft)	#338	0	#247	30	#1151	266
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	882	454	290	1644	795	903
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	153	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.06	0.87	0.25	1.80	0.71

Intersection Summary

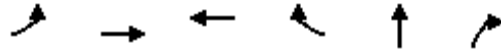
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues
8: I-215 NB Ramps & Harley Knox Bl.



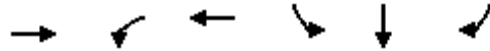
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	601	1520	635	1683	83	286
v/c Ratio	1.78	0.59	0.37	1.55	0.26	0.83
Control Delay	377.8	8.2	15.7	270.0	33.3	45.8
Queue Delay	0.0	17.7	0.0	0.0	0.0	0.0
Total Delay	377.8	25.9	15.7	270.0	33.3	45.8
Queue Length 50th (ft)	~545	273	115	~1182	40	112
Queue Length 95th (ft)	m#471	m239	151	#1394	79	#217
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	337	2580	1724	1086	362	386
Starvation Cap Reductn	0	1089	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.78	1.02	0.37	1.55	0.23	0.74

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1284	558	1916	942	945	796
v/c Ratio	1.02	1.51	0.90	1.80	1.81	1.47
Control Delay	64.6	260.2	10.3	396.2	397.2	248.0
Queue Delay	6.9	0.0	46.1	12.5	12.5	0.0
Total Delay	71.5	260.2	56.3	408.7	409.7	248.0
Queue Length 50th (ft)	~476	~525	263	~1055	~1060	~740
Queue Length 95th (ft)	#615	m#375	m390	#1312	#1316	#980
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1253	369	2133	522	523	543
Starvation Cap Reductn	0	0	405	0	0	0
Spillback Cap Reductn	24	0	0	340	341	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.04	1.51	1.11	5.18	5.19	1.47

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	330	2388	1566	1516	467	471	833
v/c Ratio	1.09	1.17	1.22	1.44	0.82	0.83	1.42
Control Delay	94.9	104.0	140.8	222.9	47.3	47.7	229.0
Queue Delay	0.0	2.4	0.9	0.0	0.0	0.0	0.0
Total Delay	94.9	106.4	141.7	222.9	47.3	47.7	229.0
Queue Length 50th (ft)	~249	~1087	~717	~1107	316	320	~765
Queue Length 95th (ft)	m227	m606	#855	#1374	#493	#500	#1008
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2034	1279	1050	569	570	585
Starvation Cap Reductn	0	999	0	0	0	0	0
Spillback Cap Reductn	0	0	241	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	2.31	1.51	1.44	0.82	0.83	1.42

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

7: I-215 SB Ramps & Harley Knox Bl.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1002	169	586	266	656	395
v/c Ratio	1.19	0.33	1.15	0.13	1.13	0.50
Control Delay	129.9	6.7	114.6	20.6	108.9	4.9
Queue Delay	1.2	0.0	1.0	0.0	2.6	0.0
Total Delay	131.1	6.7	115.6	20.6	111.5	4.9
Queue Length 50th (ft)	~365	0	~413	76	~436	0
Queue Length 95th (ft)	#488	49	#622	116	#644	62
Internal Link Dist (ft)	823			276	1367	
Turn Bay Length (ft)			60			265
Base Capacity (vph)	842	506	511	2045	581	788
Starvation Cap Reductn	0	0	58	0	0	0
Spillback Cap Reductn	152	0	0	0	154	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.45	0.33	1.29	0.13	1.54	0.50

Intersection Summary

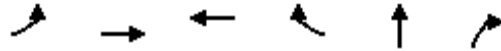
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues
8: I-215 NB Ramps & Harley Knox Bl.



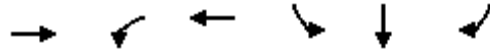
Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Group Flow (vph)	753	960	827	1334	54	322
v/c Ratio	1.49	0.36	0.56	1.38	0.20	0.83
Control Delay	255.4	1.6	22.0	196.4	33.1	34.4
Queue Delay	0.0	0.4	1.0	0.0	0.3	0.0
Total Delay	255.5	2.0	23.0	196.4	33.4	34.4
Queue Length 50th (ft)	~587	23	184	~838	27	80
Queue Length 95th (ft)	m#518	m21	242	#1094	57	171
Internal Link Dist (ft)		276	589		1044	
Turn Bay Length (ft)	60					270
Base Capacity (vph)	504	2672	1484	966	362	463
Starvation Cap Reductn	3	1117	0	0	0	0
Spillback Cap Reductn	0	0	384	0	108	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.50	0.62	0.75	1.38	0.21	0.70

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	2546	853	1253	1011	1019	422
v/c Ratio	2.04	2.31	0.59	1.94	1.95	0.78
Control Delay	493.0	612.2	3.7	453.7	458.8	39.8
Queue Delay	0.7	0.0	0.8	28.8	28.8	0.0
Total Delay	493.7	612.2	4.5	482.6	487.6	39.8
Queue Length 50th (ft)	~1480	~953	30	~1162	~1173	227
Queue Length 95th (ft)	#1616	m#710	m48	#1423	#1434	#377
Internal Link Dist (ft)	1408		344		1111	
Turn Bay Length (ft)		100		510		510
Base Capacity (vph)	1249	369	2133	522	523	543
Starvation Cap Reductn	0	0	528	0	0	0
Spillback Cap Reductn	182	0	0	438	439	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	2.39	2.31	0.78	12.04	12.13	0.78

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	739	3119	1591	1832	313	318	597
v/c Ratio	2.44	1.53	1.24	1.79	0.55	0.56	1.02
Control Delay	669.0	265.7	148.9	377.9	34.5	34.7	75.3
Queue Delay	0.0	2.3	0.0	0.0	0.0	0.0	0.0
Total Delay	669.0	268.0	148.9	377.9	34.5	34.7	75.3
Queue Length 50th (ft)	~782	~1599	~737	~1615	189	192	~411
Queue Length 95th (ft)	m#298	m608	#875	#1885	284	289	#631
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	303	2034	1279	1023	569	570	585
Starvation Cap Reductn	0	974	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	2.44	2.94	1.24	1.79	0.55	0.56	1.02

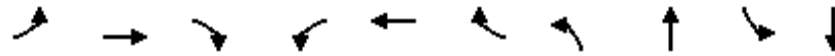
Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX 6.4: EAPC (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS WITH IMPROVEMENTS

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Timings
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

