

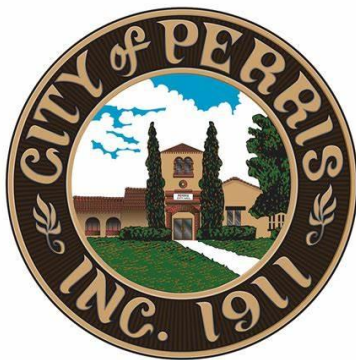
Ellis Avenue / Evans Road Extension Project Feasibility Study



March 25, 2024

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EXP





This Feasibility Study Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

A handwritten signature in black ink, appearing to read 'Syed Raza', is positioned above a horizontal line.

Syed Raza, PE
Registered Civil Engineer

3/25/2024

Date



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Appendices

- Appendix A: California Department of Transportation Approval Letter for Design Engineering Evaluation Report Process for the Project
- Appendix B: Traffic Impact Analysis Report
- Appendix C: Interchange Alternatives
- Appendix D: Plan & Profile Exhibits
- Appendix E: Cost Estimate
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Introduction

The City of Perris (City) was incorporated in 1911 and is strategically located approximately 71 miles east-southeast of Los Angeles and 81 miles north of San Diego. It is the 10th most populous city in the County with an estimated current population of over 79,000 residents and covers an area of approximately 31.5 square miles. It is bordered by unincorporated areas of Riverside County on the east and west sides and the cities of Moreno Valley and Menifee to the north and south respectively. It is served by two major State highways, Interstate 215 (I-215) and State Route 74 (SR-74). SR-60 and SR-91 are in close proximity and provide a critical link to employment centers in Los Angeles and Orange Counties.

Scope of Study

The City is conducting a Feasibility Study to assess the viability of adding a new interchange or overcrossing at Ellis Avenue / Evans Road that meets Caltrans minimum spacing requirement for local interchanges, horizontal /vertical profile requirements, City's General Plan Circulation Element and land use constraints. . The new interchange/overcrossing is proposed between Redlands Avenue/4th Street and SR-74 East interchanges along I-215.

This Feasibility Study has been prepared by EXP U.S. Services Inc, on behalf of the City assess whether an interchange or an overcrossing is viable for Ellis Avenue/Evans Road Corridor. Following the completion and approval of the Feasibility Study, the project will proceed to the next phase. If the City decides to proceed with the Overcrossing Alternative, then the next phase will be the preparation of Project Approval/ Environmental Document (PA&ED) for the project. The City has already coordinated with the California Department of Transportation (Caltrans) regarding the Overcrossing Alternative and have received approval for Design Engineering Evaluation Report process for the project (Caltrans approval letter attached in Appendix A) However, If the Interchange Alternative is selected, then a Project Initiation Document (PID) will be required.

Project Deficiency

Ellis Avenue currently ends on either side of I-215 and does not have a bridge that crosses the freeway. As a result, traffic has to travel long distance on circuitous routes to the nearest interchange to get to the other side. The City plans to reconnect the communities on either side of I-215 by adding a new overcrossing or interchange at Ellis Avenue/Evans Road as shown in the City's General Plan. The project is expected to reduce response time for emergency vehicles as well as significantly improve local circulation within the City. In addition, it will accommodate future traffic demand due to industrial, commercial and residential developments planned in the area. It will also

help improve transportation efficiency within the City by creating another east west corridor for users to cross I-215. The Project includes extending Ellis Avenue/ Evans Road across I-215 and connecting to San Jacinto Avenue which will be widened at the intersection to accommodate existing and future traffic demands.

Existing Facility

Interstate 215

I-215 is a major north-south freeway that begins at its southern junction with Interstate 15 (I-15) in the City of Murrieta in Riverside County and continues north to its northern junction with I-15 near Devore in San Bernardino County. The corridor carries high volume of traffic and experiences severe congestion during peak periods. It is a major goods movement corridor serving warehouses and distribution centers located throughout the Inland Empire. I-215 is functionally classified as a Principal Arterial. It is a part of the California Freeway and Expressway System, National Highway System, and part of Surface Transportation Assistance Act Route for use by oversized trucks. . The total length of the route is 54.2 miles and all of it is under the jurisdiction of Caltrans District 8.

I-215 is one of the busiest freeways in California with an AADT of over 275,000 vehicles per day (vpd) near the University of California, Riverside transitioning to an AADT of between 146,000 vpd and 99,000 vpd within the City limits. This segment of I-215 carries a significant amount of truck traffic, with latest Caltrans data showing 13% truck volume.

Within the project limits, the horizontal alignment of I-215 is on a tangent and the vertical profile is relatively flat. The cross-section consists of three 12-foot general purpose lanes in each direction with paved inside and outside shoulder separated by a thrie-beam median barrier. The area between the edge of outside shoulder to the right of way (R/W) line on both sides is unpaved and gently slopes away from the roadway. A dirt ditch is located just outside Caltrans R/W on the west side andan overhead power line on wooden poles runs parallel to the freeway on east side, outside Caltrans R/W. The structural section of the existing pavement consists of asphalt concrete pavement. The ultimate configuration for this segment of I-215 consists of an 8-lane facility (6 mixed-flow lanes + 2 managed lanes) as indicated in the approved Transportation Concept Report, Interstate 215, District 8, dated September 2012.

Ellis Avenue

Ellis Avenue is primarily a two-lane road that runs east-west. It intersects Case Road and Menifee Road on either side of I-215 and connects to San Jacinto Avenue via Redlands Avenue. Per the City's General Plan, the ultimate roadway classification for Ellis Avenue will be a Primary Arterial with 128' right-of-way. There is ongoing

construction on Ellis Avenue, west of I-215 for Home Depot development. The cross-section for this widening consists of two lanes in each direction with a median lane, curb, gutter, sidewalks and parkway.

Evans Road

North of I-215, Evans Road is primarily a three-lane roadway that runs north-south with two lanes in the northbound direction and one lane in the southbound direction. It terminates at its southern end at Nuevo Road. South of I-215, Evans Road is primarily a dirt road that runs north-south and terminates at its northern end at Watson Road. Per the City's General Plan, the ultimate roadway classification for Evans Road will be a Primary Arterial with 128' right-of-way.

Purpose and Need

The initial purpose and need statement was developed based on the information gathered during this Feasibility Study. This will be refined during subsequent phases of the project as more detailed information becomes available and stakeholder feedback is received.

The purpose and need of the proposed project are as follows:

- Improve traffic circulation and connectivity to communities east and west of I-215.
- Improve the City's pedestrian and bicycle connectivity network.
- Address traffic inefficiency and relieve congestion at adjacent interchanges and other local street network caused by existing and future growth in the City and adjacent communities.
- Provide opportunity for multi modal improvements.

Continuity across I-215 does not currently exist along Ellis Avenue / Evans Road. Vehicular traffic for communities adjacent to Ellis Avenue / Evans Road must travel over a mile north or south to access facilities on the opposite side of I-215. This constraint is a significant challenge to alternative modes of travel like bicycles and even more so for pedestrians.

The transportation facilities are also experiencing an increase in traffic demand generated by the growth and development occurring in the City. Local street network near the project area including the interchanges at Redlands Avenue and SR-74 East are experiencing varied level of congestion during the peak periods. It is anticipated that this congestion will worsen in the future as traffic volumes increase. Future and ongoing construction of residential and commercial developments in the area are expected to generate traffic volumes beyond what the existing transportation network can accommodate.

Additionally, communities adjacent to the City also use the City roadway network to access and cross I-215. Expected growth in these communities will only worsen the traffic congestion of the City's transportation facilities near the project area.

Preliminary Traffic Impact Analysis

A comprehensive Traffic Impact Analysis (TIA) Report has been prepared as part of the Feasibility Study and is attached in Appendix B. The TIA analyzed the following seven intersections and roadway segments in the Study Area:



Figure 1 - Study Area

The TIA was performed for the following scenarios during the AM and PM peak periods using existing turning movement counts collected for the project and forecasted traffic data obtained from the Southern California Association of Governments (SCAG):

- Existing (2023) conditions
- Opening year (2030) with and without project
- Horizon year (2050) with and without project

Existing Conditions

The existing turning movement counts for all intersections were collected in June 2023. All data was collected on a clear weekday without any incidents or ongoing road closure on the roadways. The data also included vehicle classification broken down by passenger cars, light/heavy trucks, bikes, and pedestrians.

Forecasted Conditions

Forecasted traffic volumes for the opening year (2030) and horizon year (2050) were computed using Southern California Association of Government (SCAG) 2020 Regional Travel Demand Model. This model has a base year of 2016, horizon year of 2050 and has the most up-to-date Traffic Analysis Zone (TAZ), network links, and socio-economic data (SED). The model provided traffic link volume estimates by vehicle mode and peak period from the runs performed using the 2020 RTP Project list for the following years:

- Year 2019
- Year 2025
- Year 2045

SCAG provided the link volumes during the 3-hour morning peak (6:00 AM to 9:00 AM) and 4-hour afternoon peak (3:00 PM to 7:00 PM) from their most recent regional model. To estimate the peak hour volume, EXP applied a conversion factor of 35% for the AM peak period and 28% for the PM peak period to the SCAG data. A growth rate of 3% and 2.2% was applied to estimate Opening (2030) year and Horizon (2050) year traffic volumes.

Table 1 shows the existing, opening and horizon year traffic volumes at all intersections in the Study Area

Table 1 – Existing, Opening, and Horizon Year Intersection Peak Hour Volumes (Vehicle Per Hour)

Intersection	2023	2030 (Opening)		2050 (Horizon)	
	Exist.	No-Build	Build	No-Build	Build
AM PEAK HOUR					
Ellis Ave / Case Rd	740	910	930	1330	1360
Redlands Ave / 4th St	1910	2350	2150	3440	3140
Redlands Ave / I-215 SB Ramps	2440	3000	2790	4380	4080
Redlands Ave / I-215 NB Ramps	2430	2990	2780	4370	4070
Redlands Ave / San Jacinto Ave	2190	2690	2580	3930	3770
San Jacinto Ave / Murrieta Rd / Evans Rd	1050	1290	1470	1890	2150
San Jacinto Ave / Dunlap Dr	750	920	920	1340	1340
PM PEAK HOUR					
Ellis Ave / Case Rd	910	1120	1140	1640	1670
Redlands Ave / 4th St	2220	2730	2530	4000	3700
Redlands Ave / I-215 SB Ramps	2610	3210	3010	4700	4400
Redlands Ave / I-215 NB Ramps	2650	3260	3070	4780	4490
Redlands Ave / San Jacinto Ave	2390	2940	2830	4300	4150
San Jacinto Ave / Murrieta Rd / Evans Rd	1120	1380	1550	2010	2270
San Jacinto Ave / Dunlap Dr	920	1130	1130	1650	1650

Table 2 shows vehicle classification data for the interchange broken down by passenger cars, trucks (two, three, and four or more axles), bicycles, and pedestrians. As can be seen, the vast majority (over 92%) of the vehicles at the intersections consist of passenger cars, and few bicycles were observed during the field data collection.

Table 2 - Vehicle Percentage

Intersection	Passenger Veh No. (%)	Heavy Veh No. (%)	Pedestrian No.	Bicycle No.
AM Peak Hour				
Ellis Ave / Case Rd	679 (92%)	58 (8%)	0	1
Redlands Ave / 4th St	1798 (94%)	109 (6%)	0	0
Redlands Ave / I-215 SB Ramps	2311 (95%)	118 (5%)	10	0
Redlands Ave / I-215 NB Ramps	2297 (95%)	116 (5%)	10	0
Redlands Ave / San Jacinto Ave	2125 (97%)	72 (3%)	5	0
San Jacinto Ave / Murrieta Rd / Evans Rd	1002 (95%)	50 (5%)	0	0
San Jacinto Ave / Dunlap Dr	699 (93%)	49 (7%)	0	0
PM Peak Hour				
Ellis Ave / Case Rd	865 (95%)	45 (5%)	0	2
Redlands Ave / 4th St	2152 (97%)	74 (3%)	0	0
Redlands Ave / I-215 SB Ramps	2509 (97%)	85 (3%)	6	2
Redlands Ave / I-215 NB Ramps	2542 (96%)	105 (4%)	4	2
Redlands Ave / San Jacinto Ave	2300 (97%)	66 (3%)	6	2
San Jacinto Ave / Murrieta Rd / Evans Rd	1075 (96%)	42 (4%)	0	0
San Jacinto Ave / Dunlap Dr	895 (96%)	41 (4%)	0	0

Findings

The extension of Ellis Avenue/Evans Road to San Jacinto Avenue with a bridge over I-215 will help re-distribute and balance traffic flows on various east-west corridors and improve LOS at five of the seven intersections during either one or both peak hours. The LOS at the remaining two intersections remained unchanged.

A summary of the results of the traffic analysis performed at intersections and roadway segments for various scenarios are shown in Table 3 and Table 4 respectively.

Table 3 - Summary of Intersection Level of Service

Intersection	2023		2030 (Opening)				2050 (Horizon)			
	Existing		No-Build		Build		No-Build		Build	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
AM Peak Hour										
Ellis Ave / Case Rd	B	16.6	C	20.7	B	16.2	E	66.6	C	24.4
Redlands Ave / 4th St	C	26.5	D	44.4	C	20.1	F	169.9	C	25.8
Redlands Ave / I-215 SB Ramps	B	13.8	B	17.2	B	16.6	D	46.5	D	39.1
Redlands Ave / I-215 NB Ramps	B	13.7	B	16.2	B	15.4	C	26.8	C	24.2
Redlands Ave / San Jacinto Ave	C	33.5	F	82.0	C	27.6	F	219.7	F	84.0
San Jacinto Ave / Murrieta Rd / Evans Rd	C	18.1	D	32.9	B	18.8	F	453.0	C	31.6
San Jacinto Ave / Dunlap Dr	C	16.9	D	26.4	B	15.7	F	314.8	B	16.9
PM Peak Hour										
Ellis Ave / Case Rd	B	12.0	B	14.1	B	14.0	D	39.1	C	27.2
Redlands Ave / 4th St	C	26.1	D	44.5	C	21.5	F	164.6	C	30.7
Redlands Ave / I-215 SB Ramps	B	12.5	B	14.8	B	14.4	C	24.8	C	24.9
Redlands Ave / I-215 NB Ramps	B	14.1	B	16.9	B	16.1	C	31.2	B	27.6
Redlands Ave / San Jacinto Ave	C	35.0	E	69.0	C	28.2	F	194.2	F	82.4
San Jacinto Ave / Murrieta Rd / Evans Rd	B	12.5	C	15.5	B	16.9	F	66.4	C	20.3
San Jacinto Ave / Dunlap Dr	C	19.7	E	38.3	B	15.7	F	779.0	B	14.8

Table 4 - Summary of Roadway Segment Level of Service

Corridor	Segment	Existing (2023)	Opening (2030)		Year	Horizon (2050)		Year
			No Project	With Project		No Project	With Project	
AM Peak Hour								
Redlands Ave	4 th St to I-215 SB	B	B	B		C	C	
Redlands Ave	I-215 NB Ramp to San Jacinto Ave	A	B	B		C	C	
San Jacinto Ave	Redlands Ave to Murrieta Rd	D	E	A		E	B	
San Jacinto Ave	Murrieta Rd to Dunlap Dr	C	C	A		E	B	
Overcrossing	Ellis Rd to San Jacinto Ave	-	-	A		-	A	
PM Peak Hour								
Redlands Ave	4 th St to I-215 SB Ramps	B	C	C		D	D	
Redlands Ave	I-215 NB Ramps to San Jacinto Ave	A	C	C		D	D	
San Jacinto Ave	Redlands Ave to Murrieta Rd	E	E	B		E	B	
San Jacinto Ave	Murrieta Rd to Dunlap Dr	D	D	A		E	B	
Overcrossing	Ellis Rd to San Jacinto Ave	-	-	A		-	A	

Below is a summary of findings under various scenarios:

- Existing (2023) Conditions:
 - All the intersections in the Study Area performed well with acceptable LOS of C or better.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except for the southbound left turn at Ellis/Case (AM Peak) and eastbound left turn at Redlands/4th (PM Peak).
 - All roadway segments performed at an LOS D or better except LOS E for the segment of San Jacinto Avenue, between Redlands Avenue and Murrieta Road.
- Opening Year (2030) Without Improvements:
 - There was a significant deterioration in LOS at the intersection of Redlands Avenue and San Jacinto from C to F during the AM peak hour and from C to E during the PM peak hour. This can be attributed to the high volume of eastbound through traffic on San Jacinto Avenue. The remaining intersections continued to perform satisfactorily (D or better).
 - The existing storage lengths were sufficient to accommodate queue length for most movements except for southbound left-turn at Ellis/Case (AM Peak), eastbound left at Redlands/4th (both peaks) and westbound left-turns at Redlands Avenue/San Jacinto Avenue (both peaks).
 - All roadway segments performed at LOS D or better except for the segment of San Jacinto Avenue, between Redlands Avenue and Murrieta Road which degraded from LOS D to E during AM peak hour and remained unchanged at E during the PM peak hour.
- Opening Year (2030) With Improvements:
 - All the intersections performed well with acceptable LOS of C or better.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except the 95% queue length for the southbound left turn at Ellis/Case (AM Peak) and eastbound left turn at Redlands/4th (PM Peak) extended beyond the existing storage length.
 - All roadway segments performed well with LOS C or better.
- Horizon Year (2050) Without Improvements:
 - All intersections were found to operate at LOS E or F during either or both AM and PM peak hours except for the intersections of Redlands Avenue/I-215 NB ramps and Redlands Avenue/I-215 SB ramps that operated at LOS C or D.

- The existing storage length was found to be sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound left-turn at Redlands Avenue/I-215 SB (both peaks), northbound right turn at Redlands Avenue/I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue/San Jacinto Avenue.
- The roadway segment on Redlands Avenue operated at LOS D or better while all the segments on San Jacinto Avenue deteriorated to LOS E during both peak hours.
- Horizon Year (2050) With Improvements:
 - All the intersections performed well with acceptable LOS of D or better except for the intersection of Redlands/San Jacinto that failed with LOS F during both peak hours.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound left-turn at Redlands Avenue/I-215 SB (both peaks), northbound right turn at Redlands Avenue/I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue/San Jacinto Avenue.
 - All roadway segments in the Study Area performed at LOS D or better for both peak hours including LOS A for Ellis Avenue/Evans Road Extension Project.

Alternatives

Four alternatives for Ellis Avenue/Evans Road were studied for this Feasibility Study. Each alternative was developed with consideration of the project's purpose and need, design standards, safety, environmental impacts, traffic, right-of-way, and cost. Below are the summaries of the analyses of each alternative.

- Alternative 1: Interchange at PM 25.2
- Alternative 2A: Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue located just west of Perris Valley Storm Drain (PSVD) Channel
- Alternative 2B: Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue located across from Murrieta Road
- Alternative 3: Interchange at PM 25.0
- Alternative 4: Interchange at PM 24.6

See Appendix C for Interchange Alternatives Exhibits

Alternative 1: Interchange at PM 25.2

- This alternative proposes an interchange approximately 1.7 miles north of SR-74 East and 1.1 miles south of Redlands Avenue and would connect Ellis Avenue / Evans Road from Murrieta Road to San Jacinto Avenue.
- Ellis Avenue / Evans Road would be widened to four lanes separated by a 14-foot raised median to accommodate left turn lanes at each intersection. No median is proposed on the bridge over I-215/7th Street.
- A 350-foot long structure would be constructed over I-215 and the 7th Street Channel. A 600-foot skewed structure would be constructed over the PVSD Channel.
- Signalized intersections (if warranted) at the northbound ramps, southbound ramps, and San Jacinto Avenue.
- Left turn lanes at the northbound ramps, southbound ramps, and San Jacinto Avenue will be designed to accommodate horizon year traffic volumes, ensuring that it does not impede thru movements.
- Would require partial acquisition of conservation land.
- Provides 55 mph design speed for the entire length.

Alternative 2A: Overcrossing at PM 25.4

- This alternative proposes an overcrossing approximately 1.9 miles north of SR-74 East and 0.9 miles south of Redlands Avenue and would connect Ellis Avenue / Evans Road from Murrieta Road to San Jacinto Avenue.

- Provides 50 mph design speed for the entire length except at westerly project limits where the proposed design speed will be 30 mph to avoid conversation land.
- Ellis Avenue / Evans Road would be widened to four lanes separated by a 14-foot raised median to accommodate left turn lanes at each intersection. No median is proposed on the bridge over I-215/7th Street. A 350-foot long structure would be constructed over I-215 and the 7th Street Channel.
- New signalized intersection (if warranted) of Evans Road and San Jacinto Avenue, just west of PSVD Channel.
- Left turn lanes at San Jacinto Avenue will be designed to accommodate horizon year traffic volumes, ensuring that it does impede thru movements.
- This alternative does not accommodate an interchange as it does not meet the minimum interchange spacing requirements of 1.0 miles from Redlands Avenue.
- This alternative does not impact dedicated conservation land and has the least environmental impacts.
- This alternative offers the most flexibility with planned development of the parcel north of I-215, south of San Jacinto Avenue, and west of the PSVD Channel.

Alternative 2B: Overcrossing at PM 25.4

- This Alternative is similar to Alternative 2A except for the following variation: Provides 30 mph design speed at two additional horizontal curves included in the alignment.
- Intersects San Jacinto Avenue across from Murrieta Road.

Alternative 3: Interchange at PM 25.0

- This alternative proposes an interchange approximately 1.5 miles north of SR-74 East and 1.3 miles south of Redlands Avenue and would connect Ellis Avenue / Evans Road from Murrieta Road to San Jacinto Avenue via Dunlap Drive.
- Ellis Avenue / Evans Road would be widened to four lanes separated by a 14-foot raised median to accommodate left turn lanes at each intersection.
- A 600-foot long structure would be constructed over I-215 and the 7th Street Channel. A 150-foot structure would be constructed over the San Jacinto River south of I-215, and a 200-foot structure would be constructed over the San Jacinto River north of I-215.
- New signalized intersections (if warranted) at the northbound ramps, southbound ramps, Dunlap Drive and San Jacinto Avenue.
- Left turn lanes at the northbound ramps, southbound ramps, Dunlap Drive, and San Jacinto Avenue will be designed to accommodate horizon year traffic volumes to ensure turning traffic does not impede thru movements.
- This alternative would require partial acquisition of conservation land.

- This alternative would require coordination/concurrence from Riverside County since it impacts County R/W.

Alternative 4: Interchange at PM 24.6

- This alternative proposes an interchange approximately 1.1 miles north of SR-74 East and 1.7 miles south of Redlands Avenue and would connect Ellis Avenue / Evans Road from Murrieta Road to San Jacinto Avenue via Dunlap Drive.
- Ellis Avenue / Evans Road would be widened to four lanes separated by a 14-foot raised median to accommodate left turn lanes at each intersection.
- A 350-foot long structure would be constructed over I-215 and the 7th Street Channel. A 250-foot structure would be constructed over the San Jacinto River south of I-215, and a 200-foot structure would be constructed over the San Jacinto River north of I-215.
- New signalized intersections (if warranted) at the northbound ramps, southbound ramps, Dunlap Drive, and San Jacinto Avenue.
- Left turn lanes at the northbound ramps, southbound ramps, Dunlap Drive and San Jacinto Avenue will be designed to accommodate horizon year traffic volumes to ensure turning traffic does not impede thru movements.
- This alternative does not impact conservation land.
- This alternative would require coordination/concurrence from Riverside County since it impacts County R/W.
- This alternative requires the most R/W and has the most environmental impacts compared to the other alternatives.

Considerations

Road Classification

Per the City of Perris' General Plan Circulation Element, Ellis Avenue / Evans Road and San Jacinto Avenue are all proposed to be classified as an Arterial as indicated by the large dashed lines in Figure 2 below.

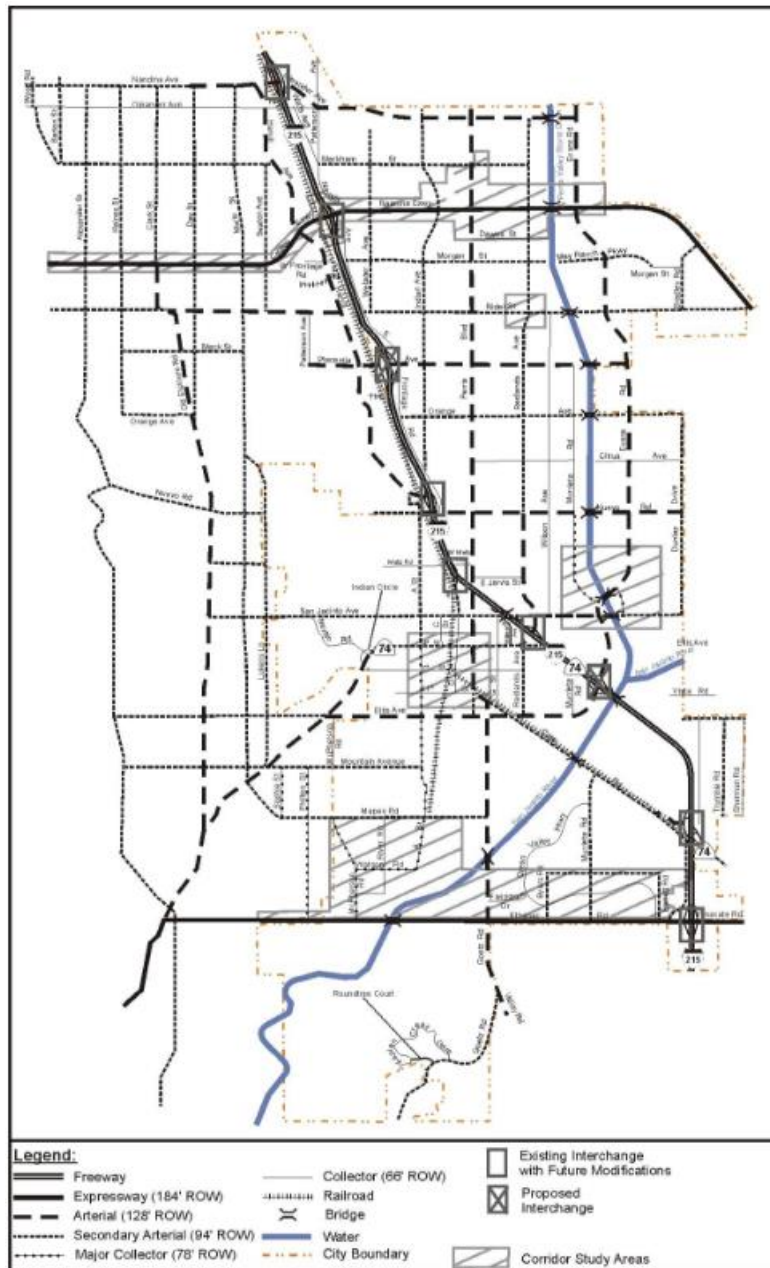


Figure 2 – General Plan Circulation Element

Typical Cross Section

Based on the City's General Plan Circulation Element, an Arterial roadway classification is a six-lane roadway section separated by a 14-foot raised median with 17-foot combined parkway / sidewalk bringing the total right-of-way width to 128-feet.

However, the City has approved improvement plans for an adjacent segment of Ellis Avenue from Case Road to Murrieta Road. This adjacent segment utilizes a four-lane section separated by a 14-foot raised median and a 12-foot combined parkway / sidewalk bringing the total right-of-way width of 94-feet as shown in Figure 3 below. In order to appropriately tie-into this adjacent project for which construction activities are nearly complete, the Ellis Avenue / Evans Road extension will utilize the same four-lane section.

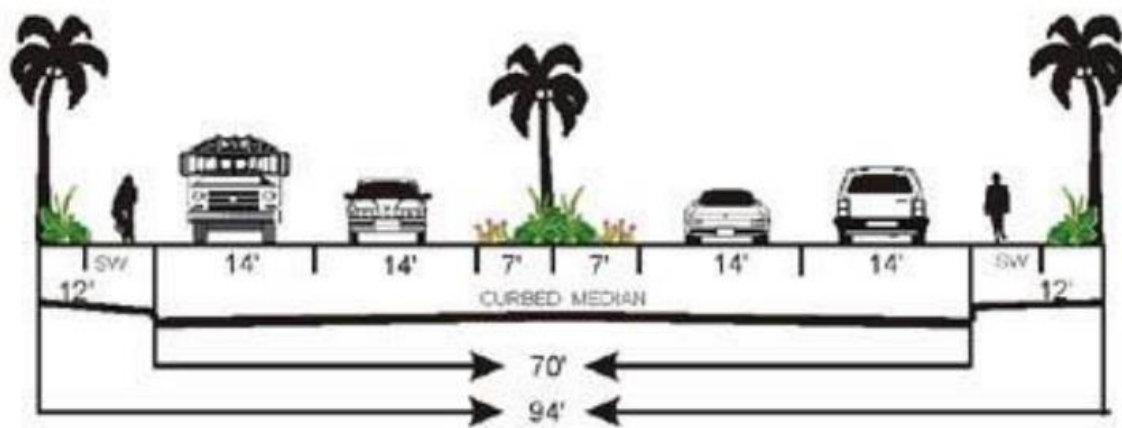


Figure 3 – Proposed Typical Cross Section

Design Standards

The Caltrans Highway Design Manual, 7th Edition, September 29, 2023 was used to develop these alternatives.

Proximity to the Redlands Avenue Interchange

Caltrans standard requires one-mile minimum spacing for local street interchanges in urban areas. Alternative 2A and 2B do not need to meet the one-mile spacing requirement since no ramps to the freeway are proposed. All other alternatives meet or exceed the one-mile spacing requirement.

Right-of-Way Impact and Environmentally Sensitive Areas

Alternative 1 crosses through dedicated conservation land and requires a structure over I-215 and the PVSD Channel.

Alternative 2 requires the least amount of right-of-way, does not impact the dedicated conservation land, and does not require crossing the Perris Valley Storm Drain Channel or the San Jacinto River.

Alternative 3 requires two structures over the San Jacinto River along with a significantly skewed crossing over I-215 (40-degree interior angle). Significant R/W would be required to meet Caltrans' standards of a 75-degree minimum interior angle at intersections. In addition, this alternative would impact dedicated conservation land.

Alternative 4 requires two structures over the San Jacinto River along with significant R/W acquisition to ensure a standard 90-degree crossing over I-215 without impacting dedicated conservation land.

Vertical Profile

A preliminary vertical profile for Ellis Avenue / Evans Road was developed for Alternative 2A and is shown in Appendix D. USGS LIDAR data was used to develop a rough existing surface, and the profile was designed to meet Caltrans standard minimum vertical clearance of 16.5-feet at the I-215 overcrossing. The proposed profile will need to be further refined in subsequent phases of the project. This profile may also apply to Alternative 2B.

Cost Estimate

A high-level cost estimate was developed for Alternative 2A as shown in Appendix E. A rough order-of-magnitude cost estimate based on lane-miles was prepared to compare the proposed alternatives as shown in Table 5 below.

Table 5 – Cost Estimate

COST ESTIMATE	
ALTERNATIVE	CAPITAL COST
1 – Interchange at PM 25.2	\$78,056,000
2A – Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue, west of PVSD	\$55,920,000
2B – Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue across from Murrieta Rd	\$60,824,000
3 – Interchange at PM 25.0	\$100,770,000
4 – Interchange at PM 24.6	\$111,205,000

Preliminary Right-of-Way Assessment

As part of the Feasibility Study, R/W lines were obtained from Riverside County's geographic information system (GIS) records. There are 4 parcels that could be affected by Alternative 2A as outlined in Table 6 below and shown in Appendix F.

Table 6 –Right-of-Way Impacts

IMPACTED PARCELS		
APN	ZONING	AREA (ACRES)
330-090-012	Light Industrial	4,805 SF
310-220-058	Light Industrial	302,260 SF
310-220-047	New Perris – Specific Plan	279,490 SF
310-200-014	New Perris – Specific Plan	432,205 SF

Preliminary Drainage Assessment

The proposed project is located in a regulatory floodway Zone AE for the San Jacinto River as shown in the FEMA FIRM Map shown below in Figure 4. According to Riverside County Flood Control District (RCFCD) staff, an updated Zone AE study is being conducted and FEMA is expected to adopt the new study late in 2024. Note that the new study anticipates the wide floodplain/floodway limits will remain unchanged but with some localized reduction in flow depth.

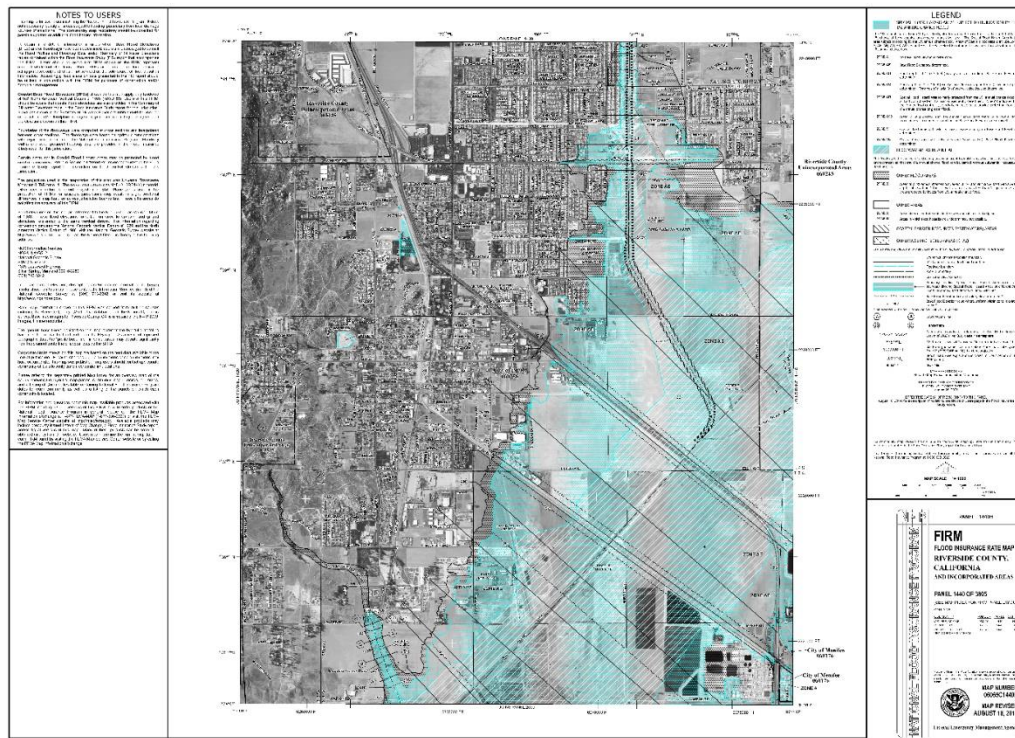


Figure 4 – FEMA FIRM Map

The proposed overcrossing will have to consider the floodplain/floodway boundaries in a manner that the proposed project does not alter the existing floodplain/floodplain limits. FEMA Guidelines shall be applied to ensure project structures or embankment fill does not cause adverse impact to properties or critical utilities within the floodplain. In general, a proposed condition hydraulic model for San Jacinto River shall be prepared to evaluate project impacts.

Drainage improvements shall be based upon City and RCFCD Drainage Hydrology and Hydraulics Requirements. Should the project drainage system encroach Caltrans R/W, the HDM shall be used for the drainage design.

Proposed bridge structures will be required to consider the 100-year water surface elevation and freeboard. The required freeboard will be based on RCFCD and Caltrans.

Preliminary Environmental Assessment

Based on the information collected during the Feasibility Study, it is likely that the Project will require preparation of an Environmental Impact Report (EIR) for compliance with California Environmental Quality Act (CEQA) and a routine Environmental Assessment (EA) for National Environmental Policy Act (NEPA). The final determination regarding the applicable CEQA and NEPA compliance documentation would be made during the Project Approval / Environmental Document (PA&ED) phase of the project in conjunction with the completion of the technical studies.

The following is a summary of special environmental considerations:

- Full and / or partial acquisitions of privately-owned parcels.
- Potential asbestos-containing materials, lead based paint, and aerially deposited lead within the project area.
- Potential presence of nesting birds within the vegetation and trees in the project area.
- Potential impacts to jurisdictional waters of the U.S. and State within the project area.
- Senate Bill 743 and the focus of Vehicle Miles Traveled (VMT) as a measure of transportation impact as opposed to Level of Service (LOS).

The following technical studies are expected to be prepared in support of the EIR/EA. These studies will need to be confirmed during the PA&ED phase of the project.

- Minor Visual Impact Assessment
- Noise Study Report
- Air Quality/ GHG Technical Report

- Air Quality Conformity Analysis Report and Checklist
- Scoping Questionnaire for Water Quality Issues
- Energy Analysis Report
- Jurisdictional Delineation Report
- Natural Environmental Study / Minimal Impacts
- MSHCP Consistency Analysis Report and Joint Project Review
- Delineation of Wetlands & Waterways
- Riparian/Riverine Resources Report
- Burrowing Owl Surveys & Report
- Narrow Endemic and Criteria Area Plant Surveys & Report
- Los Angeles Pocket Mouse Live-Trapping & Report
- Determination of Biologically Equivalent or Superior Preservation Report and Joint Project Review
- Area of Potential Effects Map
- Archaeological Survey Report
- Historic Property Survey Report
- Historical Resources Evaluation Report
- Paleontological Identification Report / Paleontological Evaluation Report
- Phase I Environmental Site Assessment with Initial Site Assessment (ISA) Checklist
- Aerially Deposited Lead Survey & Report

Recommendation

It is recommended that Alternative 2 (overcrossing alternative 2A and 2B) be approved for the Project and allowed to proceed to the next phase. The following are the advantages of this Alternative:

- Preserves the dedicated conservation land.
- Provides most flexibility with planned development of the parcel north of I-215, south of San Jacinto Avenue, and west of the PSVD Channel.
- Has less environmental impact than other alternatives.
- Accommodates perpendicular bridge over I-215 and 7th Street
- Has Caltrans approval for following the DEER process for the Project. The PA&ED and PS&E phases can be performed concurrently and will not require preparation of a PID (PSR/PDS).
- Shortest schedule to complete the environmental and design phases.
- Requires least amount of R/W among all alternatives.
- Requires only one bridge for the entire length of the Project.
- Does not impact San Jacinto River or PVSD Channel.

- Has the shortest length.
- Has the lowest construction cost.

Next Steps and Schedule

The following phases will apply to Alternative 2 as indicated in Caltrans Project Development Procedure Manual:

- Project Approval and Environmental Document Phase (PA&ED) – Preparation of Design Engineering Evaluation Report (DEER) and Environmental Document (ED)
- Design Phase – Preparation of Plans, Specifications, and Estimates (PS&E)
- Construction Phase

A draft schedule was developed for Alternative 2, following Caltrans typical process for similar projects, and is included in Appendix G.



[Appendix A](#)

California Department of Transportation Approval Letter for
Design Engineering Evaluation Report Process for the Project

DEPARTMENT OF TRANSPORTATION

PROGRAM PROJECT MANAGEMENT

464 WEST FOURTH STREET, MS 1228

SAN BERNARDINO, CA 92401-1400

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*Making Conservation
a California Way of Life.*

February 21, 2023

Stuart E. McKibbin, P.E.
Contract City Engineer
City of Perris
24 South "D" Street, Suite 100
Perris, CA 92570

Dear Mr. Stuart:

This letter is to respond to your request to review the City's proposed over-crossing on I-215 at Ellis Avenue (PM 25.2) through the Short-Form/ DEER QMA (Quality Management Assessment) Process. We understand that this project is led by the City of Perris. The new over-crossing is estimated at \$12.1 Million.

The California Department of Transportation (Caltrans) has reviewed your request and approved the use of Short-Form QMA process based on the following understanding:

- The city has agreed to coordinate with Caltrans during plans development
- Approval of the proposed Ellis Avenue Bridge over-crossing is for current proposed scope. Future scope of work outlined in the City's General plan will require a separate approval

Touhida Haider is the assigned Project Manager and will coordinate all project reviews. If you have any questions or need additional information, please contact me at (909) 665-3446 or Touhida Haider at (909) 501-5863.

Sincerely,

A handwritten signature in black ink, appearing to read "Bassem Barsoum", is written over a horizontal line.

Bassem Barsoum
Acting Deputy District Director
Program Project Management

cc: Touhida Haider, Project Manager



Appendix B

Traffic Impact Analysis Report

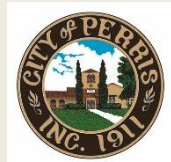
Ellis Avenue/Evans Road Extension Project Traffic Impact Analysis Report

City of Perris



Prepared For:

City of Perris
101 N D Street
Perris, CA 92570



Prepared By:
EXP Services Inc.
451 E Vanderbilt Way Suite 375
San Bernardino, CA 92408
T: +1.909.751.3264
www.exp.com



November 2023

This Traffic Impact Analysis Report has been prepared under the direction of the following registered civil engineer. The registered Civil Engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Syed Raza, PE

DATE

Project Manager

EXP U.S. Services Inc.

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Appendix H - HCS Outputs for Segment Analyses

1. Introduction

The City of Peris is conducting a Feasibility Study to assess the viability of adding a new interchange or overcrossing at Ellis Avenue / Evans Road that meets Caltrans minimum spacing requirement for local interchanges, horizontal /vertical profile requirements, City's General Plan Circulation Element and land use constraints. The new interchange/overcrossing is proposed between Redlands Avenue/4th Street and SR-74 East interchanges along I-215.

The City has retained the services of EXP U.S. Services Inc. (EXP) to prepare a Traffic Impact Analysis (TIA) Report for the Project. This report focuses on assessing the traffic impact and evaluating traffic conditions in the Study Area.

The primary goal of the TIA is to comprehensively evaluate the operational aspects, identify deficiencies, and propose necessary improvements for intersections and roadway segments within the Study Area. The analysis has been performed for existing, opening year and horizon year conditions.

2. Background

I-215 is a major north-south freeway that begins at its southern junction with Interstate 15 (I-15) in the City of Murrieta in Riverside County and continues north to its northern junction with I-15 near Devore in San Bernardino County. The corridor carries high volume of traffic and experiences severe congestion during peak periods. It is a major goods movement corridor serving warehouses and distribution centers located throughout the Inland Empire. I-215 is functionally classified as a Principal Arterial. It is a part of the California Freeway and Expressway System, National Highway System, and part of Surface Transportation Assistance Act Route for use by oversized trucks. The total length of the route is 54.2 miles and all of it is under the jurisdiction of Caltrans District 8.

I-215 is one of the busiest freeways in California with an AADT of over 275,000 vehicles per day (vpd) near the University of California, Riverside transitioning to an AADT of between 146,000 vpd and 99,000 vpd within the City limits. This segment of I-215 carries a significant amount of truck traffic, with the latest Caltrans data showing 13% truck volume.

3. Purpose and Need

The initial purpose and need statement was developed based on the information gathered during this Feasibility Study. This will be refined during subsequent phases of the project as more detailed information becomes available and stakeholder feedback is received.

The purpose and need of the proposed project are as follows:

- Improve traffic circulation and connectivity to communities east and west of I-215.
- Improve the City's pedestrian and bicycle connectivity network.
- Address traffic inefficiency and relieve congestion at adjacent interchanges and other local street network caused by existing and future growth in the City and adjacent communities.
- Provide opportunity for multi modal improvements.

Continuity across I-215 does not currently exist along Ellis Avenue / Evans Road. Vehicular traffic for communities adjacent to Ellis Avenue / Evans Road must travel over a mile north or south to access facilities on the opposite side of I-215. This constraint is a significant challenge to alternative modes of travel like bicycles and even more so for pedestrians.

The transportation facilities are also experiencing an increase in traffic demand generated by the growth and development occurring in the City. Local street network near the project area including the interchanges at Redlands Avenue and SR-74 East are experiencing varied level of congestion during the peak periods. It is anticipated that this congestion will worsen in the future as traffic volumes increase. Future and ongoing construction of residential and commercial developments in the area are expected to generate traffic volumes beyond what the existing transportation network can accommodate.

Additionally, communities adjacent to the City also use the City roadway network to access and cross I-215. Expected growth in these communities will only worsen the traffic congestion of the City's transportation facilities near the project area.

4. Existing Conditions

I-215

Within the project limits, the horizontal alignment of I-215 is on a tangent and the vertical profile is relatively flat. The cross-section consists of three 12-foot general purpose lanes in each direction with paved inside and outside shoulder separated by a three-beam median barrier. The area between the edge of outside shoulder to the right of way (R/W) line on both sides is unpaved and gently slopes away from the roadway. A dirt ditch is located just outside Caltrans R/W. An overhead power line on wooden poles runs parallel to the freeway on the east side, outside Caltrans R/W. The structural section of the existing pavement consists of asphalt concrete pavement. The ultimate configuration for this segment of I-215 consists of an 8-lane facility (6 mixed-flow lanes + 2 managed lanes) as indicated in the approved Transportation Concept Report, Interstate 215, District 8, dated September 2012.

Ellis Avenue

Ellis Avenue is primarily a two-lane road that runs east-west. It intersects Case Road and Meniffee Road on either side of I-215 and connects to San Jacinto Avenue via Redlands Avenue. Per the City's General Plan, the ultimate roadway classification for Ellis Avenue will be a Primary Arterial with 128' right-of-way. There is ongoing construction on Ellis Avenue, west of I-215 for Home Depot development. The cross-section for this widening consists of two lanes in each direction with a median lane, curb, gutter, sidewalks and parkway.

Evans Road

North of I-215, Evans Road is primarily a three-lane roadway that runs north-south with two lanes in the northbound direction and one lane in the southbound direction. It terminates at its southern end at Nuevo Road. South of I-215, Evans Road is primarily a dirt road that runs north-south and terminates at its northern end at Watson Road. Per the City's General Plan, the ultimate roadway classification for Evans Road will be a Primary Arterial with 128' right-of-way.

5. Proposed Improvements

The following four alternatives for Ellis Avenue/Evans Road Extension Project were studied in the Feasibility Study and have been evaluated in the TIA:

- Alternative 1: Interchange at PM 25.2
- Alternative 2A: Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue located just west of Perris Valley Storm Drain (PSVD) Channel
- Alternative 2B: Overcrossing at PM 25.4 with intersection of Evans Road and San Jacinto Avenue located across from Murrieta Road
- Alternative 3: Interchange at PM 25.0
- Alternative 4: Interchange at PM 24.6

Alternative layouts have been provided in Appendix A.

6. Scope of Study

The Scope of Study for the TIA is as follows:

- Level of Service (LOS) analysis for all intersections within the Study Area for existing (2023), opening year (2030) with & without project, and horizon year (2050) with & without project for the AM peak period (6 AM-9 AM) and PM peak period (3 PM-7 PM).
- LOS analysis for roadway segments within the Study Area during the AM and PM peak periods for existing (2023), opening year (2030) with & without project, and horizon year (2050) with & without project.
- Turn pocket queuing analysis for left & right turn movements at all intersections.

This report documents assumption, methodology, and approach and evaluates the enhancements proposed as part of both projects.

7. Study Area

The Study Area consists of the following seven intersections:

- Intersection of Ellis Avenue and Case Road
- Intersection of 4th Street and Redlands Avenue
- Intersection of Redlands Avenue and I- 215 Southbound ramps
- Intersection of Redlands Avenue and I- 215 Northbound ramps
- Intersection of Redlands Avenue and San Jacinto Avenue
- Intersection of San Jacinto Avenue and Murrieta Road
- Intersection of San Jacinto Avenue and Dunlap Drive

It should be noted that the intersection of Ellis Avenue/Evans Road Extension Project with San Jacinto Avenue has been studied at Murrieta Road as it will be the worst case scenario compared to the Tee intersection for Alternative 2A, just west of PSVD Channel.

Traffic models were developed using Synchro and Highway Capacity Software (HCS) to evaluate and analyze the traffic operations for the intersections and roadway segments in the Study Area as shown in Figure 1. The purpose of the study was to compute delay, queue length, and LOS under existing, opening, and horizon year traffic conditions with and without the improvements. These analyses will help validate if the proposed improvements will meet the purpose and need of the project to re-connect communities located on either side of I-215 and facilitate movement of people, goods, and services.



Figure 1 - Map of the Study Area

8. Analysis Scenarios

The TIA was performed for the following scenarios for the AM and PM peak periods using existing turning movement counts collected for the project and forecasted traffic data obtained from the Southern California Association of Governments (SCAG):

- Existing (2023) conditions
- Opening year (2030) with and without project
- Horizon year (2050) with and without project

9. Traffic Data

Turning movement counts for all intersections were collected in June 2023. All data was collected on a clear weekday without any incidents or ongoing road closure on the roadways during the AM

and PM peak periods. The traffic data included vehicle classification broken down by passenger cars, light/heavy trucks, bikes, and pedestrians. The traffic data for all intersections are attached in Appendix B.