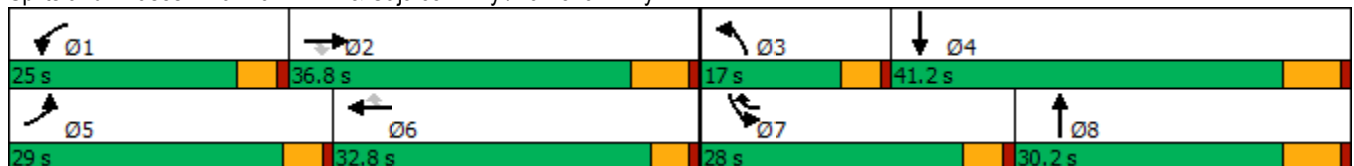


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑	↘↗	↑↑
Traffic Volume (vph)	192	841	218	640	1130	761	373	434	427	229
Future Volume (vph)	192	841	218	640	1130	761	373	434	427	229
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	5	2		1	6	7	3	8	7	4
Permitted Phases			2			6				
Detector Phase	5	2	2	1	6	7	3	8	7	4
Switch Phase										
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	5.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	36.2	36.2	9.6	32.5	9.6	9.6	16.2	9.6	41.2
Total Split (s)	29.0	36.8	36.8	25.0	32.8	28.0	17.0	30.2	28.0	41.2
Total Split (%)	24.2%	30.7%	30.7%	20.8%	27.3%	23.3%	14.2%	25.2%	23.3%	34.3%
Yellow Time (s)	3.6	5.2	5.2	3.6	3.5	3.6	3.6	5.2	3.6	5.2
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	6.2	6.2	4.6	4.5	4.6	4.6	6.2	4.6	6.2
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	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	Max	None	Max
Act Effct Green (s)	17.4	26.1	26.1	20.4	30.8	58.0	12.4	24.8	22.6	35.0
Actuated g/C Ratio	0.15	0.23	0.23	0.18	0.27	0.50	0.11	0.21	0.20	0.30
v/c Ratio	0.76	0.70	0.43	1.08	0.80	0.92	1.04	0.86	0.65	0.29
Control Delay	64.6	44.3	7.1	104.6	44.9	38.8	105.9	50.5	48.1	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.6	44.3	7.1	104.6	44.9	38.8	105.9	50.5	48.1	27.6
LOS	E	D	A	F	D	D	F	D	D	C
Approach Delay		40.9			58.2			70.3		39.4
Approach LOS		D			E			E		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 115.6
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.08
 Intersection Signal Delay: 54.1
 Intersection LOS: D
 Intersection Capacity Utilization 90.3%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 6: Harvill Av. & Cajalco Exwy./Ramona Exwy.



HCM 6th Signalized Intersection Summary
6: Harvill Av. & Cajalco Exwy./Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑↑	↗	↘↗	↑↑↑	↗	↘↗	↑↑		↘↗	↑↑	
Traffic Volume (veh/h)	192	841	218	640	1130	761	373	434	240	427	229	83
Future Volume (veh/h)	192	841	218	640	1130	761	373	434	240	427	229	83
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	206	904	76	688	1215	452	401	467	134	459	246	46
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	237	1181	333	655	1466	650	398	776	221	531	969	178
Arrive On Green	0.13	0.21	0.21	0.18	0.26	0.26	0.11	0.27	0.27	0.15	0.31	0.31
Sat Flow, veh/h	1810	5700	1610	3619	5700	1610	3619	2835	807	3619	3122	574
Grp Volume(v), veh/h	206	904	76	688	1215	452	401	312	289	459	148	144
Grp Sat Flow(s),veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1900	1742	1810	1900	1797
Q Serve(g_s), s	12.6	16.9	4.4	20.4	22.7	26.2	12.4	16.1	16.3	14.0	6.6	6.8
Cycle Q Clear(g_c), s	12.6	16.9	4.4	20.4	22.7	26.2	12.4	16.1	16.3	14.0	6.6	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.32
Lane Grp Cap(c), veh/h	237	1181	333	655	1466	650	398	520	477	531	590	558
V/C Ratio(X)	0.87	0.77	0.23	1.05	0.83	0.69	1.01	0.60	0.61	0.86	0.25	0.26
Avail Cap(c_a), veh/h	392	1547	437	655	1466	650	398	520	477	751	590	558
HCM Platoon Ratio	1.00	1.00	1.00	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	48.1	42.1	37.2	46.2	39.5	27.8	50.2	35.6	35.7	47.0	29.1	29.1
Incr Delay (d2), s/veh	5.9	1.7	0.3	49.2	4.1	3.2	47.0	5.0	5.6	5.6	1.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	7.7	1.7	13.2	10.6	9.9	8.0	7.8	7.3	6.4	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	43.8	37.5	95.4	43.6	31.1	97.2	40.6	41.3	52.7	30.1	30.3
LnGrp LOS	D	D	D	F	D	C	F	D	D	D	C	C
Approach Vol, veh/h		1186			2355			1002			751	
Approach Delay, s/veh		45.2			56.4			63.5			43.9	
Approach LOS		D			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	29.6	17.0	41.2	19.3	35.2	21.1	37.1				
Change Period (Y+Rc), s	4.6	6.2	4.6	6.2	4.6	* 6.2	4.6	6.2				
Max Green Setting (Gmax), s	20.4	30.6	12.4	35.0	24.4	* 28	23.4	24.0				
Max Q Clear Time (g_c+I1), s	22.4	18.9	14.4	8.8	14.6	28.2	16.0	18.3				
Green Ext Time (p_c), s	0.0	4.5	0.0	1.4	0.2	0.1	0.6	1.6				

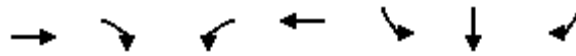
Intersection Summary

HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

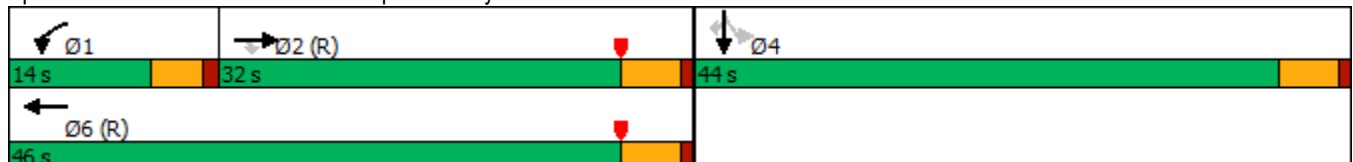


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	763	27	241	389	1104	3	614
Future Volume (vph)	763	27	241	389	1104	3	614
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0	23.0
Total Split (s)	32.0	32.0	14.0	46.0	44.0	44.0	44.0
Total Split (%)	35.6%	35.6%	15.6%	51.1%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	29.1	29.1	9.1	42.7	37.3	37.3	37.3
Actuated g/C Ratio	0.32	0.32	0.10	0.47	0.41	0.41	0.41
v/c Ratio	0.68	0.05	0.71	0.45	0.81	0.81	0.74
Control Delay	30.8	0.1	59.8	12.5	33.3	33.4	15.1
Queue Delay	0.0	0.0	0.0	0.7	4.2	4.4	0.0
Total Delay	30.8	0.1	59.8	13.1	37.6	37.8	15.1
LOS	C	A	E	B	D	D	B
Approach Delay	29.8			31.0		29.6	
Approach LOS	C			C		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 29.9
 Intersection LOS: C
 Intersection Capacity Utilization 143.5%
 ICU Level of Service H
 Analysis Period (min) 15