The traffic data was reviewed and any inconsistent data was adjusted and balanced (if needed) before incorporating them in the model to maintain the conservation of flow between the intersections (arrivals equal departures).

10. Methodology

This section summarizes the criteria used to evaluate the results of the analyses.

Level of Service

Highway Capacity Manual (HCM) 6th Edition Methodology was used to compute intersection LOS to determine how the intersections within the Study Area were functioning. The performance of each intersection was assessed and quantified using outputs from Synchro software (version 11). LOS is defined in terms of vehicular delay, which includes delay while decelerating, moving in the queue, stopping, and accelerating. The delay criteria for each LOS grade differs between signalized and stop-controlled intersections and are summarized in Table 1.

Table 1 - Level of Service Criteria (Source: Highway Capacity Manual)

LOS	Control Delay (sec/veh)		LOS Description
	Signalized Intersections	Stop-Controlled Intersections*	
A	≤ 10	≤ 10	Very low delay, most vehicles do not stop (Excellent)
B	>10 - 20	>10 - 15	Higher delay, more vehicles stop (Very Good)
C	>20 - 35	>15 - 25	Higher level of congestion; the number of vehicles stopping is significant, although many still pass through intersection without stopping (Good)
D	>35 - 55	>25 - 35	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; many vehicles stop (Satisfactory)
E	>55 - 80	>35 - 50	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of acceptable delay (Marginal)
F	> 80	> 50	This level is considered to be unacceptable to most drivers; occurs when arrival flow rates exceed the capacity of the intersection (Unacceptable)

* Two-Way stop Control and All Way Stop Control have different LOS criteria. TWSC LOS criteria is not for the entire intersection, but per lane group and approach only.

For roadway segments, the LOS was determined using travel speed and volume-to-capacity ratio for the through movement. The HCS Two Lane and Multilane Highway tools were utilized to obtain segment LOS for all scenarios as shown in Table 2. The required parameters such as peak hour factor, truck percentage, and segment speed were obtained for existing conditions.

Table 2 - LOS Criteria Segments Analysis (Source: HCM 6th Edition)

Exhibit 12-15: LOS Criteria for Basic Freeway and Multilane Highway Segments

LOS	Density (pc/mi/ln)
A	≤11
B	>11–18
C	>18–26
D	>26–35
E	>35–45
F	Demand exceeds capacity OR density > 45

Exhibit 15-3: Motorized Vehicle LOS for Two-Lane Highways

LOS	Class I Highways		Class II Highways	Class III Highways
	ATS (mi/h)	PTSF (%)	PTSF (%)	PFFS (%)
A	>55	≤35	≤40	>91.7
B	>50–55	>35–50	>40–55	>83.3–91.7
C	>45–50	>50–65	>55–70	>75.0–83.3
D	>40–45	>65–80	>70–85	>66.7–75.0
E	≤40	>80	>85	≤66.7
F	Demand exceeds capacity			

Note: For Class I highways, LOS is determined by the worse of ATS-based LOS and PTSF-based LOS.

The delay and LOS at each intersection were obtained from the Synchro outputs. The segment LOS was obtained from HCS (version 7).

11. Data Forecast

To forecast traffic volumes in the Study Area for the opening year (2030) and horizon year (2050), the SCAG 2020 Regional Travel Demand Model was utilized. The travel demand model has a base year of 2016 and a horizon year of 2050. This model was used for the Study Area because it is the latest model with the most up-to-date Traffic Analysis Zone (TAZ), network links, and socio-economic data (SED).

The following projects were listed in the SCAG 2020 Regional Transportation Plan (RTP) that are of significance to this project and included in the model:

- RTP ID 3200L051: Redlands Avenue Widening (2 to 4 lanes) from San Jacinto Avenue to Ellis Avenue in the City of Perris (Completion Year 2025).
- RTP ID 3A04WT093: Construct 2-lane arterial and 2-lane grade separation over BNSF Railroad on Ellis Avenue from SR-74 to I-215 in the City of Perris (Completion Year 2040).
- RTP ID 3A07264: Dunlap Dr Widening (2 to 4 lanes) from Orange to Ellis Avenue in the City of Perris (Completion Year 2030).
- RTP ID 3M0731: Construct New 2-Lane IC and 1-Lane Ramps on Route 215 at Ellis Avenue in the City of Perris (Completion Year 2040). This entry will have to be updated if the City decides to proceed with the overcrossing alternative.

The SCAG model provided traffic link volume estimates by vehicle mode and peak period from the model runs performed for the 2020 RTP list for the following scenarios:

- Year 2019
- Year 2025
- Year 2045

SCAG provided the link volumes mentioned above during the 3-hour morning peak (6:00 AM to 9:00 AM) and 4-hour afternoon peak (3:00 PM to 7:00 PM) from their most recent regional model. To estimate the peak hour volume, EXP applied the 35% and 28% AM and PM peak period conversion factors to SCAG volume, respectively.

Growth rates were estimated after reviewing SCAG link volumes from the SCAG models. A growth rate of 3% and 2.2% were applied to estimate Opening (2030) year and Horizon (2050) year traffic volume.

Synchro models were developed based on the estimated turning movement counts to study and compare intersection performance with and without the improvements.

12. Existing (2023) Conditions

Following is a description of the main corridors in the study area:

East Ellis Avenue is under the jurisdiction of the City. It begins at Museo Way and traverses through Case Road and the paved road ends at Murrieta Road. The total length of East Ellis Avenue is 1.3 miles with the entire length in the City. East Ellis Avenue connects residential neighborhoods in South Perris to South Perris Boulevard and Case Road which provides access to SR-74 East and I-215.

East San Jacinto Avenue in the City is classified as a 2-lane collector from Lamplighter Lane to Ramona Avenue. The City's General Plan calls for extending Ellis Avenue to the I-215 and add a new bridge over I-215 and connect to Evans Road until it intersects with San Jacinto Avenue.

Redlands Avenue is one of City's principal arterial with a posted speed of 35 mph and serves as one of its main streets for access to I-215. The existing lane configuration at all intersections in the Study Area are shown in Figure 2.

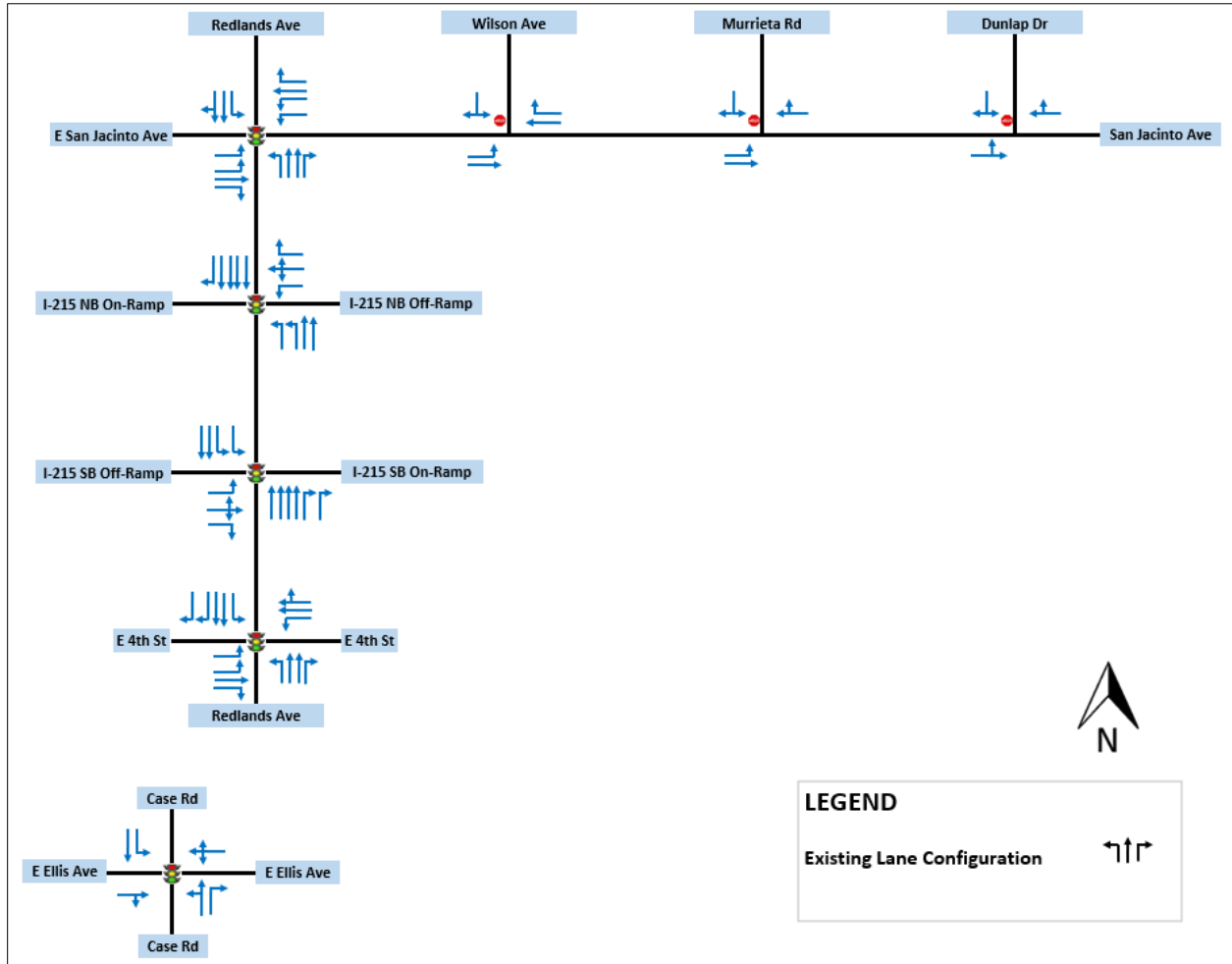


Figure 2 - Existing Lane Configuration

For existing conditions, the traffic data at intersections were balanced, shown in Figure 3 during AM and PM peak hours.

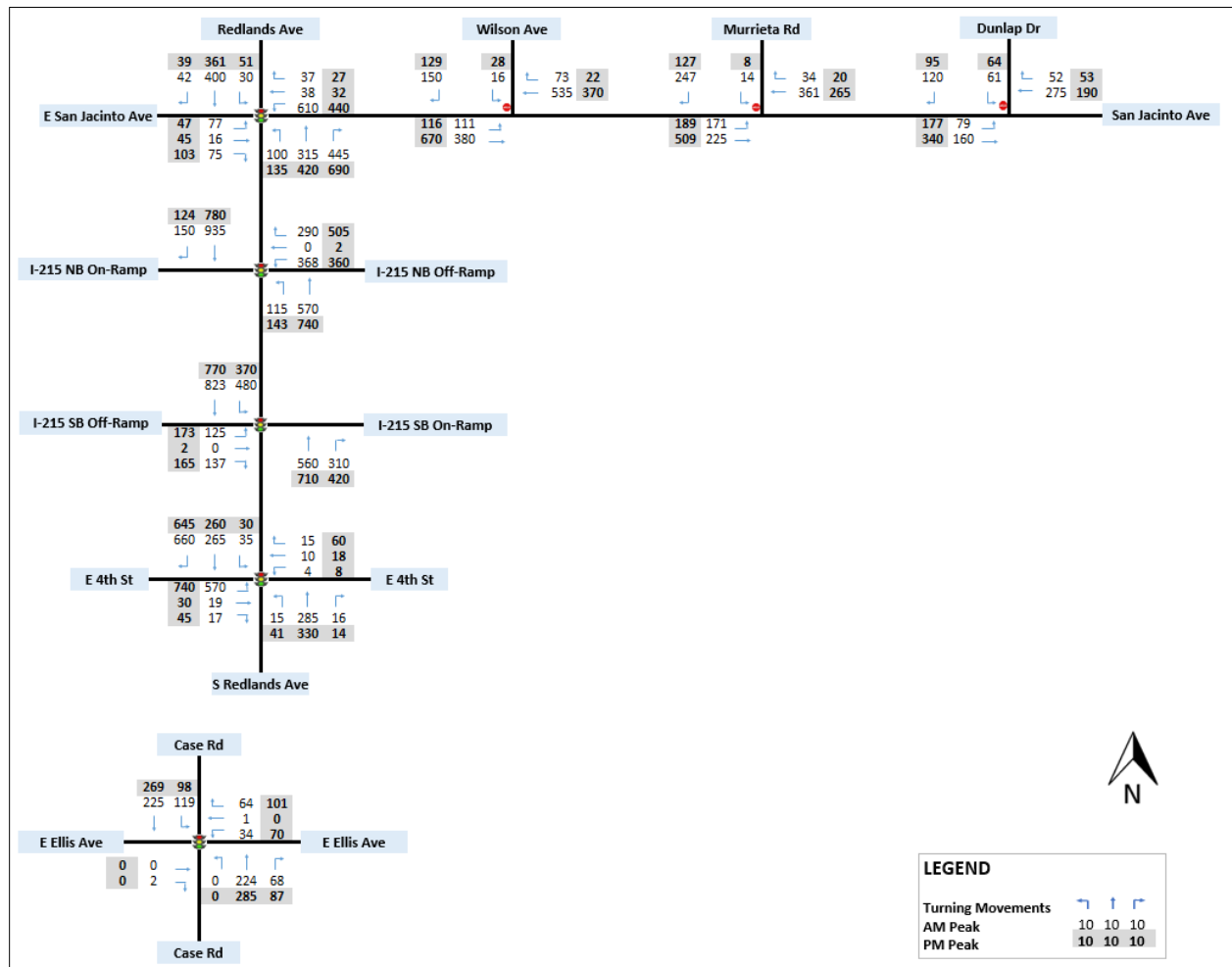


Figure 3 - Existing Traffic Volume

Delay and LOS by individual movement, approach, and overall, for each intersection were computed for all existing intersections in the Study Area. The conditions modeled in this scenario are intended to represent the existing conditions without any optimization or adjustment to the signal timing plans or changing the type of intersection control.

The results for the overall intersection performance for the existing traffic conditions are shown in Table 3. Detailed model outputs are included in Appendix C.

Table 3 - Analysis Results for Existing Year (2023)

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Ellis Ave / Case Rd	Signalized	16.6	B	12.0	B
Redlands Ave / 4th St	Signalized	26.5	C	26.1	C
Redlands Ave / I-215 SB Ramps	Signalized	13.8	B	12.5	B
Redlands Ave / I-215 NB Ramps	Signalized	13.7	B	14.1	B
Redlands Ave / San Jacinto Ave	Signalized	33.5	C	35.0	C
San Jacinto Ave / Murrieta Rd	Unsignalized*	18.1	C	12.5	B
San Jacinto Ave / Dunlap Dr	Unsignalized*	16.9	C	19.7	C

* Note: For Two Way Stop Controlled intersections, the worst side movement's delay and LOS are shown

The analysis indicated that overall, all intersections performed satisfactorily with LOS C or better during both peak hours.

Table 4 shows the 95% queue lengths for each turning movement. As can be seen, the existing storage length adequately accommodates the queue length except for southbound left turn at Ellis / Case intersection during the AM peak and eastbound left turn at Redlands/4th intersection during the PM peak hour.

Table 4 - 95% Queue Length for Existing Year (2023)

Intersection	Movement	95% Queue Length (ft)		Storage Length (ft)
		AM Peak	PM Peak	
Ellis Ave / Case Rd	SBL	169	89	130
	NBR	2	8	125
	EBL	201	265	250
	EBR	0	6	250
	WBL	11	16	80
Redlands Ave / 4th St	NBL	25	47	270
	NBR	0	0	100
	SBL	43	38	200
	SBR	21	42	320
	EBR	26	27	270
Redlands Ave / I-215 SB Ramps	WBL	148	139	270
	SBL	85	114	800
	SBR	35	40	270
Redlands Ave / I-215 NB Ramps	EBL	62	67	270
	WBR	34	40	600
	NBL	202	220	800
	NBR	47	106	500
	EBL	42	30	150
Redlands Ave / San Jacinto Ave	WBL	280	177	280
	WBR	4	0	500
	NBL	101	129	200
	NBR	39	86	300
	SBL	44	63	275
San Jacinto Ave / Murrieta Rd	EBL	15	15	270

13. Opening Year (2030) with and without Improvements

The proposed Ellis Avenue/Evans Road Extension Project is expected to change the traffic pattern along 4th Street, Case Road, Ellis Avenue and Redlands Avenue corridors. The traffic flow will be re-distributed along all these corridors based on origin/destination and travel time. SCAG's forecasted data has accounted for this re-distribution of traffic.

The following two scenarios were analyzed for opening year conditions:

- Opening Year (2030) without improvements
- Opening Year (2030) with improvements

Detailed delay, LOS, and queueing analysis were performed for each of these scenarios to assess the performance of all intersections and roadway segments in the Study Area.

Opening Year (2030) without Improvements

In this scenario, there are no changes to the existing lane configuration or traffic control at the intersections. The opening year (2030) forecasted traffic volume without improvements during AM and PM are presented in Figures 4.

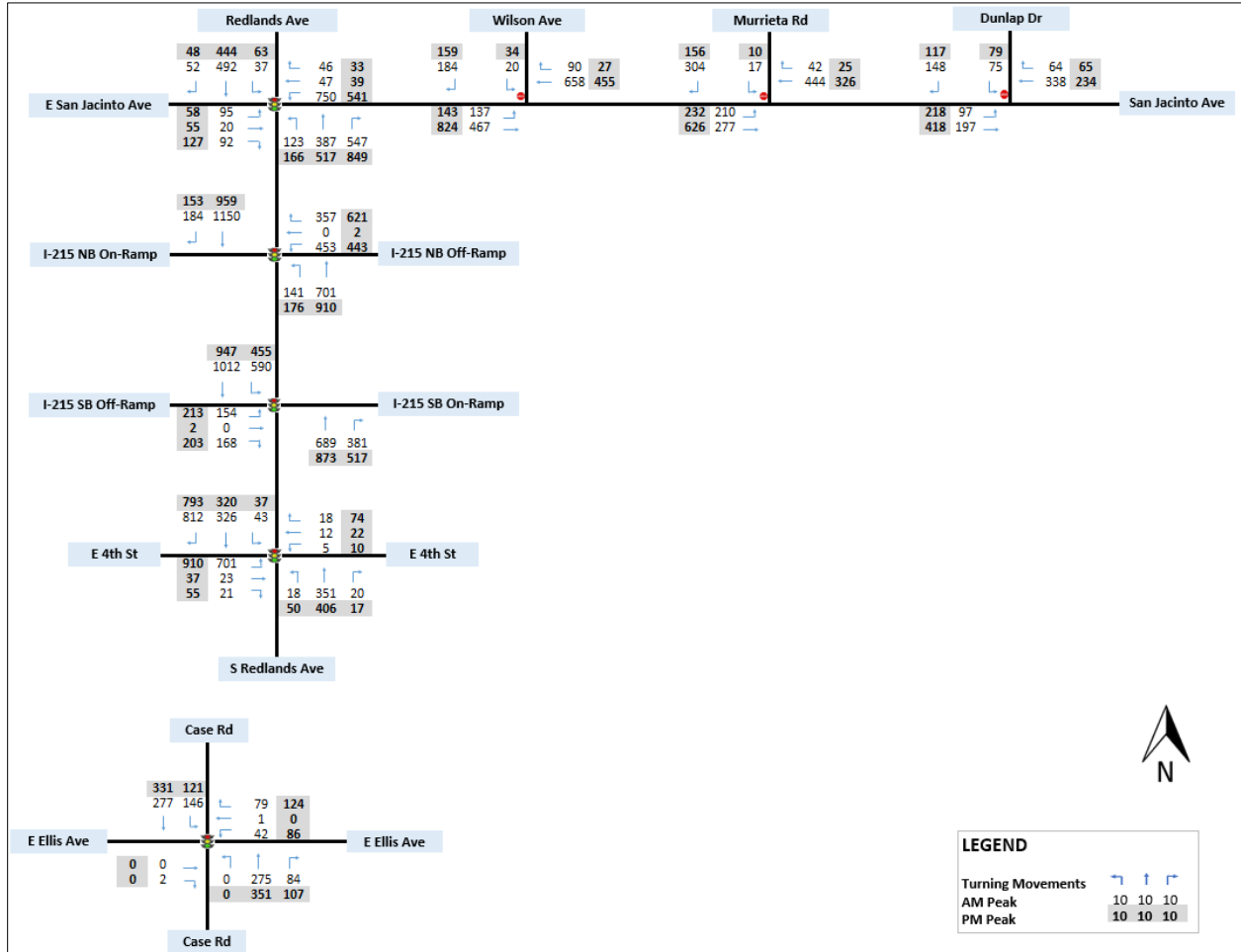


Figure 4 - Opening Year (2030) Traffic Volume without Improvements

Overall intersection delay and LOS are summarized in Table 5. Model outputs are included in Appendix D.

Table 5 - Analysis Results for Opening Year (2030) without Improvements

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Ellis Ave / Case Rd	Signalized	20.7	C	14.1	B
Redlands Ave / 4th St	Signalized	44.4	D	44.5	D
Redlands Ave / I-215 SB Ramps	Signalized	17.2	B	14.8	B
Redlands Ave / I-215 NB Ramps	Signalized	16.2	B	16.9	B
Redlands Ave / San Jacinto Ave	Signalized	82.0	F	69.0	E
San Jacinto Ave / Murrieta Rd	Unsignalized*	32.9	D	15.5	C
San Jacinto Ave / Dunlap Dr	Unsignalized*	26.4	D	38.3	E

*Note: For Two Way Stop Controlled intersections, the worst side movement's delay and LOS were reported.

The analysis showed a deterioration in overall traffic delays at all intersections, specifically at the intersection of Jacinto Avenue and Redlands Avenue where the LOS was found to be F and E during the AM and PM peak hours respectively. This can be attributed to the high volume of eastbound through traffic on San Jacinto Avenue. The remaining intersections continued to perform satisfactorily.

Table 6 presents the 95% queue lengths for each turning movement. As can be seen, the existing storage length is sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (AM Peak), eastbound left turn at Redlands/4th (both peaks) and westbound left turn at Redlands Avenue / San Jacinto (both peaks).

Table 6 - 95% Queue Length for Opening Year (2030) without Improvements

Intersection	Movement	95% Queue Length (ft)		Storage Length (ft)
		AM Peak	PM Peak	
Ellis Ave / Case Rd	SBL	210	122	130
	NBR	11	9	125
	EBL	331	409	250
	EBR	0	12	250
	WBL	13	20	80
Redlands Ave / 4th St	NBL	30	58	270
	NBR	0	0	100
	SBL	54	47	200
	SBR	17	44	320
	EBR	28	30	270
Redlands Ave / I-215 SB Ramps	WBL	231	193	270
	SBL	117	154	800
	SBR	72	86	270
Redlands Ave / I-215 NB Ramps	EBL	78	88	270
	WBR	39	43	600
	NBL	254	326	800
	NBR	131	223	500
	EBL	56	41	150
Redlands Ave / San Jacinto Ave	WBL	444	311	280
	WBR	10	0	500
	NBL	130	179	200
	NBR	35	150	300
	SBL	55	86	275
San Jacinto Ave / Murrieta Rd	EBL	22	20	270

Opening Year (2030) with Improvements

For this scenario, it is assumed that by the opening year 2030, the proposed improvements have been completed. The new overcrossing improvements would include extending Ellis Avenue/Evans Road across I-215 and connecting to San Jacinto Avenue. San Jacinto Avenue is assumed to be widened at the intersection as part of the project to accommodate existing and future traffic demands.

The lane configuration for the opening year with all the improvements and intersection control is presented in Figure 5.

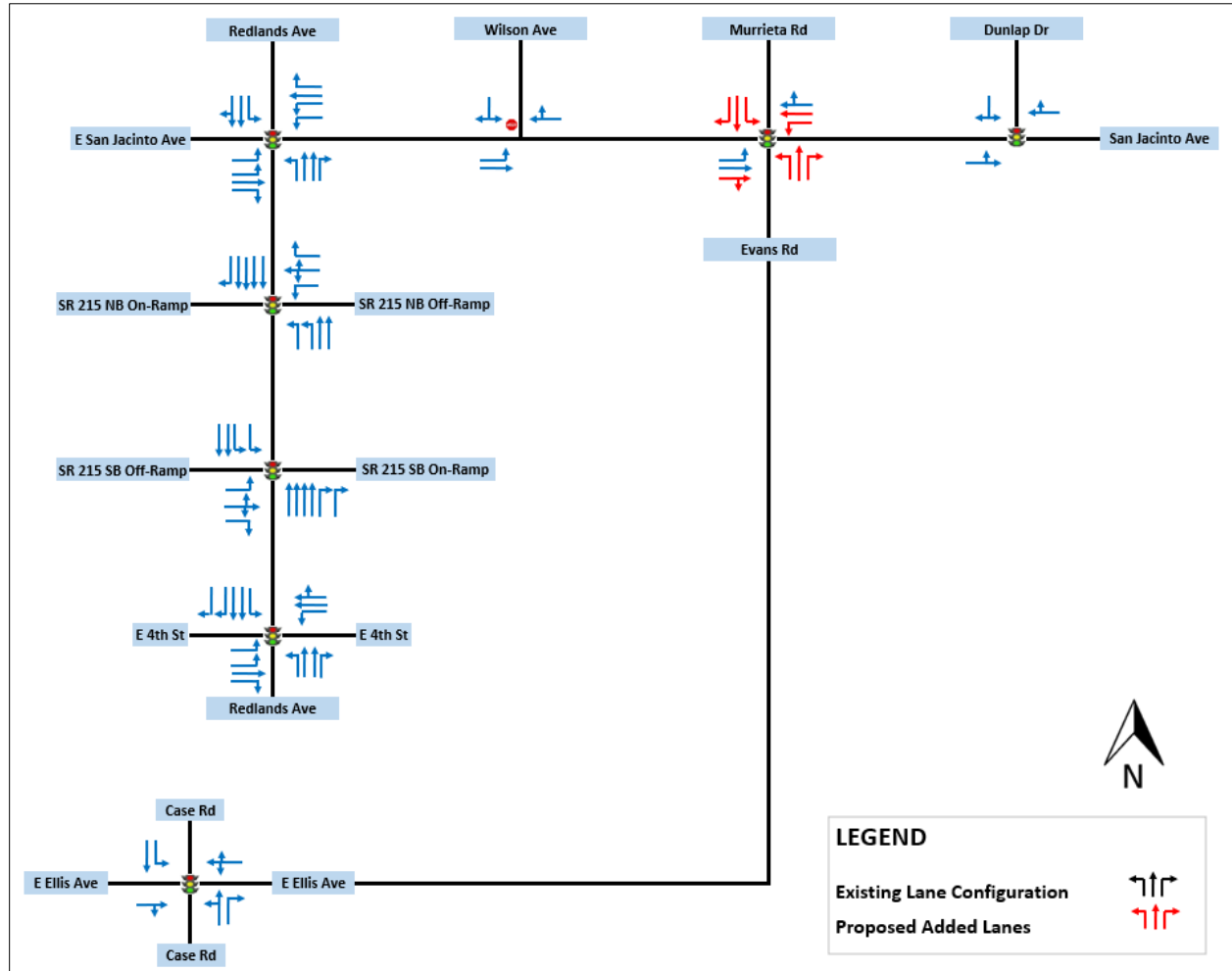
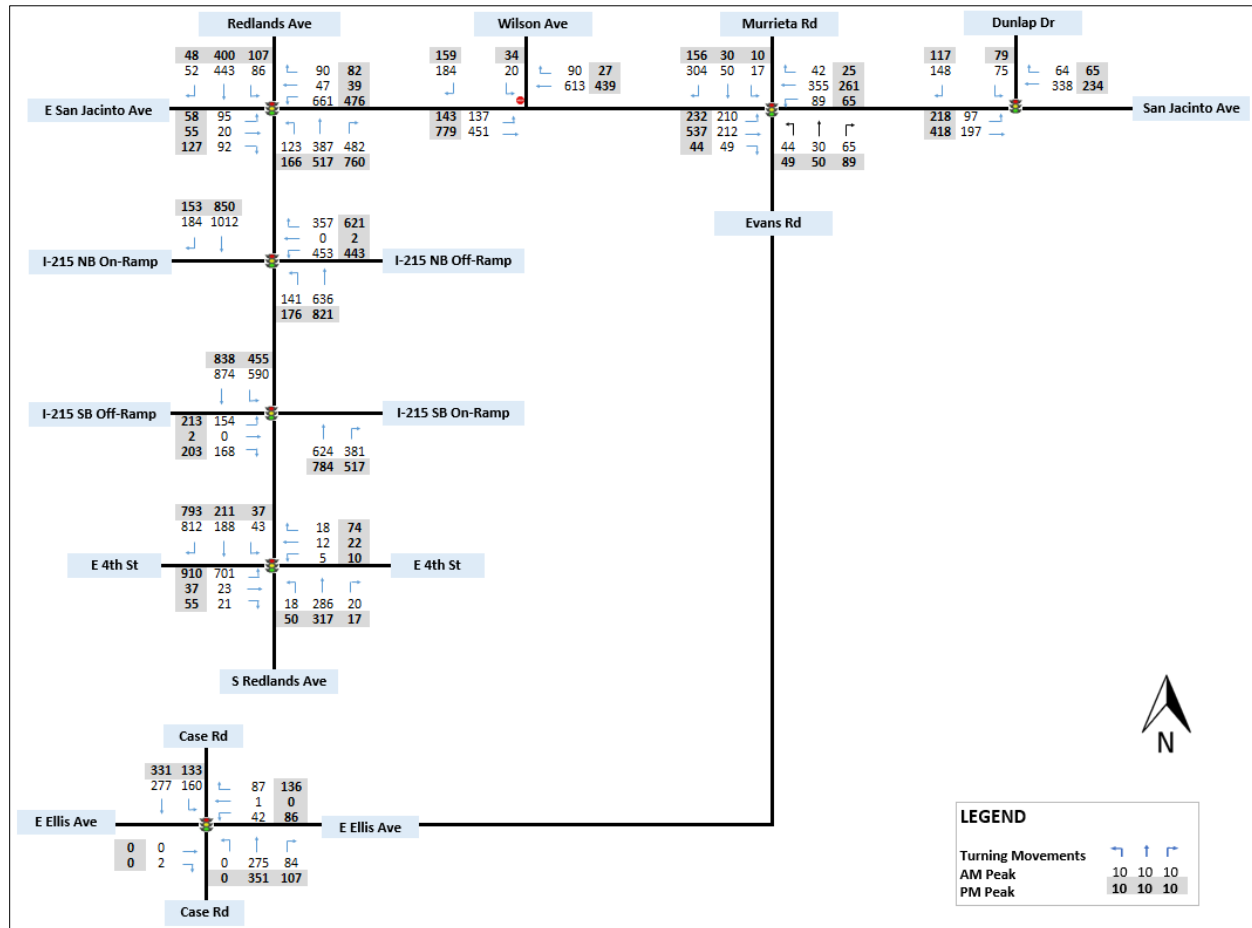


Figure 5 - Opening Year (2030) with Improvements Lane Configuration

With the proposed overcrossing, traffic will be re-distributed along all east-west corridors. This connection will not only serve the communities on either side of I-215 but also attract trips from adjacent roads and highways. The forecasted turning movement counts for the AM and PM peak hours are shown in Figure 6.



Synchro models were developed with the proposed improvements in the Study Area. The results for the opening year with improvements are shown in Table 7. Detailed model outputs are provided in Appendix E.

Table 7 - Analysis Results for Opening Year (2030) with Improvements

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Ellis Ave / Case Rd	Signalized	16.2	B	14.0	B
Redlands Ave / 4th St	Signalized	20.1	C	21.5	C
Redlands Ave / I-215 SB Ramps	Signalized	16.6	B	14.4	B
Redlands Ave / I-215 NB Ramps	Signalized	15.4	B	16.1	B
Redlands Ave / San Jacinto Ave	Signalized	27.6	C	28.2	C
San Jacinto Ave / Murrieta Rd / Evans Rd	Signalized	18.8	B	16.9	B
San Jacinto Ave / Dunlap Dr*	Signalized	15.7	B	15.7	B

*Note: Results are based on the future improvements at this intersection.

The analysis showed that all the intersections performed well with LOS C or better including the new intersection of Evans Road/San Jacinto Avenue created due to Ellis Avenue/Evans Road Extension Project that includes an overcrossing on I-215.

The diverted traffic from Redlands Avenue to the proposed overcrossing has improved the performance of the intersections along the corridor. Also, widening of San Jacinto Avenue is expected to reduce delay at the intersection.

Table 8 presents the 95% queue lengths for each turning movement. As can be seen, the existing storage length is sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (AM Peak) and eastbound left turn at Redlands/4th (PM peak).

Table 8 - Analysis Results for Opening Year (2030) with Improvements

Intersection	Movement	95% Queue Length (ft)		Storage Length (ft)
		AM Peak	PM Peak	
Ellis Ave / Case Rd	SBL	176	122	130
	NBR	11	10	125
	EBL	249	296	250
	EBR	0	7	250
	WBL	13	20	80
	NBL	30	60	270
Redlands Ave / 4th St	NBR	0	0	100
	SBL	56	48	200
	SBR	7	21	320
	EBR	30	31	270
Redlands Ave / I-215 SB Ramps	WBL	192	164	270
	SBL	108	132	800
	SBR	40	48	270
Redlands Ave / I-215 NB Ramps	EBL	73	85	270
	WBR	38	44	600
	NBL	225	282	800
	NBR	125	209	500
	EBL	56	36	150
	WBL	271	188	280
	WBR	31	30	500
	NBL	162	164	200
Redlands Ave / San Jacinto Ave	NBR	18	96	300
	SBL	107	113	275
	EBL	151	146	300
	WBL	80	60	200
San Jacinto Ave / Murrieta Rd / Evans Rd	NBL	50	50	100
	SBL	26	17	100
San Jacinto Ave / Dunlap Dr*	EBL	74	156	300

*Note: Results are based on the future improvements at this intersection.

14. Horizon Year (2050) with and without Improvements

A 2050 horizon year analysis was performed to assess the operation of the Study Area for the following two scenarios:

- Horizon Year (2050) without improvements
- Horizon Year (2050) with improvements

Detailed delay, LOS, and queueing analysis were performed for each of the scenarios and are discussed in the following sections:

Horizon Year (2050) without Improvements

Under this scenario, it is assumed there are no changes are made to the existing lane configuration or traffic control at the intersections or the roadway segments. The horizon year (2050) forecasted traffic volume without improvements for AM and PM peak hours are presented in Figures 7.

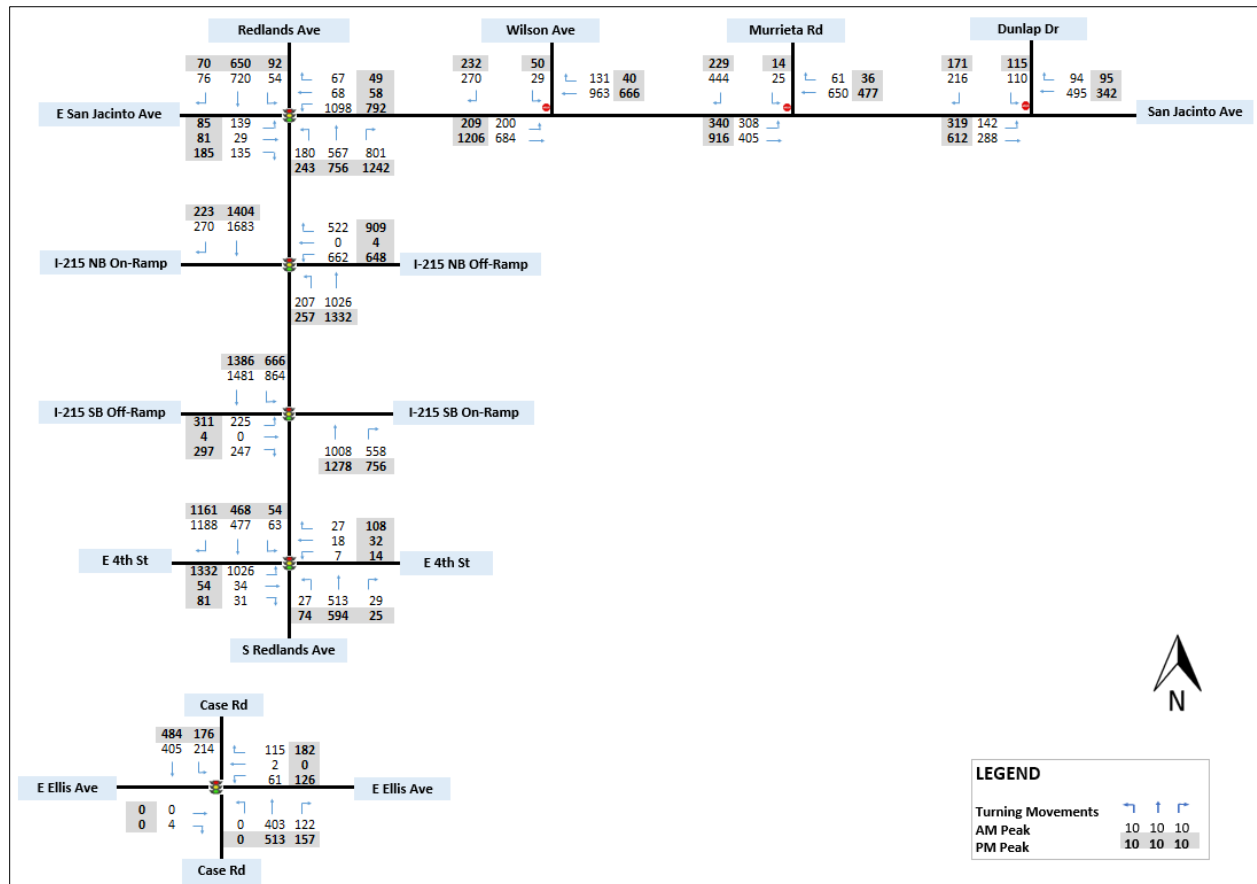


Figure 7 - Horizon Year (2050) Traffic Volume without Improvements

The results for this scenario are summarized in Table 9. Detailed model outputs are included in Appendix F.

Table 9 - Analysis Results for Horizon Year (2050) without Improvements

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Ellis Ave / Case Rd	Signalized	66.6	E	39.1	D
Redlands Ave / 4th St	Signalized	169.9	F	164.6	F
Redlands Ave / I-215 SB Ramps	Signalized	46.5	D	24.8	C
Redlands Ave / I-215 NB Ramps	Signalized	26.8	C	31.2	C
Redlands Ave / San Jacinto Ave	Signalized	219.7	F	194.2	F
San Jacinto Ave / Murrieta Rd	Unsignalized*	453.0	F	66.4	F
San Jacinto Ave / Dunlap Dr	Unsignalized*	314.8	F	779	F

* Note: For Two Way Stop Controlled intersections, the worst side movement's delay and LOS were reported.

As indicated in Table 9, all intersections were found to operate at unacceptable LOS and delays during either one or both of the AM and PM peak hours except at the intersection of Redlands Avenue / I-215 NB ramps and Redlands Avenue / I-215 SB ramps.

Table 10 provides the 95% queue lengths for each turning movement. As can be seen, the existing storage length is sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound right turn at Redlands Avenue / I-215 SB (both peaks), northbound right turn at Redlands Avenue / I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue / San Jacinto Avenue.

Table 10 - 95% Queue Length for Horizon Year (2050) without Improvements

Intersection	Movement	95% Queue Length (ft)		Storage Length (ft)
		AM Peak	PM Peak	
Ellis Ave / Case Rd	SBL	317	192	130
	NBR	34	13	125
	EBL	568	748	250
	EBR	0	30	250
	WBL	17	27	80
Redlands Ave / 4th St	NBL	40	82	270
	NBR	0	0	100
	SBL	72	66	200
	SBR	10	47	320
	EBR	32	32	270
Redlands Ave / I-215 SB Ramps	WBL	539	361	270
	SBL	171	218	800
	SBR	127	157	270
Redlands Ave / I-215 NB Ramps	EBL	108	126	270
	WBR	64	52	600
	NBL	464	663	800
	NBR	333	550	500
	EBL	88	57	150
Redlands Ave / San Jacinto Ave	WBL	870	552	280
	WBR	31	11	500
	NBL	217	310	200
	NBR	77	1066	300
	SBL	84	118	275
San Jacinto Ave / Murrieta Rd	EBL	52	38	270

Horizon Year (2050) with Improvements

Similar to the opening year with improvements, it is assumed that the proposed overcrossing connecting Ellis Avenue to San Jacinto Avenue across I-215 has been completed and is in operation. Also, San Jacinto Avenue widening at the intersection with Evans Road is in place to accommodate horizon year's traffic demands. The forecasted horizon year turning movement counts for the AM and PM peak hours are shown in Figures 8.

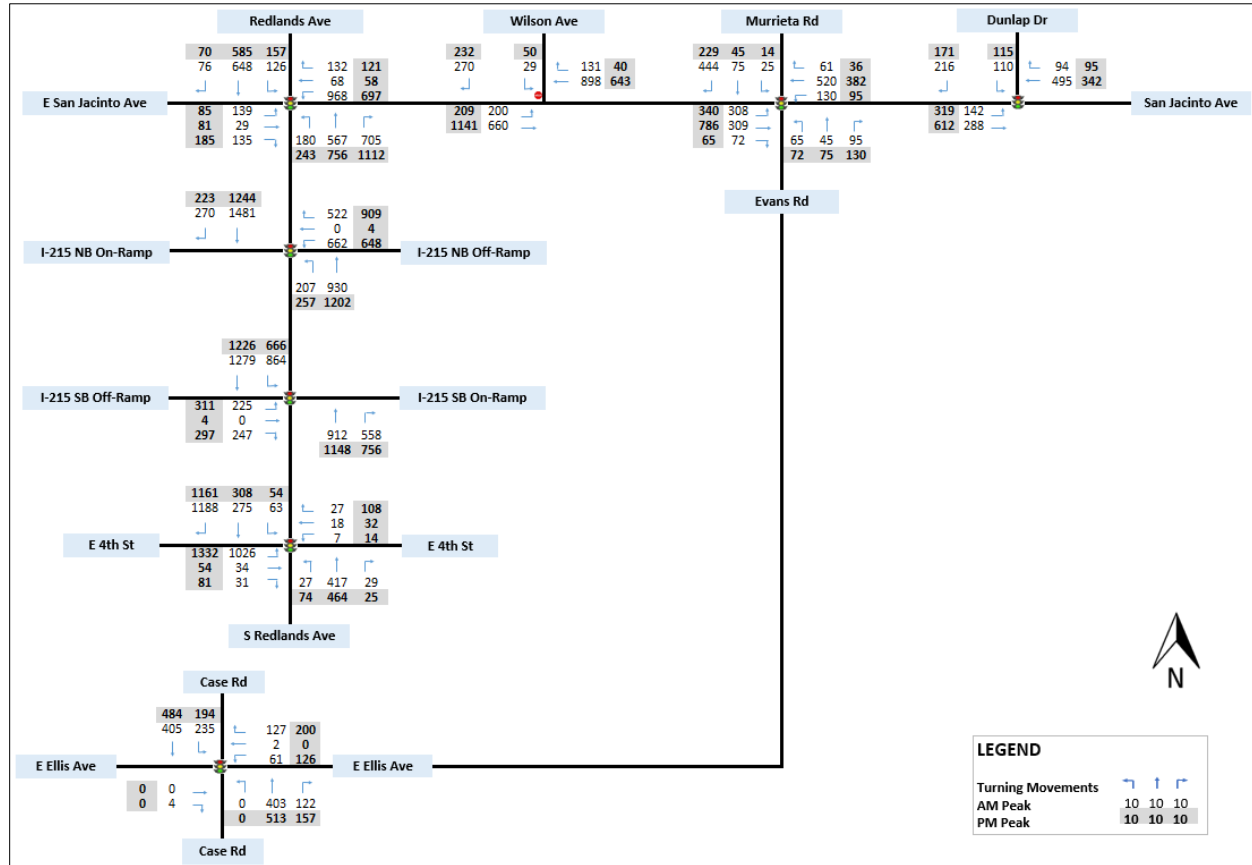


Figure 8 - Horizon Year (2050) Traffic Volume with Improvements

Proposed improvements and forecasted traffic volumes were added to the Synchro model. The overall delay and LOS for this scenario are shown in Table 11. The signal timing was optimized to capture the effect of traffic growth and redistribution in the Study Area. Detailed model outputs are provided in Appendix G.

Table 11 - Analysis Results for Horizon Year (2050) with Improvements

Intersection	Control Type	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Ellis Ave / Case Rd	Signalized	24.4	C	27.2	C
Redlands Ave / 4th St	Signalized	25.8	C	30.7	C
Redlands Ave / I-215 SB Ramps	Signalized	39.1	D	24.9	C
Redlands Ave / I-215 NB Ramps	Signalized	24.2	C	27.6	B
Redlands Ave / San Jacinto Ave	Signalized	84.0	F	82.4	F
San Jacinto Ave / Murrieta Rd /Evans Road	Signalized	31.6	C	20.3	C
San Jacinto Ave / Dunlap Dr*	Signalized	16.9	B	14.8	B

*Note: Results are based on the future improvements at this intersection.

The results show that only Redlands/San Jacinto intersection will fail by 2050. The rest of intersections performed well with LOS C or better including the new intersection of Evans Road/San Jacinto Avenue created due to Ellis Avenue/Evans Road Extension Project.

Table 12 presents the 95% queue lengths for each turning movement. As can be seen, the existing storage length is sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound right turn at Redlands Avenue / I-215 SB (both peaks), northbound right turn at Redlands Avenue / I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue / San Jacinto Avenue.

Table 12 - Analysis Results for Opening Year (2050) with Improvements

Intersection	Movement	95% Queue Length (ft)		Storage Length (ft)
		AM Peak	PM Peak	
Ellis Ave / Case Rd	SBL	309	204	130
	NBR	51	22	125
	EBL	413	598	250
	EBR	0	24	250
Redlands Ave / 4th St	WBL	20	30	80
	NBL	48	122	270
	NBR	0	0	100
	SBL	104	80	200
	SBR	1	18	320
	EBR	39	40	270
Redlands Ave / I-215 SB Ramps	WBL	269	251	270
	SBL	167	203	800
	SBR	130	136	270
	EBL	102	130	270
Redlands Ave / I-215 NB Ramps	WBR	43	53	600
	NBL	352	501	800
	NBR	264	376	500
	EBL	80	54	150
Redlands Ave / San Jacinto Ave	WBL	558	375	280
	WBR	37	45	500
	NBL	277	334	200
	NBR	39	880	300
	SBL	201	211	275
	EBL	281	286	300
San Jacinto Ave / Murrieta Rd / Evans Rd	WBL	108	90	200
	NBL	67	70	100
	SBL	34	23	100
	EBL	117	275	300

*Note: Results are based on the future improvements at this intersection.

15. Roadway Segment Analysis

For roadway segments, the LOS is determined using travel speed and volume-to-capacity ratio for the through movement. The HCS Two Lane and Multilane Highway tools were utilized to determine the segment LOS for all scenarios. The required parameters such as peak hour factor, truck percentage, and segment speed were obtained from existing data.

A total of five roadway segments were analyzed as part of the TIA. The analysis was performed for existing, opening, and horizon years during the AM and PM peak hours with and without project. The segments and results of the analysis are shown in Table 13. Detailed model outputs are attached in Appendix I.

Table 13 - Segments Level of Service

Corridor	Segment	Existing (2023)	Opening Year (2030)		Horizon Year (2050)	
			No Project	With Project	No Project	With Project
AM Peak Hour						
Redlands Ave	4 th St to I-215 SB	B	B	B	C	C
Redlands Ave	I-215 NB to San Jacinto Ave	A	B	B	C	C
San Jacinto Ave	Redlands Ave to Murrieta Rd	D	E	A	E	B
San Jacinto Ave	Murrieta Rd to Dunlap Dr	C	C	A	E	B
Overcrossing	Ellis Rd to San Jacinto Ave	-	-	A	-	A
PM Peak Hour						
Redlands Ave	4 th St to I-215 SB Ramps	B	C	C	D	D
Redlands Ave	I-215 NB Ramps to San Jacinto Ave	A	C	C	D	D
San Jacinto Ave	Redlands Ave to Murrieta Rd	E	E	B	E	B
San Jacinto Ave	Murrieta Rd to Dunlap Dr	D	D	A	E	B
Overcrossing	Ellis Rd to San Jacinto Ave	-	-	A	-	A

The roadway segment analysis indicated that all segments operated at LOS E or better during the AM and PM peak hours under existing conditions which improved to D or better for the opening and horizon year with Project. The LOS for Ellis Avenue/Evans Road was found to be A for both opening and horizon year during both peak hours.