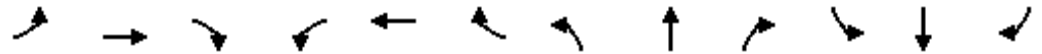
Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑					↑	↑	↑
Traffic Volume (veh/h)	0	763	27	241	389	0	0	0	0	1104	3	614
Future Volume (veh/h)	0	763	27	241	389	0	0	0	0	1104	3	614
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	795	26	251	405	0				1152	0	544
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1298	579	327	955	0				1398	0	622
Arrive On Green	0.00	0.36	0.36	0.06	0.34	0.00				0.39	0.00	0.39
Sat Flow, veh/h	0	3705	1610	3510	1900	0				3619	0	1610
Grp Volume(v), veh/h	0	795	26	251	405	0				1152	0	544
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1755	1900	0				1810	0	1610
Q Serve(g_s), s	0.0	16.3	0.9	6.3	14.8	0.0				25.8	0.0	28.2
Cycle Q Clear(g_c), s	0.0	16.3	0.9	6.3	14.8	0.0				25.8	0.0	28.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1298	579	327	955	0				1398	0	622
V/C Ratio(X)	0.00	0.61	0.04	0.77	0.42	0.00				0.82	0.00	0.87
Avail Cap(c_a), veh/h	0	1298	579	371	955	0				1568	0	698
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.42	0.42	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	23.7	18.8	41.2	19.8	0.0				24.9	0.0	25.6
Incr Delay (d2), s/veh	0.0	2.2	0.1	3.0	0.6	0.0				3.4	0.0	11.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	6.7	0.4	2.8	6.9	0.0				10.6	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	25.8	18.9	44.3	20.3	0.0				28.2	0.0	36.6
LnGrp LOS	A	C	B	D	C	A				C	A	D
Approach Vol, veh/h		821			656						1696	
Approach Delay, s/veh		25.6			29.5						30.9	
Approach LOS		C			C						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	12.9	37.4		39.8		50.2						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	9.5	27.0		39.0		41.0						
Max Q Clear Time (g_c+I1), s	8.3	18.3		30.2		16.8						
Green Ext Time (p_c), s	0.1	2.3		4.6		1.3						

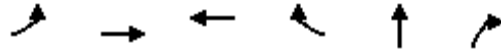
Intersection Summary

HCM 6th Ctrl Delay	29.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
8: I-215 NB Ramps & Harley Knox Bl.

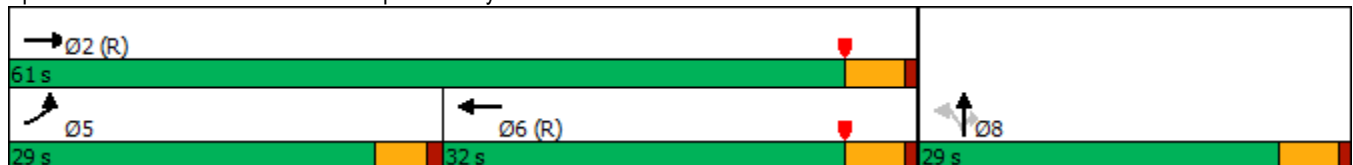


Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↗↗	↖↖	↗	↖	↗
Traffic Volume (vph)	529	1338	559	1481	1	252
Future Volume (vph)	529	1338	559	1481	1	252
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		23.0	23.0
Total Split (s)	29.0	61.0	32.0		29.0	29.0
Total Split (%)	32.2%	67.8%	35.6%		32.2%	32.2%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	19.7	62.7	38.5	90.0	17.3	17.3
Actuated g/C Ratio	0.22	0.70	0.43	1.00	0.19	0.19
v/c Ratio	0.78	0.60	0.41	1.04	0.24	0.76
Control Delay	31.2	10.6	21.1	38.8	30.2	37.5
Queue Delay	0.1	3.4	0.0	0.0	0.0	0.0
Total Delay	31.3	14.0	21.1	38.8	30.2	37.5
LOS	C	B	C	D	C	D
Approach Delay		18.9	34.0		35.8	
Approach LOS		B	C		D	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.04
 Intersection Signal Delay: 27.5
 Intersection LOS: C
 Intersection Capacity Utilization 97.8%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

08/02/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↑↑			↑↑	↗		↖	↗			
Traffic Volume (veh/h)	529	1338	0	0	559	1481	72	1	252	0	0	0
Future Volume (veh/h)	529	1338	0	0	559	1481	72	1	252	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	601	1520	0	0	635	0	82	1	249			
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	674	2556	0	0	1683		324	4	291			
Arrive On Green	0.38	1.00	0.00	0.00	0.47	0.00	0.18	0.18	0.18			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1789	22	1610			
Grp Volume(v), veh/h	601	1520	0	0	635	0	83	0	249			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1811	0	1610			
Q Serve(g_s), s	14.4	0.0	0.0	0.0	10.3	0.0	3.5	0.0	13.5			
Cycle Q Clear(g_c), s	14.4	0.0	0.0	0.0	10.3	0.0	3.5	0.0	13.5			
Prop In Lane	1.00		0.00	0.00		1.00	0.99		1.00			
Lane Grp Cap(c), veh/h	674	2556	0	0	1683		327	0	291			
V/C Ratio(X)	0.89	0.59	0.00	0.00	0.38		0.25	0.00	0.86			
Avail Cap(c_a), veh/h	956	2556	0	0	1683		483	0	429			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.60	0.60	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.9	0.0	0.0	0.0	15.6	0.0	31.6	0.0	35.7			
Incr Delay (d2), s/veh	3.9	0.6	0.0	0.0	0.6	0.0	0.4	0.0	10.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	4.7	0.2	0.0	0.0	3.9	0.0	1.5	0.0	5.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	0.6	0.0	0.0	16.2	0.0	32.0	0.0	46.4			
LnGrp LOS	C	A	A	A	B		C	A	D			
Approach Vol, veh/h		2121			635			332				
Approach Delay, s/veh		9.2			16.2			42.8				
Approach LOS		A			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		68.7			21.8	47.0		21.3				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		56.0			24.5	27.0		24.0				
Max Q Clear Time (g_c+I1), s		2.0			16.4	12.3		15.5				
Green Ext Time (p_c), s		9.1			0.8	2.2		0.8				

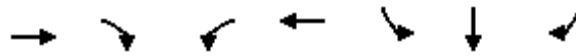
Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings
9: I-215 SB Ramps & Ramona Exwy.