16. Findings

An in-depth analysis was performed to assess the impact of the proposed improvements. The analysis focused on identifying the impact at the intersections and roadway segments in the study area. The analysis was performed using Synchro for the intersections and HCS for the roadway segments. For intersections, LOS, delay, and queueing analysis were performed while for roadway segments, only LOS was computed. Existing traffic data was collected in the field including vehicle classification, bike and pedestrians during AM and PM peak periods.

The following are the findings of the Study:

- For existing (2023) conditions:
 - All the intersections in the Study Area performed well with acceptable LOS of C or better.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except for the southbound left turn at Ellis/Case (AM Peak) and eastbound left turn at Redlands/4th (PM Peak).

- All segments in the Study Area performed at an LOS D or better except LOS E for the segment of San Jacinto Avenue, between Redlands Avenue and Murrieta Road.
- For the opening year (2030) conditions with improvements:
 - All the intersections performed well with acceptable LOS of C or better.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except the 95% queue length for the southbound left turn at Ellis/Case (AM Peak) and eastbound left turn at Redlands/4th (PM Peak) extended beyond the existing storage length.
 - All segments in the Study Area performed at an LOS D or better except LOS E for the segment of San Jacinto Avenue, between Redlands Avenue and Murrieta Road.
- For Horizon year (2050) conditions without improvements:
 - All intersections were found to operate at unacceptable LOS during either or both AM and PM peak hours and delays except for Redlands Avenue / I-215 NB and Redlands Avenue / I-215 SB, are expected to operate at LOS E or F during either or both the AM and PM peak hours, resulting in unacceptable delays.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound right turn at Redlands Avenue / I-215 SB (both peaks), northbound right turn at Redlands Avenue / I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue / San Jacinto Avenue.
 - The segments on Redlands Avenue operated at LOS D or better while the segments on San Jacinto Avenue deteriorated to LOS E during both peak hours.
- For horizon year (2050) conditions with improvements:
 - All the intersections performed well with acceptable LOS of D or better except for the intersection of Redlands/San Jacinto that failed with LOS F.
 - The existing storage length was found to be sufficient to accommodate the queue length for most movements except for southbound left turn at Ellis/Case (both peaks), eastbound left turn at Redlands/4th (both peaks), westbound right turn at Redlands Avenue / I-215 SB (both peaks), northbound right turn at Redlands Avenue / I-215 NB (PM Peak), westbound left turn (both peaks), northbound left turn (both peaks), and northbound right turn (PM Peak) at Redlands Avenue / San Jacinto Avenue.
 - All roadway segments in the Study Area performed at an LOS D or better including LOS A for Ellis Avenue/Evans Road Extension Project.

Table 14 below summarizes the intersection LOS for all the scenarios analyzed in this study:

Table 14 - Summary of Level of Service

Intersection	2023	2030		2050	
	Exist.	No-Build	Build	No-Build	Build
AM PEAK					
Ellis Ave / Case Rd	B	C	B	E	C
Redlands Ave / 4th St	C	D	C	F	C
Redlands Ave / I-215 SB	B	B	B	D	D
Redlands Ave / I-215 NB	B	B	B	C	C
Redlands Ave / San Jacinto Ave	C	F	C	F	F
San Jacinto Ave / Murrieta Rd	C	D	B	F	C
San Jacinto Ave / Dunlap Dr	C	D	B	F	B
PM PEAK					
Ellis Ave / Case Rd	B	B	B	D	C
Redlands Ave / 4th St	C	D	C	F	C
Redlands Ave / I-215 SB	B	B	B	C	C
Redlands Ave / I-215 NB	B	B	B	C	B
Redlands Ave / San Jacinto Ave	C	E	C	F	F
San Jacinto Ave / Murrieta Rd	B	C	B	F	C
San Jacinto Ave / Dunlap Dr	C	E	B	F	B

As can be seen in Table 14, the addition of Ellis Avenue/Evans Road Extension Project has helped re-distribute and balance traffic flows on various corridors and improved LOS at five of the seven intersections during either one or both peak hours. The LOS at the remaining two intersections remained unchanged.

17. Recommendations

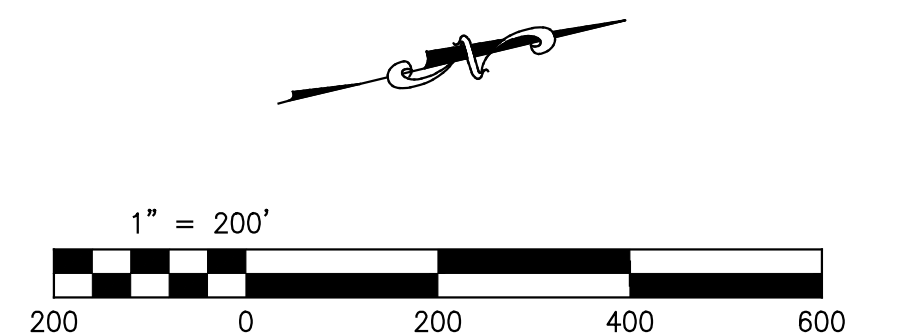
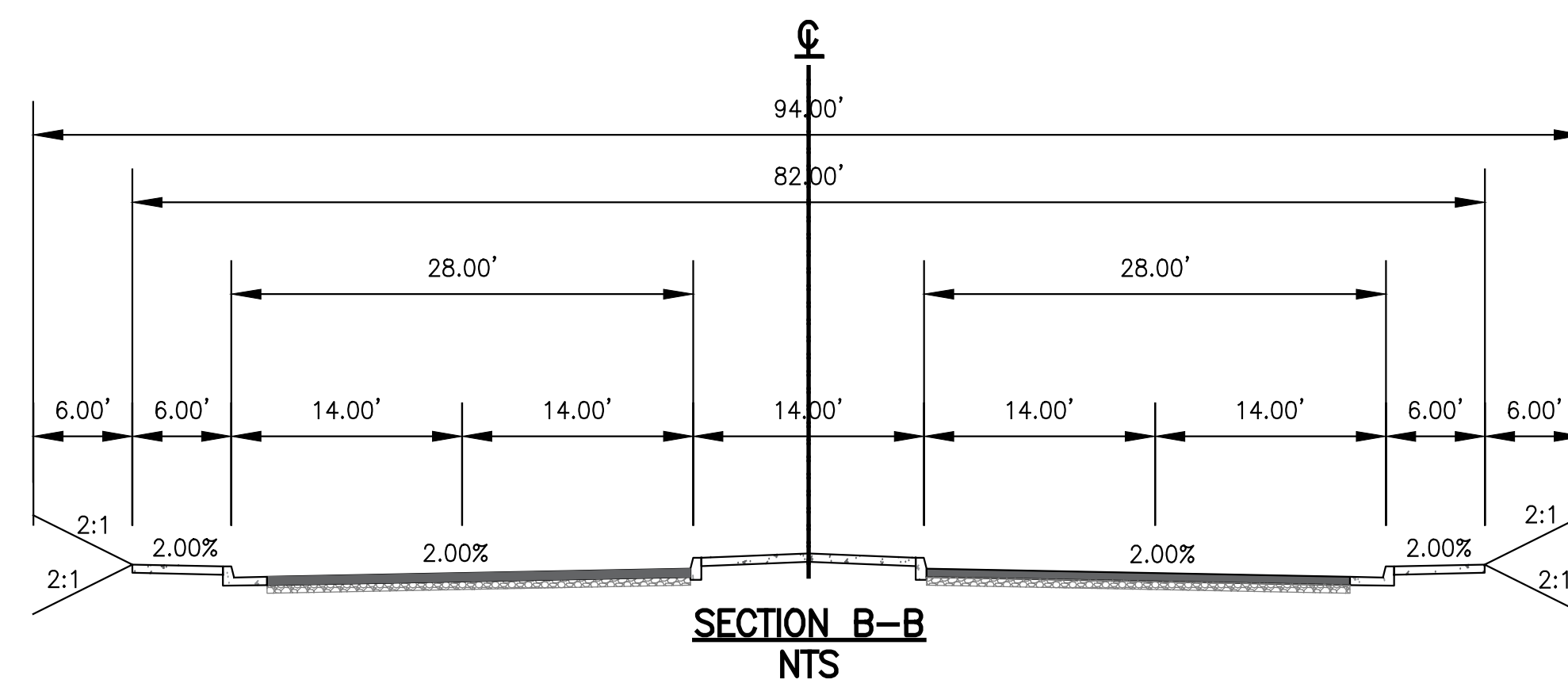
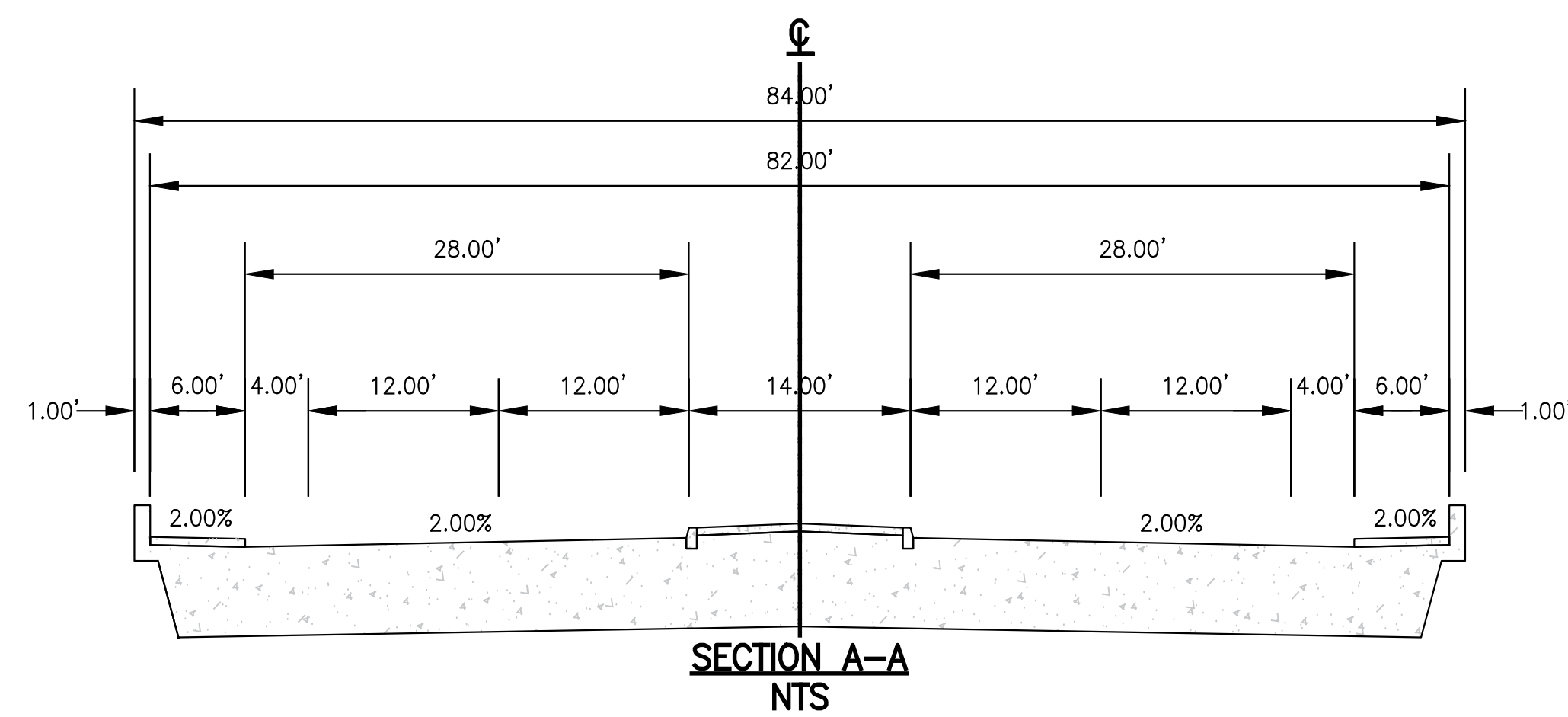
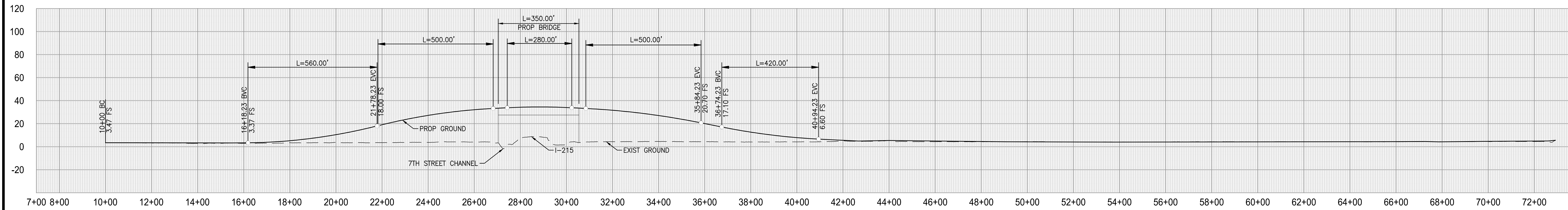
Based on the analysis performed in the TIA, it is recommended that the following improvements be considered:

1. Extend Ellis Avenue/Evans Road from its existing terminus at Home Depot Distribution Center to San Jacinto Avenue including a new overcrossing on I-215. This will add a new east west arterial for local circulation avoiding the need to use the adjoining interchanges.
2. Widen San Jacinto Avenue at the new intersection with Evans Road to provide additional through and turn lanes to provide acceptable LOS.
3. Signalize the new intersection of San Jacinto/Evans Road.
4. Below is a list of additional improvements at other intersections for City's consideration:
 - a. Extend EB left turn storage length at the intersection of Redlands Avenue and 4th Street. b. Extend SB left-turn storage length at the intersection of Ellis Avenue and Case Road.
 - c. Extend WB right-turn storage length at the intersection of Redlands Avenue and I-215 SB ramps.

- d. Extend WB left-turn, NB left-turn, and NB right-turn storage length at the intersection of Redlands Avenue and San Jacinto Avenue.
- e. Extend NB right-turn storage length at the intersection of Redlands Avenue and I-215 NB ramps.

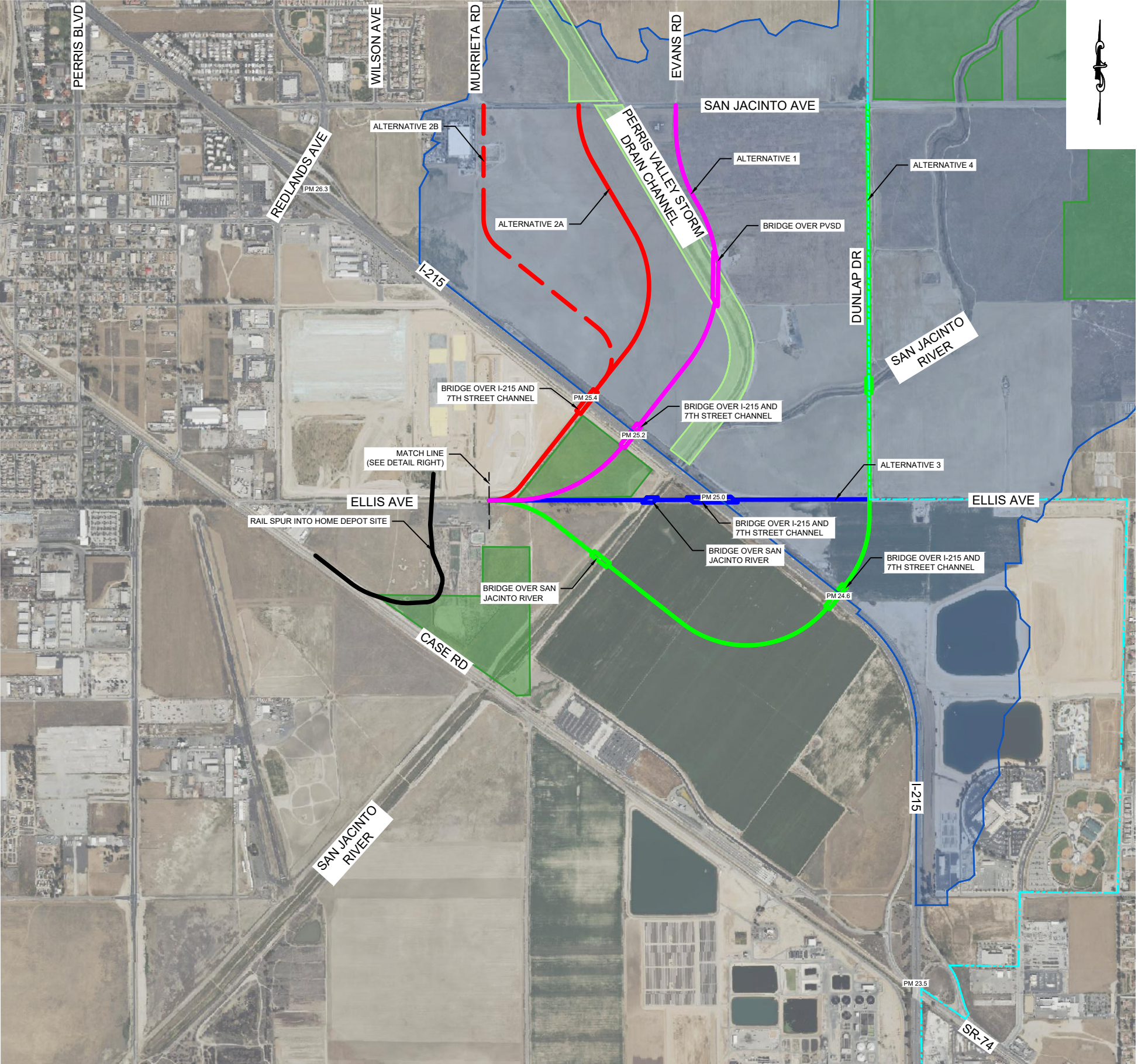
APPENDIX A

ALTERNATIVE LAYOUTS



ROADWAY RE-ALIGNMENT ALTERNATIVE 1			
ELLIS AVENUE			
SCALE: 1"=200'		451 EAST VANDERBILT WAY SAN BERNARDINO, CA 92408, SUITE 375 FAX (909) 751-3250	W.O. WO
DATE: 11/14/23			SHEET 1
DESIGNED: JLS			OF 1 SHEETS
CHECKED:			DWG. NO.
PLN CK REF: -			
F.B.			

PRELIMINARY

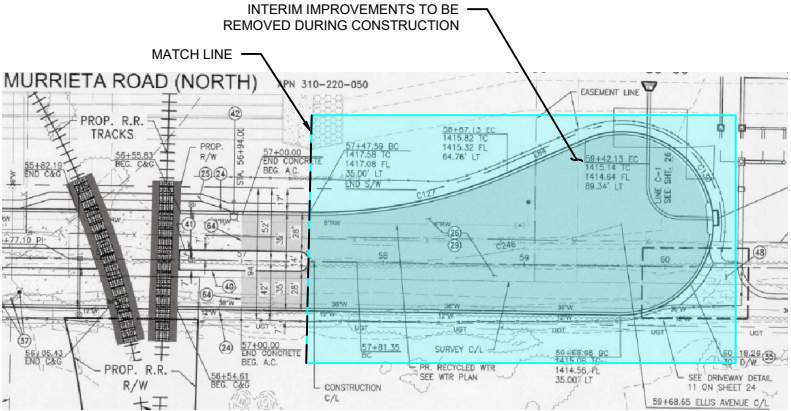


PROJECT ALTERNATIVES

- ALTERNATIVE 1**
 - ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.1 MILES FROM REDLANDS AVE & 1.7 MILES FROM SR-74)
 - 55 MPH DESIGN SPEED
 - PERPENDICULAR CROSSING AT I-215, 7TH STREET CHANNEL; SKEWED CROSSING AT PVSD
 - CROSSES DEDICATED CONSERVATION LAND
- ALTERNATIVE 2A**
 - ELIGIBLE FOR OVERCROSSING ONLY (0.9 MILES FROM REDLANDS AVE & 1.9 MILES FROM SR-74)
 - 30 MPH DESIGN SPEED AT ELLIS AVENUE (TO AVOID CONSERVATION LAND); 50 MPH ELSEWHERE
 - PERPENDICULAR CROSSING AT I-215 AND 7TH STREET CHANNEL
- ALTERNATIVE 2B**
 - ELIGIBLE FOR OVERCROSSING ONLY (0.9 MILES FROM REDLANDS AVE & 1.9 MILES FROM SR-74)
 - 30 MPH DESIGN SPEED AT ELLIS AVENUE (TO AVOID CONSERVATION LAND); 50 MPH ELSEWHERE
 - PERPENDICULAR CROSSING AT I-215 AND 7TH STREET CHANNEL
 - INTERSECTS SAN JACINTO ROAD ACROSS FROM MURRIETA ROAD
- ALTERNATIVE 3**
 - ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.3 MILES FROM REDLANDS AVE & 1.5 MILES FROM SR-74)
 - DESIGN SPEED AT CITY'S DISCRETION (TANGENT ALIGNMENT)
 - SKEWED CROSSING AT I-215, 7TH STREET CHANNEL, AND SAN JACINTO RIVER
- ALTERNATIVE 4**
 - ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.7 MILES FROM REDLANDS AVE & 1.1 MILES FROM SR-74)
 - 50 MPH DESIGN SPEED
 - PERPENDICULAR CROSSING AT I-215, 7TH STREET CHANNEL, AND SAN JACINTO RIVER

LEGEND

- CITY OF PERRIS BOUNDARY**
- SHALLOW POND AREA**
- RCA CONSERVED ADDITIONAL RESERVE LANDS**
- RCA CONSERVED QUASI-PUBLIC LANDS**



MATCH LINE DETAIL
DESIGN PROVIDED BY ALBERT. A WEBB ASSOCIATES

APPENDIX B

TRAFFIC COUNTS

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

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

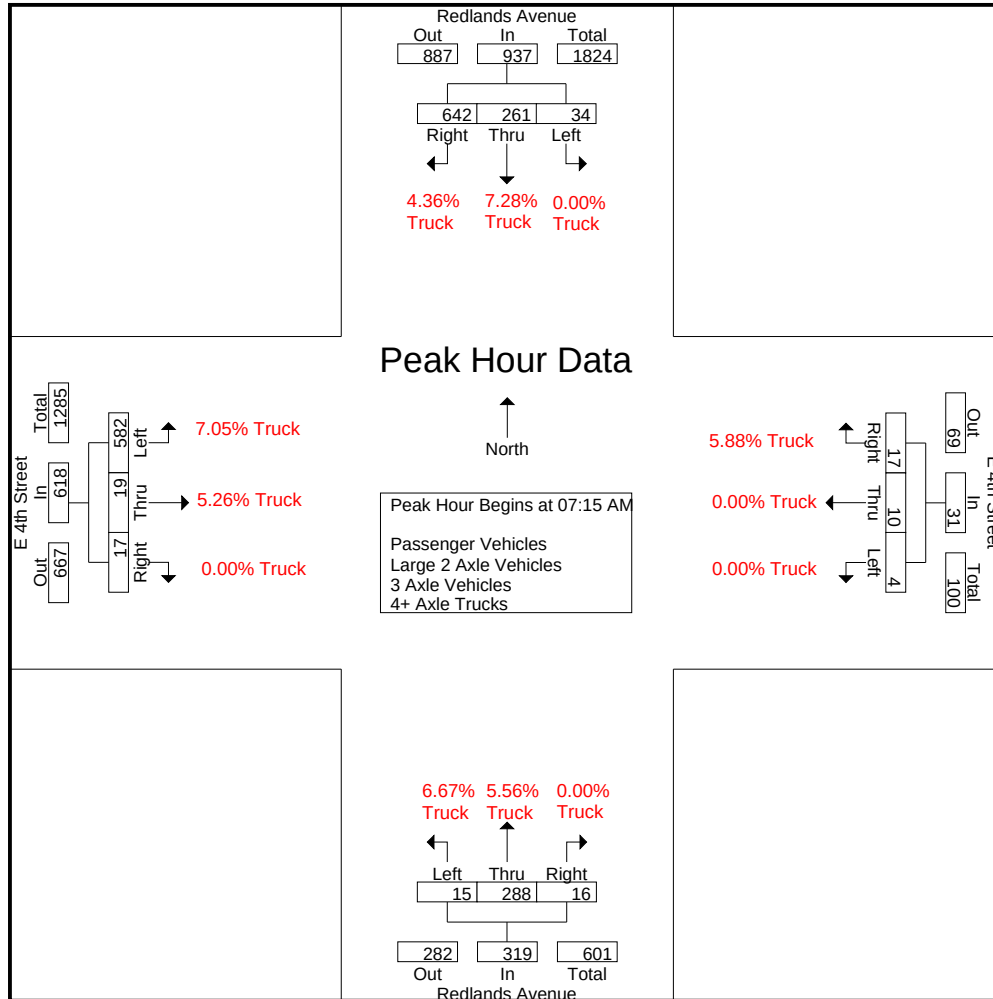
	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	22	105	128	0	1	0	1	2	30	0	32	102	0	5	107	268
06:15 AM	2	31	101	134	0	2	1	3	1	31	0	32	102	1	2	105	274
06:30 AM	1	41	108	150	0	0	0	0	3	35	0	38	117	0	5	122	310
06:45 AM	9	43	151	203	1	1	0	2	4	37	2	43	98	5	4	107	355
Total	13	137	465	615	1	4	1	6	10	133	2	145	419	6	16	441	1207
07:00 AM	6	34	137	177	2	1	2	5	3	49	2	54	102	4	8	114	350
07:15 AM	5	61	136	202	0	4	0	4	3	55	8	66	108	2	3	113	385
07:30 AM	11	70	172	253	2	2	5	9	4	92	1	97	162	5	4	171	530
07:45 AM	11	81	179	271	0	0	6	6	2	90	4	96	193	9	9	211	584
Total	33	246	624	903	4	7	13	24	12	286	15	313	565	20	24	609	1849
08:00 AM	7	49	155	211	2	4	6	12	6	51	3	60	119	3	1	123	406
08:15 AM	11	32	148	191	3	0	2	5	2	46	4	52	122	1	5	128	376
08:30 AM	8	47	114	169	0	0	5	5	5	43	0	48	118	3	6	127	349
08:45 AM	15	42	114	171	1	3	8	12	10	35	1	46	125	5	9	139	368
Total	41	170	531	742	6	7	21	34	23	175	8	206	484	12	21	517	1499
Grand Total	87	553	1620	2260	11	18	35	64	45	594	25	664	1468	38	61	1567	4555
Apprch %	3.8	24.5	71.7		17.2	28.1	54.7		6.8	89.5	3.8		93.7	2.4	3.9		
Total %	1.9	12.1	35.6	49.6	0.2	0.4	0.8	1.4	1	13	0.5	14.6	32.2	0.8	1.3	34.4	
Passenger Vehicles	85	506	1520	2111	11	17	33	61	43	545	25	613	1319	36	56	1411	4196
% Passenger Vehicles	97.7	91.5	93.8	93.4	100	94.4	94.3	95.3	95.6	91.8	100	92.3	89.9	94.7	91.8	90	92.1
Large 2 Axle Vehicles	2	19	57	78	0	1	1	2	1	14	0	15	84	1	3	88	183
% Large 2 Axle Vehicles	2.3	3.4	3.5	3.5	0	5.6	2.9	3.1	2.2	2.4	0	2.3	5.7	2.6	4.9	5.6	4
3 Axle Vehicles	0	9	19	28	0	0	1	1	0	14	0	14	29	1	1	31	74
% 3 Axle Vehicles	0	1.6	1.2	1.2	0	0	2.9	1.6	0	2.4	0	2.1	2	2.6	1.6	2	1.6
4+ Axle Trucks	0	19	24	43	0	0	0	0	1	21	0	22	36	0	1	37	102
% 4+ Axle Trucks	0	3.4	1.5	1.9	0	0	0	0	2.2	3.5	0	3.3	2.5	0	1.6	2.4	2.2

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	61	136	202	0	4	0	4	3	55	8	66	108	2	3	113	385
07:30 AM	11	70	172	253	2	2	5	9	4	92	1	97	162	5	4	171	530
07:45 AM	11	81	179	271	0	0	6	6	2	90	4	96	193	9	9	211	584
08:00 AM	7	49	155	211	2	4	6	12	6	51	3	60	119	3	1	123	406
Total Volume	34	261	642	937	4	10	17	31	15	288	16	319	582	19	17	618	1905
% App. Total	3.6	27.9	68.5		12.9	32.3	54.8		4.7	90.3	5		94.2	3.1	2.8		
PHF	.773	.806	.897	.864	.500	.625	.708	.646	.625	.783	.500	.822	.754	.528	.472	.732	.815

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

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5.76% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 5.99% Truck

	07:15 AM				08:00 AM				07:15 AM				07:30 AM			
+0 mins.	5	61	136	202	2	4	6	12	3	55	8	66	162	5	4	171
+15 mins.	11	70	172	253	3	0	2	5	4	92	1	97	193	9	9	211
+30 mins.	11	81	179	271	0	0	5	5	2	90	4	96	119	3	1	123
+45 mins.	7	49	155	211	1	3	8	12	6	51	3	60	122	1	5	128
Total Volume	34	261	642	937	6	7	21	34	15	288	16	319	596	18	19	633
% App. Total	3.6	27.9	68.5		17.6	20.6	61.8		4.7	90.3	5		94.2	2.8	3	
PHF	.773	.806	.897	.864	.500	.438	.656	.708	.625	.783	.500	.822	.772	.500	.528	.750

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
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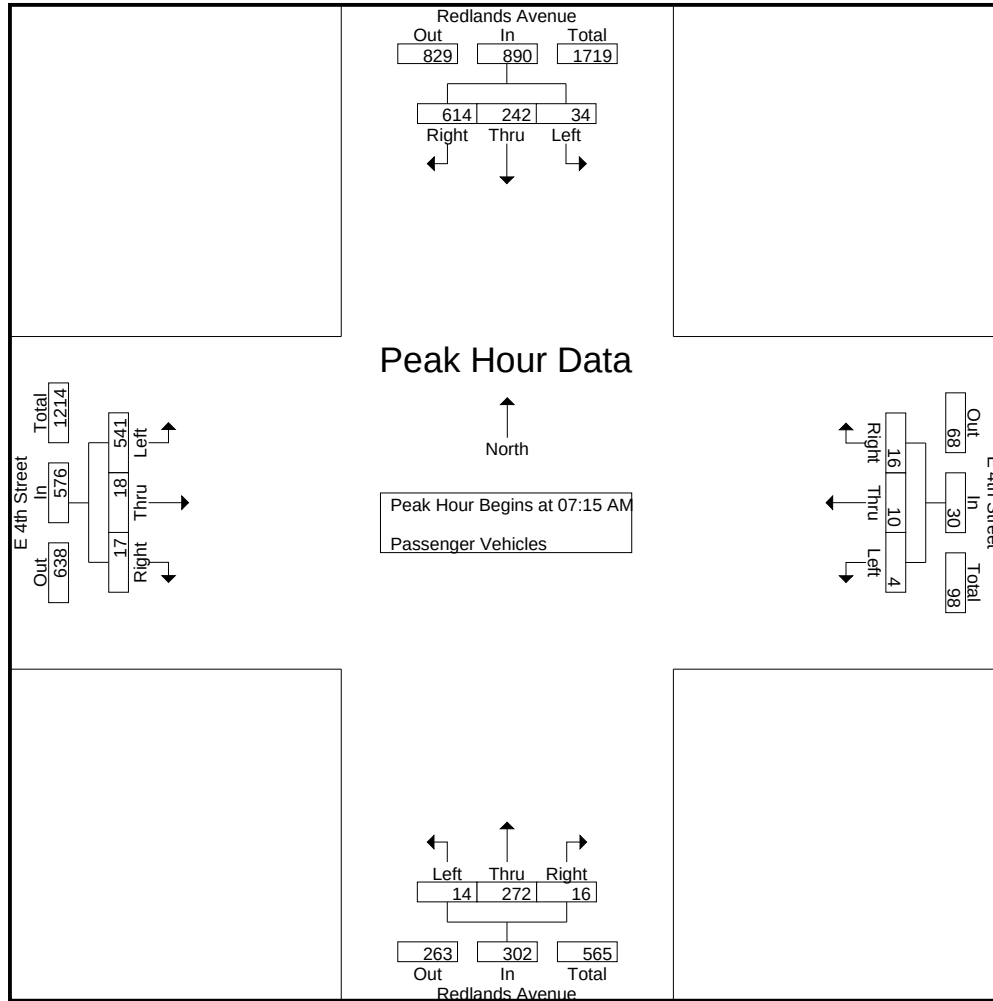
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	19	99	119	0	1	0	1	2	24	0	26	87	0	3	90	236
06:15 AM	1	28	92	121	0	1	1	2	1	28	0	29	80	1	2	83	235
06:30 AM	1	39	96	136	0	0	0	0	3	30	0	33	101	0	5	106	275
06:45 AM	9	42	139	190	1	1	0	2	3	34	2	39	88	5	4	97	328
Total	12	128	426	566	1	3	1	5	9	116	2	127	356	6	14	376	1074
07:00 AM	6	33	127	166	2	1	2	5	3	46	2	51	92	4	7	103	325
07:15 AM	5	52	131	188	0	4	0	4	3	51	8	62	94	1	3	98	352
07:30 AM	11	67	163	241	2	2	5	9	3	88	1	92	150	5	4	159	501
07:45 AM	11	78	175	264	0	0	6	6	2	86	4	92	184	9	9	202	564
Total	33	230	596	859	4	7	13	24	11	271	15	297	520	19	23	562	1742
08:00 AM	7	45	145	197	2	4	5	11	6	47	3	56	113	3	1	117	381
08:15 AM	10	28	141	179	3	0	2	5	2	41	4	47	106	1	4	111	342
08:30 AM	8	40	107	155	0	0	4	4	5	37	0	42	106	2	6	114	315
08:45 AM	15	35	105	155	1	3	8	12	10	33	1	44	118	5	8	131	342
Total	40	148	498	686	6	7	19	32	23	158	8	189	443	11	19	473	1380
Grand Total	85	506	1520	2111	11	17	33	61	43	545	25	613	1319	36	56	1411	4196
Apprch %	4	24	72		18	27.9	54.1		7	88.9	4.1		93.5	2.6	4		
Total %	2	12.1	36.2	50.3	0.3	0.4	0.8	1.5	1	13	0.6	14.6	31.4	0.9	1.3	33.6	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	52	131	188	0	4	0	4	3	51	8	62	94	1	3	98	352
07:30 AM	11	67	163	241	2	2	5	9	3	88	1	92	150	5	4	159	501
07:45 AM	11	78	175	264	0	0	6	6	2	86	4	92	184	9	9	202	564
08:00 AM	7	45	145	197	2	4	5	11	6	47	3	56	113	3	1	117	381
Total Volume	34	242	614	890	4	10	16	30	14	272	16	302	541	18	17	576	1798
% App. Total	3.8	27.2	69		13.3	33.3	53.3		4.6	90.1	5.3		93.9	3.1	3		
PHF	.773	.776	.877	.843	.500	.625	.667	.682	.583	.773	.500	.821	.735	.500	.472	.713	.797

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	5	52	131	188	0	4	0	4	3	51	8	62	94	1	3	98
+15 mins.	11	67	163	241	2	2	5	9	3	88	1	92	150	5	4	159
+30 mins.	11	78	175	264	0	0	6	6	2	86	4	92	184	9	9	202
+45 mins.	7	45	145	197	2	4	5	11	6	47	3	56	113	3	1	117
Total Volume	34	242	614	890	4	10	16	30	14	272	16	302	541	18	17	576
% App. Total	3.8	27.2	69		13.3	33.3	53.3		4.6	90.1	5.3		93.9	3.1	3	
PHF	.773	.776	.877	.843	.500	.625	.667	.682	.583	.773	.500	.821	.735	.500	.472	.713

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
Start Date : 6/8/2023
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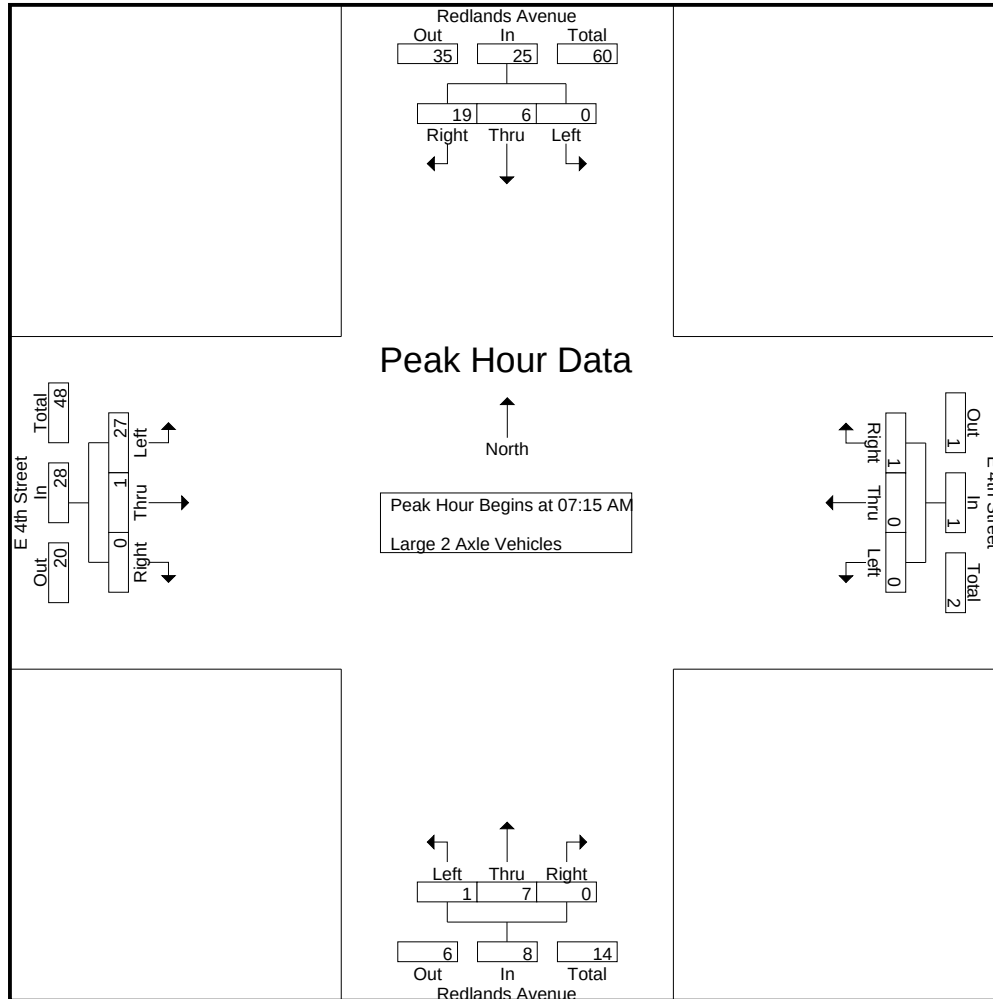
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	4	5	0	0	0	0	0	3	0	3	10	0	0	10	18
06:15 AM	1	2	5	8	0	1	0	1	0	0	0	0	9	0	0	9	18
06:30 AM	0	1	5	6	0	0	0	0	0	2	0	2	10	0	0	10	18
06:45 AM	0	0	6	6	0	0	0	0	0	0	0	0	6	0	0	6	12
Total	1	4	20	25	0	1	0	1	0	5	0	5	35	0	0	35	66
07:00 AM	0	1	7	8	0	0	0	0	0	1	0	1	5	0	1	6	15
07:15 AM	0	4	4	8	0	0	0	0	0	2	0	2	8	1	0	9	19
07:30 AM	0	0	6	6	0	0	0	0	1	1	0	2	10	0	0	10	18
07:45 AM	0	1	3	4	0	0	0	0	0	3	0	3	4	0	0	4	11
Total	0	6	20	26	0	0	0	0	1	7	0	8	27	1	1	29	63
08:00 AM	0	1	6	7	0	0	1	1	0	1	0	1	5	0	0	5	14
08:15 AM	1	2	4	7	0	0	0	0	0	0	0	0	8	0	1	9	16
08:30 AM	0	3	4	7	0	0	0	0	0	1	0	1	4	0	0	4	12
08:45 AM	0	3	3	6	0	0	0	0	0	0	0	0	5	0	1	6	12
Total	1	9	17	27	0	0	1	1	0	2	0	2	22	0	2	24	54
Grand Total	2	19	57	78	0	1	1	2	1	14	0	15	84	1	3	88	183
Apprch %	2.6	24.4	73.1		0	50	50		6.7	93.3	0		95.5	1.1	3.4		
Total %	1.1	10.4	31.1	42.6	0	0.5	0.5	1.1	0.5	7.7	0	8.2	45.9	0.5	1.6	48.1	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	4	4	8	0	0	0	0	0	2	0	2	8	1	0	9	19
07:30 AM	0	0	6	6	0	0	0	0	1	1	0	2	10	0	0	10	18
07:45 AM	0	1	3	4	0	0	0	0	0	3	0	3	4	0	0	4	11
08:00 AM	0	1	6	7	0	0	1	1	0	1	0	1	5	0	0	5	14
Total Volume	0	6	19	25	0	0	1	1	1	7	0	8	27	1	0	28	62
% App. Total	0	24	76		0	0	100		12.5	87.5	0		96.4	3.6	0		
PHF	.000	.375	.792	.781	.000	.000	.250	.250	.250	.583	.000	.667	.675	.250	.000	.700	.816

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	4	4	8	0	0	0	0	0	2	0	2	8	1	0	9
+15 mins.	0	0	6	6	0	0	0	0	1	1	0	2	10	0	0	10
+30 mins.	0	1	3	4	0	0	0	0	0	3	0	3	4	0	0	4
+45 mins.	0	1	6	7	0	0	1	1	0	1	0	1	5	0	0	5
Total Volume	0	6	19	25	0	0	1	1	1	7	0	8	27	1	0	28
% App. Total	0	24	76		0	0	100		12.5	87.5	0		96.4	3.6	0	
PHF	.000	.375	.792	.781	.000	.000	.250	.250	.250	.583	.000	.667	.675	.250	.000	.700

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
Start Date : 6/8/2023
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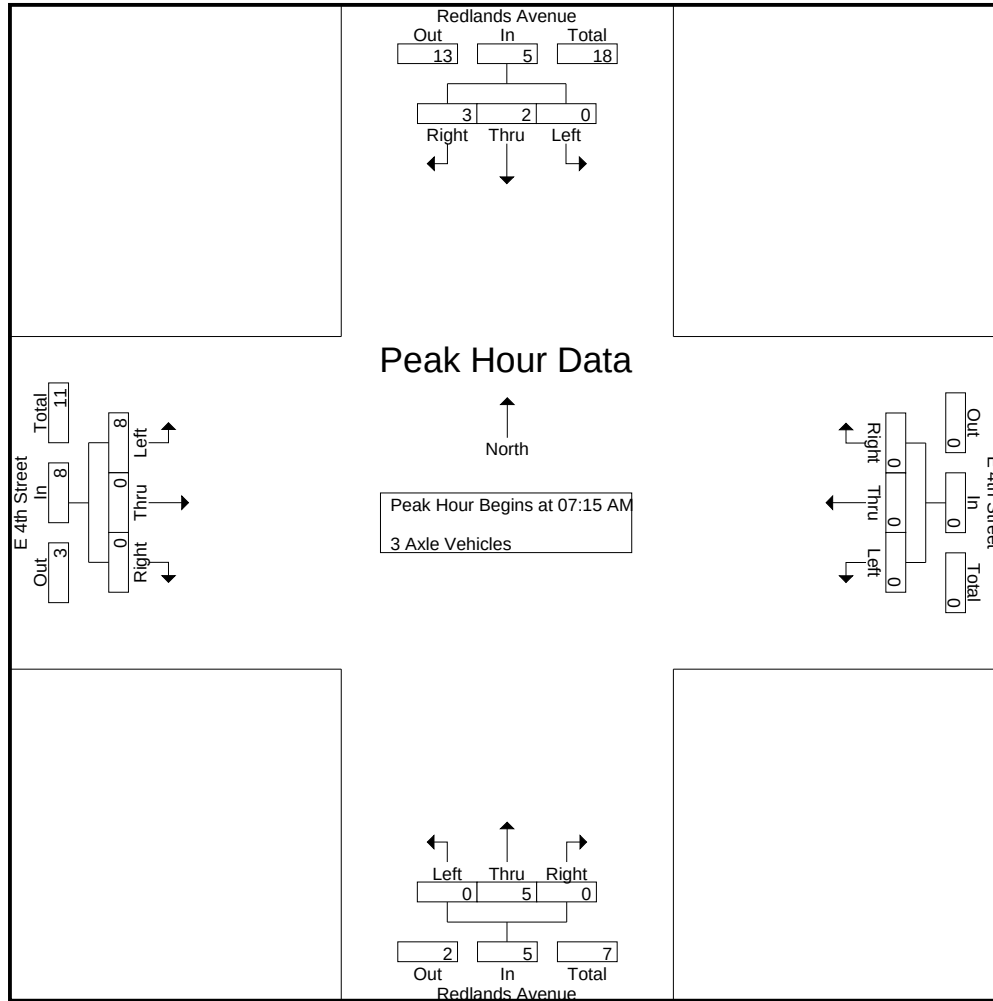
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	1	0	1	2	4
06:15 AM	0	0	2	2	0	0	0	0	0	2	0	2	4	0	0	4	8
06:30 AM	0	0	2	2	0	0	0	0	0	0	0	0	4	0	0	4	6
06:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	6	6	0	0	0	0	0	3	0	3	10	0	1	11	20
07:00 AM	0	0	2	2	0	0	0	0	0	1	0	1	2	0	0	2	5
07:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	4	0	0	4	7
07:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
Total	0	2	3	5	0	0	0	0	0	4	0	4	10	0	0	10	19
08:00 AM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
08:15 AM	0	0	3	3	0	0	0	0	0	1	0	1	5	0	0	5	9
08:30 AM	0	4	1	5	0	0	1	1	0	4	0	4	4	1	0	5	15
08:45 AM	0	3	4	7	0	0	0	0	0	0	0	0	0	0	0	0	7
Total	0	7	10	17	0	0	1	1	0	7	0	7	9	1	0	10	35
Grand Total	0	9	19	28	0	0	1	1	0	14	0	14	29	1	1	31	74
Apprch %	0	32.1	67.9		0	0	100		0	100	0		93.5	3.2	3.2		
Total %	0	12.2	25.7	37.8	0	0	1.4	1.4	0	18.9	0	18.9	39.2	1.4	1.4	41.9	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	4	0	0	4	7
07:30 AM	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4
08:00 AM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total Volume	0	2	3	5	0	0	0	0	0	5	0	5	8	0	0	8	18
% App. Total	0	40	60		0	0	0		0	100	0		100	0	0		
PHF	.000	.250	.375	.625	.000	.000	.000	.000	.000	.625	.000	.625	.500	.000	.000	.500	.643

City of Perris
N/S: Redlands Avenue
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Weather: Clear

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	1	0	1	4	0	0	4
+15 mins.	0	0	1	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4
+45 mins.	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	2	3	5	0	0	0	0	0	5	0	5	8	0	0	8
% App. Total	0	40	60		0	0	0		0	100	0		100	0	0	
PHF	.000	.250	.375	.625	.000	.000	.000	.000	.000	.625	.000	.625	.500	.000	.000	.500