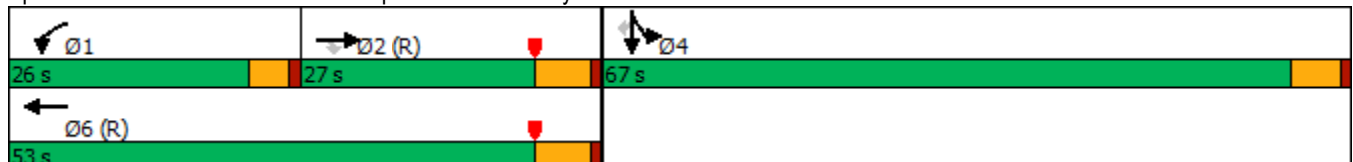


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↔	↑↑↑	↔	↑	↑
Traffic Volume (vph)	785	473	547	1878	1847	2	780
Future Volume (vph)	785	473	547	1878	1847	2	780
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	27.0	27.0	26.0	53.0	67.0	67.0	67.0
Total Split (%)	22.5%	22.5%	21.7%	44.2%	55.8%	55.8%	55.8%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	21.5	21.5	21.0	47.0	61.5	61.5	61.5
Actuated g/C Ratio	0.18	0.18	0.18	0.39	0.51	0.51	0.51
v/c Ratio	0.78	0.71	0.89	0.86	0.68	0.67	0.93
Control Delay	53.4	10.3	83.1	34.0	24.3	26.3	42.9
Queue Delay	0.0	0.0	0.0	36.8	51.3	56.3	0.0
Total Delay	53.4	10.3	83.1	70.8	75.6	82.6	42.9
LOS	D	B	F	E	E	F	D
Approach Delay	37.2			73.6		67.5	
Approach LOS	D			E		E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 63.8
 Intersection LOS: E
 Intersection Capacity Utilization 166.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑					↖	↘	↗
Traffic Volume (veh/h)	0	785	473	547	1878	0	0	0	0	1847	2	780
Future Volume (veh/h)	0	785	473	547	1878	0	0	0	0	1847	2	780
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	801	259	558	1916	0				1886	0	413
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1046	292	617	2232	0				2782	0	825
Arrive On Green	0.00	0.18	0.18	0.17	0.39	0.00				0.51	0.00	0.51
Sat Flow, veh/h	0	5700	1589	3619	5700	0				5429	0	1610
Grp Volume(v), veh/h	0	801	259	558	1916	0				1886	0	413
Grp Sat Flow(s),veh/h/ln	0	1900	1589	1810	1900	0				1810	0	1610
Q Serve(g_s), s	0.0	16.0	19.1	18.1	37.0	0.0				31.1	0.0	20.2
Cycle Q Clear(g_c), s	0.0	16.0	19.1	18.1	37.0	0.0				31.1	0.0	20.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1046	292	617	2233	0				2782	0	825
V/C Ratio(X)	0.00	0.77	0.89	0.90	0.86	0.00				0.68	0.00	0.50
Avail Cap(c_a), veh/h	0	1046	292	648	2233	0				2782	0	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.67	0.33	0.33	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	46.5	47.8	48.8	33.4	0.0				21.9	0.0	19.2
Incr Delay (d2), s/veh	0.0	3.6	22.6	6.2	1.6	0.0				1.3	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.6	9.1	8.4	16.2	0.0				12.6	0.0	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	50.2	70.4	55.0	35.0	0.0				23.2	0.0	21.3
LnGrp LOS	A	D	E	D	D	A				C	A	C
Approach Vol, veh/h		1060			2474						2299	
Approach Delay, s/veh		55.1			39.5						22.9	
Approach LOS		E			D						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.0	28.0		67.0		53.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	21.5	21.0		61.5		47.0						
Max Q Clear Time (g_c+I1), s	20.1	21.1		33.1		39.0						
Green Ext Time (p_c), s	0.3	0.0		12.3		5.2						

Intersection Summary

HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.

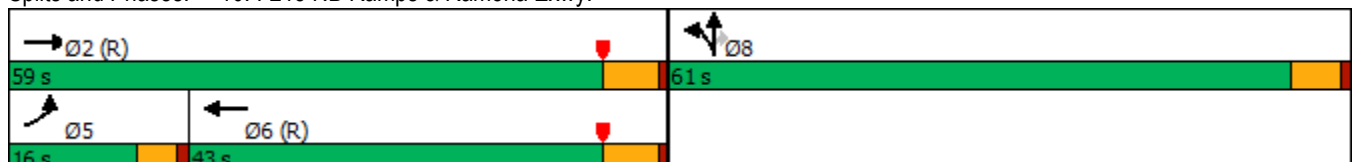


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶↶	↶↶↶	↶↶↶	↷	↶	↶	↷
Traffic Volume (vph)	320	2316	1519	1471	906	4	808
Future Volume (vph)	320	2316	1519	1471	906	4	808
Turn Type	Prot	NA	NA	Free	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				Free			8
Detector Phase	5	2	6		8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0		10.5	10.5	10.5
Total Split (s)	16.0	59.0	43.0		61.0	61.0	61.0
Total Split (%)	13.3%	49.2%	35.8%		50.8%	50.8%	50.8%
Yellow Time (s)	3.5	5.0	5.0		4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0		5.5	5.5	5.5
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Max	C-Max		None	None	None
Act Effct Green (s)	11.5	53.0	37.0	120.0	55.5	55.5	55.5
Actuated g/C Ratio	0.10	0.44	0.31	1.00	0.46	0.46	0.46
v/c Ratio	0.99	1.04	0.98	0.94	0.59	0.59	1.06
Control Delay	113.5	72.2	59.4	13.4	27.6	27.7	80.2
Queue Delay	0.0	24.6	40.7	0.0	0.2	0.2	0.0
Total Delay	113.5	96.8	100.1	13.4	27.8	27.9	80.2
LOS	F	F	F	B	C	C	F
Approach Delay		98.8	57.5			52.5	
Approach LOS		F	E			D	

Intersection Summary

























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 71.1
 Intersection LOS: E
 Intersection Capacity Utilization 166.5%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)
 09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  							
Traffic Volume (veh/h)	320	2316	0	0	1519	1471	906	4	808	0	0	0
Future Volume (veh/h)	320	2316	0	0	1519	1471	906	4	808	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	330	2388	0	0	1566	0	937	0	681			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	336	2376	0	0	1684		1615	0	718			
Arrive On Green	0.19	0.92	0.00	0.00	0.32	0.00	0.45	0.00	0.45			
Sat Flow, veh/h	3510	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	330	2388	0	0	1566	0	937	0	681			
Grp Sat Flow(s),veh/h/ln	1755	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	11.2	55.0	0.0	0.0	35.0	0.0	23.2	0.0	48.7			
Cycle Q Clear(g_c), s	11.2	55.0	0.0	0.0	35.0	0.0	23.2	0.0	48.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	336	2376	0	0	1684		1615	0	718			
V/C Ratio(X)	0.98	1.01	0.00	0.00	0.93		0.58	0.00	0.95			
Avail Cap(c_a), veh/h	336	2376	0	0	1684		1674	0	745			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.62	0.62	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	48.4	5.0	0.0	0.0	39.2	0.0	24.8	0.0	31.9			
Incr Delay (d2), s/veh	33.6	15.8	0.0	0.0	10.6	0.0	0.5	0.0	20.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	5.8	5.4	0.0	0.0	15.6	0.0	9.5	0.0	21.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.0	20.8	0.0	0.0	49.8	0.0	25.3	0.0	52.8			
LnGrp LOS	F	F	A	A	D		C	A	D			
Approach Vol, veh/h		2718			1566			1618				
Approach Delay, s/veh		28.2			49.8			36.9				
Approach LOS		C			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		61.0			16.0	45.0		59.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		53.0			11.5	37.0		55.5				
Max Q Clear Time (g_c+I1), s		57.0			13.2	37.0		50.7				
Green Ext Time (p_c), s		0.0			0.0	0.0		2.8				

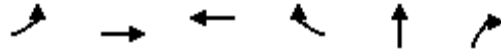
Intersection Summary

HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↗↗	↑↑	↑↑	↖	↖	↖
Traffic Volume (vph)	693	883	761	1227	1	296
Future Volume (vph)	693	883	761	1227	1	296
Turn Type	Prot	NA	NA	Free	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				Free		8
Detector Phase	5	2	6		8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	9.5	26.0	24.0		23.0	23.0
Total Split (s)	31.0	66.0	35.0		24.0	24.0
Total Split (%)	34.4%	73.3%	38.9%		26.7%	26.7%
Yellow Time (s)	3.5	4.0	4.0		4.0	4.0
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0		5.0	5.0
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Recall Mode	None	C-Min	C-Min		None	None
Act Effct Green (s)	23.1	66.2	38.7	90.0	13.8	13.8
Actuated g/C Ratio	0.26	0.74	0.43	1.00	0.15	0.15
v/c Ratio	0.84	0.36	0.53	0.83	0.20	0.82
Control Delay	34.0	0.6	22.4	5.1	32.5	34.2
Queue Delay	0.3	0.3	0.0	0.0	0.0	0.0
Total Delay	34.3	0.8	22.4	5.1	32.5	34.2
LOS	C	A	C	A	C	C
Approach Delay		15.5	11.7		34.0	
Approach LOS		B	B		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 15.2
 Intersection LOS: B
 Intersection Capacity Utilization 96.6%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)
 08/02/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Future Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	753	960	0	0	827	0	53	1	172			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	858	2737	0	0	1674		232	4	210			
Arrive On Green	0.08	0.25	0.00	0.00	0.46	0.00	0.13	0.13	0.13			
Sat Flow, veh/h	3510	3705	0	0	3705	1610	1778	34	1610			
Grp Volume(v), veh/h	753	960	0	0	827	0	54	0	172			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1805	1610	1811	0	1610			
Q Serve(g_s), s	19.1	19.7	0.0	0.0	14.3	0.0	2.4	0.0	9.4			
Cycle Q Clear(g_c), s	19.1	19.7	0.0	0.0	14.3	0.0	2.4	0.0	9.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	858	2737	0	0	1674		237	0	210			
V/C Ratio(X)	0.88	0.35	0.00	0.00	0.49		0.23	0.00	0.82			
Avail Cap(c_a), veh/h	1034	2737	0	0	1674		382	0	340			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.62	0.62	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	40.0	15.5	0.0	0.0	16.8	0.0	35.0	0.0	38.1			
Incr Delay (d2), s/veh	4.3	0.2	0.0	0.0	1.0	0.0	0.5	0.0	7.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	9.4	9.3	0.0	0.0	5.5	0.0	1.0	0.0	4.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	15.8	0.0	0.0	17.8	0.0	35.5	0.0	45.9			
LnGrp LOS	D	B	A	A	B		D	A	D			
Approach Vol, veh/h		1713			827			226				
Approach Delay, s/veh		28.3			17.8			43.5				
Approach LOS		C			B			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.2			26.5	46.7		16.8				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		61.0			26.5	30.0		19.0				
Max Q Clear Time (g_c+I1), s		21.7			21.1	16.3		11.4				
Green Ext Time (p_c), s		4.4			0.9	3.0		0.4				

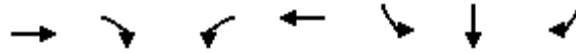
Intersection Summary

HCM 6th Ctrl Delay	26.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

Timings
7: I-215 SB Ramps & Harley Knox Bl.