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

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
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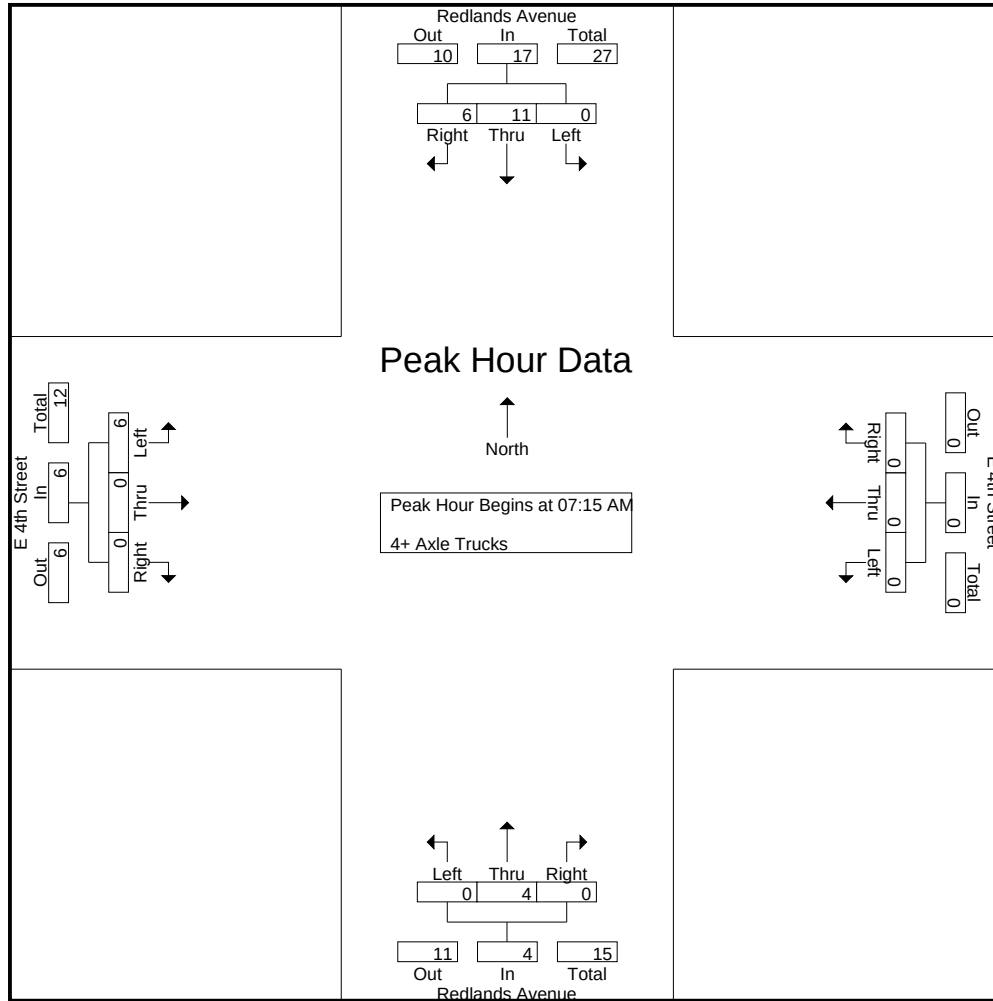
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	1	3	0	0	0	0	0	2	0	2	4	0	1	5	10
06:15 AM	0	1	2	3	0	0	0	0	0	1	0	1	9	0	0	9	13
06:30 AM	0	1	5	6	0	0	0	0	0	3	0	3	2	0	0	2	11
06:45 AM	0	1	5	6	0	0	0	0	1	3	0	4	3	0	0	3	13
Total	0	5	13	18	0	0	0	0	1	9	0	10	18	0	1	19	47
07:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	3	0	0	3	5
07:15 AM	0	3	1	4	0	0	0	0	0	1	0	1	2	0	0	2	7
07:30 AM	0	3	2	5	0	0	0	0	0	1	0	1	2	0	0	2	8
07:45 AM	0	2	1	3	0	0	0	0	0	1	0	1	1	0	0	1	5
Total	0	8	5	13	0	0	0	0	0	4	0	4	8	0	0	8	25
08:00 AM	0	3	2	5	0	0	0	0	0	1	0	1	1	0	0	1	7
08:15 AM	0	2	0	2	0	0	0	0	0	4	0	4	3	0	0	3	9
08:30 AM	0	0	2	2	0	0	0	0	0	1	0	1	4	0	0	4	7
08:45 AM	0	1	2	3	0	0	0	0	0	2	0	2	2	0	0	2	7
Total	0	6	6	12	0	0	0	0	0	8	0	8	10	0	0	10	30
Grand Total	0	19	24	43	0	0	0	0	1	21	0	22	36	0	1	37	102
Apprch %	0	44.2	55.8		0	0	0		4.5	95.5	0		97.3	0	2.7		
Total %	0	18.6	23.5	42.2	0	0	0	0	1	20.6	0	21.6	35.3	0	1	36.3	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	3	1	4	0	0	0	0	0	1	0	1	2	0	0	2	7
07:30 AM	0	3	2	5	0	0	0	0	0	1	0	1	2	0	0	2	8
07:45 AM	0	2	1	3	0	0	0	0	0	1	0	1	1	0	0	1	5
08:00 AM	0	3	2	5	0	0	0	0	0	1	0	1	1	0	0	1	7
Total Volume	0	11	6	17	0	0	0	0	0	4	0	4	6	0	0	6	27
% App. Total	0	64.7	35.3		0	0	0		0	100	0		100	0	0		
PHF	.000	.917	.750	.850	.000	.000	.000	.000	.000	1.00	.000	1.00	.750	.000	.000	.750	.844

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	1	4	0	0	0	0	0	1	0	1	2	0	0	2
+15 mins.	0	3	2	5	0	0	0	0	0	1	0	1	2	0	0	2
+30 mins.	0	2	1	3	0	0	0	0	0	1	0	1	1	0	0	1
+45 mins.	0	3	2	5	0	0	0	0	0	1	0	1	1	0	0	1
Total Volume	0	11	6	17	0	0	0	0	0	4	0	4	6	0	0	6
% App. Total	0	64.7	35.3		0	0	0	0	0	100	0		100	0	0	
PHF	.000	.917	.750	.850	.000	.000	.000	.000	.000	1.000	.000	1.000	.750	.000	.000	.750

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	11	48	155	214	1	1	11	13	6	75	1	82	200	5	23	228	537
03:15 PM	6	59	154	219	1	2	14	17	10	57	0	67	166	8	19	193	496
03:30 PM	12	60	158	230	2	2	11	15	10	81	2	93	162	6	15	183	521
03:45 PM	6	59	177	242	1	6	9	16	10	70	4	84	171	4	15	190	532
Total	35	226	644	905	5	11	45	61	36	283	7	326	699	23	72	794	2086
04:00 PM	12	61	157	230	3	6	12	21	17	69	4	90	176	6	13	195	536
04:15 PM	6	60	153	219	1	9	22	32	10	83	6	99	208	9	9	226	576
04:30 PM	6	66	160	232	2	1	10	13	9	108	5	122	180	10	11	201	568
04:45 PM	10	64	145	219	3	2	9	14	12	69	2	83	177	4	12	193	509
Total	34	251	615	900	9	18	53	80	48	329	17	394	741	29	45	815	2189
05:00 PM	8	61	168	237	2	6	25	33	10	79	1	90	193	7	13	213	573
05:15 PM	0	41	148	189	3	4	4	11	10	47	0	57	193	3	9	205	462
05:30 PM	4	44	145	193	5	1	9	15	10	68	0	78	191	1	10	202	488
05:45 PM	2	47	130	179	1	6	4	11	7	34	0	41	170	3	7	180	411
Total	14	193	591	798	11	17	42	70	37	228	1	266	747	14	39	800	1934
06:00 PM	3	44	131	178	0	3	12	15	13	47	2	62	187	2	6	195	450
06:15 PM	5	36	150	191	1	1	4	6	6	46	0	52	185	1	10	196	445
06:30 PM	4	29	122	155	3	0	5	8	7	41	2	50	154	2	7	163	376
06:45 PM	1	33	133	167	3	0	4	7	2	27	1	30	155	2	5	162	366
Total	13	142	536	691	7	4	25	36	28	161	5	194	681	7	28	716	1637
Grand Total	96	812	2386	3294	32	50	165	247	149	1001	30	1180	2868	73	184	3125	7846
Apprch %	2.9	24.7	72.4		13	20.2	66.8		12.6	84.8	2.5		91.8	2.3	5.9		
Total %	1.2	10.3	30.4	42	0.4	0.6	2.1	3.1	1.9	12.8	0.4	15	36.6	0.9	2.3	39.8	
Passenger Vehicles	93	772	2269	3134	31	49	162	242	147	969	29	1145	2795	72	182	3049	7570
% Passenger Vehicles	96.9	95.1	95.1	95.1	96.9	98	98.2	98	98.7	96.8	96.7	97	97.5	98.6	98.9	97.6	96.5
Large 2 Axle Vehicles	3	12	71	86	1	1	3	5	2	17	1	20	51	1	1	53	164
% Large 2 Axle Vehicles	3.1	1.5	3	2.6	3.1	2	1.8	2	1.3	1.7	3.3	1.7	1.8	1.4	0.5	1.7	2.1
3 Axle Vehicles	0	19	28	47	0	0	0	0	0	11	0	11	15	0	0	15	73
% 3 Axle Vehicles	0	2.3	1.2	1.4	0	0	0	0	0	1.1	0	0.9	0.5	0	0	0.5	0.9
4+ Axle Trucks	0	9	18	27	0	0	0	0	0	4	0	4	7	0	1	8	39
% 4+ Axle Trucks	0	1.1	0.8	0.8	0	0	0	0	0	0.4	0	0.3	0.2	0	0.5	0.3	0.5

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	6	60	153	219	1	9	22	32	10	83	6	99	208	9	9	226	576
04:30 PM	6	66	160	232	2	1	10	13	9	108	5	122	180	10	11	201	568
04:45 PM	10	64	145	219	3	2	9	14	12	69	2	83	177	4	12	193	509
05:00 PM	8	61	168	237	2	6	25	33	10	79	1	90	193	7	13	213	573
Total Volume	30	251	626	907	8	18	66	92	41	339	14	394	758	30	45	833	2226
% App. Total	3.3	27.7	69		8.7	19.6	71.7		10.4	86	3.6		91	3.6	5.4		
PHF	.750	.951	.932	.957	.667	.500	.660	.697	.854	.785	.583	.807	.911	.750	.865	.921	.966

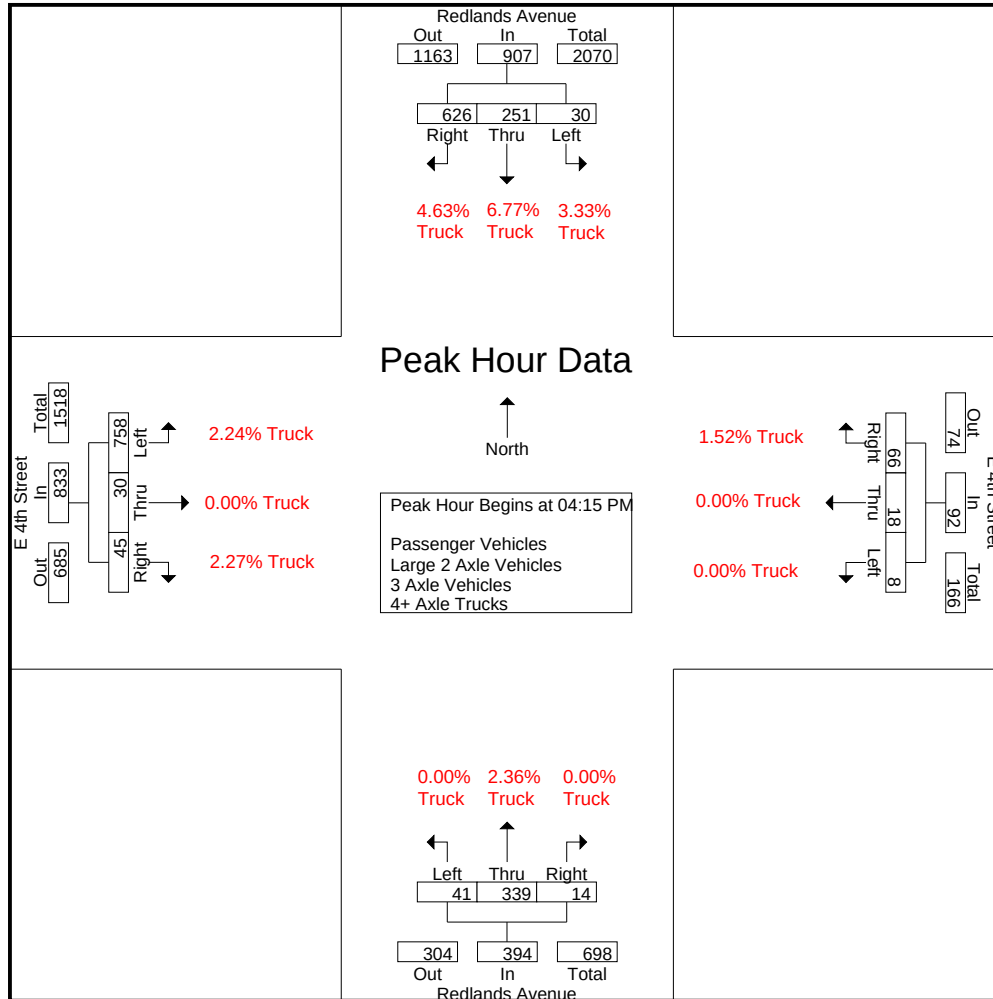
City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
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3.53% Truck

3.10% Truck

1.21% Truck



Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 3.73% Truck

	03:45 PM				04:15 PM				03:45 PM				04:15 PM			
+0 mins.	6	59	177	242	1	9	22	32	10	70	4	84	208	9	9	226
+15 mins.	12	61	157	230	2	1	10	13	17	69	4	90	180	10	11	201
+30 mins.	6	60	153	219	3	2	9	14	10	83	6	99	177	4	12	193
+45 mins.	6	66	160	232	2	6	25	33	9	108	5	122	193	7	13	213
Total Volume	30	246	647	923	8	18	66	92	46	330	19	395	758	30	45	833
% App. Total	3.3	26.7	70.1		8.7	19.6	71.7		11.6	83.5	4.8		91	3.6	5.4	
PHF	.625	.932	.914	.954	.667	.500	.660	.697	.676	.764	.792	.809	.911	.750	.865	.921

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
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File Name : 01_PER_Red_4th PM
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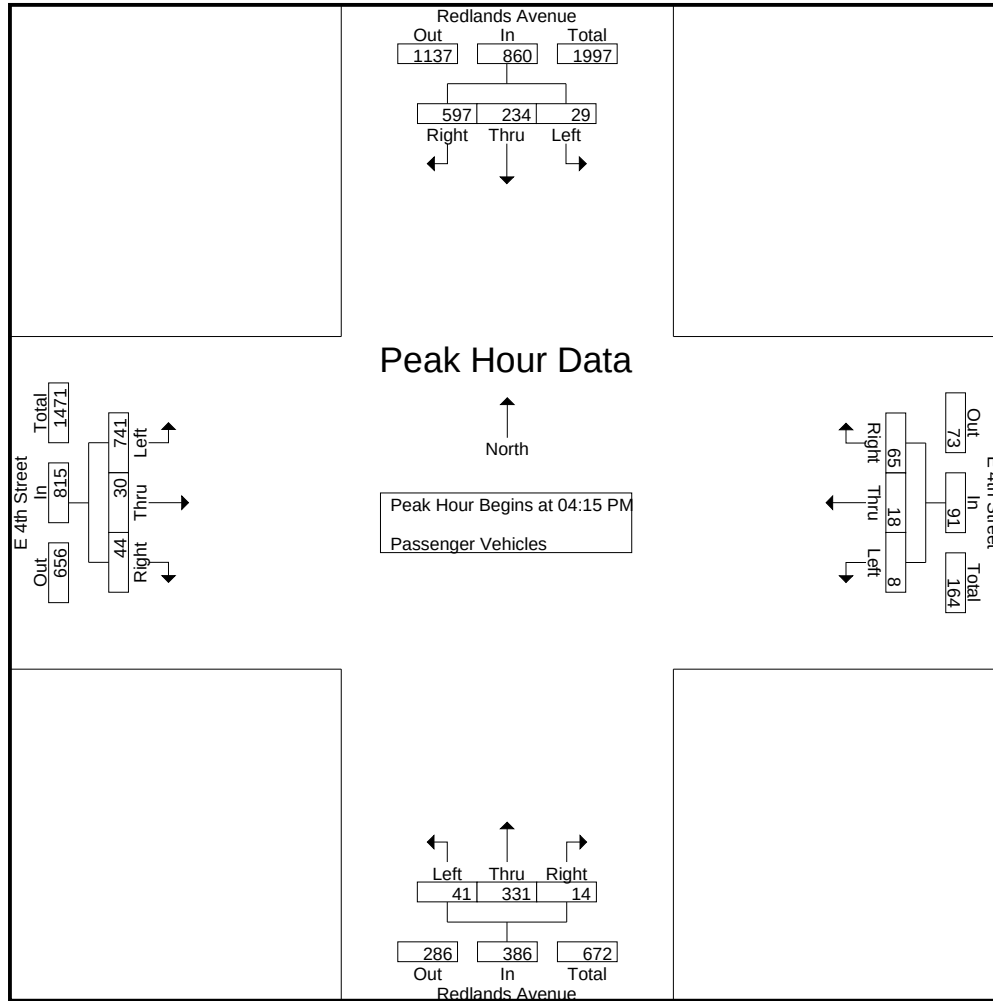
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	10	44	146	200	1	1	10	12	6	71	1	78	191	5	23	219	509
03:15 PM	6	59	147	212	1	1	14	16	10	54	0	64	156	7	19	182	474
03:30 PM	11	54	145	210	2	2	11	15	9	78	2	89	157	6	15	178	492
03:45 PM	6	57	166	229	0	6	9	15	10	64	3	77	165	4	15	184	505
Total	33	214	604	851	4	10	44	58	35	267	6	308	669	22	72	763	1980
04:00 PM	12	60	142	214	3	6	11	20	16	69	4	89	171	6	12	189	512
04:15 PM	6	53	144	203	1	9	22	32	10	78	6	94	202	9	9	220	549
04:30 PM	5	59	157	221	2	1	10	13	9	106	5	120	176	10	10	196	550
04:45 PM	10	63	137	210	3	2	8	13	12	68	2	82	171	4	12	187	492
Total	33	235	580	848	9	18	51	78	47	321	17	385	720	29	43	792	2103
05:00 PM	8	59	159	226	2	6	25	33	10	79	1	90	192	7	13	212	561
05:15 PM	0	39	145	184	3	4	4	11	10	46	0	56	190	3	9	202	453
05:30 PM	4	44	138	186	5	1	9	15	10	65	0	75	188	1	10	199	475
05:45 PM	2	44	128	174	1	6	4	11	7	34	0	41	169	3	7	179	405
Total	14	186	570	770	11	17	42	70	37	224	1	262	739	14	39	792	1894
06:00 PM	3	43	127	173	0	3	12	15	13	47	2	62	184	2	6	192	442
06:15 PM	5	34	145	184	1	1	4	6	6	44	0	50	181	1	10	192	432
06:30 PM	4	28	116	148	3	0	5	8	7	39	2	48	154	2	7	163	367
06:45 PM	1	32	127	160	3	0	4	7	2	27	1	30	148	2	5	155	352
Total	13	137	515	665	7	4	25	36	28	157	5	190	667	7	28	702	1593
Grand Total	93	772	2269	3134	31	49	162	242	147	969	29	1145	2795	72	182	3049	7570
Apprch %	3	24.6	72.4		12.8	20.2	66.9		12.8	84.6	2.5		91.7	2.4	6		
Total %	1.2	10.2	30	41.4	0.4	0.6	2.1	3.2	1.9	12.8	0.4	15.1	36.9	1	2.4	40.3	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	6	53	144	203	1	9	22	32	10	78	6	94	202	9	9	220	549
04:30 PM	5	59	157	221	2	1	10	13	9	106	5	120	176	10	10	196	550
04:45 PM	10	63	137	210	3	2	8	13	12	68	2	82	171	4	12	187	492
05:00 PM	8	59	159	226	2	6	25	33	10	79	1	90	192	7	13	212	561
Total Volume	29	234	597	860	8	18	65	91	41	331	14	386	741	30	44	815	2152
% App. Total	3.4	27.2	69.4		8.8	19.8	71.4		10.6	85.8	3.6		90.9	3.7	5.4		
PHF	.725	.929	.939	.951	.667	.500	.650	.689	.854	.781	.583	.804	.917	.750	.846	.926	.959

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	6	53	144	203	1	9	22	32	10	78	6	94	202	9	9	220
+15 mins.	5	59	157	221	2	1	10	13	9	106	5	120	176	10	10	196
+30 mins.	10	63	137	210	3	2	8	13	12	68	2	82	171	4	12	187
+45 mins.	8	59	159	226	2	6	25	33	10	79	1	90	192	7	13	212
Total Volume	29	234	597	860	8	18	65	91	41	331	14	386	741	30	44	815
% App. Total	3.4	27.2	69.4		8.8	19.8	71.4		10.6	85.8	3.6		90.9	3.7	5.4	
PHF	.725	.929	.939	.951	.667	.500	.650	.689	.854	.781	.583	.804	.917	.750	.846	.926

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
Site Code : 99923603
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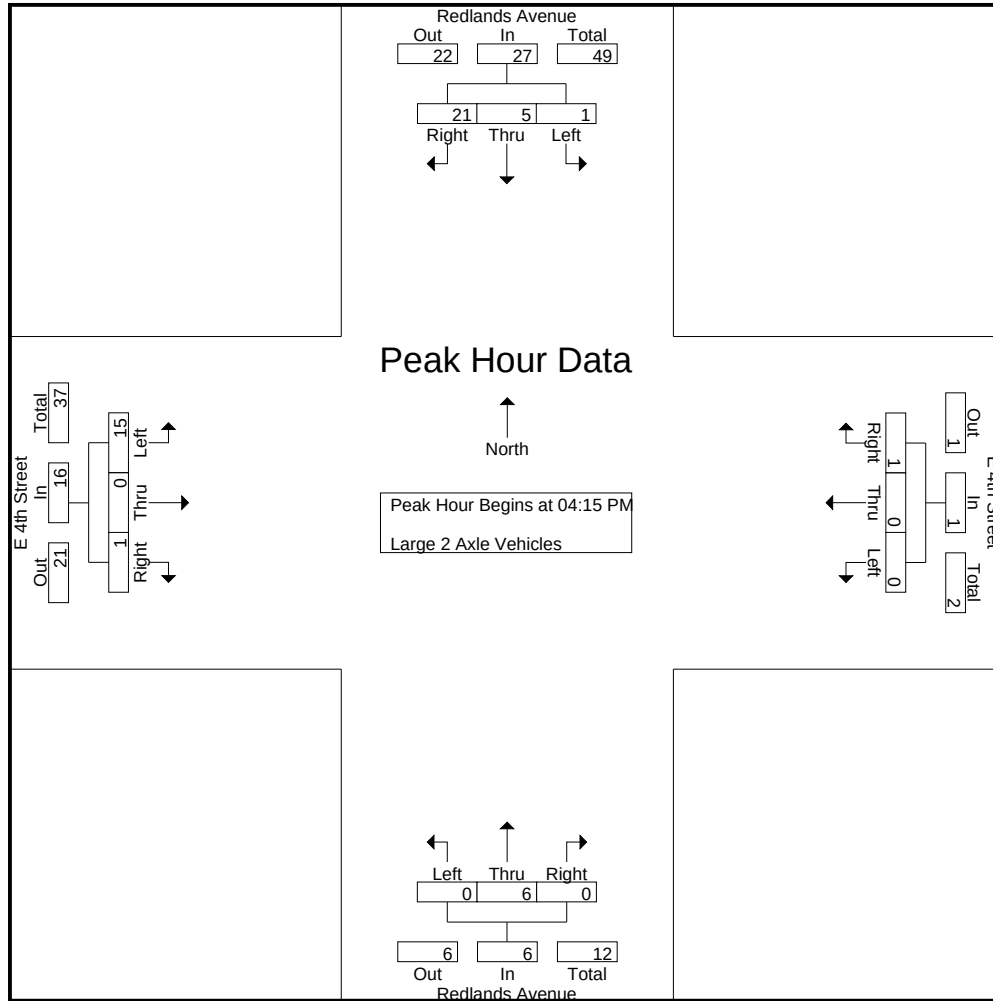
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	1	4	6	0	0	1	1	0	3	0	3	6	0	0	6	16
03:15 PM	0	0	3	3	0	1	0	1	0	1	0	1	6	1	0	7	12
03:30 PM	1	3	6	10	0	0	0	0	1	1	0	2	2	0	0	2	14
03:45 PM	0	1	6	7	1	0	0	1	0	2	1	3	2	0	0	2	13
Total	2	5	19	26	1	1	1	3	1	7	1	9	16	1	0	17	55
04:00 PM	0	0	9	9	0	0	1	1	1	0	0	1	3	0	0	3	14
04:15 PM	0	2	5	7	0	0	0	0	0	5	0	5	6	0	0	6	18
04:30 PM	1	2	1	4	0	0	0	0	0	1	0	1	4	0	1	5	10
04:45 PM	0	1	7	8	0	0	1	1	0	0	0	0	5	0	0	5	14
Total	1	5	22	28	0	0	2	2	1	6	0	7	18	0	1	19	56
05:00 PM	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	8
05:15 PM	0	1	3	4	0	0	0	0	0	1	0	1	3	0	0	3	8
05:30 PM	0	0	6	6	0	0	0	0	0	0	0	0	3	0	0	3	9
05:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	2	18	20	0	0	0	0	0	1	0	1	7	0	0	7	28
06:00 PM	0	0	2	2	0	0	0	0	0	0	0	0	3	0	0	3	5
06:15 PM	0	0	3	3	0	0	0	0	0	1	0	1	1	0	0	1	5
06:30 PM	0	0	3	3	0	0	0	0	0	2	0	2	0	0	0	0	5
06:45 PM	0	0	4	4	0	0	0	0	0	0	0	0	6	0	0	6	10
Total	0	0	12	12	0	0	0	0	0	3	0	3	10	0	0	10	25
Grand Total	3	12	71	86	1	1	3	5	2	17	1	20	51	1	1	53	164
Apprch %	3.5	14	82.6		20	20	60		10	85	5		96.2	1.9	1.9		
Total %	1.8	7.3	43.3	52.4	0.6	0.6	1.8	3	1.2	10.4	0.6	12.2	31.1	0.6	0.6	32.3	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	2	5	7	0	0	0	0	0	5	0	5	6	0	0	6	18
04:30 PM	1	2	1	4	0	0	0	0	0	1	0	1	4	0	1	5	10
04:45 PM	0	1	7	8	0	0	1	1	0	0	0	0	5	0	0	5	14
05:00 PM	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	8
Total Volume	1	5	21	27	0	0	1	1	0	6	0	6	15	0	1	16	50
% App. Total	3.7	18.5	77.8		0	0	100		0	100	0		93.8	0	6.2		
PHF	.250	.625	.656	.844	.000	.000	.250	.250	.000	.300	.000	.300	.625	.000	.250	.667	.694

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	2	5	7	0	0	0	0	0	5	0	5	6	0	0	6
+15 mins.	1	2	1	4	0	0	0	0	0	1	0	1	4	0	1	5
+30 mins.	0	1	7	8	0	0	1	1	0	0	0	0	5	0	0	5
+45 mins.	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	5	21	27	0	0	1	1	0	6	0	6	15	0	1	16
% App. Total	3.7	18.5	77.8		0	0	100		0	100	0		93.8	0	6.2	
PHF	.250	.625	.656	.844	.000	.000	.250	.250	.000	.300	.000	.300	.625	.000	.250	.667

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
Site Code : 99923603
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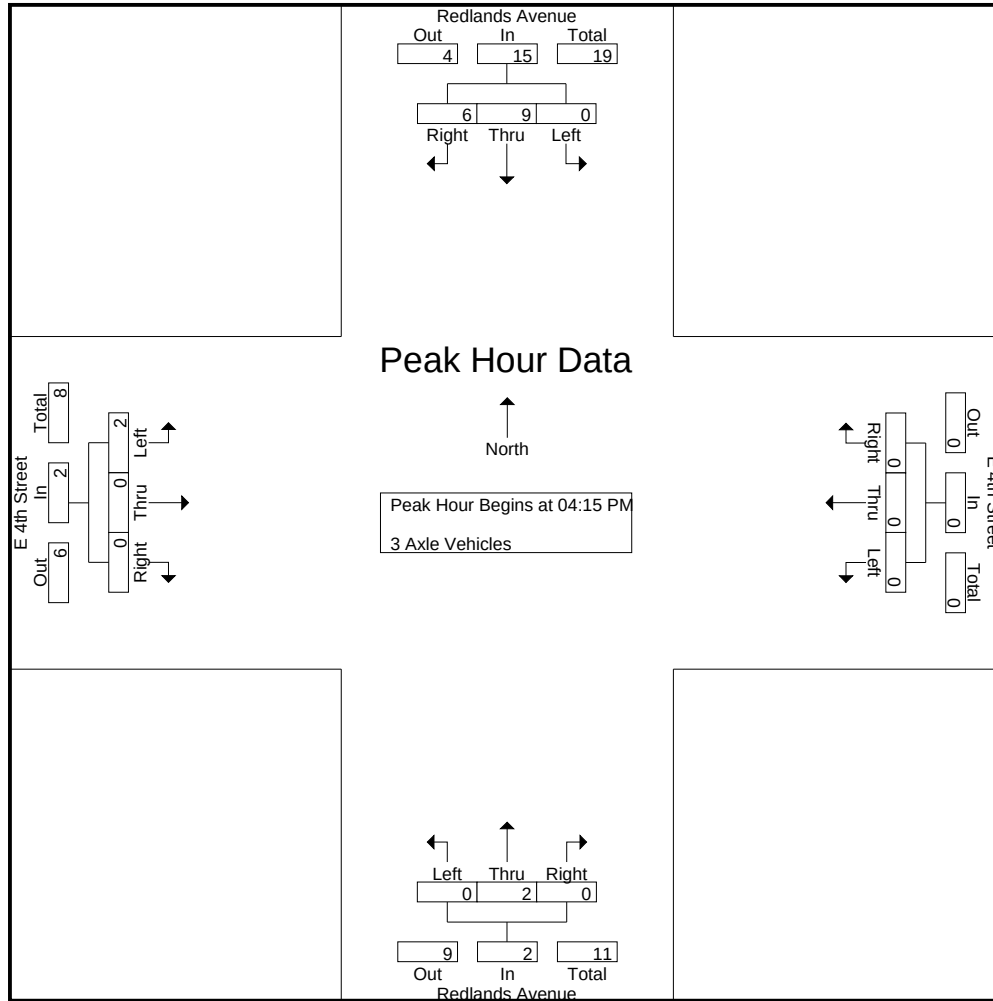
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	2	5	0	0	0	0	0	1	0	1	1	0	0	1	7
03:15 PM	0	0	1	1	0	0	0	0	0	1	0	1	3	0	0	3	5
03:30 PM	0	2	4	6	0	0	0	0	0	2	0	2	2	0	0	2	10
03:45 PM	0	0	5	5	0	0	0	0	0	2	0	2	2	0	0	2	9
Total	0	5	12	17	0	0	0	0	0	6	0	6	8	0	0	8	31
04:00 PM	0	1	3	4	0	0	0	0	0	0	0	0	2	0	0	2	6
04:15 PM	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	6
04:30 PM	0	5	2	7	0	0	0	0	0	1	0	1	0	0	0	0	8
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	9	8	17	0	0	0	0	0	2	0	2	3	0	0	3	22
05:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
05:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	2	5	0	0	0	0	0	3	0	3	1	0	0	1	9
06:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	1	2	3	0	0	0	0	0	0	0	0	2	0	0	2	5
06:30 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:45 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total	0	2	6	8	0	0	0	0	0	0	0	0	3	0	0	3	11
Grand Total	0	19	28	47	0	0	0	0	0	11	0	11	15	0	0	15	73
Apprch %	0	40.4	59.6		0	0	0		0	100	0		100	0	0		
Total %	0	26	38.4	64.4	0	0	0	0	0	15.1	0	15.1	20.5	0	0	20.5	

	Redlands Avenue Southbound				E 4th Street Westbound				Redlands Avenue Northbound				E 4th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0	6
04:30 PM	0	5	2	7	0	0	0	0	0	1	0	1	0	0	0	0	8
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
05:00 PM	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1	3
Total Volume	0	9	6	15	0	0	0	0	0	2	0	2	2	0	0	2	19
% App. Total	0	60	40		0	0	0		0	100	0		100	0	0		
PHF	.000	.450	.500	.536	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.000	.500	.594

City of Perris
N/S: Redlands Avenue
E/W: E 4th Street
Weather: Clear

File Name : 01_PER_Red_4th PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	3	3	6	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	5	2	7	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1
+45 mins.	0	1	1	2	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	9	6	15	0	0	0	0	0	2	0	2	2	0	0	2
% App. Total	0	60	40		0	0	0	0	0	100	0		100	0	0	
PHF	.000	.450	.500	.536	.000	.000	.000	.000	.000	.500	.000	.500	.500	.000	.000	.500

File Name : 01_PER_Red_4th PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

Location: Perris
 N/S: Redlands Avenue
 E/W: 4th Street



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Redlands Avenue	East Leg 4th Street	South Leg Redlands Avenue	West Leg 4th Street	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
6:00 AM	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0

		North Leg Redlands Avenue	East Leg 4th Street	South Leg Redlands Avenue	West Leg 4th Street	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
3:00 PM	0	0	0	1	0	1
3:15 PM	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0
4:45 PM	0	0	0	0	2	2
5:00 PM	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	1	2	3

Location: Perris
 N/S: Redlands Avenue
 E/W: 4th Street



Date: 6/8/2023
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound 4th Street			Northbound Redlands Avenue			Eastbound 4th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
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	1	0	0	0	0	0	1	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	1	0	0	0	1	0	3

	Southbound Redlands Avenue			Westbound 4th Street			Northbound Redlands Avenue			Eastbound 4th Street			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	2
4:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	1	1	0	0	0	0	0	1	0	4

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

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

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

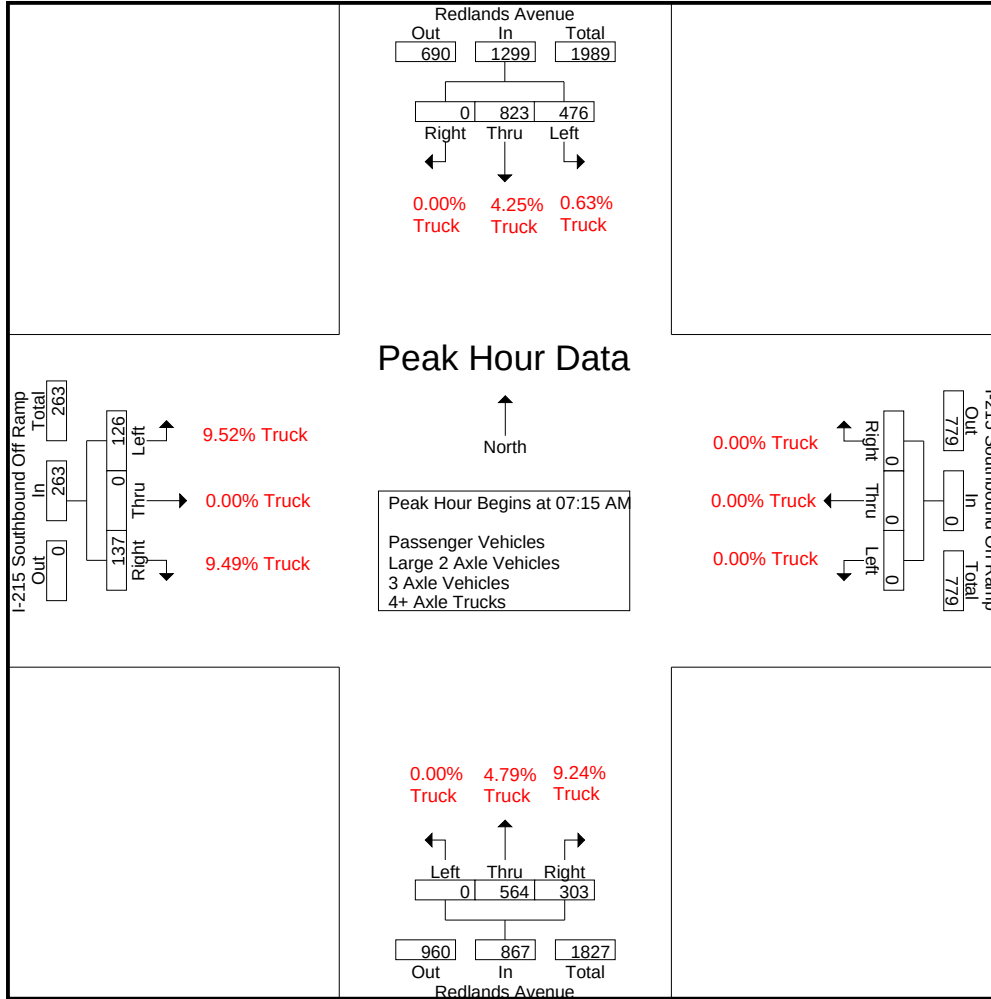
	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	84	115	0	199	0	0	0	0	0	70	66	136	18	0	20	38	373
06:15 AM	86	120	0	206	0	0	0	0	0	62	61	123	16	0	21	37	366
06:30 AM	102	113	0	215	0	0	0	0	0	74	73	147	22	0	37	59	421
06:45 AM	100	177	0	277	0	0	0	0	0	57	68	125	10	1	29	40	442
Total	372	525	0	897	0	0	0	0	0	263	268	531	66	1	107	174	1602
07:00 AM	94	153	0	247	0	0	0	0	0	87	51	138	22	0	23	45	430
07:15 AM	119	169	0	288	0	0	0	0	0	98	65	163	37	0	35	72	523
07:30 AM	150	217	0	367	0	0	0	0	0	153	84	237	24	0	37	61	665
07:45 AM	115	237	0	352	0	0	0	0	0	190	76	266	46	0	41	87	705
Total	478	776	0	1254	0	0	0	0	0	528	276	804	129	0	136	265	2323
08:00 AM	92	200	0	292	0	0	0	0	0	123	78	201	19	0	24	43	536
08:15 AM	106	169	0	275	0	0	0	0	0	107	62	169	19	0	31	50	494
08:30 AM	90	139	0	229	0	0	0	0	0	96	56	152	20	0	33	53	434
08:45 AM	82	145	0	227	0	0	0	0	0	90	80	170	22	0	32	54	451
Total	370	653	0	1023	0	0	0	0	0	416	276	692	80	0	120	200	1915
Grand Total	1220	1954	0	3174	0	0	0	0	0	1207	820	2027	275	1	363	639	5840
Apprch %	38.4	61.6	0		0	0	0		0	59.5	40.5		43	0.2	56.8		
Total %	20.9	33.5	0	54.3	0	0	0	0	0	20.7	14	34.7	4.7	0	6.2	10.9	
Passenger Vehicles	1196	1855	0	3051	0	0	0	0	0	1120	712	1832	240	1	315	556	5439
% Passenger Vehicles	98	94.9	0	96.1	0	0	0	0	0	92.8	86.8	90.4	87.3	100	86.8	87	93.1
Large 2 Axle Vehicles	18	63	0	81	0	0	0	0	0	46	52	98	13	0	14	27	206
% Large 2 Axle Vehicles	1.5	3.2	0	2.6	0	0	0	0	0	3.8	6.3	4.8	4.7	0	3.9	4.2	3.5
3 Axle Vehicles	2	18	0	20	0	0	0	0	0	18	23	41	21	0	7	28	89
% 3 Axle Vehicles	0.2	0.9	0	0.6	0	0	0	0	0	1.5	2.8	2	7.6	0	1.9	4.4	1.5
4+ Axle Trucks	4	18	0	22	0	0	0	0	0	23	33	56	1	0	27	28	106
% 4+ Axle Trucks	0.3	0.9	0	0.7	0	0	0	0	0	1.9	4	2.8	0.4	0	7.4	4.4	1.8

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	119	169	0	288	0	0	0	0	0	98	65	163	37	0	35	72	523
07:30 AM	150	217	0	367	0	0	0	0	0	153	84	237	24	0	37	61	665
07:45 AM	115	237	0	352	0	0	0	0	0	190	76	266	46	0	41	87	705
08:00 AM	92	200	0	292	0	0	0	0	0	123	78	201	19	0	24	43	536
Total Volume	476	823	0	1299	0	0	0	0	0	564	303	867	126	0	137	263	2429
% App. Total	36.6	63.4	0		0	0	0		0	65.1	34.9		47.9	0	52.1		
PHF	.793	.868	.000	.885	.000	.000	.000	.000	.000	.742	.902	.815	.685	.000	.835	.756	.861

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2

3.87% Truck



9.51% Truck

3.98% Truck

5.64% Truck

Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				06:00 AM				07:30 AM				07:00 AM			
+0 mins.	119	169	0	288	0	0	0	0	0	153	84	237	22	0	23	45
+15 mins.	150	217	0	367	0	0	0	0	0	190	76	266	37	0	35	72
+30 mins.	115	237	0	352	0	0	0	0	0	123	78	201	24	0	37	61
+45 mins.	92	200	0	292	0	0	0	0	0	107	62	169	46	0	41	87
Total Volume	476	823	0	1299	0	0	0	0	0	573	300	873	129	0	136	265
% App. Total	36.6	63.4	0		0	0	0	0	0	65.6	34.4		48.7	0	51.3	
PHF	.793	.868	.000	.885	.000	.000	.000	.000	.000	.754	.893	.820	.701	.000	.829	.761

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

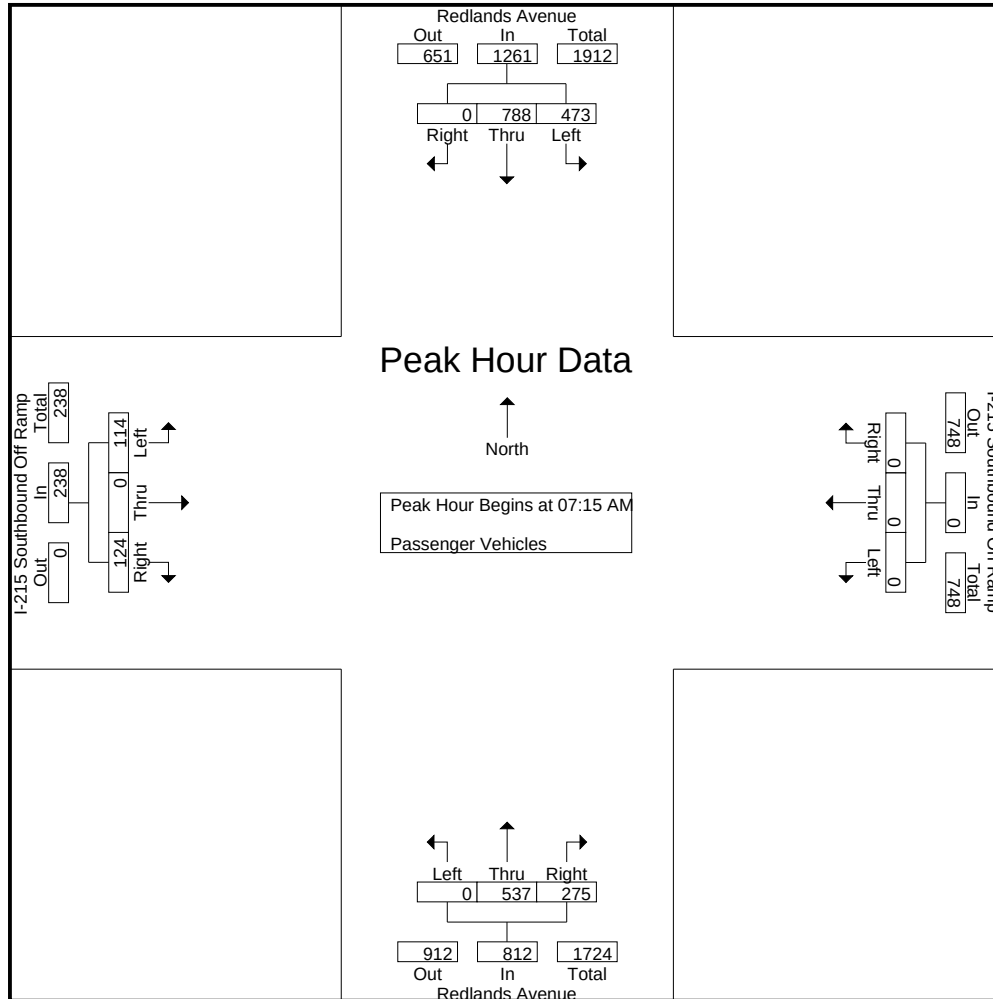
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	80	108	0	188	0	0	0	0	0	61	54	115	15	0	17	32	335
06:15 AM	85	111	0	196	0	0	0	0	0	55	42	97	14	0	16	30	323
06:30 AM	98	105	0	203	0	0	0	0	0	65	61	126	14	0	33	47	376
06:45 AM	98	167	0	265	0	0	0	0	0	51	61	112	9	1	27	37	414
Total	361	491	0	852	0	0	0	0	0	232	218	450	52	1	93	146	1448
07:00 AM	93	144	0	237	0	0	0	0	0	81	45	126	21	0	21	42	405
07:15 AM	119	157	0	276	0	0	0	0	0	90	54	144	35	0	31	66	486
07:30 AM	150	209	0	359	0	0	0	0	0	145	77	222	23	0	33	56	637
07:45 AM	112	232	0	344	0	0	0	0	0	186	68	254	43	0	39	82	680
Total	474	742	0	1216	0	0	0	0	0	502	244	746	122	0	124	246	2208
08:00 AM	92	190	0	282	0	0	0	0	0	116	76	192	13	0	21	34	508
08:15 AM	100	162	0	262	0	0	0	0	0	100	49	149	16	0	26	42	453
08:30 AM	89	134	0	223	0	0	0	0	0	84	50	134	18	0	25	43	400
08:45 AM	80	136	0	216	0	0	0	0	0	86	75	161	19	0	26	45	422
Total	361	622	0	983	0	0	0	0	0	386	250	636	66	0	98	164	1783
Grand Total	1196	1855	0	3051	0	0	0	0	0	1120	712	1832	240	1	315	556	5439
Apprch %	39.2	60.8	0		0	0	0		0	61.1	38.9		43.2	0.2	56.7		
Total %	22	34.1	0	56.1	0	0	0	0	0	20.6	13.1	33.7	4.4	0	5.8	10.2	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	119	157	0	276	0	0	0	0	0	90	54	144	35	0	31	66	486
07:30 AM	150	209	0	359	0	0	0	0	0	145	77	222	23	0	33	56	637
07:45 AM	112	232	0	344	0	0	0	0	0	186	68	254	43	0	39	82	680
08:00 AM	92	190	0	282	0	0	0	0	0	116	76	192	13	0	21	34	508
Total Volume	473	788	0	1261	0	0	0	0	0	537	275	812	114	0	124	238	2311
% App. Total	37.5	62.5	0		0	0	0		0	66.1	33.9		47.9	0	52.1		
PHF	.788	.849	.000	.878	.000	.000	.000	.000	.000	.722	.893	.799	.663	.000	.795	.726	.850

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	119	157	0	276	0	0	0	0	0	90	54	144	35	0	31	66
+15 mins.	150	209	0	359	0	0	0	0	0	145	77	222	23	0	33	56
+30 mins.	112	232	0	344	0	0	0	0	0	186	68	254	43	0	39	82
+45 mins.	92	190	0	282	0	0	0	0	0	116	76	192	13	0	21	34
Total Volume	473	788	0	1261	0	0	0	0	0	537	275	812	114	0	124	238
% App. Total	37.5	62.5	0		0	0	0		0	66.1	33.9		47.9	0	52.1	
PHF	.788	.849	.000	.878	.000	.000	.000	.000	.000	.722	.893	.799	.663	.000	.795	.726