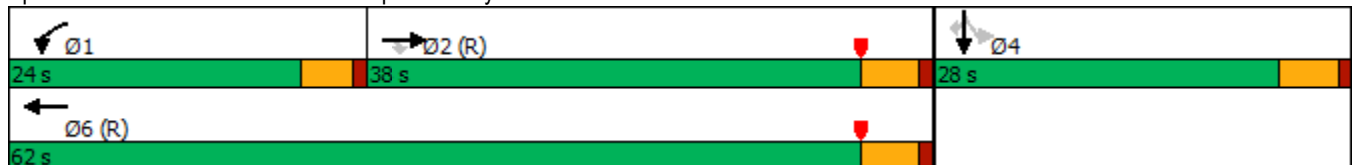


Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑	↑
Traffic Volume (vph)	952	161	557	253	623	0	375
Future Volume (vph)	952	161	557	253	623	0	375
Turn Type	NA	Perm	Prot	NA	Perm	NA	Perm
Protected Phases	2		1	6		4	
Permitted Phases		2			4		4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.0	25.0	9.5	25.0	23.0	23.0	23.0
Total Split (s)	38.0	38.0	24.0	62.0	28.0	28.0	28.0
Total Split (%)	42.2%	42.2%	26.7%	68.9%	31.1%	31.1%	31.1%
Yellow Time (s)	4.0	4.0	3.5	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	4.5	5.0	5.0	5.0	5.0
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Min	C-Min	None	C-Min	None	None	None
Act Effct Green (s)	35.8	35.8	18.0	58.3	21.7	21.7	21.7
Actuated g/C Ratio	0.40	0.40	0.20	0.65	0.24	0.24	0.24
v/c Ratio	0.70	0.23	0.84	0.22	0.80	0.80	0.57
Control Delay	26.7	4.1	26.5	12.3	47.2	47.2	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.7	4.1	26.5	12.3	47.2	47.2	6.7
LOS	C	A	C	B	D	D	A
Approach Delay	23.4			22.1		32.0	
Approach LOS	C			C		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 26.0
 Intersection LOS: C
 Intersection Capacity Utilization 126.2%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 7: I-215 SB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
 7: I-215 SB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↘↗	↑					↘	↗	↗
Traffic Volume (veh/h)	0	952	161	557	253	0	0	0	0	623	0	375
Future Volume (veh/h)	0	952	161	557	253	0	0	0	0	623	0	375
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1002	130	586	266	0				656	0	302
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1557	694	655	1269	0				800	0	356
Arrive On Green	0.00	0.43	0.43	0.31	1.00	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3705	1610	3510	1900	0				3619	0	1610
Grp Volume(v), veh/h	0	1002	130	586	266	0				656	0	302
Grp Sat Flow(s),veh/h/ln	0	1805	1610	1755	1900	0				1810	0	1610
Q Serve(g_s), s	0.0	19.7	4.5	14.3	0.0	0.0				15.5	0.0	16.2
Cycle Q Clear(g_c), s	0.0	19.7	4.5	14.3	0.0	0.0				15.5	0.0	16.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1557	694	655	1269	0				800	0	356
V/C Ratio(X)	0.00	0.64	0.19	0.89	0.21	0.00				0.82	0.00	0.85
Avail Cap(c_a), veh/h	0	1557	694	761	1269	0				925	0	411
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.26	0.26	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	20.1	15.8	30.1	0.0	0.0				33.4	0.0	33.6
Incr Delay (d2), s/veh	0.0	2.1	0.6	3.3	0.1	0.0				5.3	0.0	13.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.8	1.6	5.1	0.0	0.0				7.0	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.2	16.4	33.4	0.1	0.0				38.6	0.0	47.4
LnGrp LOS	A	C	B	C	A	A				D	A	D
Approach Vol, veh/h		1132			852						958	
Approach Delay, s/veh		21.5			23.0						41.4	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	21.3	43.8		24.9		65.1						
Change Period (Y+Rc), s	4.5	5.0		5.0		5.0						
Max Green Setting (Gmax), s	19.5	33.0		23.0		57.0						
Max Q Clear Time (g_c+I1), s	16.3	21.7		18.2		2.0						
Green Ext Time (p_c), s	0.5	3.6		1.7		0.9						

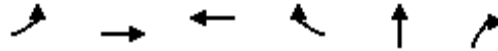
Intersection Summary

HCM 6th Ctrl Delay	28.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
8: I-215 NB Ramps & Harley Knox Bl.



Lane Group	EBL	EBT	WBT	WBR	NBT	NBR
Lane Configurations	↖↖	↗↗	↖↗	↖	↖	↖
Traffic Volume (vph)	693	883	761	1227	1	296
Future Volume (vph)	693	883	761	1227	1	296
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		8	
Permitted Phases				6		8
Detector Phase	5	2	6	6	8	8
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	26.0	24.0	24.0	23.0	23.0
Total Split (s)	25.0	67.0	42.0	42.0	23.0	23.0
Total Split (%)	27.8%	74.4%	46.7%	46.7%	25.6%	25.6%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Recall Mode	None	C-Min	C-Min	C-Min	None	None
Act Effct Green (s)	21.7	66.6	40.4	40.4	13.4	13.4
Actuated g/C Ratio	0.24	0.74	0.45	0.45	0.15	0.15
v/c Ratio	0.89	0.36	0.93	0.72	0.20	0.83
Control Delay	42.3	1.5	31.8	10.5	33.1	34.4
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0
Total Delay	42.3	1.8	31.8	10.5	33.1	34.4
LOS	D	A	C	B	C	C
Approach Delay		19.6	25.1		34.2	
Approach LOS		B	C		C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 37 (41%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 23.7
 Intersection LOS: C
 Intersection Capacity Utilization 126.2%
 ICU Level of Service H
 Analysis Period (min) 15






















Splits and Phases: 8: I-215 NB Ramps & Harley Knox Bl.



HCM 6th Signalized Intersection Summary
8: I-215 NB Ramps & Harley Knox Bl.

MFBC Building 18 (JN 13697)

09/25/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 							
Traffic Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Future Volume (veh/h)	693	883	0	0	761	1227	49	1	296	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	753	960	0	0	827	1275	53	1	172			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	800	2738	0	0	914	1548	232	4	210			
Arrive On Green	0.08	0.25	0.00	0.00	0.48	0.48	0.13	0.13	0.13			
Sat Flow, veh/h	3510	3705	0	0	1900	3220	1778	34	1610			
Grp Volume(v), veh/h	753	960	0	0	827	1275	54	0	172			
Grp Sat Flow(s),veh/h/ln	1755	1805	0	0	1900	1610	1811	0	1610			
Q Serve(g_s), s	19.2	19.7	0.0	0.0	36.0	30.6	2.4	0.0	9.4			
Cycle Q Clear(g_c), s	19.2	19.7	0.0	0.0	36.0	30.6	2.4	0.0	9.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.98		1.00			
Lane Grp Cap(c), veh/h	800	2738	0	0	914	1548	236	0	210			
V/C Ratio(X)	0.94	0.35	0.00	0.00	0.91	0.82	0.23	0.00	0.82			
Avail Cap(c_a), veh/h	800	2738	0	0	914	1548	362	0	322			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.62	0.62	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	41.0	15.5	0.0	0.0	21.5	20.1	35.1	0.0	38.1			
Incr Delay (d2), s/veh	13.3	0.2	0.0	0.0	14.1	5.1	0.5	0.0	9.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	10.4	9.4	0.0	0.0	17.4	11.0	1.0	0.0	4.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	15.7	0.0	0.0	35.6	25.2	35.6	0.0	47.5			
LnGrp LOS	D	B	A	A	D	C	D	A	D			
Approach Vol, veh/h		1713			2102			226				
Approach Delay, s/veh		32.7			29.3			44.7				
Approach LOS		C			C			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		73.3			25.0	48.3		16.7				
Change Period (Y+Rc), s		5.0			4.5	5.0		5.0				
Max Green Setting (Gmax), s		62.0			20.5	37.0		18.0				
Max Q Clear Time (g_c+I1), s		21.7			21.2	38.0		11.4				
Green Ext Time (p_c), s		4.4			0.0	0.0		0.4				

Intersection Summary

HCM 6th Ctrl Delay	31.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

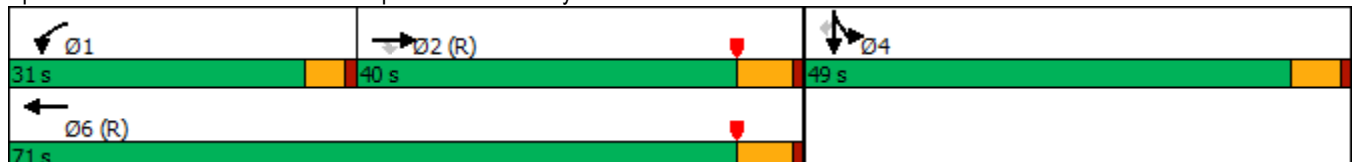
Timings
9: I-215 SB Ramps & Ramona Exwy.

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↘↙	↑↑↑	↘↙	↑	↘
Traffic Volume (vph)	1622	899	844	1240	2002	8	418
Future Volume (vph)	1622	899	844	1240	2002	8	418
Turn Type	NA	Perm	Prot	NA	Split	NA	Perm
Protected Phases	2		1	6	4	4	
Permitted Phases		2					4
Detector Phase	2	2	1	6	4	4	4
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	11.0	9.5	31.0	10.5	10.5	10.5
Total Split (s)	40.0	40.0	31.0	71.0	49.0	49.0	49.0
Total Split (%)	33.3%	33.3%	25.8%	59.2%	40.8%	40.8%	40.8%
Yellow Time (s)	5.0	5.0	3.5	5.0	4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	4.5	6.0	5.5	5.5	5.5
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Recall Mode	C-Max	C-Max	None	C-Max	Max	Max	Max
Act Effct Green (s)	34.0	34.0	26.5	65.0	43.5	43.5	43.5
Actuated g/C Ratio	0.28	0.28	0.22	0.54	0.36	0.36	0.36
v/c Ratio	1.01	0.98	1.07	0.41	1.04	1.03	0.67
Control Delay	68.7	36.4	116.1	20.7	72.5	80.9	33.0
Queue Delay	0.0	0.0	9.8	0.6	28.9	32.2	0.0
Total Delay	68.7	36.4	126.0	21.2	101.4	113.1	33.0
LOS	E	D	F	C	F	F	C
Approach Delay	57.2			63.7		92.8	
Approach LOS	E			E		F	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 71.4
 Intersection LOS: E
 Intersection Capacity Utilization 165.9%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 9: I-215 SB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 9: I-215 SB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)

09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↘	↑↑↑					↖	↘	↗
Traffic Volume (veh/h)	0	1622	899	844	1240	0	0	0	0	2002	8	418
Future Volume (veh/h)	0	1622	899	844	1240	0	0	0	0	2002	8	418
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1900	1900	1900	1900	0				1900	1900	1900
Adj Flow Rate, veh/h	0	1638	385	853	1253	0				2028	0	240
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99				0.99	0.99	0.99
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1615	456	799	3088	0				1968	0	584
Arrive On Green	0.00	0.28	0.28	0.22	0.54	0.00				0.36	0.00	0.36
Sat Flow, veh/h	0	5700	1610	3619	5700	0				5429	0	1610
Grp Volume(v), veh/h	0	1638	385	853	1253	0				2028	0	240
Grp Sat Flow(s),veh/h/ln	0	1900	1610	1810	1900	0				1810	0	1610
Q Serve(g_s), s	0.0	34.0	27.0	26.5	15.5	0.0				43.5	0.0	13.4
Cycle Q Clear(g_c), s	0.0	34.0	27.0	26.5	15.5	0.0				43.5	0.0	13.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1615	456	799	3088	0				1968	0	584
V/C Ratio(X)	0.00	1.01	0.84	1.07	0.41	0.00				1.03	0.00	0.41
Avail Cap(c_a), veh/h	0	1615	456	799	3088	0				1968	0	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.24	0.24	0.36	0.36	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	43.0	40.5	46.8	16.2	0.0				38.3	0.0	28.7
Incr Delay (d2), s/veh	0.0	14.7	4.8	40.0	0.1	0.0				28.6	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	17.3	10.8	15.8	6.2	0.0				23.4	0.0	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	57.7	45.3	86.8	16.3	0.0				66.8	0.0	30.8
LnGrp LOS	A	F	D	F	B	A				F	A	C
Approach Vol, veh/h		2023			2106						2268	
Approach Delay, s/veh		55.3			44.8						63.0	
Approach LOS		E			D						E	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	31.0	40.0		49.0		71.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	26.5	34.0		43.5		65.0						
Max Q Clear Time (g_c+I1), s	28.5	36.0		45.5		17.5						
Green Ext Time (p_c), s	0.0	0.0		0.0		6.0						

Intersection Summary

HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.

Timings
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations	↶↶	↑↑↑	↶↶↶	↷	↶	↷	↷
Traffic Volume (vph)	695	2932	1496	1722	589	4	561
Future Volume (vph)	695	2932	1496	1722	589	4	561
Turn Type	Prot	NA	NA	Free	Split	NA	Perm
Protected Phases	5	2	6		8	8	
Permitted Phases				Free			8
Detector Phase	5	2	6		8	8	8
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	11.0	26.0		10.5	10.5	10.5
Total Split (s)	30.8	76.0	45.2		44.0	44.0	44.0
Total Split (%)	25.7%	63.3%	37.7%		36.7%	36.7%	36.7%
Yellow Time (s)	3.5	5.0	5.0		4.5	4.5	4.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0		5.5	5.5	5.5
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?	Yes		Yes				
Recall Mode	None	C-Max	C-Max		None	None	None
Act Effct Green (s)	26.3	70.0	39.2	120.0	38.5	38.5	38.5
Actuated g/C Ratio	0.22	0.58	0.33	1.00	0.32	0.32	0.32
v/c Ratio	0.96	1.03	0.94	1.15	0.57	0.58	1.06
Control Delay	86.8	50.5	51.1	82.1	38.7	39.0	89.7
Queue Delay	0.0	29.4	31.2	0.0	0.0	0.0	0.0
Total Delay	86.8	79.9	82.2	82.1	38.7	39.0	89.7
LOS	F	E	F	F	D	D	F
Approach Delay		81.2	82.2			63.6	
Approach LOS		F	F			E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow, Master Intersection
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 79.0
 Intersection LOS: E
 Intersection Capacity Utilization 165.9%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 10: I-215 NB Ramps & Ramona Exwy.



HCM 6th Signalized Intersection Summary
 10: I-215 NB Ramps & Ramona Exwy.