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

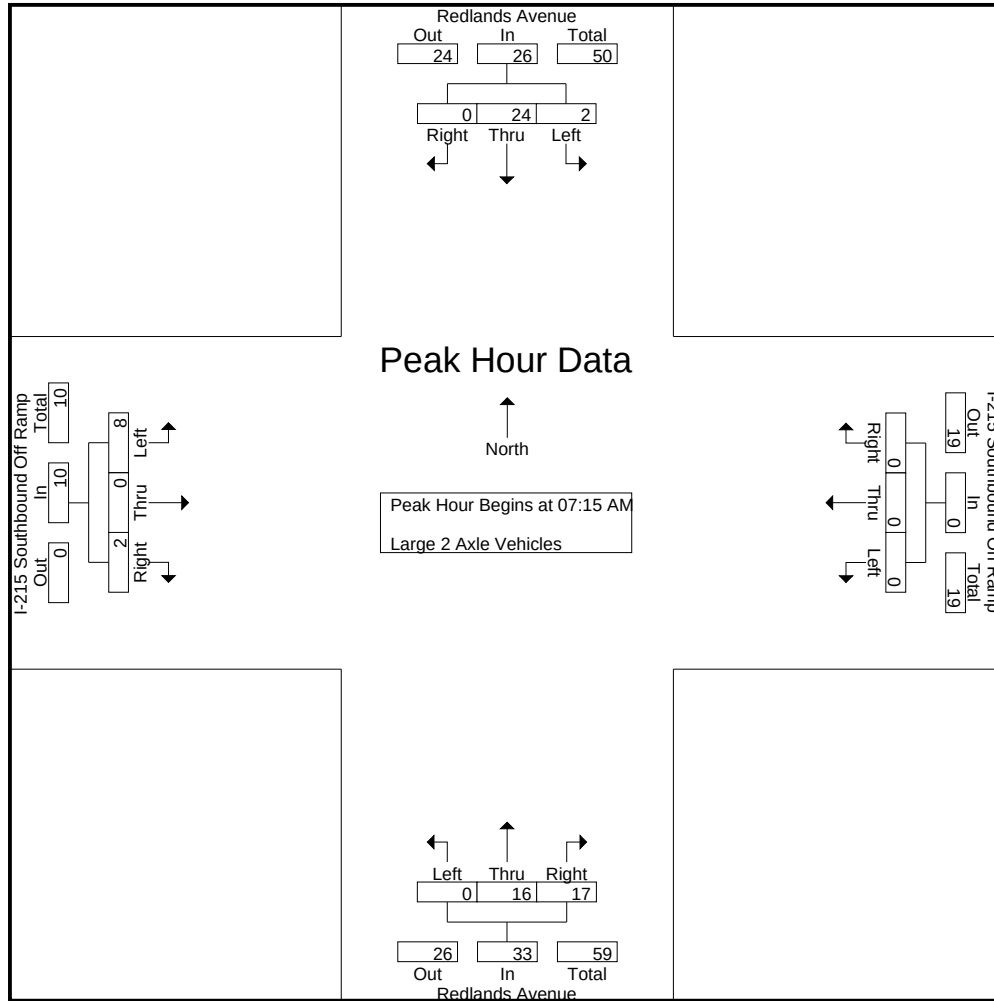
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	5	0	7	0	0	0	0	0	6	7	13	0	0	1	1	21
06:15 AM	1	5	0	6	0	0	0	0	0	4	7	11	2	0	2	4	21
06:30 AM	3	6	0	9	0	0	0	0	0	7	5	12	2	0	0	2	23
06:45 AM	2	6	0	8	0	0	0	0	0	3	3	6	0	0	0	0	14
Total	8	22	0	30	0	0	0	0	0	20	22	42	4	0	3	7	79
07:00 AM	0	6	0	6	0	0	0	0	0	4	1	5	0	0	2	2	13
07:15 AM	0	8	0	8	0	0	0	0	0	5	6	11	2	0	1	3	22
07:30 AM	0	6	0	6	0	0	0	0	0	5	5	10	1	0	1	2	18
07:45 AM	2	4	0	6	0	0	0	0	0	2	4	6	1	0	0	1	13
Total	2	24	0	26	0	0	0	0	0	16	16	32	4	0	4	8	66
08:00 AM	0	6	0	6	0	0	0	0	0	4	2	6	4	0	0	4	16
08:15 AM	5	4	0	9	0	0	0	0	0	1	7	8	0	0	2	2	19
08:30 AM	1	3	0	4	0	0	0	0	0	4	1	5	1	0	4	5	14
08:45 AM	2	4	0	6	0	0	0	0	0	1	4	5	0	0	1	1	12
Total	8	17	0	25	0	0	0	0	0	10	14	24	5	0	7	12	61
Grand Total	18	63	0	81	0	0	0	0	0	46	52	98	13	0	14	27	206
Apprch %	22.2	77.8	0		0	0	0		0	46.9	53.1		48.1	0	51.9		
Total %	8.7	30.6	0	39.3	0	0	0	0	0	22.3	25.2	47.6	6.3	0	6.8	13.1	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	8	0	8	0	0	0	0	0	5	6	11	2	0	1	3	22
07:30 AM	0	6	0	6	0	0	0	0	0	5	5	10	1	0	1	2	18
07:45 AM	2	4	0	6	0	0	0	0	0	2	4	6	1	0	0	1	13
08:00 AM	0	6	0	6	0	0	0	0	0	4	2	6	4	0	0	4	16
Total Volume	2	24	0	26	0	0	0	0	0	16	17	33	8	0	2	10	69
% App. Total	7.7	92.3	0		0	0	0		0	48.5	51.5		80	0	20		
PHF	.250	.750	.000	.813	.000	.000	.000	.000	.000	.800	.708	.750	.500	.000	.500	.625	.784

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	8	0	8	0	0	0	0	0	5	6	11	2	0	1	3
+15 mins.	0	6	0	6	0	0	0	0	0	5	5	10	1	0	1	2
+30 mins.	2	4	0	6	0	0	0	0	0	2	4	6	1	0	0	1
+45 mins.	0	6	0	6	0	0	0	0	0	4	2	6	4	0	0	4
Total Volume	2	24	0	26	0	0	0	0	0	16	17	33	8	0	2	10
% App. Total	7.7	92.3	0		0	0	0		0	48.5	51.5		80	0	20	
PHF	.250	.750	.000	.813	.000	.000	.000	.000	.000	.800	.708	.750	.500	.000	.500	.625

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

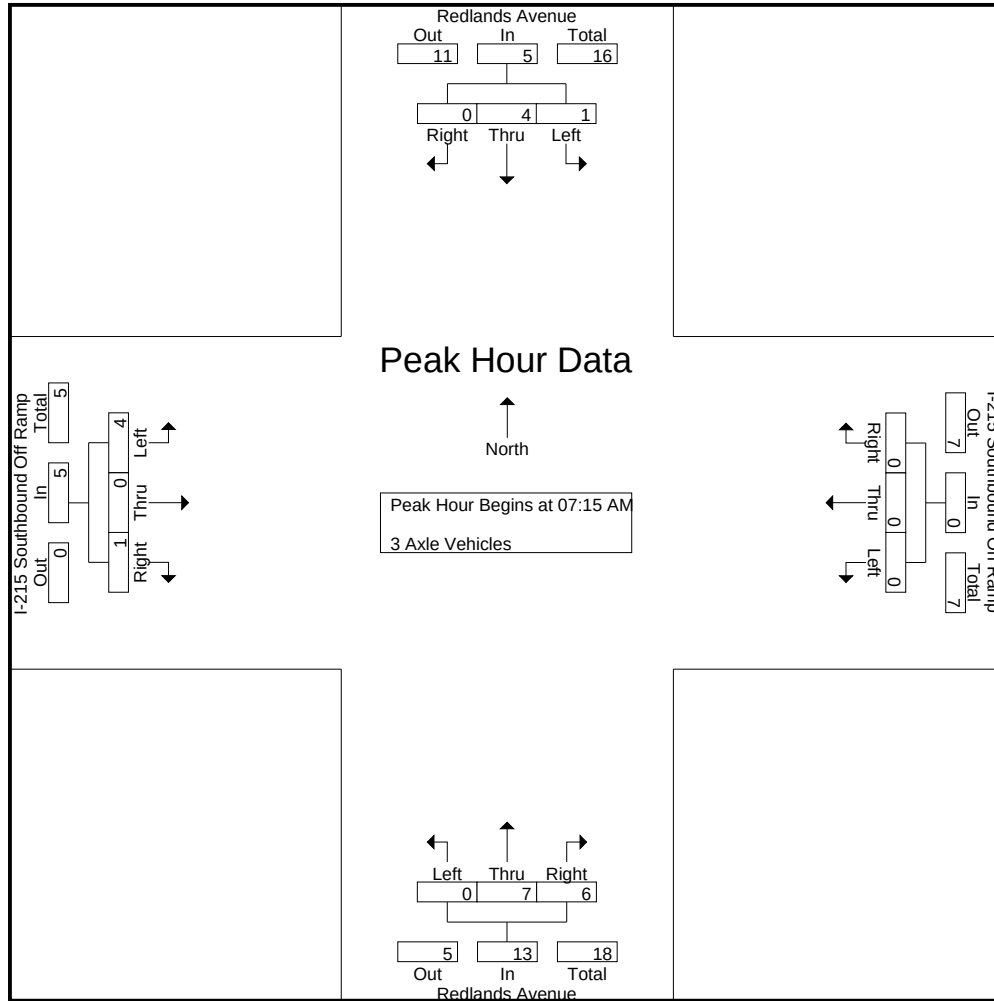
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	0	0	0	0	0	1	1	2	3	0	0	3	6
06:15 AM	0	2	0	2	0	0	0	0	0	1	4	5	0	0	1	1	8
06:30 AM	1	0	0	1	0	0	0	0	0	0	4	4	6	0	1	7	12
06:45 AM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	1	4	0	5	0	0	0	0	0	2	10	12	9	0	2	11	28
07:00 AM	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	6
07:15 AM	0	2	0	2	0	0	0	0	0	2	3	5	0	0	0	0	7
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
07:45 AM	1	0	0	1	0	0	0	0	0	1	3	4	2	0	0	2	7
Total	1	4	0	5	0	0	0	0	0	6	8	14	3	0	1	4	23
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	2	0	0	2	6
08:15 AM	0	2	0	2	0	0	0	0	0	2	3	5	3	0	1	4	11
08:30 AM	0	1	0	1	0	0	0	0	0	5	2	7	1	0	1	2	10
08:45 AM	0	5	0	5	0	0	0	0	0	1	0	1	3	0	2	5	11
Total	0	10	0	10	0	0	0	0	0	10	5	15	9	0	4	13	38
Grand Total	2	18	0	20	0	0	0	0	0	18	23	41	21	0	7	28	89
Apprch %	10	90	0		0	0	0		0	43.9	56.1		75	0	25		
Total %	2.2	20.2	0	22.5	0	0	0	0	0	20.2	25.8	46.1	23.6	0	7.9	31.5	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	2	3	5	0	0	0	0	7
07:30 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1	3
07:45 AM	1	0	0	1	0	0	0	0	0	1	3	4	2	0	0	2	7
08:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	2	0	0	2	6
Total Volume	1	4	0	5	0	0	0	0	0	7	6	13	4	0	1	5	23
% App. Total	20	80	0		0	0	0		0	53.8	46.2		80	0	20		
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.000	.875	.500	.650	.500	.000	.250	.625	.821

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	2	3	5	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	1	1
+30 mins.	1	0	0	1	0	0	0	0	0	1	3	4	2	0	0	2
+45 mins.	0	2	0	2	0	0	0	0	0	2	0	2	2	0	0	2
Total Volume	1	4	0	5	0	0	0	0	0	7	6	13	4	0	1	5
% App. Total	20	80	0		0	0	0		0	53.8	46.2		80	0	20	
PHF	.250	.500	.000	.625	.000	.000	.000	.000	.000	.875	.500	.650	.500	.000	.250	.625

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

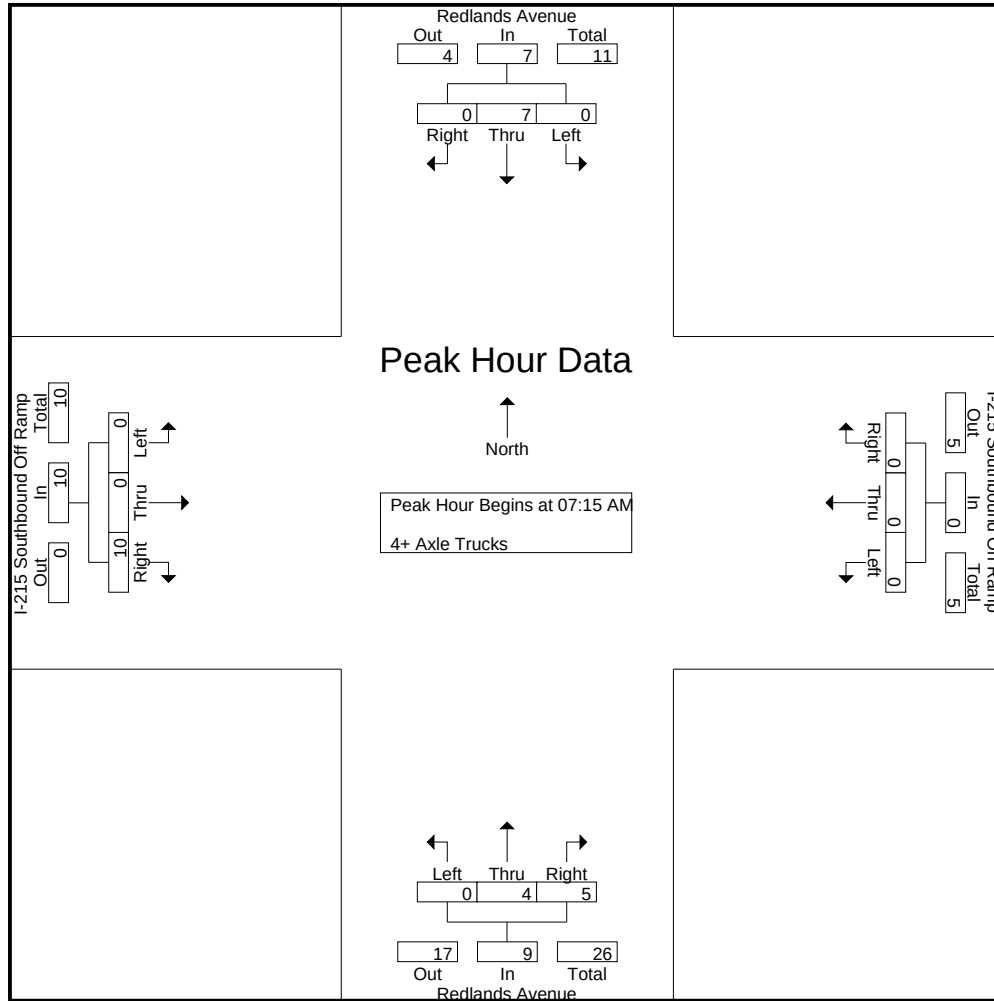
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	2	1	0	3	0	0	0	0	0	2	4	6	0	0	2	2	11
06:15 AM	0	2	0	2	0	0	0	0	0	2	8	10	0	0	2	2	14
06:30 AM	0	2	0	2	0	0	0	0	0	2	3	5	0	0	3	3	10
06:45 AM	0	3	0	3	0	0	0	0	0	3	3	6	1	0	2	3	12
Total	2	8	0	10	0	0	0	0	0	9	18	27	1	0	9	10	47
07:00 AM	1	1	0	2	0	0	0	0	0	1	3	4	0	0	0	0	6
07:15 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	3	3	8
07:30 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	2	2	7
07:45 AM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	2	2	5
Total	1	6	0	7	0	0	0	0	0	4	8	12	0	0	7	7	26
08:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	3	3	6
08:15 AM	1	1	0	2	0	0	0	0	0	4	3	7	0	0	2	2	11
08:30 AM	0	1	0	1	0	0	0	0	0	3	3	6	0	0	3	3	10
08:45 AM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	3	3	6
Total	1	4	0	5	0	0	0	0	0	10	7	17	0	0	11	11	33
Grand Total	4	18	0	22	0	0	0	0	0	23	33	56	1	0	27	28	106
Apprch %	18.2	81.8	0		0	0	0		0	41.1	58.9		3.6	0	96.4		
Total %	3.8	17	0	20.8	0	0	0	0	0	21.7	31.1	52.8	0.9	0	25.5	26.4	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	3	3	8
07:30 AM	0	2	0	2	0	0	0	0	0	1	2	3	0	0	2	2	7
07:45 AM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	2	2	5
08:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	3	3	6
Total Volume	0	7	0	7	0	0	0	0	0	4	5	9	0	0	10	10	26
% App. Total	0	100	0		0	0	0		0	44.4	55.6		0	0	100		
PHF	.000	.875	.000	.875	.000	.000	.000	.000	.000	1.00	.625	.750	.000	.000	.833	.833	.813

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	0	0	0	0	1	2	3	0	0	3	3
+15 mins.	0	2	0	2	0	0	0	0	0	1	2	3	0	0	2	2
+30 mins.	0	1	0	1	0	0	0	0	0	1	1	2	0	0	2	2
+45 mins.	0	2	0	2	0	0	0	0	0	1	0	1	0	0	3	3
Total Volume	0	7	0	7	0	0	0	0	0	4	5	9	0	0	10	10
% App. Total	0	100	0		0	0	0		0	44.4	55.6		0	0	100	
PHF	.000	.875	.000	.875	.000	.000	.000	.000	.000	1.000	.625	.750	.000	.000	.833	.833

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

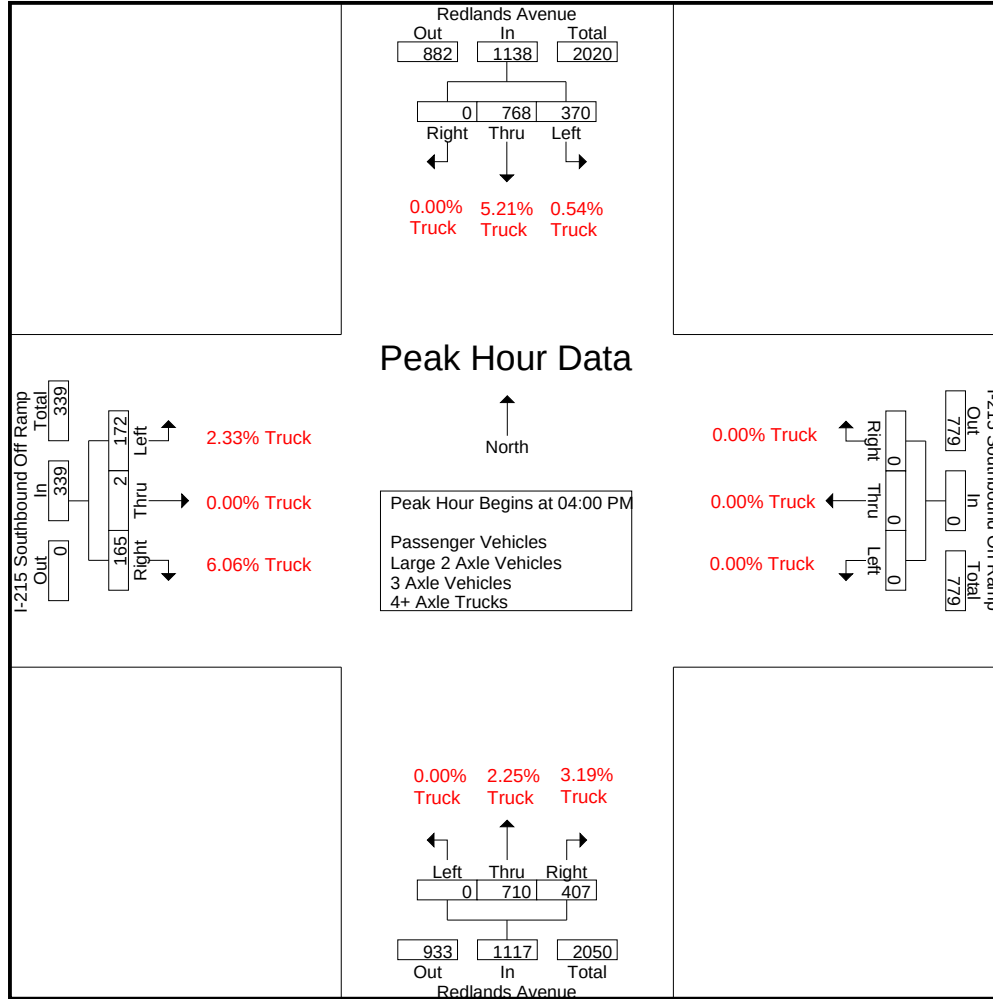
	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	102	176	0	278	0	0	0	0	0	183	118	301	30	0	45	75	654
03:15 PM	93	179	0	272	0	0	0	0	0	134	95	229	27	1	41	69	570
03:30 PM	90	182	0	272	0	0	0	0	0	162	71	233	44	1	38	83	588
03:45 PM	94	201	0	295	0	0	0	0	0	163	79	242	32	0	28	60	597
Total	379	738	0	1117	0	0	0	0	0	642	363	1005	133	2	152	287	2409
04:00 PM	92	199	0	291	0	0	0	0	0	171	88	259	52	0	38	90	640
04:15 PM	89	170	0	259	0	0	0	0	0	207	105	312	45	1	46	92	663
04:30 PM	92	209	0	301	0	0	0	0	0	180	113	293	33	0	38	71	665
04:45 PM	97	190	0	287	0	0	0	0	0	152	101	253	42	1	43	86	626
Total	370	768	0	1138	0	0	0	0	0	710	407	1117	172	2	165	339	2594
05:00 PM	89	176	0	265	0	0	0	0	0	172	94	266	39	2	49	90	621
05:15 PM	88	169	0	257	0	0	0	0	0	153	90	243	32	0	35	67	567
05:30 PM	110	162	0	272	0	0	0	0	0	156	111	267	52	0	40	92	631
05:45 PM	76	144	0	220	0	0	0	0	0	113	87	200	51	0	44	95	515
Total	363	651	0	1014	0	0	0	0	0	594	382	976	174	2	168	344	2334
06:00 PM	83	135	0	218	0	0	0	0	0	124	105	229	44	1	40	85	532
06:15 PM	73	150	0	223	0	0	0	0	0	135	95	230	49	0	43	92	545
06:30 PM	68	130	0	198	0	0	0	0	0	136	67	203	28	0	30	58	459
06:45 PM	45	143	0	188	0	0	0	0	0	109	77	186	36	1	34	71	445
Total	269	558	0	827	0	0	0	0	0	504	344	848	157	2	147	306	1981
Grand Total	1381	2715	0	4096	0	0	0	0	0	2450	1496	3946	636	8	632	1276	9318
Apprch %	33.7	66.3	0		0	0	0		0	62.1	37.9		49.8	0.6	49.5		
Total %	14.8	29.1	0	44	0	0	0	0	0	26.3	16.1	42.3	6.8	0.1	6.8	13.7	
Passenger Vehicles	1372	2591	0	3963	0	0	0	0	0	2391	1454	3845	616	7	601	1224	9032
% Passenger Vehicles	99.3	95.4	0	96.8	0	0	0	0	0	97.6	97.2	97.4	96.9	87.5	95.1	95.9	96.9
Large 2 Axle Vehicles	5	73	0	78	0	0	0	0	0	31	33	64	15	1	9	25	167
% Large 2 Axle Vehicles	0.4	2.7	0	1.9	0	0	0	0	0	1.3	2.2	1.6	2.4	12.5	1.4	2	1.8
3 Axle Vehicles	0	39	0	39	0	0	0	0	0	19	7	26	3	0	7	10	75
% 3 Axle Vehicles	0	1.4	0	1	0	0	0	0	0	0.8	0.5	0.7	0.5	0	1.1	0.8	0.8
4+ Axle Trucks	4	12	0	16	0	0	0	0	0	9	2	11	2	0	15	17	44
% 4+ Axle Trucks	0.3	0.4	0	0.4	0	0	0	0	0	0.4	0.1	0.3	0.3	0	2.4	1.3	0.5

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	92	199	0	291	0	0	0	0	0	171	88	259	52	0	38	90	640
04:15 PM	89	170	0	259	0	0	0	0	0	207	105	312	45	1	46	92	663
04:30 PM	92	209	0	301	0	0	0	0	0	180	113	293	33	0	38	71	665
04:45 PM	97	190	0	287	0	0	0	0	0	152	101	253	42	1	43	86	626
Total Volume	370	768	0	1138	0	0	0	0	0	710	407	1117	172	2	165	339	2594
% App. Total	32.5	67.5	0		0	0	0		0	63.6	36.4		50.7	0.6	48.7		
PHF	.954	.919	.000	.945	.000	.000	.000	.000	.000	.857	.900	.895	.827	.500	.897	.921	.975

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
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3.07% Truck



4.13% Truck

1.93% Truck

3.85% Truck

Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:00 PM				04:15 PM				05:30 PM			
+0 mins.	94	201	0	295	0	0	0	0	0	207	105	312	52	0	40	92
+15 mins.	92	199	0	291	0	0	0	0	0	180	113	293	51	0	44	95
+30 mins.	89	170	0	259	0	0	0	0	0	152	101	253	44	1	40	85
+45 mins.	92	209	0	301	0	0	0	0	0	172	94	266	49	0	43	92
Total Volume	367	779	0	1146	0	0	0	0	0	711	413	1124	196	1	167	364
% App. Total	32	68	0		0	0	0		0	63.3	36.7		53.8	0.3	45.9	
PHF	.976	.932	.000	.952	.000	.000	.000	.000	.000	.859	.914	.901	.942	.250	.949	.958

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

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
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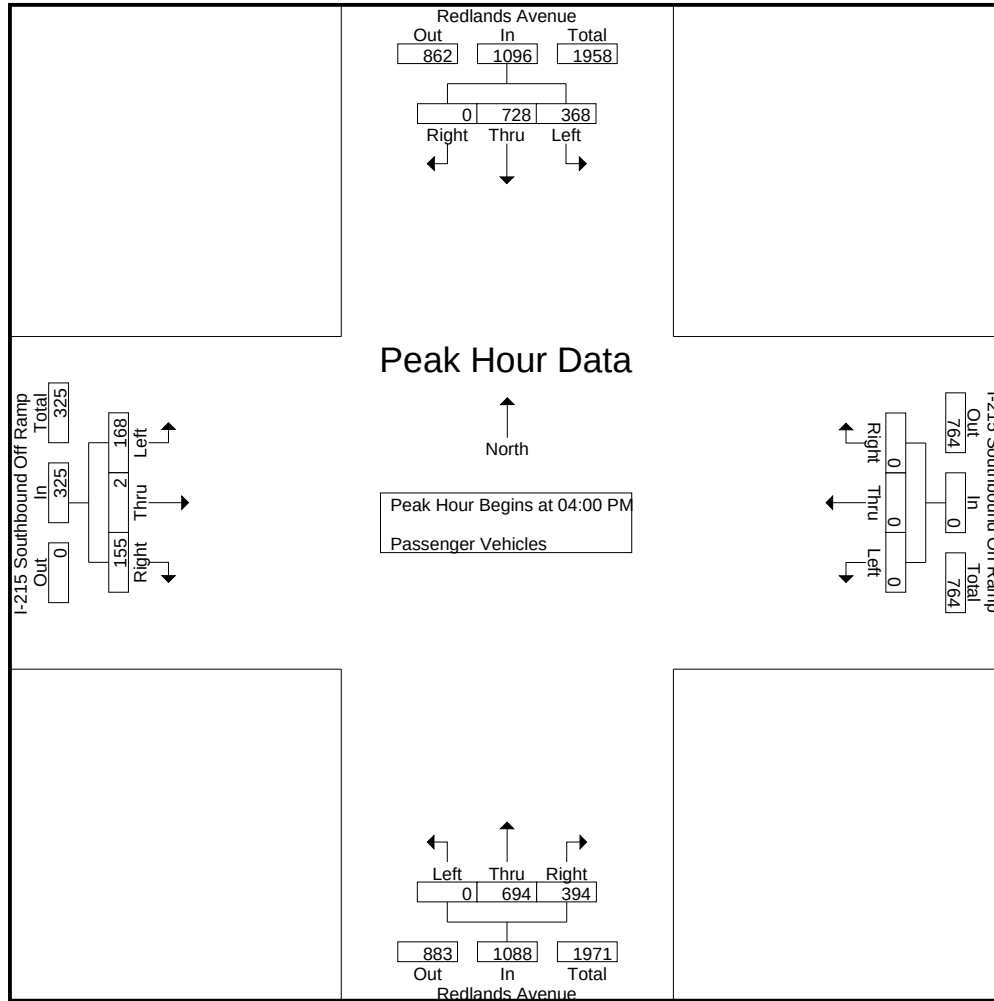
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	100	163	0	263	0	0	0	0	0	177	110	287	28	0	44	72	622
03:15 PM	91	173	0	264	0	0	0	0	0	128	88	216	25	1	40	66	546
03:30 PM	89	168	0	257	0	0	0	0	0	158	69	227	42	1	31	74	558
03:45 PM	93	189	0	282	0	0	0	0	0	153	77	230	31	0	27	58	570
Total	373	693	0	1066	0	0	0	0	0	616	344	960	126	2	142	270	2296
04:00 PM	91	185	0	276	0	0	0	0	0	168	85	253	52	0	36	88	617
04:15 PM	89	159	0	248	0	0	0	0	0	200	101	301	43	1	42	86	635
04:30 PM	91	201	0	292	0	0	0	0	0	177	111	288	32	0	36	68	648
04:45 PM	97	183	0	280	0	0	0	0	0	149	97	246	41	1	41	83	609
Total	368	728	0	1096	0	0	0	0	0	694	394	1088	168	2	155	325	2509
05:00 PM	89	168	0	257	0	0	0	0	0	171	93	264	39	1	47	87	608
05:15 PM	88	165	0	253	0	0	0	0	0	152	90	242	30	0	35	65	560
05:30 PM	110	155	0	265	0	0	0	0	0	151	110	261	51	0	40	91	617
05:45 PM	75	140	0	215	0	0	0	0	0	113	87	200	49	0	43	92	507
Total	362	628	0	990	0	0	0	0	0	587	380	967	169	1	165	335	2292
06:00 PM	83	133	0	216	0	0	0	0	0	123	103	226	42	1	38	81	523
06:15 PM	73	146	0	219	0	0	0	0	0	131	93	224	47	0	39	86	529
06:30 PM	68	126	0	194	0	0	0	0	0	134	67	201	28	0	29	57	452
06:45 PM	45	137	0	182	0	0	0	0	0	106	73	179	36	1	33	70	431
Total	269	542	0	811	0	0	0	0	0	494	336	830	153	2	139	294	1935
Grand Total	1372	2591	0	3963	0	0	0	0	0	2391	1454	3845	616	7	601	1224	9032
Apprch %	34.6	65.4	0		0	0	0		0	62.2	37.8		50.3	0.6	49.1		
Total %	15.2	28.7	0	43.9	0	0	0	0	0	26.5	16.1	42.6	6.8	0.1	6.7	13.6	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	91	185	0	276	0	0	0	0	0	168	85	253	52	0	36	88	617
04:15 PM	89	159	0	248	0	0	0	0	0	200	101	301	43	1	42	86	635
04:30 PM	91	201	0	292	0	0	0	0	0	177	111	288	32	0	36	68	648
04:45 PM	97	183	0	280	0	0	0	0	0	149	97	246	41	1	41	83	609
Total Volume	368	728	0	1096	0	0	0	0	0	694	394	1088	168	2	155	325	2509
% App. Total	33.6	66.4	0		0	0	0		0	63.8	36.2		51.7	0.6	47.7		
PHF	.948	.905	.000	.938	.000	.000	.000	.000	.000	.868	.887	.904	.808	.500	.923	.923	.968

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	91	185	0	276	0	0	0	0	0	168	85	253	52	0	36	88
+15 mins.	89	159	0	248	0	0	0	0	0	200	101	301	43	1	42	86
+30 mins.	91	201	0	292	0	0	0	0	0	177	111	288	32	0	36	68
+45 mins.	97	183	0	280	0	0	0	0	0	149	97	246	41	1	41	83
Total Volume	368	728	0	1096	0	0	0	0	0	694	394	1088	168	2	155	325
% App. Total	33.6	66.4	0		0	0	0		0	63.8	36.2		51.7	0.6	47.7	
PHF	.948	.905	.000	.938	.000	.000	.000	.000	.000	.868	.887	.904	.808	.500	.923	.923

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

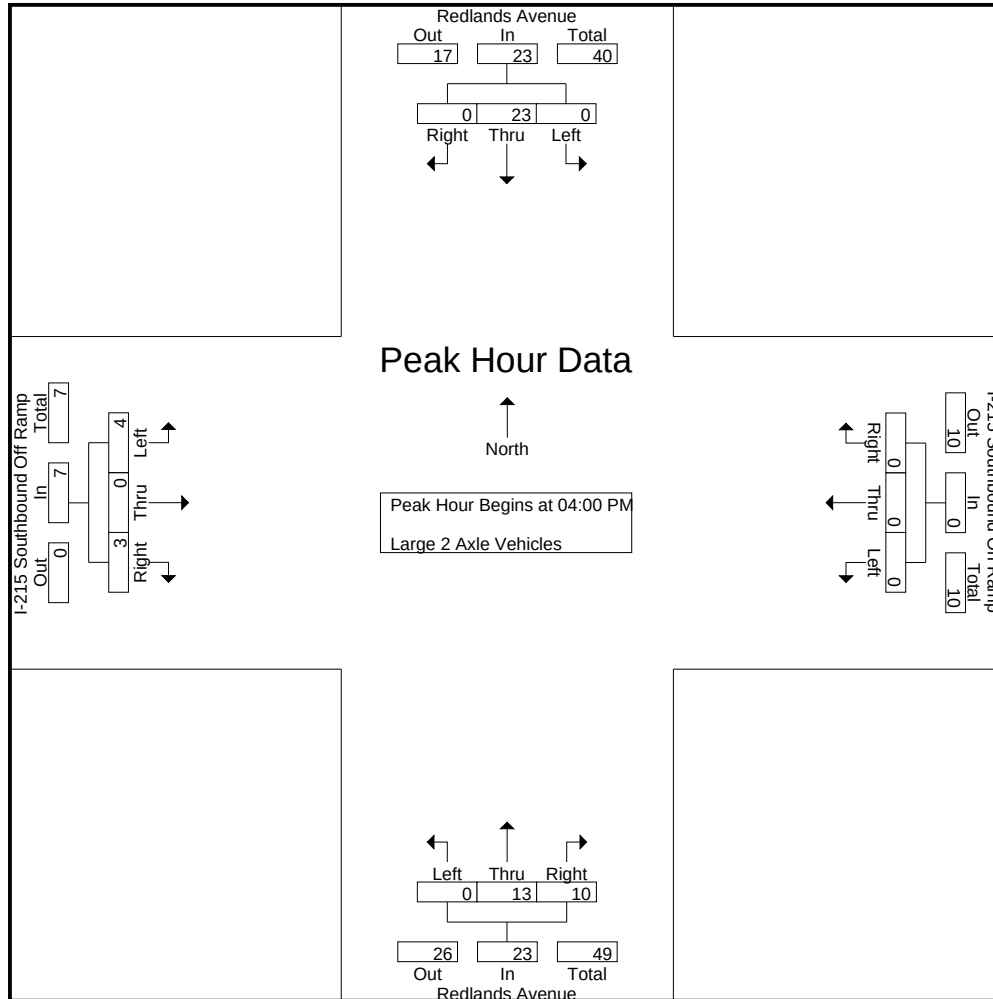
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				Int. Total
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
03:00 PM	2	5	0	7	0	0	0	0	0	3	7	10	1	0	1	2	19
03:15 PM	2	2	0	4	0	0	0	0	0	2	5	7	2	0	1	3	14
03:30 PM	0	9	0	9	0	0	0	0	0	1	1	2	1	0	3	4	15
03:45 PM	0	7	0	7	0	0	0	0	0	3	1	4	1	0	0	1	12
Total	4	23	0	27	0	0	0	0	0	9	14	23	5	0	5	10	60
04:00 PM	0	8	0	8	0	0	0	0	0	2	1	3	0	0	0	0	11
04:15 PM	0	5	0	5	0	0	0	0	0	7	4	11	2	0	1	3	19
04:30 PM	0	3	0	3	0	0	0	0	0	2	2	4	1	0	1	2	9
04:45 PM	0	7	0	7	0	0	0	0	0	2	3	5	1	0	1	2	14
Total	0	23	0	23	0	0	0	0	0	13	10	23	4	0	3	7	53
05:00 PM	0	6	0	6	0	0	0	0	0	0	1	1	0	1	1	2	9
05:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
05:30 PM	0	6	0	6	0	0	0	0	0	2	1	3	1	0	0	1	10
05:45 PM	1	2	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5
Total	1	17	0	18	0	0	0	0	0	3	2	5	3	1	1	5	28
06:00 PM	0	1	0	1	0	0	0	0	0	1	2	3	1	0	0	1	5
06:15 PM	0	3	0	3	0	0	0	0	0	1	1	2	2	0	0	2	7
06:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
06:45 PM	0	4	0	4	0	0	0	0	0	2	4	6	0	0	0	0	10
Total	0	10	0	10	0	0	0	0	0	6	7	13	3	0	0	3	26
Grand Total	5	73	0	78	0	0	0	0	0	31	33	64	15	1	9	25	167
Apprch %	6.4	93.6	0		0	0	0		0	48.4	51.6		60	4	36		
Total %	3	43.7	0	46.7	0	0	0	0	0	18.6	19.8	38.3	9	0.6	5.4	15	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	8	0	8	0	0	0	0	0	2	1	3	0	0	0	0	11
04:15 PM	0	5	0	5	0	0	0	0	0	7	4	11	2	0	1	3	19
04:30 PM	0	3	0	3	0	0	0	0	0	2	2	4	1	0	1	2	9
04:45 PM	0	7	0	7	0	0	0	0	0	2	3	5	1	0	1	2	14
Total Volume	0	23	0	23	0	0	0	0	0	13	10	23	4	0	3	7	53
% App. Total	0	100	0		0	0	0		0	56.5	43.5		57.1	0	42.9		
PHF	.000	.719	.000	.719	.000	.000	.000	.000	.000	.464	.625	.523	.500	.000	.750	.583	.697

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	8	0	8	0	0	0	0	0	2	1	3	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	7	4	11	2	0	1	3
+30 mins.	0	3	0	3	0	0	0	0	0	2	2	4	1	0	1	2
+45 mins.	0	7	0	7	0	0	0	0	0	2	3	5	1	0	1	2
Total Volume	0	23	0	23	0	0	0	0	0	13	10	23	4	0	3	7
% App. Total	0	100	0		0	0	0		0	56.5	43.5		57.1	0	42.9	
PHF	.000	.719	.000	.719	.000	.000	.000	.000	.000	.464	.625	.523	.500	.000	.750	.583

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

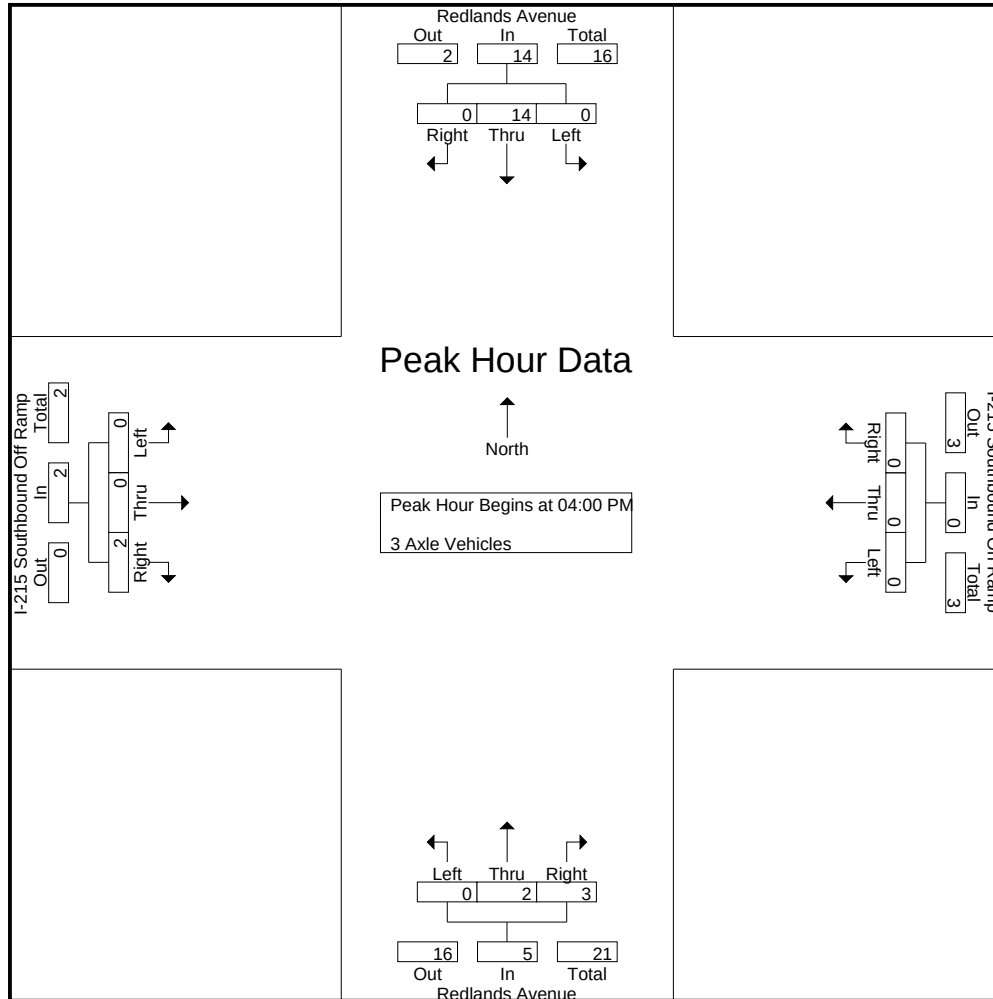
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
03:15 PM	0	2	0	2	0	0	0	0	0	2	2	4	0	0	0	0	6
03:30 PM	0	4	0	4	0	0	0	0	0	3	1	4	1	0	1	2	10
03:45 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	1	1	9
Total	0	15	0	15	0	0	0	0	0	11	3	14	1	0	2	3	32
04:00 PM	0	4	0	4	0	0	0	0	0	0	2	2	0	0	0	0	6
04:15 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1	1	6
04:30 PM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	1	1	7
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total	0	14	0	14	0	0	0	0	0	2	3	5	0	0	2	2	21
05:00 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:30 PM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	5	0	5	0	0	0	0	0	4	0	4	2	0	0	2	11
06:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	2	2	5
06:30 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
06:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	1	1	3
Total	0	5	0	5	0	0	0	0	0	2	1	3	0	0	3	3	11
Grand Total	0	39	0	39	0	0	0	0	0	19	7	26	3	0	7	10	75
Apprch %	0	100	0		0	0	0		0	73.1	26.9		30	0	70		
Total %	0	52	0	52	0	0	0	0	0	25.3	9.3	34.7	4	0	9.3	13.3	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	4	0	4	0	0	0	0	0	0	2	2	0	0	0	0	6
04:15 PM	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1	1	6
04:30 PM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	1	1	7
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total Volume	0	14	0	14	0	0	0	0	0	2	3	5	0	0	2	2	21
% App. Total	0	100	0		0	0	0		0	40	60		0	0	100		
PHF	.000	.700	.000	.700	.000	.000	.000	.000	.000	.500	.375	.625	.000	.000	.500	.500	.750

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	4	0	4	0	0	0	0	0	0	2	2	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	5	0	5	0	0	0	0	0	1	0	1	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0
Total Volume	0	14	0	14	0	0	0	0	0	2	3	5	0	0	2	2
% App. Total	0	100	0		0	0	0		0	40	60		0	0	100	
PHF	.000	.700	.000	.700	.000	.000	.000	.000	.000	.500	.375	.625	.000	.000	.500	.500

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

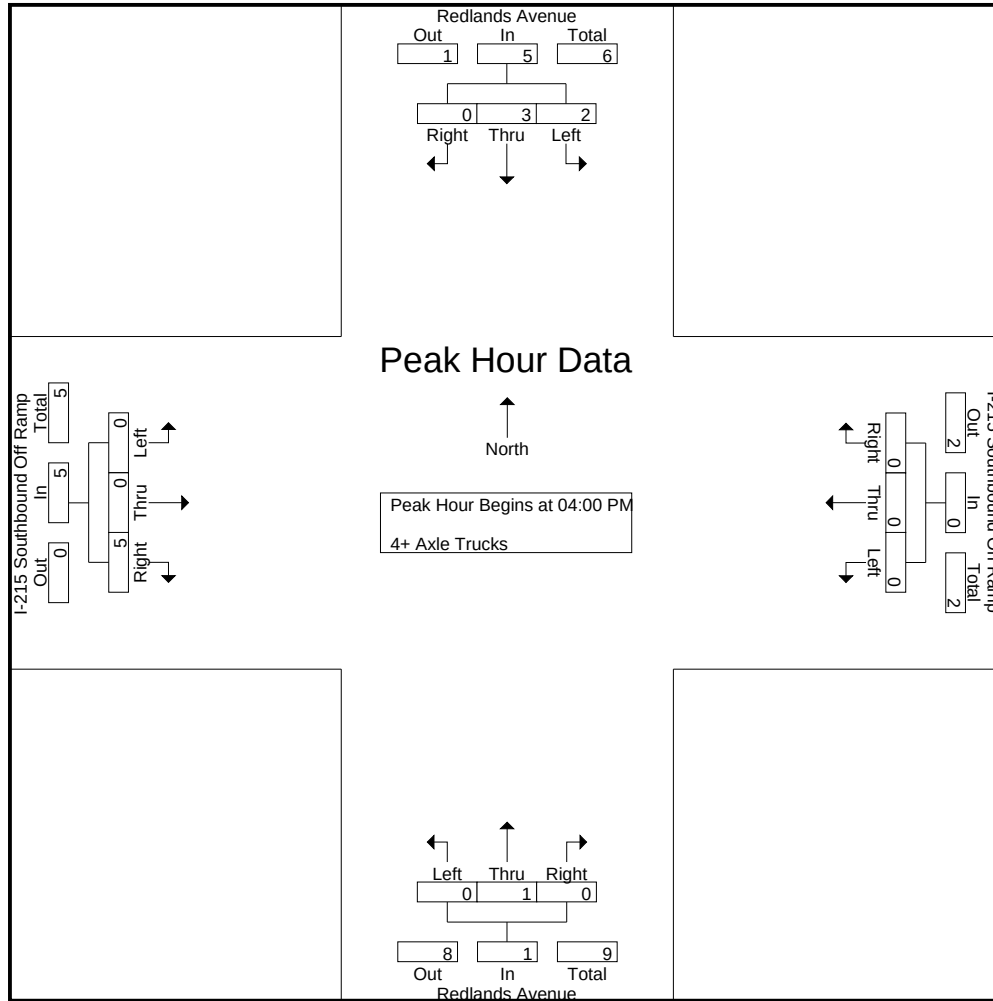
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	0	3	0	0	0	0	0	1	1	2	1	0	0	1	6
03:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
03:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	3	3	5
03:45 PM	1	1	0	2	0	0	0	0	0	3	1	4	0	0	0	0	6
Total	2	7	0	9	0	0	0	0	0	6	2	8	1	0	3	4	21
04:00 PM	1	2	0	3	0	0	0	0	0	1	0	1	0	0	2	2	6
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
04:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	2	3	0	5	0	0	0	0	0	1	0	1	0	0	5	5	11
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3	3
06:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	2	4
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
06:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	2	0	2	1	0	5	6	9
Grand Total	4	12	0	16	0	0	0	0	0	9	2	11	2	0	15	17	44
Apprch %	25	75	0		0	0	0		0	81.8	18.2		11.8	0	88.2		
Total %	9.1	27.3	0	36.4	0	0	0	0	0	20.5	4.5	25	4.5	0	34.1	38.6	

	Redlands Avenue Southbound				I-215 Southbound On Ramp Westbound				Redlands Avenue Northbound				I-215 Southbound Off Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	1	2	0	3	0	0	0	0	0	1	0	1	0	0	2	2	6
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2	3
04:30 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	2	3	0	5	0	0	0	0	0	1	0	1	0	0	5	5	11
% App. Total	40	60	0		0	0	0		0	100	0		0	0	100		
PHF	.500	.375	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.625	.625	.458

City of Perris
N/S: Redlands Avenue
E/W: I-215 Southbound Ramps
Weather: Clear

File Name : 02_PER_Red_215S PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	1	2	0	3	0	0	0	0	0	1	0	1	0	0	2	2
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	2
+30 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	2	3	0	5	0	0	0	0	0	1	0	1	0	0	5	5
% App. Total	40	60	0		0	0	0		0	100	0		0	0	100	
PHF	.500	.375	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.625	.625

Location: Perris
 N/S: Redlands Avenue
 E/W: I-215 SB Ramps



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Redlands Avenue	East Leg I-215 SB Ramps	South Leg Redlands Avenue	West Leg I-215 SB Ramps	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	6:00 AM	0	0	0	0	0
	6:15 AM	0	0	0	0	0
	6:30 AM	0	0	0	0	0
	6:45 AM	0	0	0	2	2
	7:00 AM	0	0	0	0	0
	7:15 AM	0	0	0	4	4
	7:30 AM	0	0	0	2	2
	7:45 AM	0	0	0	1	1
	8:00 AM	0	0	0	3	3
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	4	4
	8:45 AM	0	0	0	0	0
	TOTAL VOLUMES:	0	0	0	16	16

		North Leg Redlands Avenue	East Leg I-215 SB Ramps	South Leg Redlands Avenue	West Leg I-215 SB Ramps	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	3:00 PM	0	0	0	0	0
	3:15 PM	0	0	0	1	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	1	1
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	2	2
	4:30 PM	0	0	0	1	1
	4:45 PM	0	0	0	3	3
	5:00 PM	0	0	0	3	3
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	6:00 PM	0	0	0	0	0
	6:15 PM	0	0	0	0	0
	6:30 PM	0	0	0	0	0
	6:45 PM	0	0	0	0	0
	TOTAL VOLUMES:	0	0	0	11	11

Location: Perris
N/S: Redlands Avenue
E/W: I-215 SB Ramps



Date: 6/8/2023
Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound I-215 SB Ramps			Northbound Redlands Avenue			Eastbound I-215 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Redlands Avenue			Westbound I-215 SB Ramps			Northbound Redlands Avenue			Eastbound I-215 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	1	0	0	0	0	3

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	140	51	191	72	0	26	98	32	55	0	87	0	0	0	0	376
06:15 AM	0	144	51	195	46	0	46	92	31	45	0	76	0	0	0	0	363
06:30 AM	0	167	36	203	72	2	77	151	21	72	0	93	0	0	0	0	447
06:45 AM	0	154	34	188	98	0	72	170	13	56	0	69	0	0	0	0	427
Total	0	605	172	777	288	2	221	511	97	228	0	325	0	0	0	0	1613
07:00 AM	0	173	29	202	73	2	70	145	22	92	0	114	0	0	0	0	461
07:15 AM	0	209	30	239	83	0	84	167	30	101	0	131	0	0	0	0	537
07:30 AM	0	257	44	301	100	0	60	160	28	140	0	168	0	0	0	0	629
07:45 AM	0	257	32	289	99	0	85	184	29	212	0	241	0	0	0	0	714
Total	0	896	135	1031	355	2	299	656	109	545	0	654	0	0	0	0	2341
08:00 AM	0	209	38	247	86	0	65	151	25	110	0	135	0	0	0	0	533
08:15 AM	0	172	48	220	90	2	38	130	26	87	0	113	0	0	0	0	463
08:30 AM	0	193	39	232	52	0	48	100	40	80	0	120	0	0	0	0	452
08:45 AM	0	153	22	175	68	1	42	111	25	85	0	110	0	0	0	0	396
Total	0	727	147	874	296	3	193	492	116	362	0	478	0	0	0	0	1844
Grand Total	0	2228	454	2682	939	7	713	1659	322	1135	0	1457	0	0	0	0	5798
Apprch %	0	83.1	16.9		56.6	0.4	43		22.1	77.9	0		0	0	0		
Total %	0	38.4	7.8	46.3	16.2	0.1	12.3	28.6	5.6	19.6	0	25.1	0	0	0	0	
Passenger Vehicles	0	2168	425	2593	861	7	677	1545	265	1057	0	1322	0	0	0	0	5460
% Passenger Vehicles	0	97.3	93.6	96.7	91.7	100	95	93.1	82.3	93.1	0	90.7	0	0	0	0	94.2
Large 2 Axle Vehicles	0	48	12	60	46	0	22	68	24	42	0	66	0	0	0	0	194
% Large 2 Axle Vehicles	0	2.2	2.6	2.2	4.9	0	3.1	4.1	7.5	3.7	0	4.5	0	0	0	0	3.3
3 Axle Vehicles	0	9	13	22	12	0	3	15	9	30	0	39	0	0	0	0	76
% 3 Axle Vehicles	0	0.4	2.9	0.8	1.3	0	0.4	0.9	2.8	2.6	0	2.7	0	0	0	0	1.3
4+ Axle Trucks	0	3	4	7	20	0	11	31	24	6	0	30	0	0	0	0	68
% 4+ Axle Trucks	0	0.1	0.9	0.3	2.1	0	1.5	1.9	7.5	0.5	0	2.1	0	0	0	0	1.2

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	209	30	239	83	0	84	167	30	101	0	131	0	0	0	0	537
07:30 AM	0	257	44	301	100	0	60	160	28	140	0	168	0	0	0	0	629
07:45 AM	0	257	32	289	99	0	85	184	29	212	0	241	0	0	0	0	714
08:00 AM	0	209	38	247	86	0	65	151	25	110	0	135	0	0	0	0	533
Total Volume	0	932	144	1076	368	0	294	662	112	563	0	675	0	0	0	0	2413
% App. Total	0	86.6	13.4		55.6	0	44.4		16.6	83.4	0		0	0	0		
PHF	.000	.907	.818	.894	.920	.000	.865	.899	.933	.664	.000	.700	.000	.000	.000	.000	.845

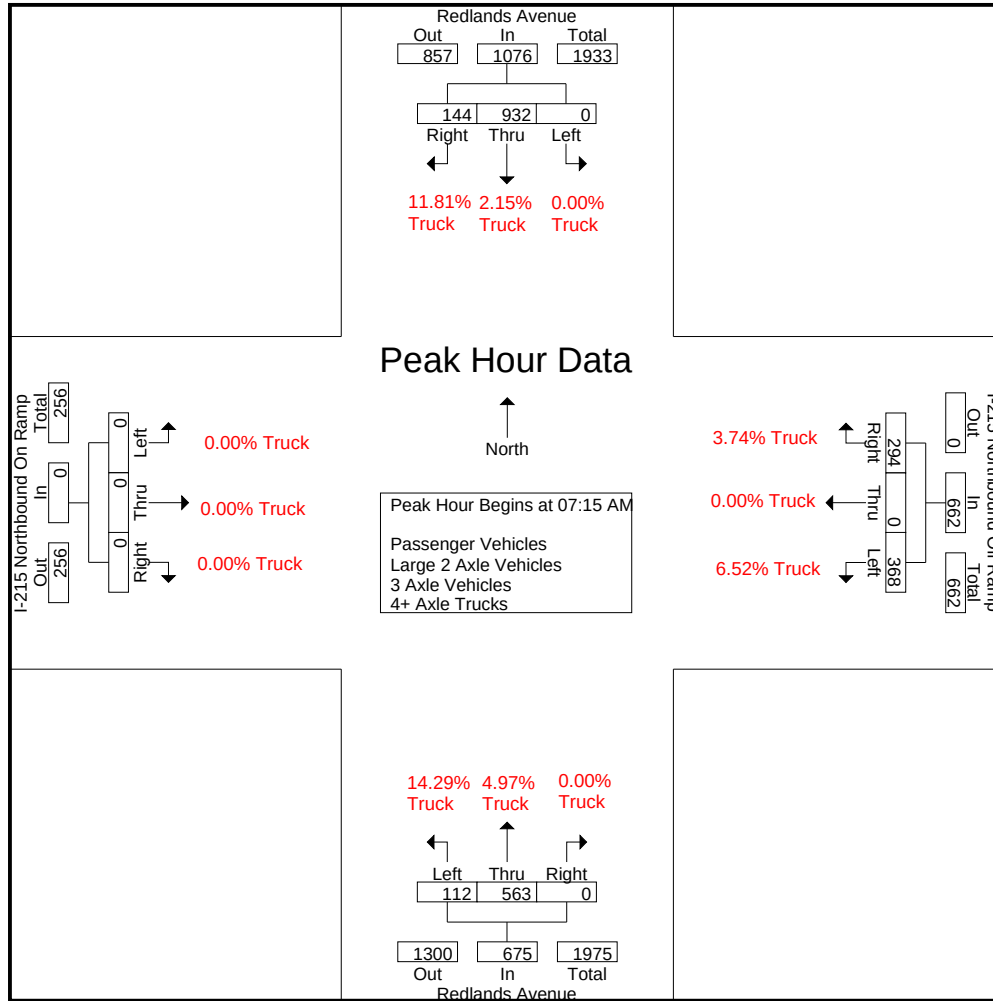
City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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3.93% Truck

12.89% Truck

5.29% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 4.46% Truck

	07:15 AM				07:15 AM				07:15 AM				06:00 AM			
+0 mins.	0	209	30	239	83	0	84	167	30	101	0	131	0	0	0	0
+15 mins.	0	257	44	301	100	0	60	160	28	140	0	168	0	0	0	0
+30 mins.	0	257	32	289	99	0	85	184	29	212	0	241	0	0	0	0
+45 mins.	0	209	38	247	86	0	65	151	25	110	0	135	0	0	0	0
Total Volume	0	932	144	1076	368	0	294	662	112	563	0	675	0	0	0	0
% App. Total	0	86.6	13.4		55.6	0	44.4		16.6	83.4	0		0	0	0	
PHF	.000	.907	.818	.894	.920	.000	.865	.899	.933	.664	.000	.700	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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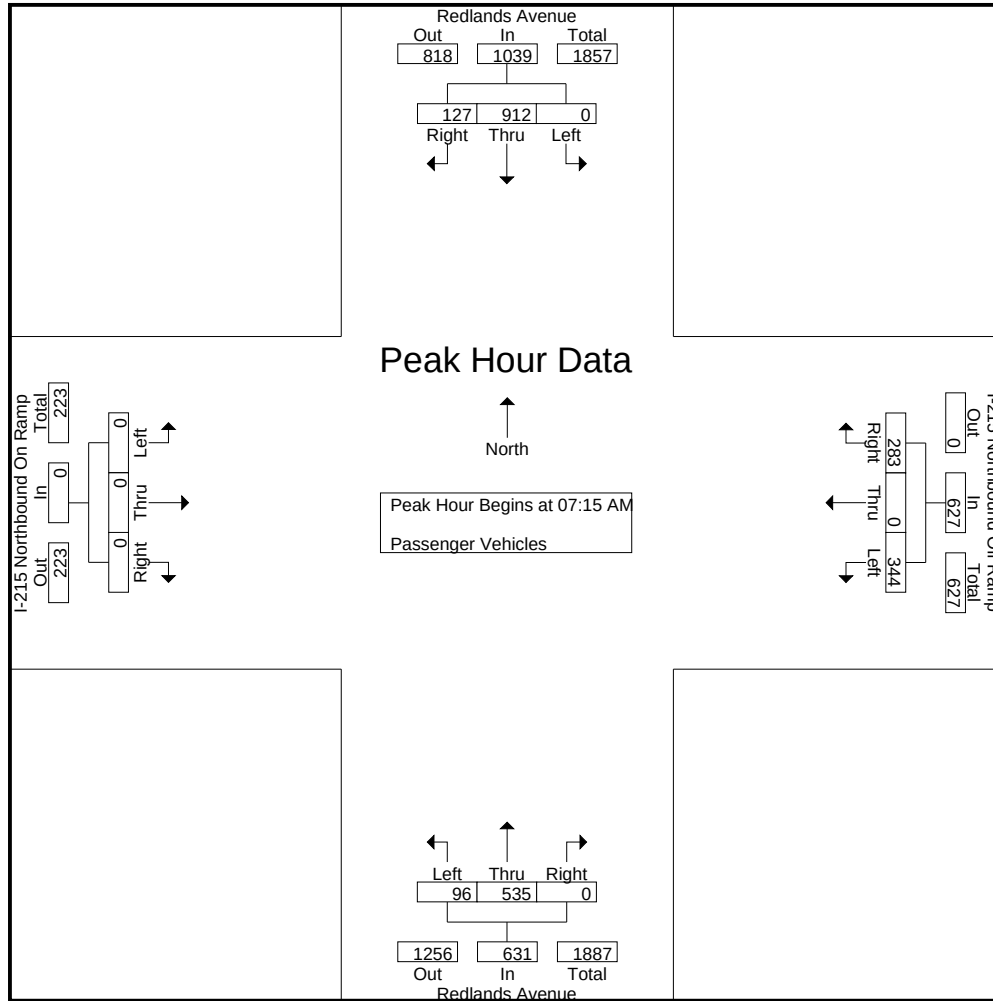
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	135	48	183	66	0	21	87	25	50	0	75	0	0	0	0	345
06:15 AM	0	139	50	189	42	0	44	86	25	43	0	68	0	0	0	0	343
06:30 AM	0	158	34	192	64	2	71	137	15	60	0	75	0	0	0	0	404
06:45 AM	0	151	32	183	88	0	67	155	10	50	0	60	0	0	0	0	398
Total	0	583	164	747	260	2	203	465	75	203	0	278	0	0	0	0	1490
07:00 AM	0	170	28	198	65	2	69	136	20	86	0	106	0	0	0	0	440
07:15 AM	0	200	29	229	77	0	80	157	24	97	0	121	0	0	0	0	507
07:30 AM	0	254	39	293	95	0	59	154	25	133	0	158	0	0	0	0	605
07:45 AM	0	251	27	278	96	0	81	177	26	205	0	231	0	0	0	0	686
Total	0	875	123	998	333	2	289	624	95	521	0	616	0	0	0	0	2238
08:00 AM	0	207	32	239	76	0	63	139	21	100	0	121	0	0	0	0	499
08:15 AM	0	166	47	213	82	2	38	122	22	81	0	103	0	0	0	0	438
08:30 AM	0	189	38	227	50	0	47	97	30	74	0	104	0	0	0	0	428
08:45 AM	0	148	21	169	60	1	37	98	22	78	0	100	0	0	0	0	367
Total	0	710	138	848	268	3	185	456	95	333	0	428	0	0	0	0	1732
Grand Total	0	2168	425	2593	861	7	677	1545	265	1057	0	1322	0	0	0	0	5460
Apprch %	0	83.6	16.4		55.7	0.5	43.8		20	80	0		0	0	0		
Total %	0	39.7	7.8	47.5	15.8	0.1	12.4	28.3	4.9	19.4	0	24.2	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	200	29	229	77	0	80	157	24	97	0	121	0	0	0	0	507
07:30 AM	0	254	39	293	95	0	59	154	25	133	0	158	0	0	0	0	605
07:45 AM	0	251	27	278	96	0	81	177	26	205	0	231	0	0	0	0	686
08:00 AM	0	207	32	239	76	0	63	139	21	100	0	121	0	0	0	0	499
Total Volume	0	912	127	1039	344	0	283	627	96	535	0	631	0	0	0	0	2297
% App. Total	0	87.8	12.2		54.9	0	45.1		15.2	84.8	0		0	0	0		
PHF	.000	.898	.814	.887	.896	.000	.873	.886	.923	.652	.000	.683	.000	.000	.000	.000	.837

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	200	29	229	77	0	80	157	24	97	0	121	0	0	0	0
+15 mins.	0	254	39	293	95	0	59	154	25	133	0	158	0	0	0	0
+30 mins.	0	251	27	278	96	0	81	177	26	205	0	231	0	0	0	0
+45 mins.	0	207	32	239	76	0	63	139	21	100	0	121	0	0	0	0
Total Volume	0	912	127	1039	344	0	283	627	96	535	0	631	0	0	0	0
% App. Total	0	87.8	12.2		54.9	0	45.1		15.2	84.8	0		0	0	0	
PHF	.000	.898	.814	.887	.896	.000	.873	.886	.923	.652	.000	.683	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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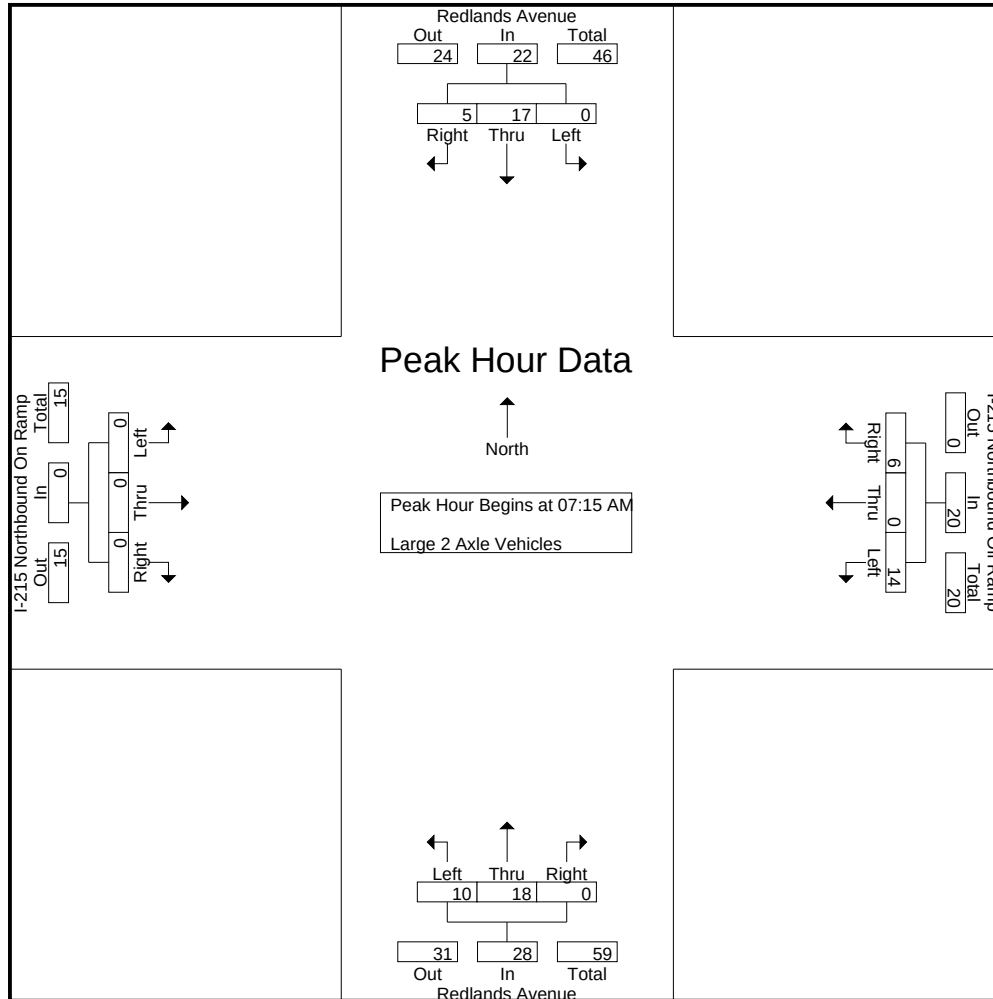
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	3	2	5	4	0	3	7	3	2	0	5	0	0	0	0	17
06:15 AM	0	4	1	5	2	0	1	3	2	2	0	4	0	0	0	0	12
06:30 AM	0	8	1	9	5	0	3	8	3	6	0	9	0	0	0	0	26
06:45 AM	0	2	2	4	7	0	3	10	0	4	0	4	0	0	0	0	18
Total	0	17	6	23	18	0	10	28	8	14	0	22	0	0	0	0	73
07:00 AM	0	1	0	1	6	0	1	7	1	4	0	5	0	0	0	0	13
07:15 AM	0	7	0	7	4	0	3	7	4	3	0	7	0	0	0	0	21
07:30 AM	0	3	3	6	2	0	1	3	2	5	0	7	0	0	0	0	16
07:45 AM	0	5	1	6	2	0	1	3	2	4	0	6	0	0	0	0	15
Total	0	16	4	20	14	0	6	20	9	16	0	25	0	0	0	0	65
08:00 AM	0	2	1	3	6	0	1	7	2	6	0	8	0	0	0	0	18
08:15 AM	0	6	0	6	4	0	0	4	0	1	0	1	0	0	0	0	11
08:30 AM	0	3	0	3	1	0	1	2	4	3	0	7	0	0	0	0	12
08:45 AM	0	4	1	5	3	0	4	7	1	2	0	3	0	0	0	0	15
Total	0	15	2	17	14	0	6	20	7	12	0	19	0	0	0	0	56
Grand Total	0	48	12	60	46	0	22	68	24	42	0	66	0	0	0	0	194
Apprch %	0	80	20		67.6	0	32.4		36.4	63.6	0		0	0	0		
Total %	0	24.7	6.2	30.9	23.7	0	11.3	35.1	12.4	21.6	0	34	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	7	0	7	4	0	3	7	4	3	0	7	0	0	0	0	21
07:30 AM	0	3	3	6	2	0	1	3	2	5	0	7	0	0	0	0	16
07:45 AM	0	5	1	6	2	0	1	3	2	4	0	6	0	0	0	0	15
08:00 AM	0	2	1	3	6	0	1	7	2	6	0	8	0	0	0	0	18
Total Volume	0	17	5	22	14	0	6	20	10	18	0	28	0	0	0	0	70
% App. Total	0	77.3	22.7		70	0	30		35.7	64.3	0		0	0	0		
PHF	.000	.607	.417	.786	.583	.000	.500	.714	.625	.750	.000	.875	.000	.000	.000	.000	.833

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	7	0	7	4	0	3	7	4	3	0	7	0	0	0	0
+15 mins.	0	3	3	6	2	0	1	3	2	5	0	7	0	0	0	0
+30 mins.	0	5	1	6	2	0	1	3	2	4	0	6	0	0	0	0
+45 mins.	0	2	1	3	6	0	1	7	2	6	0	8	0	0	0	0
Total Volume	0	17	5	22	14	0	6	20	10	18	0	28	0	0	0	0
% App. Total	0	77.3	22.7		70	0	30		35.7	64.3	0		0	0	0	
PHF	.000	.607	.417	.786	.583	.000	.500	.714	.625	.750	.000	.875	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

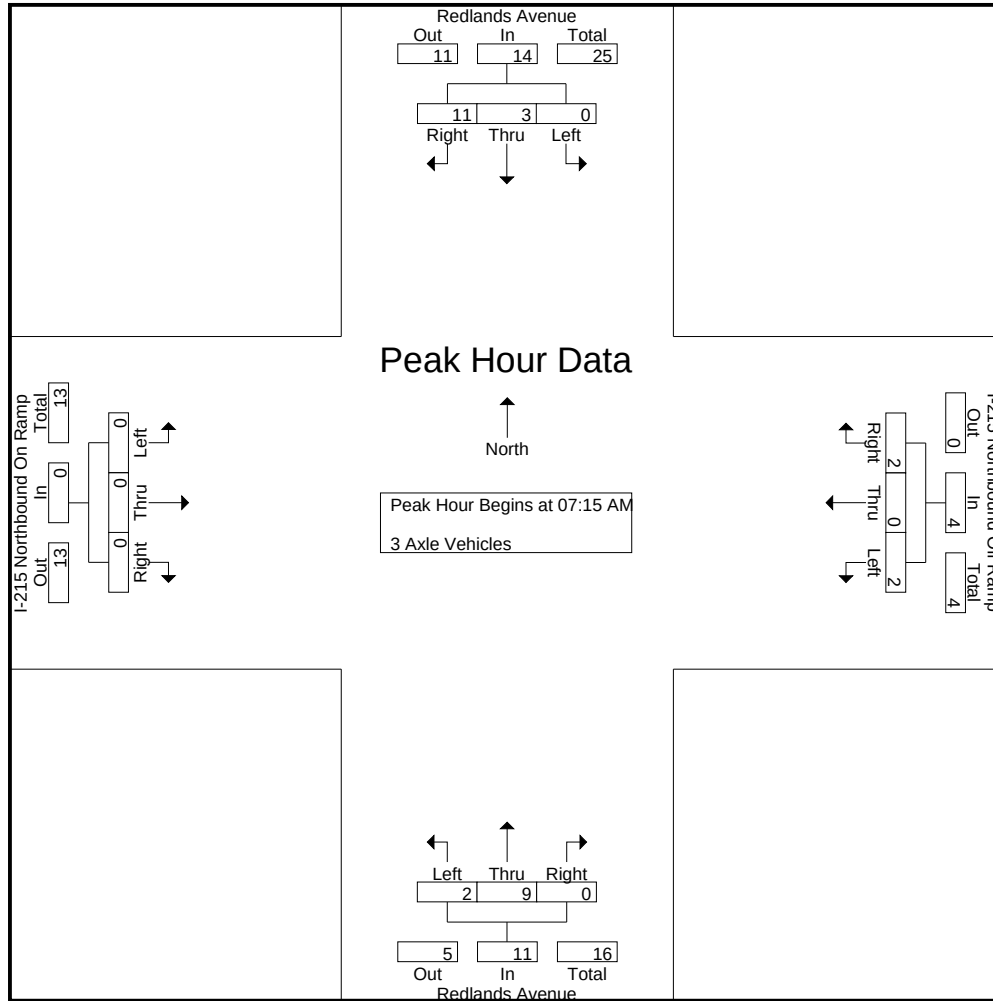
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	1	0	1	2	1	3	0	4	0	0	0	0	7
06:15 AM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
06:30 AM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
06:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	2	0	1	3	2	8	0	10	0	0	0	0	16
07:00 AM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	0	0	4
07:15 AM	0	2	1	3	0	0	1	1	1	1	0	2	0	0	0	0	6
07:30 AM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	1	3	4	0	0	1	1	0	3	0	3	0	0	0	0	8
Total	0	4	6	10	1	0	2	3	1	8	0	9	0	0	0	0	22
08:00 AM	0	0	5	5	2	0	0	2	1	3	0	4	0	0	0	0	11
08:15 AM	0	0	1	1	2	0	0	2	0	5	0	5	0	0	0	0	8
08:30 AM	0	1	1	2	0	0	0	0	4	2	0	6	0	0	0	0	8
08:45 AM	0	1	0	1	5	0	0	5	1	4	0	5	0	0	0	0	11
Total	0	2	7	9	9	0	0	9	6	14	0	20	0	0	0	0	38
Grand Total	0	9	13	22	12	0	3	15	9	30	0	39	0	0	0	0	76
Apprch %	0	40.9	59.1		80	0	20		23.1	76.9	0		0	0	0		
Total %	0	11.8	17.1	28.9	15.8	0	3.9	19.7	11.8	39.5	0	51.3	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	1	3	0	0	1	1	1	1	0	2	0	0	0	0	6
07:30 AM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	1	3	4	0	0	1	1	0	3	0	3	0	0	0	0	8
08:00 AM	0	0	5	5	2	0	0	2	1	3	0	4	0	0	0	0	11
Total Volume	0	3	11	14	2	0	2	4	2	9	0	11	0	0	0	0	29
% App. Total	0	21.4	78.6		50	0	50		18.2	81.8	0		0	0	0		
PHF	.000	.375	.550	.700	.250	.000	.500	.500	.500	.750	.000	.688	.000	.000	.000	.000	.659

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	1	3	0	0	1	1	1	1	0	2	0	0	0	0
+15 mins.	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	1	3	4	0	0	1	1	0	3	0	3	0	0	0	0
+45 mins.	0	0	5	5	2	0	0	2	1	3	0	4	0	0	0	0
Total Volume	0	3	11	14	2	0	2	4	2	9	0	11	0	0	0	0
% App. Total	0	21.4	78.6		50	0	50		18.2	81.8	0		0	0	0	
PHF	.000	.375	.550	.700	.250	.000	.500	.500	.500	.750	.000	.688	.000	.000	.000	.000

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City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

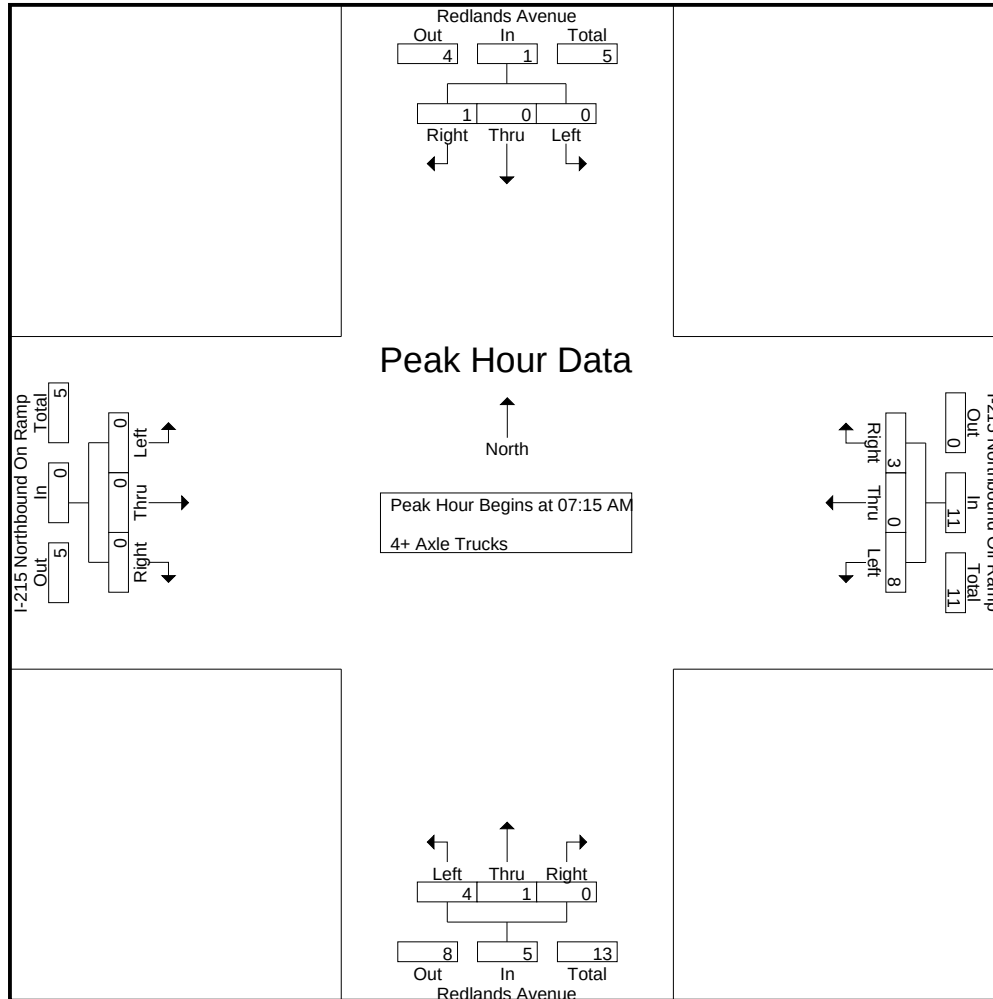
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	1	2	1	0	1	2	3	0	0	3	0	0	0	0	7
06:15 AM	0	1	0	1	1	0	1	2	3	0	0	3	0	0	0	0	6
06:30 AM	0	0	1	1	3	0	3	6	3	1	0	4	0	0	0	0	11
06:45 AM	0	0	0	0	3	0	2	5	3	2	0	5	0	0	0	0	10
Total	0	2	2	4	8	0	7	15	12	3	0	15	0	0	0	0	34
07:00 AM	0	1	1	2	1	0	0	1	1	0	0	1	0	0	0	0	4
07:15 AM	0	0	0	0	2	0	0	2	1	0	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	3	0	0	3	1	0	0	1	0	0	0	0	4
07:45 AM	0	0	1	1	1	0	2	3	1	0	0	1	0	0	0	0	5
Total	0	1	2	3	7	0	2	9	4	0	0	4	0	0	0	0	16
08:00 AM	0	0	0	0	2	0	1	3	1	1	0	2	0	0	0	0	5
08:15 AM	0	0	0	0	2	0	0	2	4	0	0	4	0	0	0	0	6
08:30 AM	0	0	0	0	1	0	0	1	2	1	0	3	0	0	0	0	4
08:45 AM	0	0	0	0	0	0	1	1	1	1	0	2	0	0	0	0	3
Total	0	0	0	0	5	0	2	7	8	3	0	11	0	0	0	0	18
Grand Total	0	3	4	7	20	0	11	31	24	6	0	30	0	0	0	0	68
Apprch %	0	42.9	57.1		64.5	0	35.5		80	20	0		0	0	0		
Total %	0	4.4	5.9	10.3	29.4	0	16.2	45.6	35.3	8.8	0	44.1	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	2	0	0	2	1	0	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	3	0	0	3	1	0	0	1	0	0	0	0	4
07:45 AM	0	0	1	1	1	0	2	3	1	0	0	1	0	0	0	0	5
08:00 AM	0	0	0	0	2	0	1	3	1	1	0	2	0	0	0	0	5
Total Volume	0	0	1	1	8	0	3	11	4	1	0	5	0	0	0	0	17
% App. Total	0	0	100		72.7	0	27.3		80	20	0		0	0	0		
PHF	.000	.000	.250	.250	.667	.000	.375	.917	1.00	.250	.000	.625	.000	.000	.000	.000	.850

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	2	0	0	2	1	0	0	1	0	0	0	0
+15 mins.	0	0	0	0	3	0	0	3	1	0	0	1	0	0	0	0
+30 mins.	0	0	1	1	1	0	2	3	1	0	0	1	0	0	0	0
+45 mins.	0	0	0	0	2	0	1	3	1	1	0	2	0	0	0	0
Total Volume	0	0	1	1	8	0	3	11	4	1	0	5	0	0	0	0
% App. Total	0	0	100		72.7	0	27.3		80	20	0		0	0	0	
PHF	.000	.000	.250	.250	.667	.000	.375	.917	1.000	.250	.000	.625	.000	.000	.000	.000

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City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

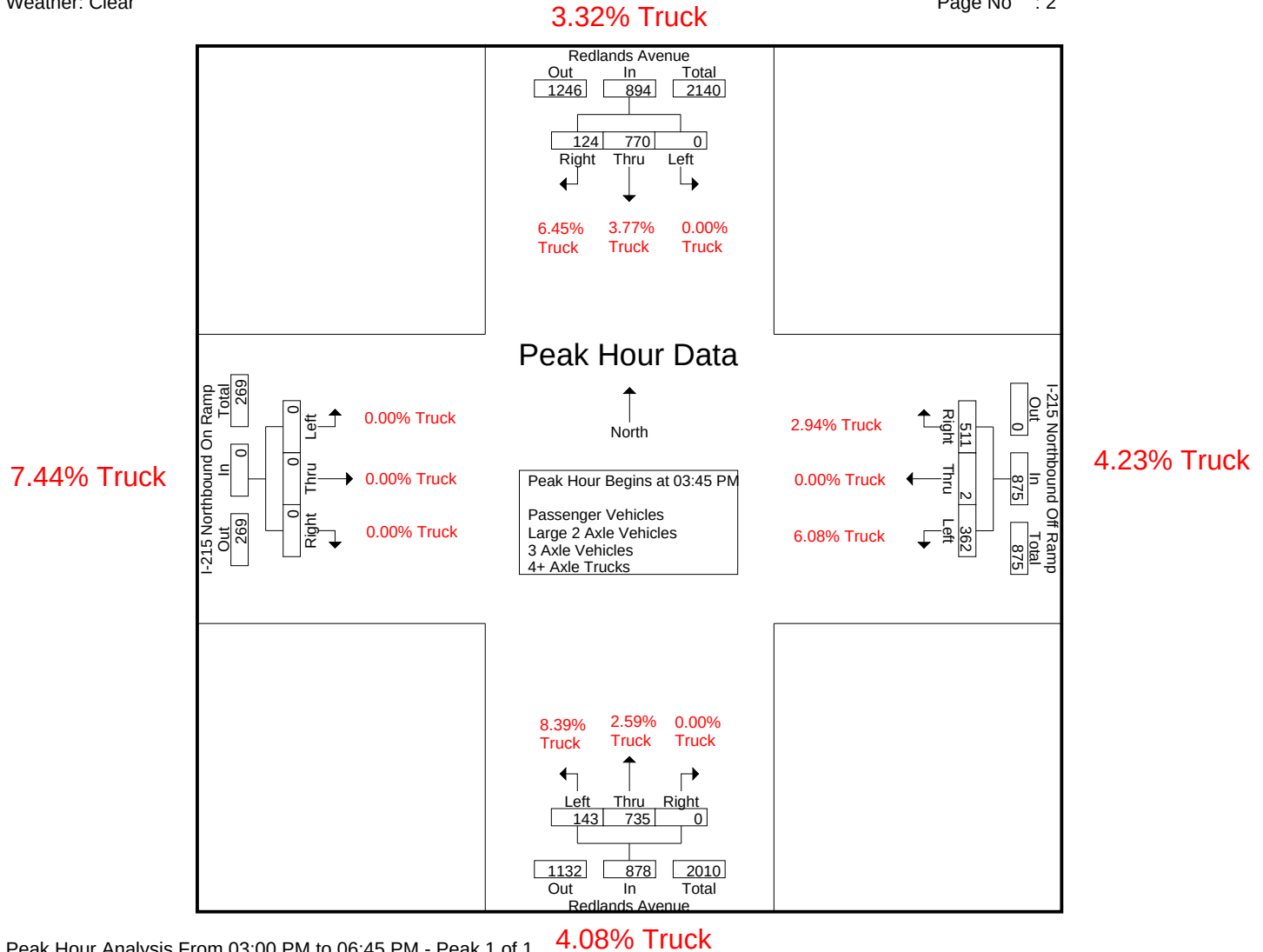
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	173	35	208	77	0	134	211	35	156	0	191	0	0	0	0	610
03:15 PM	0	181	30	211	96	1	143	240	36	137	0	173	0	0	0	0	624
03:30 PM	0	210	21	231	84	1	99	184	41	173	0	214	0	0	0	0	629
03:45 PM	0	179	28	207	99	1	146	246	28	167	0	195	0	0	0	0	648
Total	0	743	114	857	356	3	522	881	140	633	0	773	0	0	0	0	2511
04:00 PM	0	206	27	233	108	1	120	229	34	199	0	233	0	0	0	0	695
04:15 PM	0	183	33	216	67	0	129	196	45	197	0	242	0	0	0	0	654
04:30 PM	0	202	36	238	88	0	116	204	36	172	0	208	0	0	0	0	650
04:45 PM	0	175	27	202	95	1	127	223	30	161	0	191	0	0	0	0	616
Total	0	766	123	889	358	2	492	852	145	729	0	874	0	0	0	0	2615
05:00 PM	0	192	41	233	79	0	138	217	43	187	0	230	0	0	0	0	680
05:15 PM	0	162	36	198	92	1	141	234	27	151	0	178	0	0	0	0	610
05:30 PM	0	182	47	229	82	0	156	238	26	190	0	216	0	0	0	0	683
05:45 PM	0	143	38	181	71	0	122	193	23	139	0	162	0	0	0	0	536
Total	0	679	162	841	324	1	557	882	119	667	0	786	0	0	0	0	2509
06:00 PM	0	156	36	192	68	0	113	181	23	155	0	178	0	0	0	0	551
06:15 PM	0	166	18	184	65	1	104	170	31	154	0	185	0	0	0	0	539
06:30 PM	0	127	34	161	69	0	110	179	25	131	0	156	0	0	0	0	496
06:45 PM	0	132	27	159	70	0	89	159	25	121	0	146	0	0	0	0	464
Total	0	581	115	696	272	1	416	689	104	561	0	665	0	0	0	0	2050
Grand Total	0	2769	514	3283	1310	7	1987	3304	508	2590	0	3098	0	0	0	0	9685
Apprch %	0	84.3	15.7		39.6	0.2	60.1		16.4	83.6	0		0	0	0		
Total %	0	28.6	5.3	33.9	13.5	0.1	20.5	34.1	5.2	26.7	0	32	0	0	0	0	
Passenger Vehicles	0	2699	494	3193	1232	7	1942	3181	473	2526	0	2999	0	0	0	0	9373
% Passenger Vehicles	0	97.5	96.1	97.3	94	100	97.7	96.3	93.1	97.5	0	96.8	0	0	0	0	96.8
Large 2 Axle Vehicles	0	45	13	58	48	0	27	75	20	43	0	63	0	0	0	0	196
% Large 2 Axle Vehicles	0	1.6	2.5	1.8	3.7	0	1.4	2.3	3.9	1.7	0	2	0	0	0	0	2
3 Axle Vehicles	0	18	1	19	19	0	4	23	8	14	0	22	0	0	0	0	64
% 3 Axle Vehicles	0	0.7	0.2	0.6	1.5	0	0.2	0.7	1.6	0.5	0	0.7	0	0	0	0	0.7
4+ Axle Trucks	0	7	6	13	11	0	14	25	7	7	0	14	0	0	0	0	52
% 4+ Axle Trucks	0	0.3	1.2	0.4	0.8	0	0.7	0.8	1.4	0.3	0	0.5	0	0	0	0	0.5

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	179	28	207	99	1	146	246	28	167	0	195	0	0	0	0	648
04:00 PM	0	206	27	233	108	1	120	229	34	199	0	233	0	0	0	0	695
04:15 PM	0	183	33	216	67	0	129	196	45	197	0	242	0	0	0	0	654
04:30 PM	0	202	36	238	88	0	116	204	36	172	0	208	0	0	0	0	650
Total Volume	0	770	124	894	362	2	511	875	143	735	0	878	0	0	0	0	2647
% App. Total	0	86.1	13.9		41.4	0.2	58.4		16.3	83.7	0		0	0	0		
PHF	.000	.934	.861	.939	.838	.500	.875	.889	.794	.923	.000	.907	.000	.000	.000	.000	.952

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
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Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				04:45 PM				03:30 PM				03:00 PM			
+0 mins.	0	179	28	207	95	1	127	223	41	173	0	214	0	0	0	0
+15 mins.	0	206	27	233	79	0	138	217	28	167	0	195	0	0	0	0
+30 mins.	0	183	33	216	92	1	141	234	34	199	0	233	0	0	0	0
+45 mins.	0	202	36	238	82	0	156	238	45	197	0	242	0	0	0	0
Total Volume	0	770	124	894	348	2	562	912	148	736	0	884	0	0	0	0
% App. Total	0	86.1	13.9		38.2	0.2	61.6		16.7	83.3	0		0	0	0	
PHF	.000	.934	.861	.939	.916	.500	.901	.958	.822	.925	.000	.913	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
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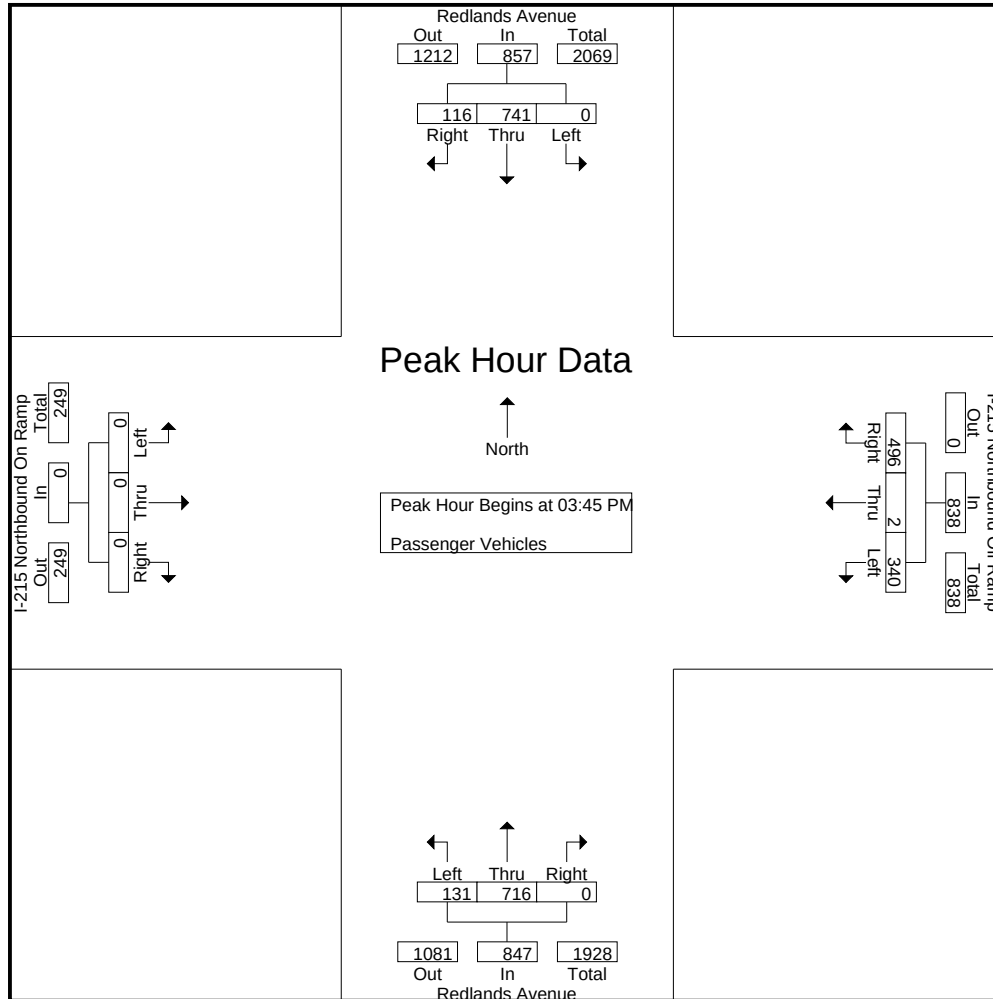
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	163	34	197	72	0	129	201	33	150	0	183	0	0	0	0	581
03:15 PM	0	175	26	201	91	1	139	231	31	133	0	164	0	0	0	0	596
03:30 PM	0	205	21	226	73	1	96	170	39	168	0	207	0	0	0	0	603
03:45 PM	0	174	27	201	92	1	140	233	22	159	0	181	0	0	0	0	615
Total	0	717	108	825	328	3	504	835	125	610	0	735	0	0	0	0	2395
04:00 PM	0	196	26	222	99	1	115	215	32	198	0	230	0	0	0	0	667
04:15 PM	0	175	30	205	62	0	128	190	42	191	0	233	0	0	0	0	628
04:30 PM	0	196	33	229	87	0	113	200	35	168	0	203	0	0	0	0	632
04:45 PM	0	173	26	199	90	1	127	218	30	156	0	186	0	0	0	0	603
Total	0	740	115	855	338	2	483	823	139	713	0	852	0	0	0	0	2530
05:00 PM	0	187	40	227	73	0	137	210	42	186	0	228	0	0	0	0	665
05:15 PM	0	160	36	196	88	1	139	228	26	147	0	173	0	0	0	0	597
05:30 PM	0	181	45	226	76	0	152	228	24	184	0	208	0	0	0	0	662
05:45 PM	0	139	36	175	70	0	119	189	23	136	0	159	0	0	0	0	523
Total	0	667	157	824	307	1	547	855	115	653	0	768	0	0	0	0	2447
06:00 PM	0	155	35	190	65	0	112	177	19	154	0	173	0	0	0	0	540
06:15 PM	0	164	18	182	63	1	101	165	27	149	0	176	0	0	0	0	523
06:30 PM	0	126	34	160	66	0	109	175	24	129	0	153	0	0	0	0	488
06:45 PM	0	130	27	157	65	0	86	151	24	118	0	142	0	0	0	0	450
Total	0	575	114	689	259	1	408	668	94	550	0	644	0	0	0	0	2001
Grand Total	0	2699	494	3193	1232	7	1942	3181	473	2526	0	2999	0	0	0	0	9373
Apprch %	0	84.5	15.5		38.7	0.2	61		15.8	84.2	0		0	0	0		
Total %	0	28.8	5.3	34.1	13.1	0.1	20.7	33.9	5	26.9	0	32	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	174	27	201	92	1	140	233	22	159	0	181	0	0	0	0	615
04:00 PM	0	196	26	222	99	1	115	215	32	198	0	230	0	0	0	0	667
04:15 PM	0	175	30	205	62	0	128	190	42	191	0	233	0	0	0	0	628
04:30 PM	0	196	33	229	87	0	113	200	35	168	0	203	0	0	0	0	632
Total Volume	0	741	116	857	340	2	496	838	131	716	0	847	0	0	0	0	2542
% App. Total	0	86.5	13.5		40.6	0.2	59.2		15.5	84.5	0		0	0	0		
PHF	.000	.945	.879	.936	.859	.500	.886	.899	.780	.904	.000	.909	.000	.000	.000	.000	.953