MFBC Building 18 (JN 13697)
 09/25/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑			↑↑↑	↔	↔	↑	↔			
Traffic Volume (veh/h)	695	2932	0	0	1496	1722	589	4	561	0	0	0
Future Volume (veh/h)	695	2932	0	0	1496	1722	589	4	561	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Work Zone On Approach		No			No			No				
Adj Sat Flow, veh/h/ln	1900	1900	0	0	1900	1900	1900	1900	1900			
Adj Flow Rate, veh/h	739	3119	0	0	1591	0	630	0	516			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	769	3026	0	0	1694		1161	0	517			
Arrive On Green	0.44	1.00	0.00	0.00	0.33	0.00	0.32	0.00	0.32			
Sat Flow, veh/h	3510	5358	0	0	5358	1610	3619	0	1610			
Grp Volume(v), veh/h	739	3119	0	0	1591	0	630	0	516			
Grp Sat Flow(s),veh/h/ln	1755	1729	0	0	1729	1610	1810	0	1610			
Q Serve(g_s), s	24.5	0.0	0.0	0.0	35.7	0.0	17.2	0.0	38.4			
Cycle Q Clear(g_c), s	24.5	0.0	0.0	0.0	35.7	0.0	17.2	0.0	38.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	769	3026	0	0	1694		1161	0	517			
V/C Ratio(X)	0.96	1.03	0.00	0.00	0.94		0.54	0.00	1.00			
Avail Cap(c_a), veh/h	769	3026	0	0	1694		1161	0	517			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.09	0.09	0.00	0.00	1.00	0.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	33.2	0.0	0.0	0.0	39.2	0.0	33.5	0.0	40.7			
Incr Delay (d2), s/veh	3.9	15.5	0.0	0.0	11.5	0.0	0.5	0.0	39.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	7.5	4.3	0.0	0.0	16.1	0.0	7.3	0.0	20.1			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	15.5	0.0	0.0	50.8	0.0	34.0	0.0	80.0			
LnGrp LOS	D	F	A	A	D		C	A	F			
Approach Vol, veh/h		3858			1591			1146				
Approach Delay, s/veh		19.6			50.8			54.7				
Approach LOS		B			D			D				
Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		76.0			30.8	45.2		44.0				
Change Period (Y+Rc), s		6.0			4.5	6.0		5.5				
Max Green Setting (Gmax), s		70.0			26.3	39.2		38.5				
Max Q Clear Time (g_c+I1), s		2.0			26.5	37.7		40.4				
Green Ext Time (p_c), s		38.7			0.0	1.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay	33.2
HCM 6th LOS	C

Notes

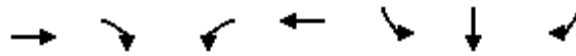
User approved volume balancing among the lanes for turning movement.
 Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

**APPENDIX 6.5: EAPC (2025) CONDITIONS FREEWAY OFF-RAMP
QUEUING ANALYSIS WORKSHEETS WITH IMPROVEMENTS**

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Queues

9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	801	483	558	1916	1263	624	796
v/c Ratio	0.78	0.71	0.89	0.86	0.68	0.67	0.93
Control Delay	53.4	10.3	83.1	34.0	24.3	26.3	42.9
Queue Delay	0.0	0.0	0.0	36.8	51.3	56.3	0.0
Total Delay	53.4	10.3	83.1	70.8	75.6	82.6	42.9
Queue Length 50th (ft)	200	0	195	304	354	347	518
Queue Length 95th (ft)	245	104	m199	m356	429	482	#804
Internal Link Dist (ft)	1408			344		1111	
Turn Bay Length (ft)		300	100		510		510
Base Capacity (vph)	1023	682	646	2232	1850	928	860
Starvation Cap Reductn	0	0	0	452	0	0	0
Spillback Cap Reductn	0	0	0	0	1108	555	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.71	0.86	1.08	1.70	1.67	0.93

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: I-215 NB Ramps & Ramona Exwy.

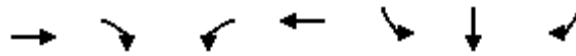


Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	330	2388	1566	1516	467	471	833
v/c Ratio	0.99	1.04	0.98	0.94	0.59	0.59	1.06
Control Delay	113.5	72.2	59.4	13.4	27.6	27.7	80.2
Queue Delay	0.0	24.6	40.7	0.0	0.2	0.2	0.0
Total Delay	113.5	96.8	100.1	13.4	27.8	27.9	80.2
Queue Length 50th (ft)	135	~713	439	0	274	277	~682
Queue Length 95th (ft)	m#187	#803	#549	#105	390	393	#930
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	335	2290	1599	1615	793	795	783
Starvation Cap Reductn	0	693	0	0	0	0	0
Spillback Cap Reductn	0	0	264	0	42	42	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.50	1.17	0.94	0.62	0.63	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
9: I-215 SB Ramps & Ramona Exwy.



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1638	908	853	1253	1355	675	422
v/c Ratio	1.01	0.98	1.07	0.41	1.04	1.03	0.67
Control Delay	68.7	36.4	116.1	20.7	72.5	80.9	33.0
Queue Delay	0.0	0.0	9.8	0.6	28.9	32.2	0.0
Total Delay	68.7	36.4	126.0	21.2	101.4	113.1	33.0
Queue Length 50th (ft)	~434	251	~377	177	~564	~559	231
Queue Length 95th (ft)	#535	#568	m#421	m205	#696	#789	350
Internal Link Dist (ft)	1408			344		1111	
Turn Bay Length (ft)		300	100		510		510
Base Capacity (vph)	1615	931	797	3087	1308	656	628
Starvation Cap Reductn	0	0	18	1298	0	0	0
Spillback Cap Reductn	0	0	0	0	681	341	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.98	1.09	0.70	2.16	2.14	0.67

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues
10: I-215 NB Ramps & Ramona Exwy.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	739	3119	1591	1832	313	318	597
v/c Ratio	0.96	1.03	0.94	1.15	0.57	0.58	1.06
Control Delay	86.8	50.5	51.1	82.1	38.7	39.0	89.7
Queue Delay	0.0	29.4	31.2	0.0	0.0	0.0	0.0
Total Delay	86.8	79.9	82.2	82.1	38.7	39.0	89.7
Queue Length 50th (ft)	283	752	436	~384	211	215	~470
Queue Length 95th (ft)	m257	m634	#535	#648	311	317	#696
Internal Link Dist (ft)		344	532			1162	
Turn Bay Length (ft)	105			200			500
Base Capacity (vph)	767	3025	1694	1594	550	551	564
Starvation Cap Reductn	0	1049	0	0	0	0	0
Spillback Cap Reductn	0	0	204	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.58	1.07	1.15	0.57	0.58	1.06

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.