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

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Site Code : 99923603
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Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	174	27	201	92	1	140	233	22	159	0	181	0	0	0	0
+15 mins.	0	196	26	222	99	1	115	215	32	198	0	230	0	0	0	0
+30 mins.	0	175	30	205	62	0	128	190	42	191	0	233	0	0	0	0
+45 mins.	0	196	33	229	87	0	113	200	35	168	0	203	0	0	0	0
Total Volume	0	741	116	857	340	2	496	838	131	716	0	847	0	0	0	0
% App. Total	0	86.5	13.5		40.6	0.2	59.2		15.5	84.5	0		0	0	0	
PHF	.000	.945	.879	.936	.859	.500	.886	.899	.780	.904	.000	.909	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
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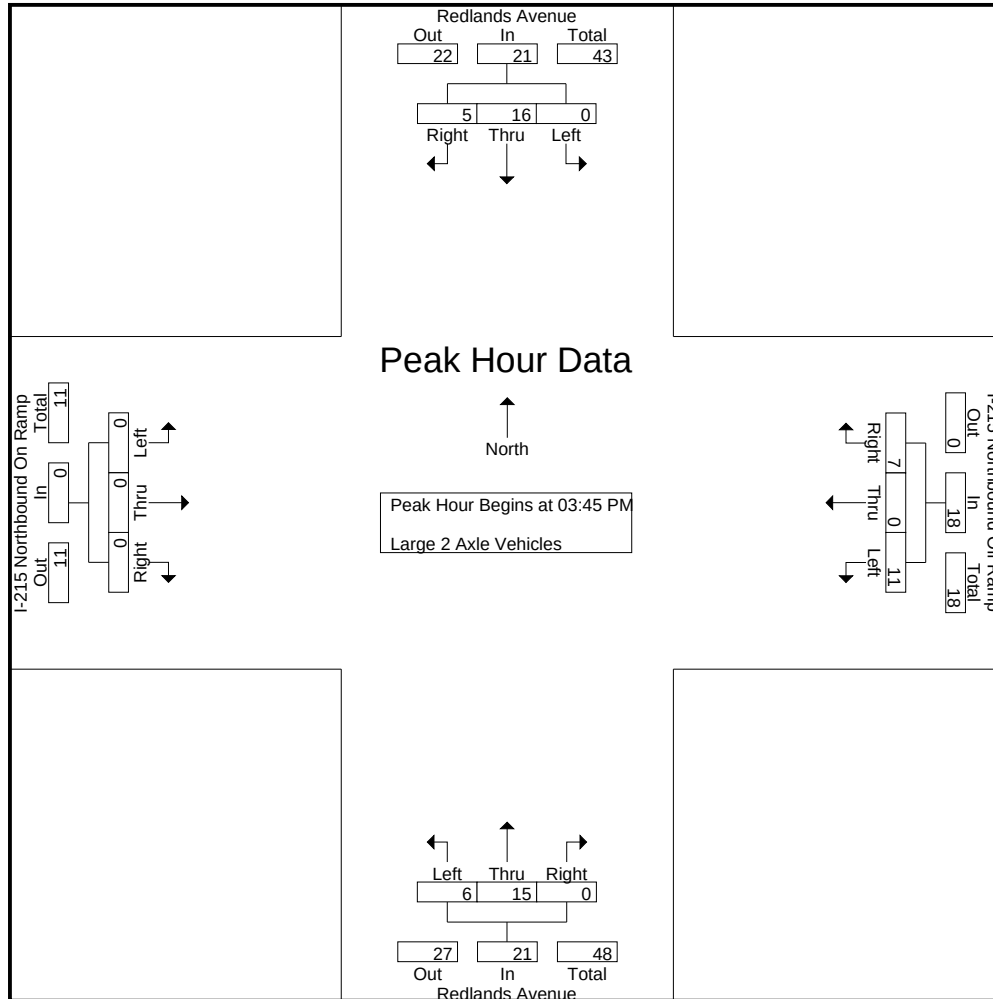
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	5	0	5	2	0	1	3	2	2	0	4	0	0	0	0	12
03:15 PM	0	5	1	6	2	0	3	5	2	2	0	4	0	0	0	0	15
03:30 PM	0	3	0	3	6	0	3	9	1	2	0	3	0	0	0	0	15
03:45 PM	0	3	1	4	3	0	2	5	2	5	0	7	0	0	0	0	16
Total	0	16	2	18	13	0	9	22	7	11	0	18	0	0	0	0	58
04:00 PM	0	7	1	8	6	0	2	8	1	1	0	2	0	0	0	0	18
04:15 PM	0	3	0	3	2	0	1	3	3	5	0	8	0	0	0	0	14
04:30 PM	0	3	3	6	0	0	2	2	0	4	0	4	0	0	0	0	12
04:45 PM	0	2	1	3	4	0	0	4	0	4	0	4	0	0	0	0	11
Total	0	15	5	20	12	0	5	17	4	14	0	18	0	0	0	0	55
05:00 PM	0	4	1	5	5	0	1	6	1	0	0	1	0	0	0	0	12
05:15 PM	0	2	0	2	4	0	2	6	1	2	0	3	0	0	0	0	11
05:30 PM	0	1	2	3	5	0	2	7	1	4	0	5	0	0	0	0	15
05:45 PM	0	3	2	5	0	0	1	1	0	2	0	2	0	0	0	0	8
Total	0	10	5	15	14	0	6	20	3	8	0	11	0	0	0	0	46
06:00 PM	0	0	1	1	3	0	1	4	3	1	0	4	0	0	0	0	9
06:15 PM	0	1	0	1	2	0	3	5	2	4	0	6	0	0	0	0	12
06:30 PM	0	1	0	1	1	0	1	2	1	2	0	3	0	0	0	0	6
06:45 PM	0	2	0	2	3	0	2	5	0	3	0	3	0	0	0	0	10
Total	0	4	1	5	9	0	7	16	6	10	0	16	0	0	0	0	37
Grand Total	0	45	13	58	48	0	27	75	20	43	0	63	0	0	0	0	196
Apprch %	0	77.6	22.4		64	0	36		31.7	68.3	0		0	0	0		
Total %	0	23	6.6	29.6	24.5	0	13.8	38.3	10.2	21.9	0	32.1	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	3	1	4	3	0	2	5	2	5	0	7	0	0	0	0	16
04:00 PM	0	7	1	8	6	0	2	8	1	1	0	2	0	0	0	0	18
04:15 PM	0	3	0	3	2	0	1	3	3	5	0	8	0	0	0	0	14
04:30 PM	0	3	3	6	0	0	2	2	0	4	0	4	0	0	0	0	12
Total Volume	0	16	5	21	11	0	7	18	6	15	0	21	0	0	0	0	60
% App. Total	0	76.2	23.8		61.1	0	38.9		28.6	71.4	0		0	0	0		
PHF	.000	.571	.417	.656	.458	.000	.875	.563	.500	.750	.000	.656	.000	.000	.000	.000	.833

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	3	1	4	3	0	2	5	2	5	0	7	0	0	0	0
+15 mins.	0	7	1	8	6	0	2	8	1	1	0	2	0	0	0	0
+30 mins.	0	3	0	3	2	0	1	3	3	5	0	8	0	0	0	0
+45 mins.	0	3	3	6	0	0	2	2	0	4	0	4	0	0	0	0
Total Volume	0	16	5	21	11	0	7	18	6	15	0	21	0	0	0	0
% App. Total	0	76.2	23.8		61.1	0	38.9		28.6	71.4	0		0	0	0	
PHF	.000	.571	.417	.656	.458	.000	.875	.563	.500	.750	.000	.656	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

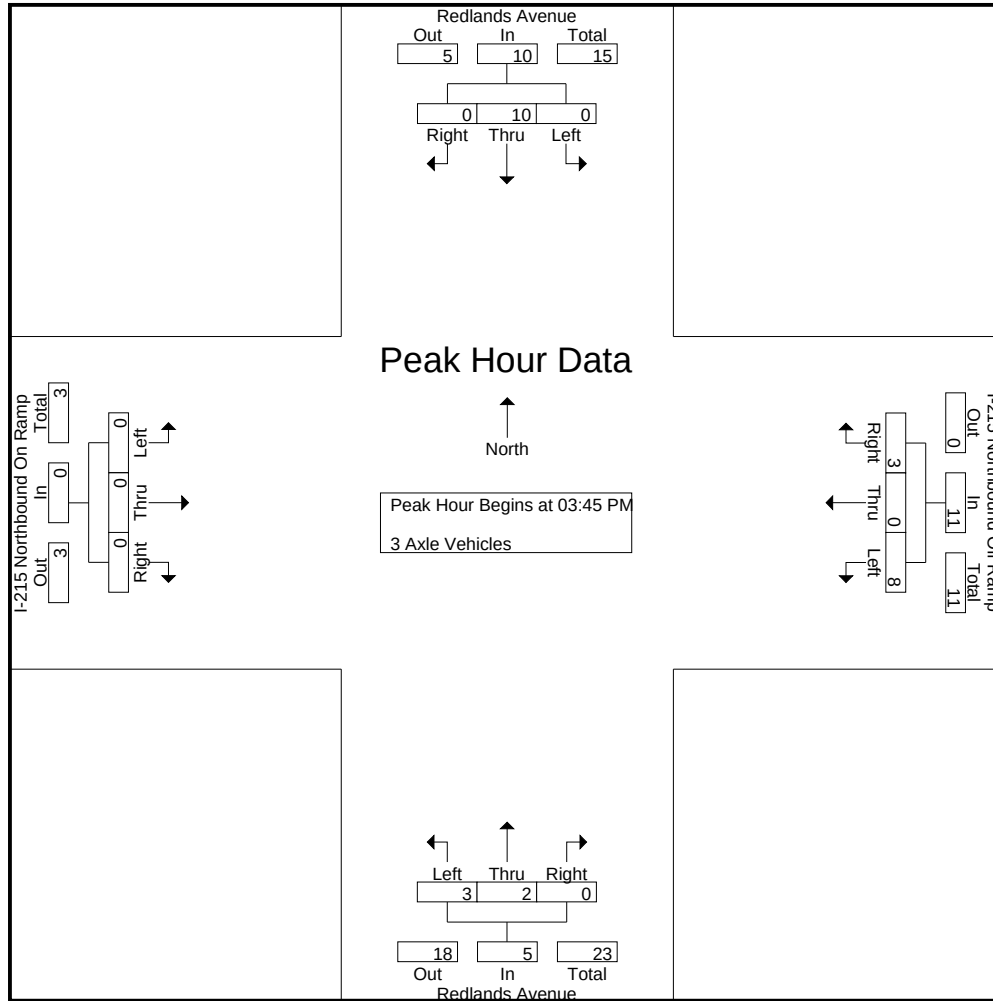
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	4	0	4	1	0	0	1	0	2	0	2	0	0	0	0	7
03:15 PM	0	0	1	1	1	0	0	1	1	1	0	2	0	0	0	0	4
03:30 PM	0	0	0	0	4	0	0	4	1	3	0	4	0	0	0	0	8
03:45 PM	0	1	0	1	3	0	2	5	2	2	0	4	0	0	0	0	10
Total	0	5	1	6	9	0	2	11	4	8	0	12	0	0	0	0	29
04:00 PM	0	2	0	2	2	0	1	3	0	0	0	0	0	0	0	0	5
04:15 PM	0	4	0	4	2	0	0	2	0	0	0	0	0	0	0	0	6
04:30 PM	0	3	0	3	1	0	0	1	1	0	0	1	0	0	0	0	5
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	9	0	9	5	0	1	6	1	1	0	2	0	0	0	0	17
05:00 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	1	1	2	0	3	0	0	0	0	4
05:45 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Total	0	2	0	2	2	0	1	3	1	5	0	6	0	0	0	0	11
06:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
06:30 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
06:45 PM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
Total	0	2	0	2	3	0	0	3	2	0	0	2	0	0	0	0	7
Grand Total	0	18	1	19	19	0	4	23	8	14	0	22	0	0	0	0	64
Apprch %	0	94.7	5.3		82.6	0	17.4		36.4	63.6	0		0	0	0		
Total %	0	28.1	1.6	29.7	29.7	0	6.2	35.9	12.5	21.9	0	34.4	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	1	0	1	3	0	2	5	2	2	0	4	0	0	0	0	10
04:00 PM	0	2	0	2	2	0	1	3	0	0	0	0	0	0	0	0	5
04:15 PM	0	4	0	4	2	0	0	2	0	0	0	0	0	0	0	0	6
04:30 PM	0	3	0	3	1	0	0	1	1	0	0	1	0	0	0	0	5
Total Volume	0	10	0	10	8	0	3	11	3	2	0	5	0	0	0	0	26
% App. Total	0	100	0		72.7	0	27.3		60	40	0		0	0	0		
PHF	.000	.625	.000	.625	.667	.000	.375	.550	.375	.250	.000	.313	.000	.000	.000	.000	.650

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	1	0	1	3	0	2	5	2	2	0	4	0	0	0	0
+15 mins.	0	2	0	2	2	0	1	3	0	0	0	0	0	0	0	0
+30 mins.	0	4	0	4	2	0	0	2	0	0	0	0	0	0	0	0
+45 mins.	0	3	0	3	1	0	0	1	1	0	0	1	0	0	0	0
Total Volume	0	10	0	10	8	0	3	11	3	2	0	5	0	0	0	0
% App. Total	0	100	0		72.7	0	27.3		60	40	0		0	0	0	
PHF	.000	.625	.000	.625	.667	.000	.375	.550	.375	.250	.000	.313	.000	.000	.000	.000

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

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

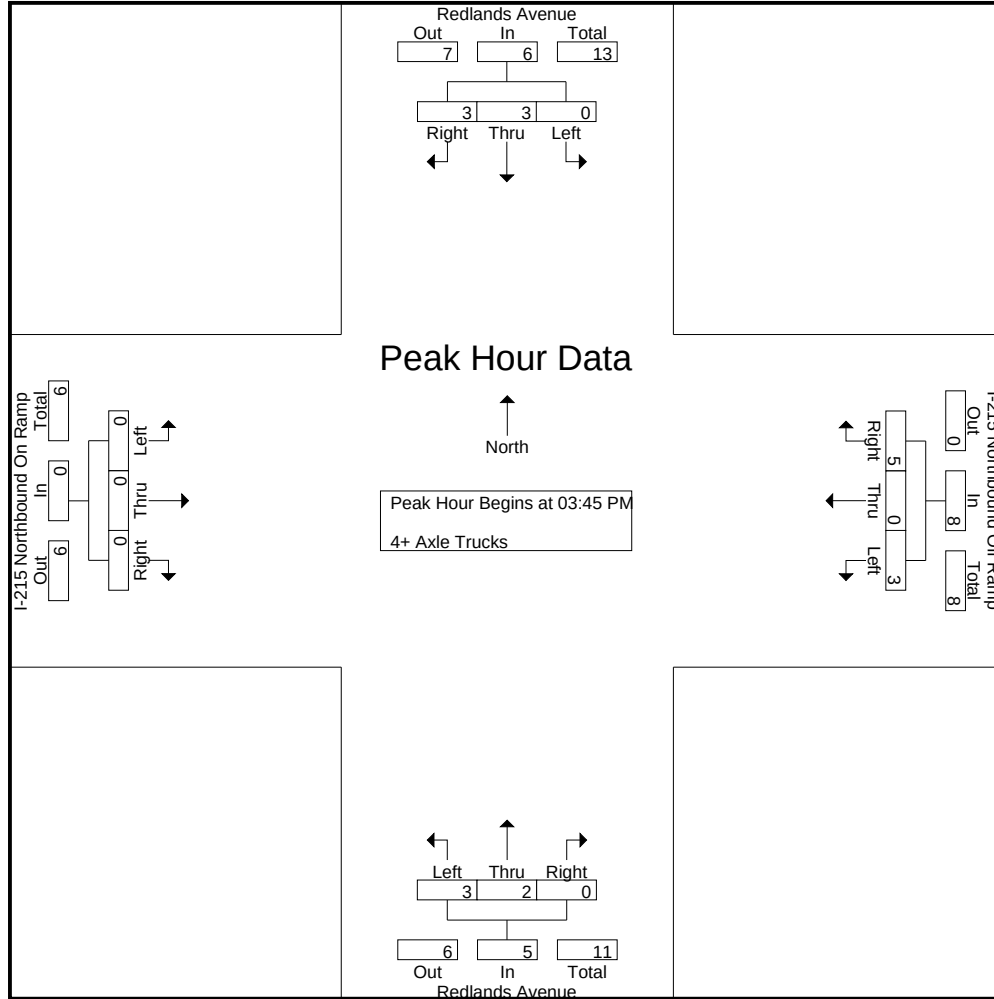
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	1	2	2	0	4	6	0	2	0	2	0	0	0	0	10
03:15 PM	0	1	2	3	2	0	1	3	2	1	0	3	0	0	0	0	9
03:30 PM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
03:45 PM	0	1	0	1	1	0	2	3	2	1	0	3	0	0	0	0	7
Total	0	5	3	8	6	0	7	13	4	4	0	8	0	0	0	0	29
04:00 PM	0	1	0	1	1	0	2	3	1	0	0	1	0	0	0	0	5
04:15 PM	0	1	3	4	1	0	0	1	0	1	0	1	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	2	3	5	3	0	3	6	1	1	0	2	0	0	0	0	13
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
Total	0	0	0	0	1	0	3	4	0	1	0	1	0	0	0	0	5
06:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	1	0	1	2	2	1	0	3	0	0	0	0	5
Grand Total	0	7	6	13	11	0	14	25	7	7	0	14	0	0	0	0	52
Apprch %	0	53.8	46.2		44	0	56		50	50	0		0	0	0		
Total %	0	13.5	11.5	25	21.2	0	26.9	48.1	13.5	13.5	0	26.9	0	0	0	0	

	Redlands Avenue Southbound				I-215 Northbound Off Ramp Westbound				Redlands Avenue Northbound				I-215 Northbound On Ramp Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	1	0	1	1	0	2	3	2	1	0	3	0	0	0	0	7
04:00 PM	0	1	0	1	1	0	2	3	1	0	0	1	0	0	0	0	5
04:15 PM	0	1	3	4	1	0	0	1	0	1	0	1	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total Volume	0	3	3	6	3	0	5	8	3	2	0	5	0	0	0	0	19
% App. Total	0	50	50		37.5	0	62.5		60	40	0		0	0	0		
PHF	.000	.750	.250	.375	.750	.000	.625	.667	.375	.500	.000	.417	.000	.000	.000	.000	.679

City of Perris
N/S: Redlands Avenue
E/W: I-215 Northbound Ramps
Weather: Clear

File Name : 03_PER_Red_215N PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	1	0	1	1	0	2	3	2	1	0	3	0	0	0	0
+15 mins.	0	1	0	1	1	0	2	3	1	0	0	1	0	0	0	0
+30 mins.	0	1	3	4	1	0	0	1	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Total Volume	0	3	3	6	3	0	5	8	3	2	0	5	0	0	0	0
% App. Total	0	50	50		37.5	0	62.5		60	40	0		0	0	0	
PHF	.000	.750	.250	.375	.750	.000	.625	.667	.375	.500	.000	.417	.000	.000	.000	.000

Location: Perris
 N/S: Redlands Avenue
 E/W: I-215 NB Ramps



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Redlands Avenue	East Leg I-215 NB Ramps	South Leg Redlands Avenue	West Leg I-215 NB Ramps		
		Pedestrians	Pedestrians	Pedestrians	Pedestrians		
	6:00 AM	0	0	0	0		0
	6:15 AM	0	0	0	0		0
	6:30 AM	0	0	0	1		1
	6:45 AM	0	0	0	1		1
	7:00 AM	0	0	0	0		0
	7:15 AM	0	0	0	4		4
	7:30 AM	0	0	0	2		2
	7:45 AM	0	0	0	1		1
	8:00 AM	0	0	0	3		3
	8:15 AM	0	0	0	0		0
	8:30 AM	0	0	0	4		4
	8:45 AM	0	0	0	0		0
	TOTAL VOLUMES:	0	0	0	16		16

		North Leg Redlands Avenue	East Leg I-215 NB Ramps	South Leg Redlands Avenue	West Leg I-215 NB Ramps		
		Pedestrians	Pedestrians	Pedestrians	Pedestrians		
	3:00 PM	0	0	0	0		0
	3:15 PM	0	0	0	1		1
	3:30 PM	0	0	0	0		0
	3:45 PM	0	0	0	1		1
	4:00 PM	0	0	0	1		1
	4:15 PM	0	0	0	2		2
	4:30 PM	0	0	0	0		0
	4:45 PM	0	0	0	1		1
	5:00 PM	0	0	0	1		1
	5:15 PM	0	0	0	0		0
	5:30 PM	0	0	0	0		0
	5:45 PM	0	0	0	0		0
	6:00 PM	0	0	0	0		0
	6:15 PM	0	0	0	0		0
	6:30 PM	0	0	0	0		0
	6:45 PM	0	0	0	0		0
	TOTAL VOLUMES:	0	0	0	7		7

Location: Perris
N/S: Redlands Avenue
E/W: I-215 NB Ramps



Date: 6/8/2023
Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound I-215 NB Ramps			Northbound Redlands Avenue			Eastbound I-215 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

	Southbound Redlands Avenue			Westbound I-215 NB Ramps			Northbound Redlands Avenue			Eastbound I-215 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	0	0	0	0	0	2

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

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

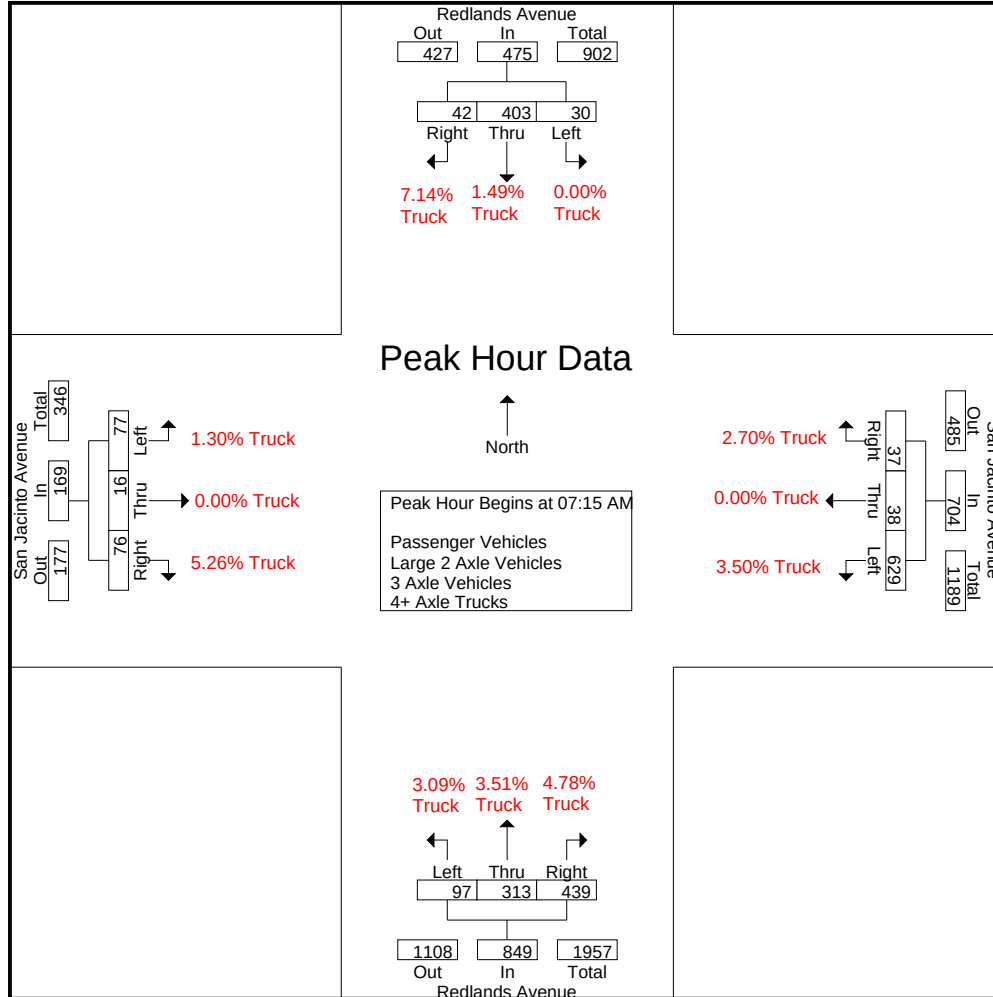
	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	60	5	68	97	7	2	106	3	15	64	82	2	2	22	26	282
06:15 AM	3	72	6	81	112	11	4	127	17	21	51	89	3	5	23	31	328
06:30 AM	4	74	3	81	97	8	6	111	10	37	100	147	1	5	26	32	371
06:45 AM	3	71	3	77	97	11	4	112	10	42	80	132	6	2	25	33	354
Total	13	277	17	307	403	37	16	456	40	115	295	450	12	14	96	122	1335
07:00 AM	4	80	7	91	101	7	3	111	12	45	92	149	3	4	10	17	368
07:15 AM	4	101	9	114	141	7	5	153	23	67	86	176	10	4	19	33	476
07:30 AM	5	118	11	134	148	17	8	173	19	57	120	196	18	2	23	43	546
07:45 AM	8	95	8	111	195	5	10	210	37	110	147	294	30	9	16	55	670
Total	21	394	35	450	585	36	26	647	91	279	445	815	61	19	68	148	2060
08:00 AM	13	89	14	116	145	9	14	168	18	79	86	183	19	1	18	38	505
08:15 AM	7	95	11	113	109	8	6	123	16	44	65	125	10	5	30	45	406
08:30 AM	6	105	9	120	104	7	5	116	15	42	71	128	10	4	18	32	396
08:45 AM	3	88	15	106	80	8	1	89	14	44	66	124	10	6	12	28	347
Total	29	377	49	455	438	32	26	496	63	209	288	560	49	16	78	143	1654
Grand Total	63	1048	101	1212	1426	105	68	1599	194	603	1028	1825	122	49	242	413	5049
Apprch %	5.2	86.5	8.3		89.2	6.6	4.3		10.6	33	56.3		29.5	11.9	58.6		
Total %	1.2	20.8	2	24	28.2	2.1	1.3	31.7	3.8	11.9	20.4	36.1	2.4	1	4.8	8.2	
Passenger Vehicles	63	1022	97	1182	1383	98	65	1546	187	579	957	1723	119	49	233	401	4852
% Passenger Vehicles	100	97.5	96	97.5	97	93.3	95.6	96.7	96.4	96	93.1	94.4	97.5	100	96.3	97.1	96.1
Large 2 Axle Vehicles	0	21	4	25	17	4	3	24	7	20	32	59	3	0	9	12	120
% Large 2 Axle Vehicles	0	2	4	2.1	1.2	3.8	4.4	1.5	3.6	3.3	3.1	3.2	2.5	0	3.7	2.9	2.4
3 Axle Vehicles	0	4	0	4	18	3	0	21	0	3	30	33	0	0	0	0	58
% 3 Axle Vehicles	0	0.4	0	0.3	1.3	2.9	0	1.3	0	0.5	2.9	1.8	0	0	0	0	1.1
4+ Axle Trucks	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
% 4+ Axle Trucks	0	0.1	0	0.1	0.6	0	0	0.5	0	0.2	0.9	0.5	0	0	0	0	0.4

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	101	9	114	141	7	5	153	23	67	86	176	10	4	19	33	476
07:30 AM	5	118	11	134	148	17	8	173	19	57	120	196	18	2	23	43	546
07:45 AM	8	95	8	111	195	5	10	210	37	110	147	294	30	9	16	55	670
08:00 AM	13	89	14	116	145	9	14	168	18	79	86	183	19	1	18	38	505
Total Volume	30	403	42	475	629	38	37	704	97	313	439	849	77	16	76	169	2197
% App. Total	6.3	84.8	8.8		89.3	5.4	5.3		11.4	36.9	51.7		45.6	9.5	45		
PHF	.577	.854	.750	.886	.806	.559	.661	.838	.655	.711	.747	.722	.642	.444	.826	.768	.820

City of Perris
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2.44% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 3.42% Truck

	07:15 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	4	101	9	114	141	7	5	153	23	67	86	176	18	2	23	43
+15 mins.	5	118	11	134	148	17	8	173	19	57	120	196	30	9	16	55
+30 mins.	8	95	8	111	195	5	10	210	37	110	147	294	19	1	18	38
+45 mins.	13	89	14	116	145	9	14	168	18	79	86	183	10	5	30	45
Total Volume	30	403	42	475	629	38	37	704	97	313	439	849	77	17	87	181
% App. Total	6.3	84.8	8.8		89.3	5.4	5.3		11.4	36.9	51.7		42.5	9.4	48.1	
PHF	.577	.854	.750	.886	.806	.559	.661	.838	.655	.711	.747	.722	.642	.472	.725	.823

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City of Perris
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E/W: San Jacinto Avenue
Weather: Clear

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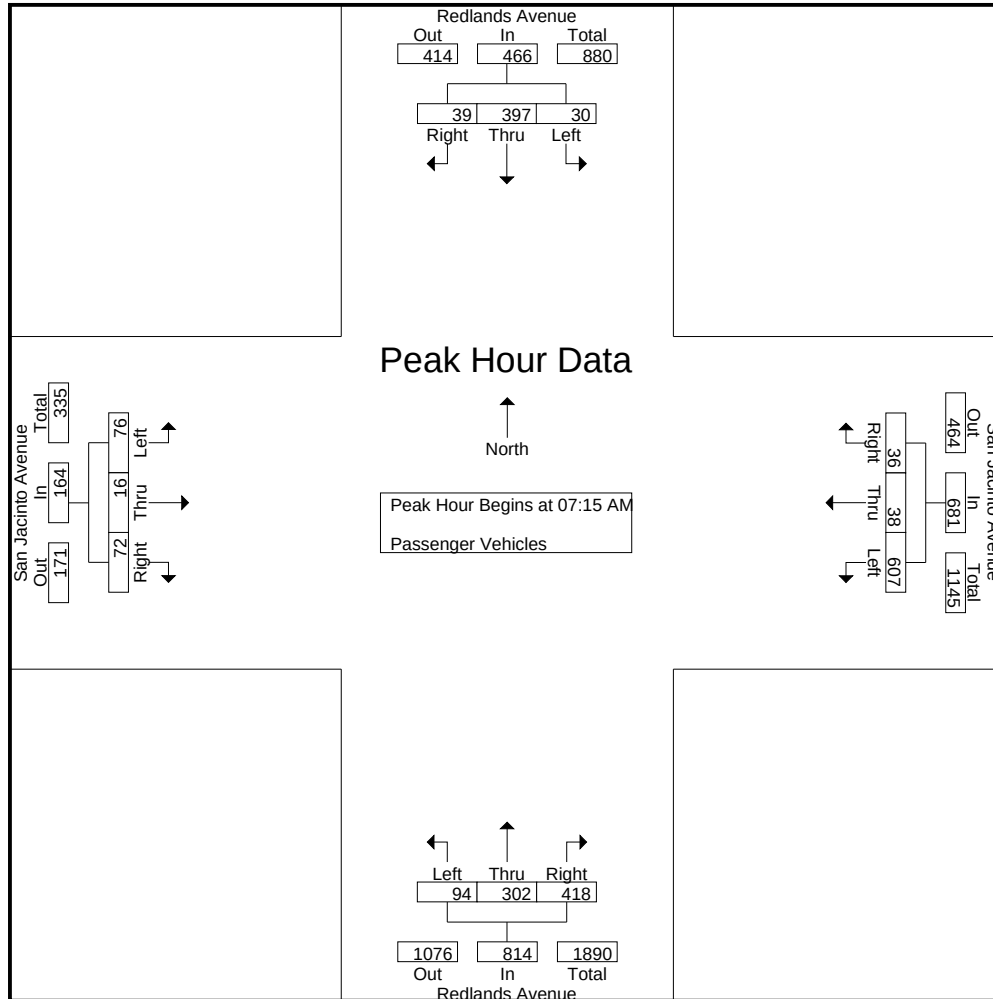
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	58	5	66	93	6	2	101	3	14	57	74	2	2	21	25	266
06:15 AM	3	71	6	80	108	10	4	122	16	19	49	84	3	5	22	30	316
06:30 AM	4	70	3	77	93	6	5	104	9	36	88	133	1	5	26	32	346
06:45 AM	3	68	3	74	97	11	4	112	9	40	74	123	4	2	24	30	339
Total	13	267	17	297	391	33	15	439	37	109	268	414	10	14	93	117	1267
07:00 AM	4	79	7	90	97	5	3	105	12	44	86	142	3	4	10	17	354
07:15 AM	4	98	7	109	137	7	5	149	22	64	84	170	9	4	18	31	459
07:30 AM	5	117	10	132	143	17	7	167	17	55	116	188	18	2	23	43	530
07:45 AM	8	95	8	111	188	5	10	203	37	107	139	283	30	9	13	52	649
Total	21	389	32	442	565	34	25	624	88	270	425	783	60	19	64	143	1992
08:00 AM	13	87	14	114	139	9	14	162	18	76	79	173	19	1	18	38	487
08:15 AM	7	91	11	109	107	7	5	119	16	43	58	117	10	5	29	44	389
08:30 AM	6	102	9	117	103	7	5	115	15	39	67	121	10	4	18	32	385
08:45 AM	3	86	14	103	78	8	1	87	13	42	60	115	10	6	11	27	332
Total	29	366	48	443	427	31	25	483	62	200	264	526	49	16	76	141	1593
Grand Total	63	1022	97	1182	1383	98	65	1546	187	579	957	1723	119	49	233	401	4852
Apprch %	5.3	86.5	8.2		89.5	6.3	4.2		10.9	33.6	55.5		29.7	12.2	58.1		
Total %	1.3	21.1	2	24.4	28.5	2	1.3	31.9	3.9	11.9	19.7	35.5	2.5	1	4.8	8.3	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	4	98	7	109	137	7	5	149	22	64	84	170	9	4	18	31	459
07:30 AM	5	117	10	132	143	17	7	167	17	55	116	188	18	2	23	43	530
07:45 AM	8	95	8	111	188	5	10	203	37	107	139	283	30	9	13	52	649
08:00 AM	13	87	14	114	139	9	14	162	18	76	79	173	19	1	18	38	487
Total Volume	30	397	39	466	607	38	36	681	94	302	418	814	76	16	72	164	2125
% App. Total	6.4	85.2	8.4		89.1	5.6	5.3		11.5	37.1	51.4		46.3	9.8	43.9		
PHF	.577	.848	.696	.883	.807	.559	.643	.839	.635	.706	.752	.719	.633	.444	.783	.788	.819

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	4	98	7	109	137	7	5	149	22	64	84	170	9	4	18	31
+15 mins.	5	117	10	132	143	17	7	167	17	55	116	188	18	2	23	43
+30 mins.	8	95	8	111	188	5	10	203	37	107	139	283	30	9	13	52
+45 mins.	13	87	14	114	139	9	14	162	18	76	79	173	19	1	18	38
Total Volume	30	397	39	466	607	38	36	681	94	302	418	814	76	16	72	164
% App. Total	6.4	85.2	8.4		89.1	5.6	5.3		11.5	37.1	51.4		46.3	9.8	43.9	
PHF	.577	.848	.696	.883	.807	.559	.643	.839	.635	.706	.752	.719	.633	.444	.783	.788

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J AM
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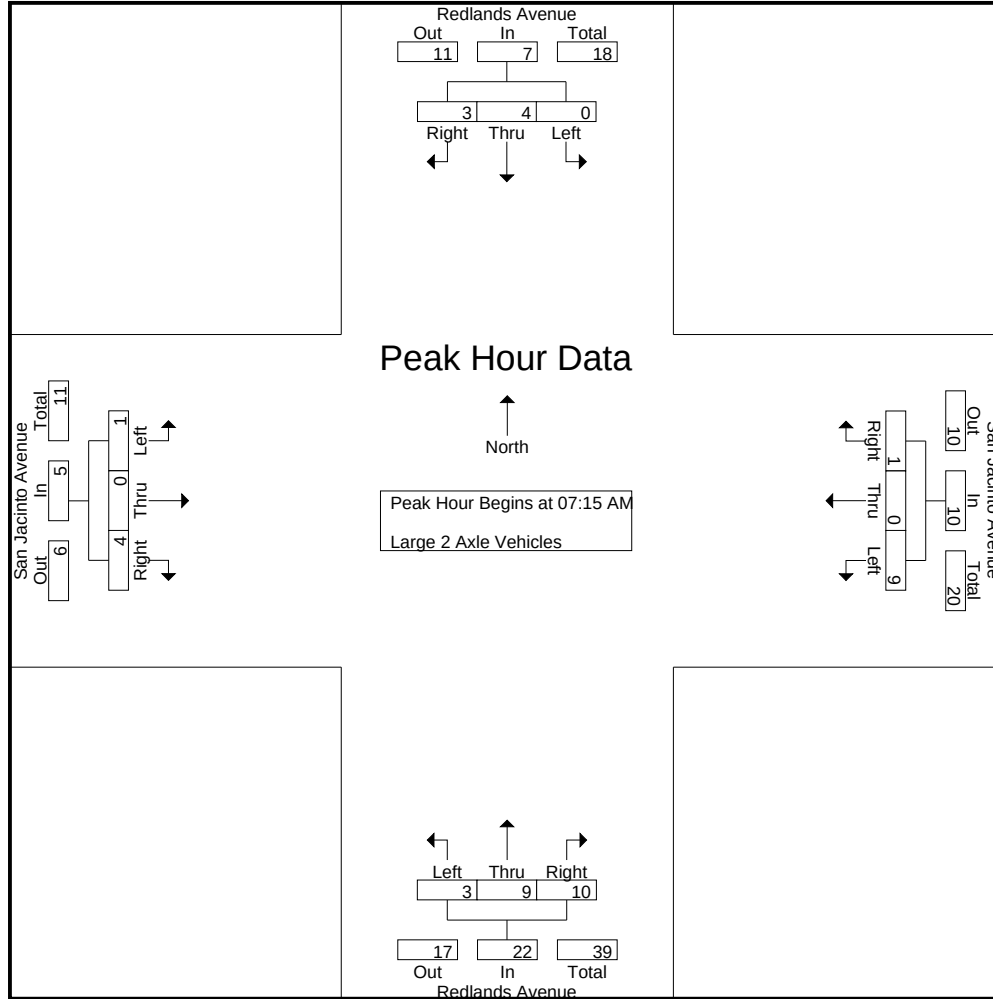
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	2	0	2	1	1	0	2	0	0	4	4	0	0	1	1	9
06:15 AM	0	1	0	1	3	1	0	4	1	1	1	3	0	0	1	1	9
06:30 AM	0	4	0	4	2	1	1	4	1	1	5	7	0	0	0	0	15
06:45 AM	0	2	0	2	0	0	0	0	1	2	5	8	2	0	1	3	13
Total	0	9	0	9	6	3	1	10	3	4	15	22	2	0	3	5	46
07:00 AM	0	0	0	0	1	0	0	1	0	1	4	5	0	0	0	0	6
07:15 AM	0	1	2	3	3	0	0	3	1	2	1	4	1	0	1	2	12
07:30 AM	0	1	1	2	3	0	1	4	2	2	2	6	0	0	0	0	12
07:45 AM	0	0	0	0	2	0	0	2	0	2	4	6	0	0	3	3	11
Total	0	2	3	5	9	0	1	10	3	7	11	21	1	0	4	5	41
08:00 AM	0	2	0	2	1	0	0	1	0	3	3	6	0	0	0	0	9
08:15 AM	0	4	0	4	0	1	1	2	0	1	1	2	0	0	1	1	9
08:30 AM	0	2	0	2	0	0	0	0	0	3	1	4	0	0	0	0	6
08:45 AM	0	2	1	3	1	0	0	1	1	2	1	4	0	0	1	1	9
Total	0	10	1	11	2	1	1	4	1	9	6	16	0	0	2	2	33
Grand Total	0	21	4	25	17	4	3	24	7	20	32	59	3	0	9	12	120
Apprch %	0	84	16		70.8	16.7	12.5		11.9	33.9	54.2		25	0	75		
Total %	0	17.5	3.3	20.8	14.2	3.3	2.5	20	5.8	16.7	26.7	49.2	2.5	0	7.5	10	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	1	2	3	3	0	0	3	1	2	1	4	1	0	1	2	12
07:30 AM	0	1	1	2	3	0	1	4	2	2	2	6	0	0	0	0	12
07:45 AM	0	0	0	0	2	0	0	2	0	2	4	6	0	0	3	3	11
08:00 AM	0	2	0	2	1	0	0	1	0	3	3	6	0	0	0	0	9
Total Volume	0	4	3	7	9	0	1	10	3	9	10	22	1	0	4	5	44
% App. Total	0	57.1	42.9		90	0	10		13.6	40.9	45.5		20	0	80		
PHF	.000	.500	.375	.583	.750	.000	.250	.625	.375	.750	.625	.917	.250	.000	.333	.417	.917

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	2	3	3	0	0	3	1	2	1	4	1	0	1	2
+15 mins.	0	1	1	2	3	0	1	4	2	2	2	6	0	0	0	0
+30 mins.	0	0	0	0	2	0	0	2	0	2	4	6	0	0	3	3
+45 mins.	0	2	0	2	1	0	0	1	0	3	3	6	0	0	0	0
Total Volume	0	4	3	7	9	0	1	10	3	9	10	22	1	0	4	5
% App. Total	0	57.1	42.9		90	0	10		13.6	40.9	45.5		20	0	80	
PHF	.000	.500	.375	.583	.750	.000	.250	.625	.375	.750	.625	.917	.250	.000	.333	.417

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J AM
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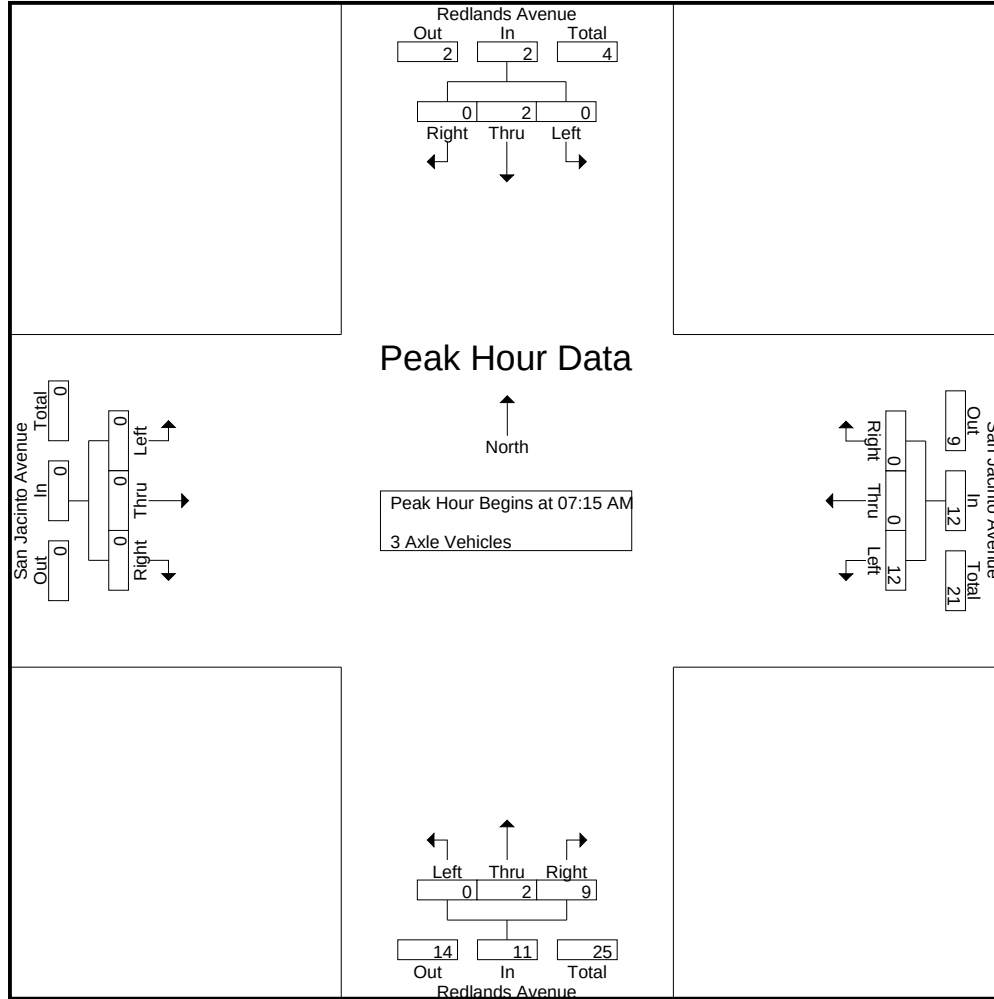
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	1	0	0	1	0	1	2	3	0	0	0	0	4
06:15 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
06:30 AM	0	0	0	0	1	1	0	2	0	0	6	6	0	0	0	0	8
06:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	2	1	0	3	0	1	9	10	0	0	0	0	14
07:00 AM	0	0	0	0	1	2	0	3	0	0	2	2	0	0	0	0	5
07:15 AM	0	2	0	2	1	0	0	1	0	1	1	2	0	0	0	0	5
07:30 AM	0	0	0	0	2	0	0	2	0	0	2	2	0	0	0	0	4
07:45 AM	0	0	0	0	4	0	0	4	0	1	3	4	0	0	0	0	8
Total	0	2	0	2	8	2	0	10	0	2	8	10	0	0	0	0	22
08:00 AM	0	0	0	0	5	0	0	5	0	0	3	3	0	0	0	0	8
08:15 AM	0	0	0	0	1	0	0	1	0	0	5	5	0	0	0	0	6
08:30 AM	0	1	0	1	1	0	0	1	0	0	2	2	0	0	0	0	4
08:45 AM	0	0	0	0	1	0	0	1	0	0	3	3	0	0	0	0	4
Total	0	1	0	1	8	0	0	8	0	0	13	13	0	0	0	0	22
Grand Total	0	4	0	4	18	3	0	21	0	3	30	33	0	0	0	0	58
Apprch %	0	100	0		85.7	14.3	0		0	9.1	90.9		0	0	0		
Total %	0	6.9	0	6.9	31	5.2	0	36.2	0	5.2	51.7	56.9	0	0	0	0	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	1	0	0	1	0	1	1	2	0	0	0	0	5
07:30 AM	0	0	0	0	2	0	0	2	0	0	2	2	0	0	0	0	4
07:45 AM	0	0	0	0	4	0	0	4	0	1	3	4	0	0	0	0	8
08:00 AM	0	0	0	0	5	0	0	5	0	0	3	3	0	0	0	0	8
Total Volume	0	2	0	2	12	0	0	12	0	2	9	11	0	0	0	0	25
% App. Total	0	100	0		100	0	0		0	18.2	81.8		0	0	0		
PHF	.000	.250	.000	.250	.600	.000	.000	.600	.000	.500	.750	.688	.000	.000	.000	.000	.781

City of Perris
N/S: Redlands Avenue
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Weather: Clear

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	1	0	0	1	0	1	1	2	0	0	0	0
+15 mins.	0	0	0	0	2	0	0	2	0	0	2	2	0	0	0	0
+30 mins.	0	0	0	0	4	0	0	4	0	1	3	4	0	0	0	0
+45 mins.	0	0	0	0	5	0	0	5	0	0	3	3	0	0	0	0
Total Volume	0	2	0	2	12	0	0	12	0	2	9	11	0	0	0	0
% App. Total	0	100	0		100	0	0		0	18.2	81.8		0	0	0	
PHF	.000	.250	.000	.250	.600	.000	.000	.600	.000	.500	.750	.688	.000	.000	.000	.000

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City of Perris
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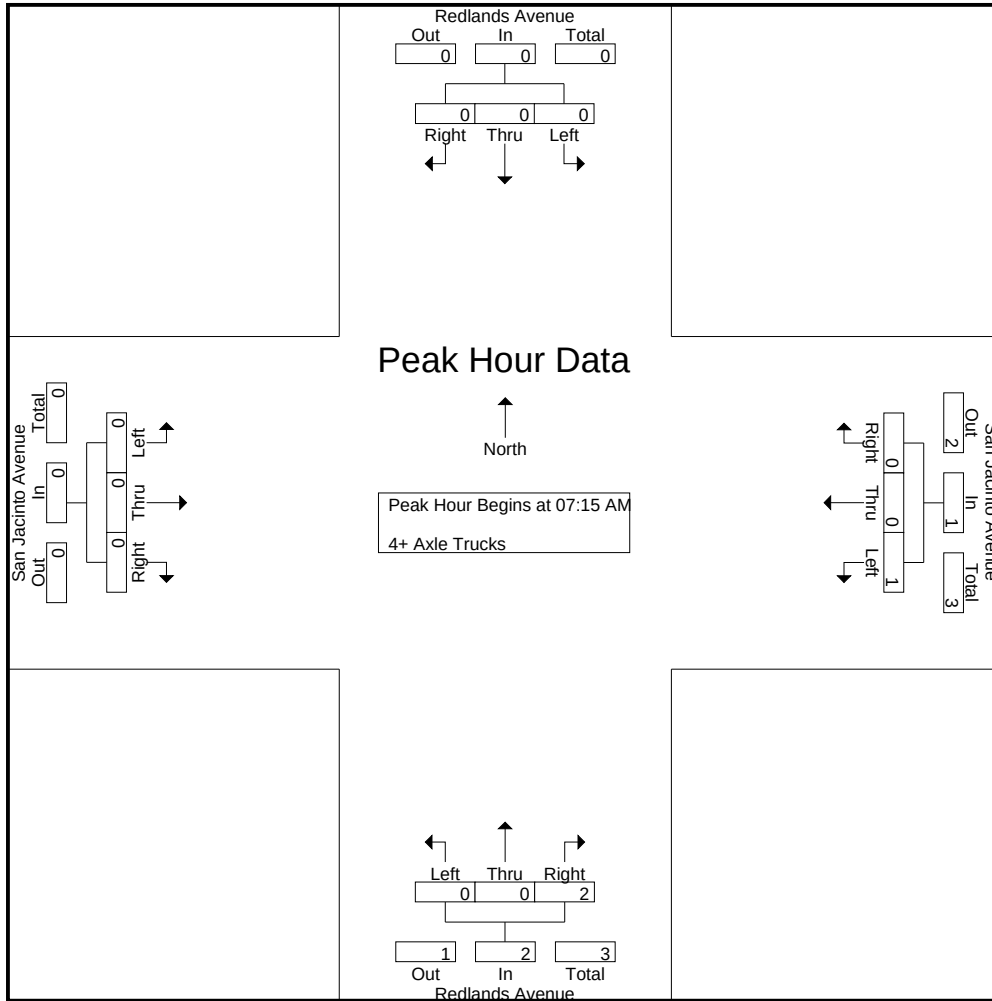
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	2	0	0	2	0	0	1	1	0	0	0	0	3
06:15 AM	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	0	2
06:30 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
06:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	4	0	0	4	0	1	3	4	0	0	0	0	8
07:00 AM	0	1	0	1	2	0	0	2	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
Total	0	1	0	1	3	0	0	3	0	0	1	1	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
Total	0	0	0	0	1	0	0	1	0	0	5	5	0	0	0	0	6
Grand Total	0	1	0	1	8	0	0	8	0	1	9	10	0	0	0	0	19
Apprch %	0	100	0		100	0	0		0	10	90		0	0	0		
Total %	0	5.3	0	5.3	42.1	0	0	42.1	0	5.3	47.4	52.6	0	0	0	0	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total Volume	0	0	0	0	1	0	0	1	0	0	2	2	0	0	0	0	3
% App. Total	0	0	0		100	0	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.500	.500	.000	.000	.000	.000	.375

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
Total Volume	0	0	0	0	1	0	0	1	0	0	2	2	0	0	0	0
% App. Total	0	0	0	0	100	0	0		0	0	100		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.500	.500	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	18	78	16	112	105	4	5	114	28	81	176	285	12	5	29	46	557
03:15 PM	9	83	9	101	118	13	7	138	23	102	148	273	14	6	20	40	552
03:30 PM	8	84	11	103	125	8	13	146	23	90	151	264	13	8	26	47	560
03:45 PM	8	93	14	115	86	13	7	106	37	99	181	317	8	8	25	41	579
Total	43	338	50	431	434	38	32	504	111	372	656	1139	47	27	100	174	2248
04:00 PM	20	99	5	124	111	8	5	124	30	116	148	294	15	13	23	51	593
04:15 PM	13	85	11	109	113	4	7	124	44	95	187	326	12	12	35	59	618
04:30 PM	10	87	9	106	134	7	8	149	24	99	154	277	12	12	20	44	576
04:45 PM	10	81	13	104	104	10	5	119	26	88	169	283	8	7	18	33	539
Total	53	352	38	443	462	29	25	516	124	398	658	1180	47	44	96	187	2326
05:00 PM	19	102	2	123	109	12	8	129	24	98	175	297	11	14	28	53	602
05:15 PM	12	77	9	98	106	7	8	121	25	105	169	299	8	10	25	43	561
05:30 PM	15	85	11	111	113	13	11	137	31	110	167	308	12	10	26	48	604
05:45 PM	12	67	7	86	77	7	6	90	14	78	149	241	12	7	24	43	460
Total	58	331	29	418	405	39	33	477	94	391	660	1145	43	41	103	187	2227
06:00 PM	5	69	9	83	119	9	7	135	23	81	154	258	10	5	15	30	506
06:15 PM	6	74	14	94	95	7	7	109	27	79	146	252	10	7	16	33	488
06:30 PM	10	59	11	80	83	12	3	98	19	70	134	223	10	2	18	30	431
06:45 PM	12	51	7	70	79	10	4	93	21	59	114	194	7	2	23	32	389
Total	33	253	41	327	376	38	21	435	90	289	548	927	37	16	72	125	1814
Grand Total	187	1274	158	1619	1677	144	111	1932	419	1450	2522	4391	174	128	371	673	8615
Apprch %	11.6	78.7	9.8		86.8	7.5	5.7		9.5	33	57.4		25.9	19	55.1		
Total %	2.2	14.8	1.8	18.8	19.5	1.7	1.3	22.4	4.9	16.8	29.3	51	2	1.5	4.3	7.8	
Passenger Vehicles	182	1256	158	1596	1622	143	110	1875	411	1431	2468	4310	172	127	369	668	8449
% Passenger Vehicles	97.3	98.6	100	98.6	96.7	99.3	99.1	97	98.1	98.7	97.9	98.2	98.9	99.2	99.5	99.3	98.1
Large 2 Axle Vehicles	3	11	0	14	28	1	1	30	6	10	30	46	1	0	1	2	92
% Large 2 Axle Vehicles	1.6	0.9	0	0.9	1.7	0.7	0.9	1.6	1.4	0.7	1.2	1	0.6	0	0.3	0.3	1.1
3 Axle Vehicles	1	6	0	7	15	0	0	15	1	7	10	18	0	0	0	0	40
% 3 Axle Vehicles	0.5	0.5	0	0.4	0.9	0	0	0.8	0.2	0.5	0.4	0.4	0	0	0	0	0.5
4+ Axle Trucks	1	1	0	2	12	0	0	12	1	2	14	17	1	1	1	3	34
% 4+ Axle Trucks	0.5	0.1	0	0.1	0.7	0	0	0.6	0.2	0.1	0.6	0.4	0.6	0.8	0.3	0.4	0.4

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	8	93	14	115	86	13	7	106	37	99	181	317	8	8	25	41	579
04:00 PM	20	99	5	124	111	8	5	124	30	116	148	294	15	13	23	51	593
04:15 PM	13	85	11	109	113	4	7	124	44	95	187	326	12	12	35	59	618
04:30 PM	10	87	9	106	134	7	8	149	24	99	154	277	12	12	20	44	576
Total Volume	51	364	39	454	444	32	27	503	135	409	670	1214	47	45	103	195	2366
% App. Total	11.2	80.2	8.6		88.3	6.4	5.4		11.1	33.7	55.2		24.1	23.1	52.8		
PHF	.638	.919	.696	.915	.828	.615	.844	.844	.767	.881	.896	.931	.783	.865	.736	.826	.957

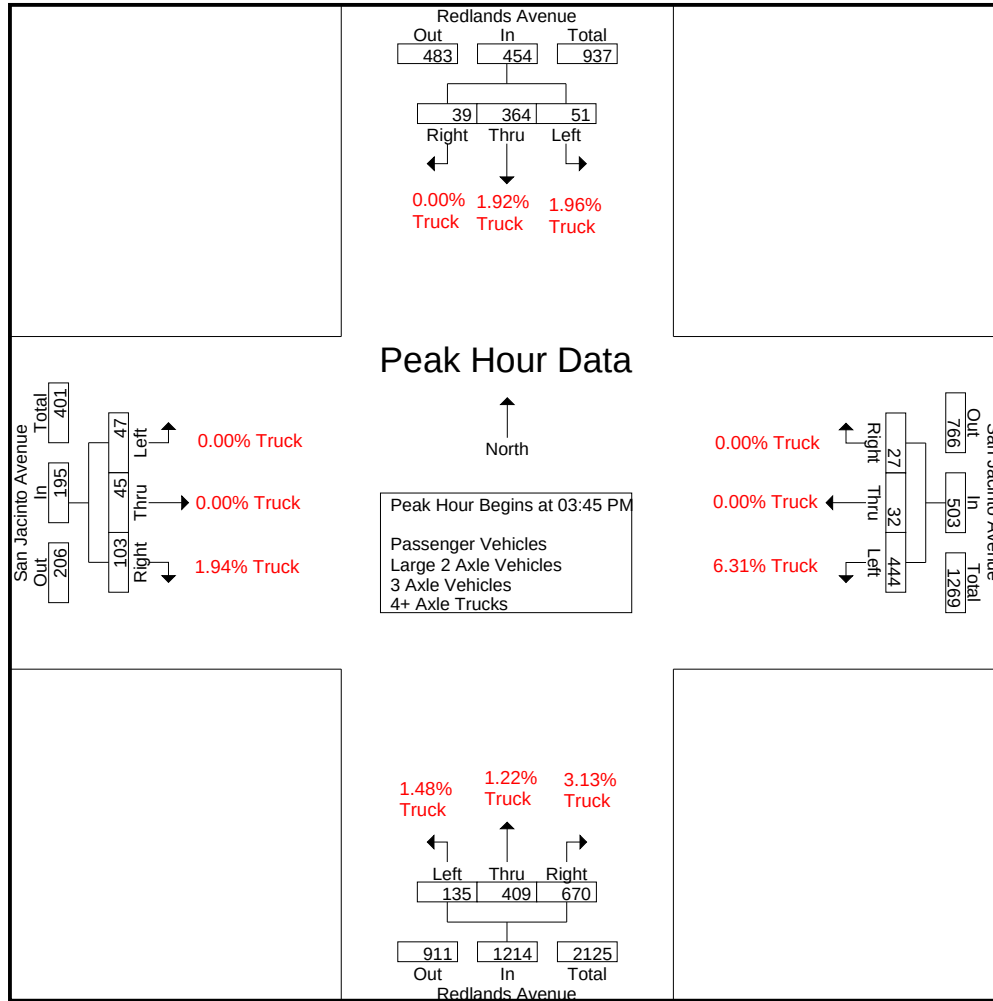
City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
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1.39% Truck

1.00% Truck

3.94% Truck



Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

3.06% Truck

	03:45 PM				04:15 PM				03:45 PM				03:30 PM			
+0 mins.	8	93	14	115	113	4	7	124	37	99	181	317	13	8	26	47
+15 mins.	20	99	5	124	134	7	8	149	30	116	148	294	8	8	25	41
+30 mins.	13	85	11	109	104	10	5	119	44	95	187	326	15	13	23	51
+45 mins.	10	87	9	106	109	12	8	129	24	99	154	277	12	12	35	59
Total Volume	51	364	39	454	460	33	28	521	135	409	670	1214	48	41	109	198
% App. Total	11.2	80.2	8.6		88.3	6.3	5.4		11.1	33.7	55.2		24.2	20.7	55.1	
PHF	.638	.919	.696	.915	.858	.688	.875	.874	.767	.881	.896	.931	.800	.788	.779	.839

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
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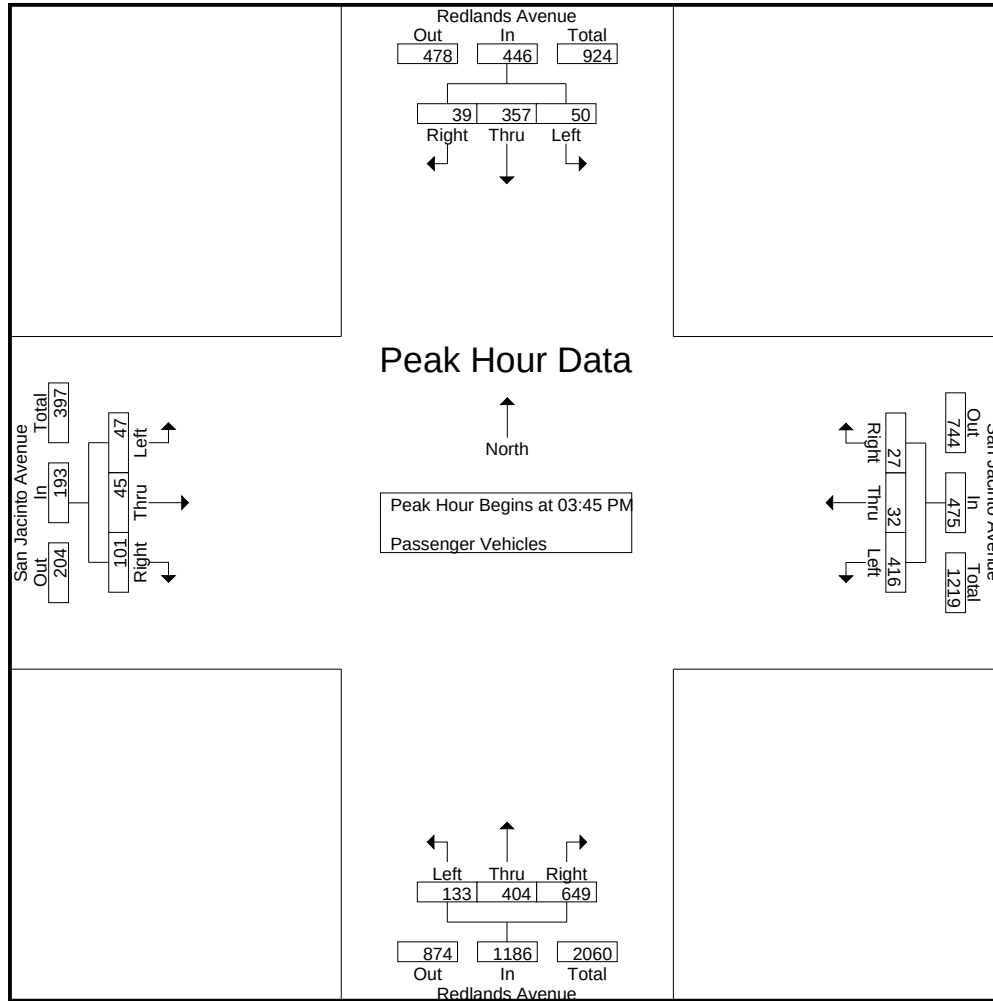
Groups Printed- Passenger Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	15	75	16	106	97	4	5	106	27	79	169	275	11	5	29	45	532
03:15 PM	9	82	9	100	112	13	7	132	22	102	144	268	13	5	20	38	538
03:30 PM	7	83	11	101	121	8	12	141	23	88	146	257	13	8	26	47	546
03:45 PM	8	91	14	113	81	13	7	101	37	96	174	307	8	8	25	41	562
Total	39	331	50	420	411	38	31	480	109	365	633	1107	45	26	100	171	2178
04:00 PM	20	99	5	124	102	8	5	115	30	115	143	288	15	13	23	51	578
04:15 PM	13	84	11	108	103	4	7	114	42	95	182	319	12	12	34	58	599
04:30 PM	9	83	9	101	130	7	8	145	24	98	150	272	12	12	19	43	561
04:45 PM	10	80	13	103	102	10	5	117	25	87	168	280	8	7	18	33	533
Total	52	346	38	436	437	29	25	491	121	395	643	1159	47	44	94	185	2271
05:00 PM	19	100	2	121	107	12	8	127	24	98	174	296	11	14	28	53	597
05:15 PM	12	77	9	98	106	7	8	121	25	103	166	294	8	10	25	43	556
05:30 PM	15	85	11	111	112	13	11	136	28	107	163	298	12	10	26	48	593
05:45 PM	12	66	7	85	75	6	6	87	14	77	148	239	12	7	24	43	454
Total	58	328	29	415	400	38	33	471	91	385	651	1127	43	41	103	187	2200
06:00 PM	5	68	9	82	119	9	7	135	23	79	154	256	10	5	15	30	503
06:15 PM	6	74	14	94	94	7	7	108	27	78	142	247	10	7	16	33	482
06:30 PM	10	58	11	79	83	12	3	98	19	70	132	221	10	2	18	30	428
06:45 PM	12	51	7	70	78	10	4	92	21	59	113	193	7	2	23	32	387
Total	33	251	41	325	374	38	21	433	90	286	541	917	37	16	72	125	1800
Grand Total	182	1256	158	1596	1622	143	110	1875	411	1431	2468	4310	172	127	369	668	8449
Apprch %	11.4	78.7	9.9		86.5	7.6	5.9		9.5	33.2	57.3		25.7	19	55.2		
Total %	2.2	14.9	1.9	18.9	19.2	1.7	1.3	22.2	4.9	16.9	29.2	51	2	1.5	4.4	7.9	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	8	91	14	113	81	13	7	101	37	96	174	307	8	8	25	41	562
04:00 PM	20	99	5	124	102	8	5	115	30	115	143	288	15	13	23	51	578
04:15 PM	13	84	11	108	103	4	7	114	42	95	182	319	12	12	34	58	599
04:30 PM	9	83	9	101	130	7	8	145	24	98	150	272	12	12	19	43	561
Total Volume	50	357	39	446	416	32	27	475	133	404	649	1186	47	45	101	193	2300
% App. Total	11.2	80	8.7		87.6	6.7	5.7		11.2	34.1	54.7		24.4	23.3	52.3		
PHF	.625	.902	.696	.899	.800	.615	.844	.819	.792	.878	.891	.929	.783	.865	.743	.832	.960

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
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Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	8	91	14	113	81	13	7	101	37	96	174	307	8	8	25	41
+15 mins.	20	99	5	124	102	8	5	115	30	115	143	288	15	13	23	51
+30 mins.	13	84	11	108	103	4	7	114	42	95	182	319	12	12	34	58
+45 mins.	9	83	9	101	130	7	8	145	24	98	150	272	12	12	19	43
Total Volume	50	357	39	446	416	32	27	475	133	404	649	1186	47	45	101	193
% App. Total	11.2	80	8.7		87.6	6.7	5.7		11.2	34.1	54.7		24.4	23.3	52.3	
PHF	.625	.902	.696	.899	.800	.615	.844	.819	.792	.878	.891	.929	.783	.865	.743	.832

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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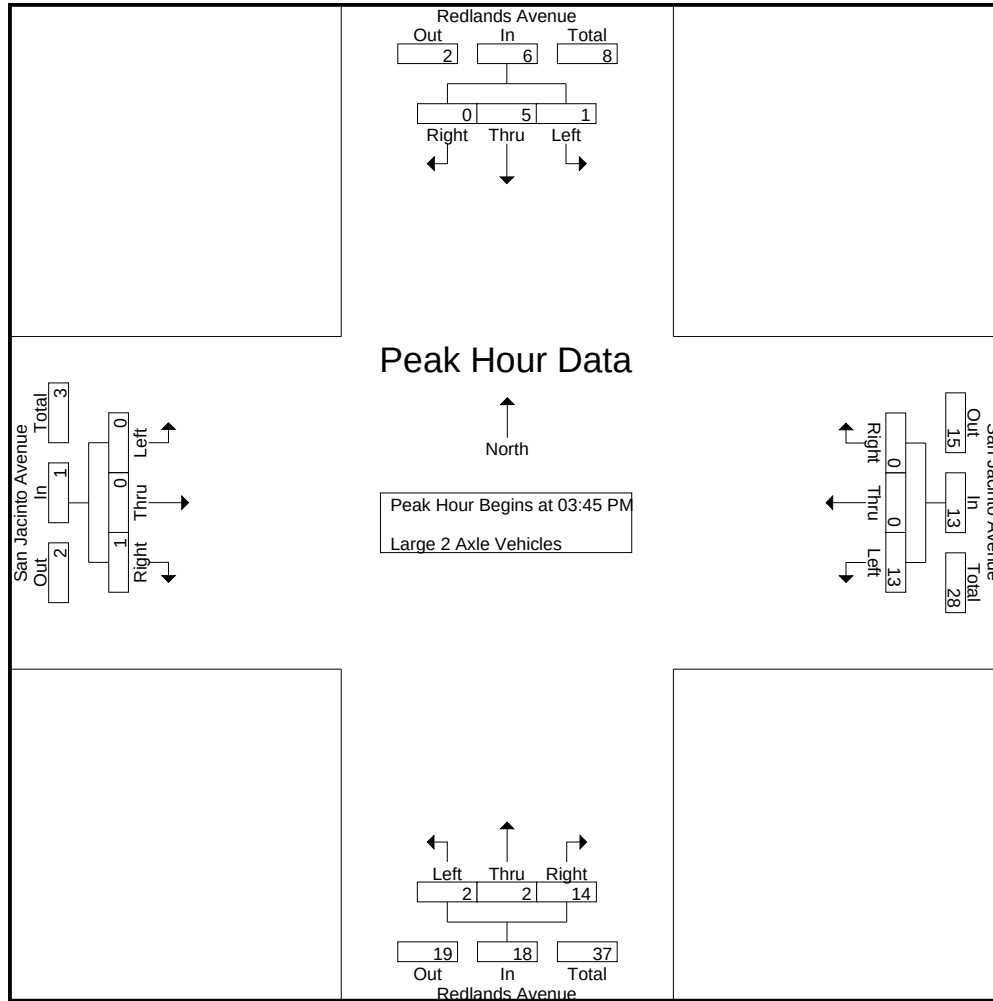
Groups Printed- Large 2 Axle Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	2	0	3	3	0	0	3	0	0	2	2	0	0	0	0	8
03:15 PM	0	0	0	0	3	0	0	3	1	0	2	3	1	0	0	1	7
03:30 PM	1	1	0	2	2	0	1	3	0	0	4	4	0	0	0	0	9
03:45 PM	0	2	0	2	2	0	0	2	0	0	4	4	0	0	0	0	8
Total	2	5	0	7	10	0	1	11	1	0	12	13	1	0	0	1	32
04:00 PM	0	0	0	0	6	0	0	6	0	1	1	2	0	0	0	0	8
04:15 PM	0	1	0	1	3	0	0	3	2	0	5	7	0	0	0	0	11
04:30 PM	1	2	0	3	2	0	0	2	0	1	4	5	0	0	1	1	11
04:45 PM	0	1	0	1	2	0	0	2	1	1	0	2	0	0	0	0	5
Total	1	4	0	5	13	0	0	13	3	3	10	16	0	0	1	1	35
05:00 PM	0	1	0	1	1	0	0	1	0	0	1	1	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:30 PM	0	0	0	0	1	0	0	1	2	1	4	7	0	0	0	0	8
05:45 PM	0	0	0	0	2	1	0	3	0	1	0	1	0	0	0	0	4
Total	0	1	0	1	4	1	0	5	2	4	5	11	0	0	0	0	17
06:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
06:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3
06:30 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
06:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	1	0	0	1	0	3	3	6	0	0	0	0	8
Grand Total	3	11	0	14	28	1	1	30	6	10	30	46	1	0	1	2	92
Apprch %	21.4	78.6	0		93.3	3.3	3.3		13	21.7	65.2		50	0	50		
Total %	3.3	12	0	15.2	30.4	1.1	1.1	32.6	6.5	10.9	32.6	50	1.1	0	1.1	2.2	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	2	0	2	2	0	0	2	0	0	4	4	0	0	0	0	8
04:00 PM	0	0	0	0	6	0	0	6	0	1	1	2	0	0	0	0	8
04:15 PM	0	1	0	1	3	0	0	3	2	0	5	7	0	0	0	0	11
04:30 PM	1	2	0	3	2	0	0	2	0	1	4	5	0	0	1	1	11
Total Volume	1	5	0	6	13	0	0	13	2	2	14	18	0	0	1	1	38
% App. Total	16.7	83.3	0		100	0	0		11.1	11.1	77.8		0	0	100		
PHF	.250	.625	.000	.500	.542	.000	.000	.542	.250	.500	.700	.643	.000	.000	.250	.250	.864

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
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Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	2	0	2	2	0	0	2	0	0	4	4	0	0	0	0
+15 mins.	0	0	0	0	6	0	0	6	0	1	1	2	0	0	0	0
+30 mins.	0	1	0	1	3	0	0	3	2	0	5	7	0	0	0	0
+45 mins.	1	2	0	3	2	0	0	2	0	1	4	5	0	0	1	1
Total Volume	1	5	0	6	13	0	0	13	2	2	14	18	0	0	1	1
% App. Total	16.7	83.3	0		100	0	0		11.1	11.1	77.8		0	0	100	
PHF	.250	.625	.000	.500	.542	.000	.000	.542	.250	.500	.700	.643	.000	.000	.250	.250

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
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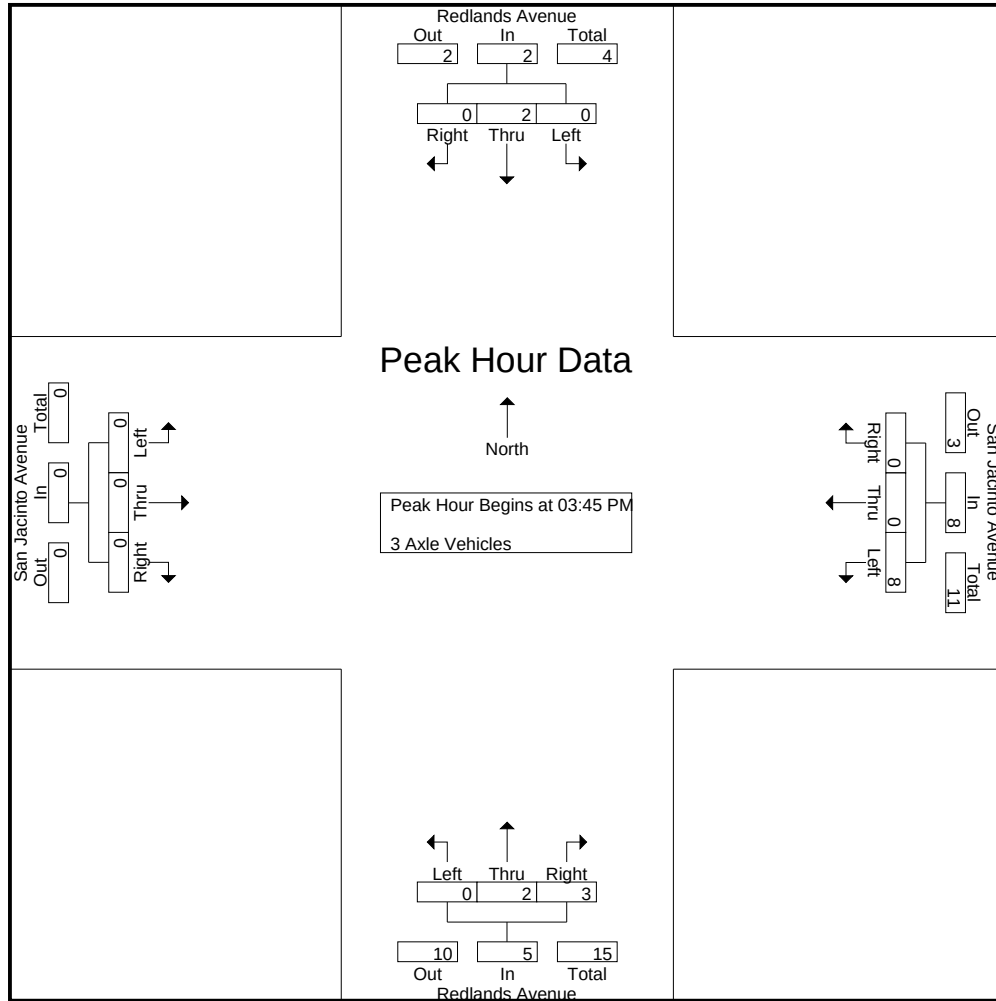
Groups Printed- 3 Axle Vehicles

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	1	0	2	4	0	0	4	0	1	1	2	0	0	0	0	8
03:15 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
03:30 PM	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	3
03:45 PM	0	0	0	0	2	0	0	2	0	2	2	4	0	0	0	0	6
Total	1	1	0	2	7	0	0	7	0	5	5	10	0	0	0	0	19
04:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
04:15 PM	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	2	0	2	6	0	0	6	0	0	2	2	0	0	0	0	10
05:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	3
05:30 PM	0	0	0	0	0	0	0	0	1	2	0	3	0	0	0	0	3
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	1	0	0	1	1	2	3	6	0	0	0	0	9
06:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
Grand Total	1	6	0	7	15	0	0	15	1	7	10	18	0	0	0	0	40
Apprch %	14.3	85.7	0		100	0	0		5.6	38.9	55.6		0	0	0		
Total %	2.5	15	0	17.5	37.5	0	0	37.5	2.5	17.5	25	45	0	0	0	0	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	0	0	0	2	0	0	2	0	2	2	4	0	0	0	0	6
04:00 PM	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
04:15 PM	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	4
04:30 PM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
Total Volume	0	2	0	2	8	0	0	8	0	2	3	5	0	0	0	0	15
% App. Total	0	100	0		100	0	0		0	40	60		0	0	0		
PHF	.000	.250	.000	.250	.500	.000	.000	.500	.000	.250	.375	.313	.000	.000	.000	.000	.625

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	0	0	0	2	0	0	2	0	2	2	4	0	0	0	0
+15 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0
+30 mins.	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	8	0	0	8	0	2	3	5	0	0	0	0
% App. Total	0	100	0		100	0	0		0	40	60		0	0	0	
PHF	.000	.250	.000	.250	.500	.000	.000	.500	.000	.250	.375	.313	.000	.000	.000	.000

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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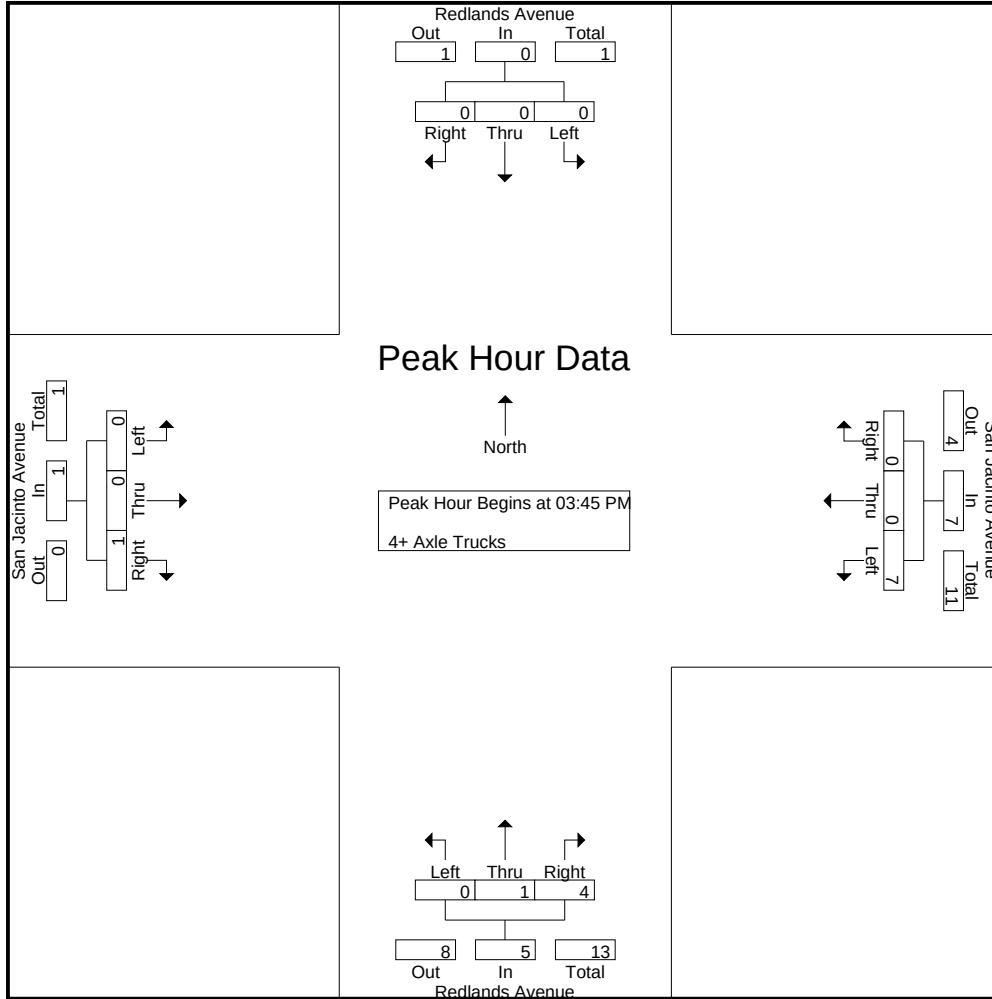
Groups Printed- 4+ Axle Trucks

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	0	0	1	1	0	0	1	1	1	4	6	1	0	0	1	9
03:15 PM	0	1	0	1	2	0	0	2	0	0	1	1	0	1	0	1	5
03:30 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	1	0	0	1	0	1	1	2	0	0	0	0	3
Total	1	1	0	2	6	0	0	6	1	2	6	9	1	1	0	2	19
04:00 PM	0	0	0	0	2	0	0	2	0	0	3	3	0	0	0	0	5
04:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	1	4
04:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	6	0	0	6	0	0	3	3	0	0	1	1	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	4	4	0	0	0	0	4
Grand Total	1	1	0	2	12	0	0	12	1	2	14	17	1	1	1	3	34
Apprch %	50	50	0		100	0	0		5.9	11.8	82.4		33.3	33.3	33.3		
Total %	2.9	2.9	0	5.9	35.3	0	0	35.3	2.9	5.9	41.2	50	2.9	2.9	2.9	8.8	

	Redlands Avenue Southbound				San Jacinto Avenue Westbound				Redlands Avenue Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	0	0	0	1	0	0	1	0	1	1	2	0	0	0	0	3
04:00 PM	0	0	0	0	2	0	0	2	0	0	3	3	0	0	0	0	5
04:15 PM	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	1	4
04:30 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	7	0	0	7	0	1	4	5	0	0	1	1	13
% App. Total	0	0	0		100	0	0		0	20	80		0	0	100		
PHF	.000	.000	.000	.000	.583	.000	.000	.583	.000	.250	.333	.417	.000	.000	.250	.250	.650

City of Perris
N/S: Redlands Avenue
E/W: San Jacinto Avenue
Weather: Clear

File Name : 04_PER_Red_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 03:45 PM to 04:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:45 PM				03:45 PM				03:45 PM			
+0 mins.	0	0	0	0	1	0	0	1	0	1	1	2	0	0	0	0
+15 mins.	0	0	0	0	2	0	0	2	0	0	3	3	0	0	0	0
+30 mins.	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	1
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	7	0	0	7	0	1	4	5	0	0	1	1
% App. Total	0	0	0	0	100	0	0		0	20	80		0	0	100	
PHF	.000	.000	.000	.000	.583	.000	.000	.583	.000	.250	.333	.417	.000	.000	.250	.250

Location: Perris
 N/S: Redlands Avenue
 E/W: San Jacinto Avenue



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Redlands Avenue	East Leg San Jacinto Avenue	South Leg Redlands Avenue	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	6:00 AM	0	0	0	1	1
	6:15 AM	1	0	0	0	1
	6:30 AM	1	0	0	1	2
	6:45 AM	1	0	0	1	2
	7:00 AM	0	0	0	0	0
	7:15 AM	1	0	0	1	2
	7:30 AM	1	0	0	1	2
	7:45 AM	0	1	0	0	1
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	1	0	0	3	4
	8:45 AM	0	0	0	0	0
	TOTAL VOLUMES:	6	1	0	8	15

		North Leg Redlands Avenue	East Leg San Jacinto Avenue	South Leg Redlands Avenue	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	3:00 PM	0	0	0	0	0
	3:15 PM	0	0	0	1	1
	3:30 PM	0	0	0	1	1
	3:45 PM	1	0	0	1	2
	4:00 PM	0	0	0	0	0
	4:15 PM	1	0	0	3	4
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	1	0	0	3	4
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	6:00 PM	0	0	0	0	0
	6:15 PM	0	0	0	0	0
	6:30 PM	0	0	0	0	0
	6:45 PM	0	0	0	2	2
	TOTAL VOLUMES:	3	0	0	11	14

Location: Perris
 N/S: Redlands Avenue
 E/W: San Jacinto Avenue



Date: 6/8/2023
 Day: Thursday

BICYCLES

	Southbound Redlands Avenue			Westbound San Jacinto Avenue			Northbound Redlands Avenue			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
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 Redlands Avenue			Westbound San Jacinto Avenue			Northbound Redlands Avenue			Eastbound San Jacinto Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	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
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	1	0	2

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	0	21	22	0	62	0	62	0	0	0	0	14	51	0	65	149
06:15 AM	3	0	30	33	0	76	1	77	0	0	0	0	26	33	0	59	169
06:30 AM	2	0	38	40	0	63	2	65	0	0	0	0	39	60	1	100	205
06:45 AM	2	0	30	32	0	62	1	63	1	0	0	1	31	49	0	80	176
Total	8	0	119	127	0	263	4	267	1	0	0	1	110	193	1	304	699
07:00 AM	1	0	22	23	0	71	7	78	0	0	0	0	41	48	0	89	190
07:15 AM	2	0	46	48	0	86	3	89	0	0	0	0	47	46	0	93	230
07:30 AM	5	0	66	71	0	105	12	117	0	0	0	0	39	60	0	99	287
07:45 AM	4	0	75	79	0	80	14	94	0	0	0	0	64	58	0	122	295
Total	12	0	209	221	0	342	36	378	0	0	0	0	191	212	0	403	1002
08:00 AM	3	0	60	63	0	90	5	95	0	0	0	0	21	61	0	82	240
08:15 AM	0	0	30	30	0	77	1	78	0	0	0	0	14	50	0	64	172
08:30 AM	1	0	27	28	0	66	4	70	0	0	0	0	18	54	0	72	170
08:45 AM	1	0	24	25	0	53	2	55	0	0	0	0	16	44	0	60	140
Total	5	0	141	146	0	286	12	298	0	0	0	0	69	209	0	278	722
Grand Total	25	0	469	494	0	891	52	943	1	0	0	1	370	614	1	985	2423
Apprch %	5.1	0	94.9		0	94.5	5.5		100	0	0		37.6	62.3	0.1		
Total %	1	0	19.4	20.4	0	36.8	2.1	38.9	0	0	0	0	15.3	25.3	0	40.7	
Passenger Vehicles	24	0	459	483	0	843	52	895	0	0	0	0	357	546	0	903	2281
% Passenger Vehicles	96	0	97.9	97.8	0	94.6	100	94.9	0	0	0	0	96.5	88.9	0	91.7	94.1
Large 2 Axle Vehicles	1	0	9	10	0	22	0	22	0	0	0	0	10	32	0	42	74
% Large 2 Axle Vehicles	4	0	1.9	2	0	2.5	0	2.3	0	0	0	0	2.7	5.2	0	4.3	3.1
3 Axle Vehicles	0	0	1	1	0	20	0	20	0	0	0	0	1	29	1	31	52
% 3 Axle Vehicles	0	0	0.2	0.2	0	2.2	0	2.1	0	0	0	0	0.3	4.7	100	3.1	2.1
4+ Axle Trucks	0	0	0	0	0	6	0	6	1	0	0	1	2	7	0	9	16
% 4+ Axle Trucks	0	0	0	0	0	0.7	0	0.6	100	0	0	100	0.5	1.1	0	0.9	0.7

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	0	46	48	0	86	3	89	0	0	0	0	47	46	0	93	230
07:30 AM	5	0	66	71	0	105	12	117	0	0	0	0	39	60	0	99	287
07:45 AM	4	0	75	79	0	80	14	94	0	0	0	0	64	58	0	122	295
08:00 AM	3	0	60	63	0	90	5	95	0	0	0	0	21	61	0	82	240
Total Volume	14	0	247	261	0	361	34	395	0	0	0	0	171	225	0	396	1052
% App. Total	5.4	0	94.6		0	91.4	8.6		0	0	0		43.2	56.8	0		
PHF	.700	.000	.823	.826	.000	.860	.607	.844	.000	.000	.000	.000	.668	.922	.000	.811	.892

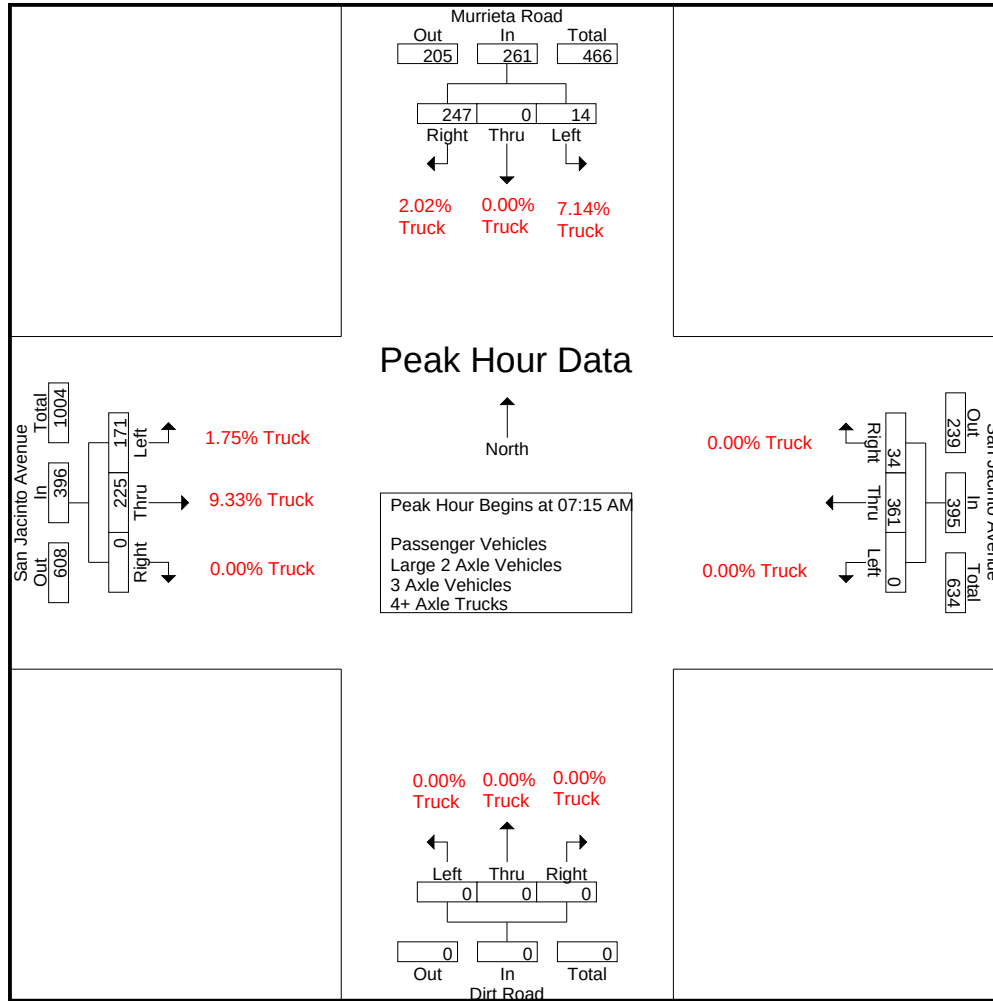
City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2

1.93% Truck

4.88% Truck

6.63% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 0.00% Truck

	07:15 AM				07:15 AM				06:00 AM				07:00 AM			
+0 mins.	2	0	46	48	0	86	3	89	0	0	0	0	41	48	0	89
+15 mins.	5	0	66	71	0	105	12	117	0	0	0	0	47	46	0	93
+30 mins.	4	0	75	79	0	80	14	94	0	0	0	0	39	60	0	99
+45 mins.	3	0	60	63	0	90	5	95	1	0	0	1	64	58	0	122
Total Volume	14	0	247	261	0	361	34	395	1	0	0	1	191	212	0	403
% App. Total	5.4	0	94.6		0	91.4	8.6		100	0	0		47.4	52.6	0	
PHF	.700	.000	.823	.826	.000	.860	.607	.844	.250	.000	.000	.250	.746	.883	.000	.826

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
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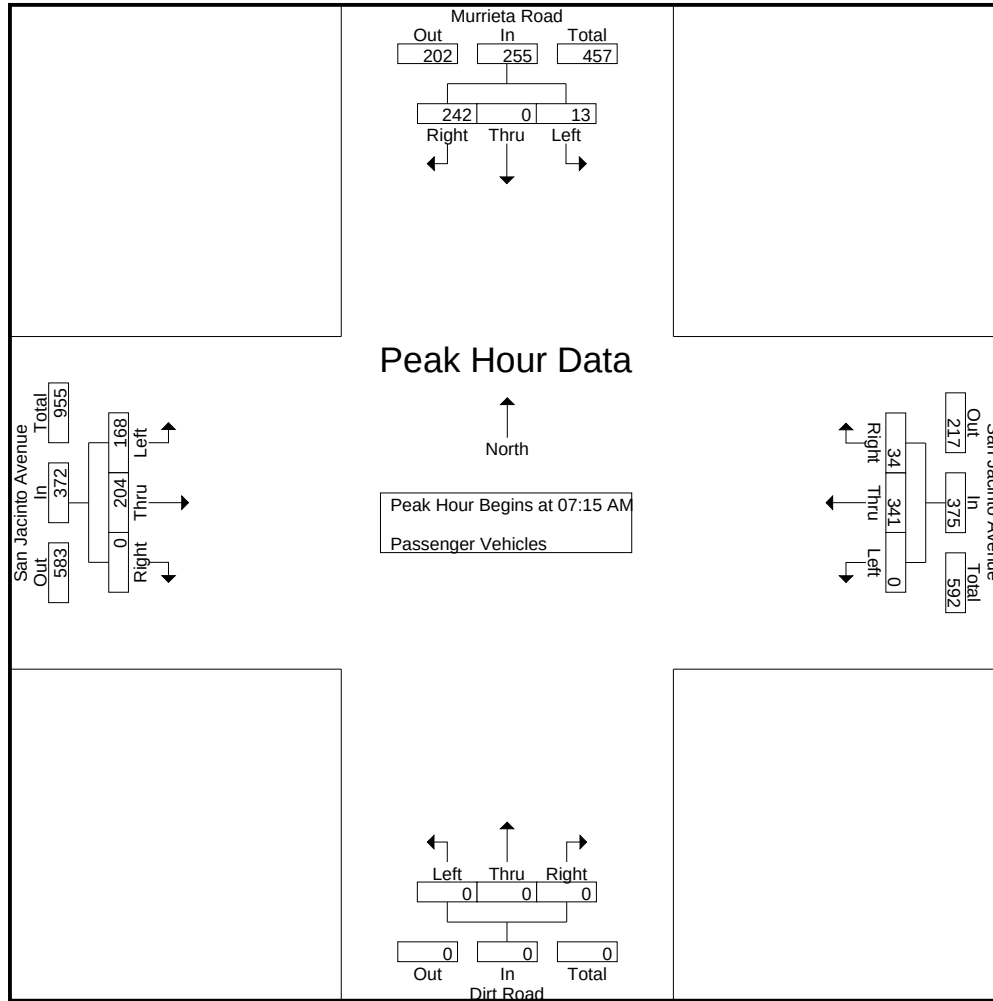
Groups Printed- Passenger Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	0	21	22	0	56	0	56	0	0	0	0	13	44	0	57	135
06:15 AM	3	0	28	31	0	73	1	74	0	0	0	0	26	30	0	56	161
06:30 AM	2	0	35	37	0	57	2	59	0	0	0	0	37	49	0	86	182
06:45 AM	2	0	30	32	0	60	1	61	0	0	0	0	26	45	0	71	164
Total	8	0	114	122	0	246	4	250	0	0	0	0	102	168	0	270	642
07:00 AM	1	0	22	23	0	67	7	74	0	0	0	0	40	42	0	82	179
07:15 AM	2	0	44	46	0	85	3	88	0	0	0	0	46	44	0	90	224
07:30 AM	4	0	65	69	0	100	12	112	0	0	0	0	39	55	0	94	275
07:45 AM	4	0	74	78	0	70	14	84	0	0	0	0	63	52	0	115	277
Total	11	0	205	216	0	322	36	358	0	0	0	0	188	193	0	381	955
08:00 AM	3	0	59	62	0	86	5	91	0	0	0	0	20	53	0	73	226
08:15 AM	0	0	30	30	0	73	1	74	0	0	0	0	13	45	0	58	162
08:30 AM	1	0	27	28	0	65	4	69	0	0	0	0	18	49	0	67	164
08:45 AM	1	0	24	25	0	51	2	53	0	0	0	0	16	38	0	54	132
Total	5	0	140	145	0	275	12	287	0	0	0	0	67	185	0	252	684
Grand Total	24	0	459	483	0	843	52	895	0	0	0	0	357	546	0	903	2281
Apprch %	5	0	95		0	94.2	5.8		0	0	0		39.5	60.5	0		
Total %	1.1	0	20.1	21.2	0	37	2.3	39.2	0	0	0	0	15.7	23.9	0	39.6	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	2	0	44	46	0	85	3	88	0	0	0	0	46	44	0	90	224
07:30 AM	4	0	65	69	0	100	12	112	0	0	0	0	39	55	0	94	275
07:45 AM	4	0	74	78	0	70	14	84	0	0	0	0	63	52	0	115	277
08:00 AM	3	0	59	62	0	86	5	91	0	0	0	0	20	53	0	73	226
Total Volume	13	0	242	255	0	341	34	375	0	0	0	0	168	204	0	372	1002
% App. Total	5.1	0	94.9		0	90.9	9.1		0	0	0		45.2	54.8	0		
PHF	.813	.000	.818	.817	.000	.853	.607	.837	.000	.000	.000	.000	.667	.927	.000	.809	.904

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	2	0	44	46	0	85	3	88	0	0	0	0	46	44	0	90
+15 mins.	4	0	65	69	0	100	12	112	0	0	0	0	39	55	0	94
+30 mins.	4	0	74	78	0	70	14	84	0	0	0	0	63	52	0	115
+45 mins.	3	0	59	62	0	86	5	91	0	0	0	0	20	53	0	73
Total Volume	13	0	242	255	0	341	34	375	0	0	0	0	168	204	0	372
% App. Total	5.1	0	94.9		0	90.9	9.1		0	0	0		45.2	54.8	0	
PHF	.813	.000	.818	.817	.000	.853	.607	.837	.000	.000	.000	.000	.667	.927	.000	.809

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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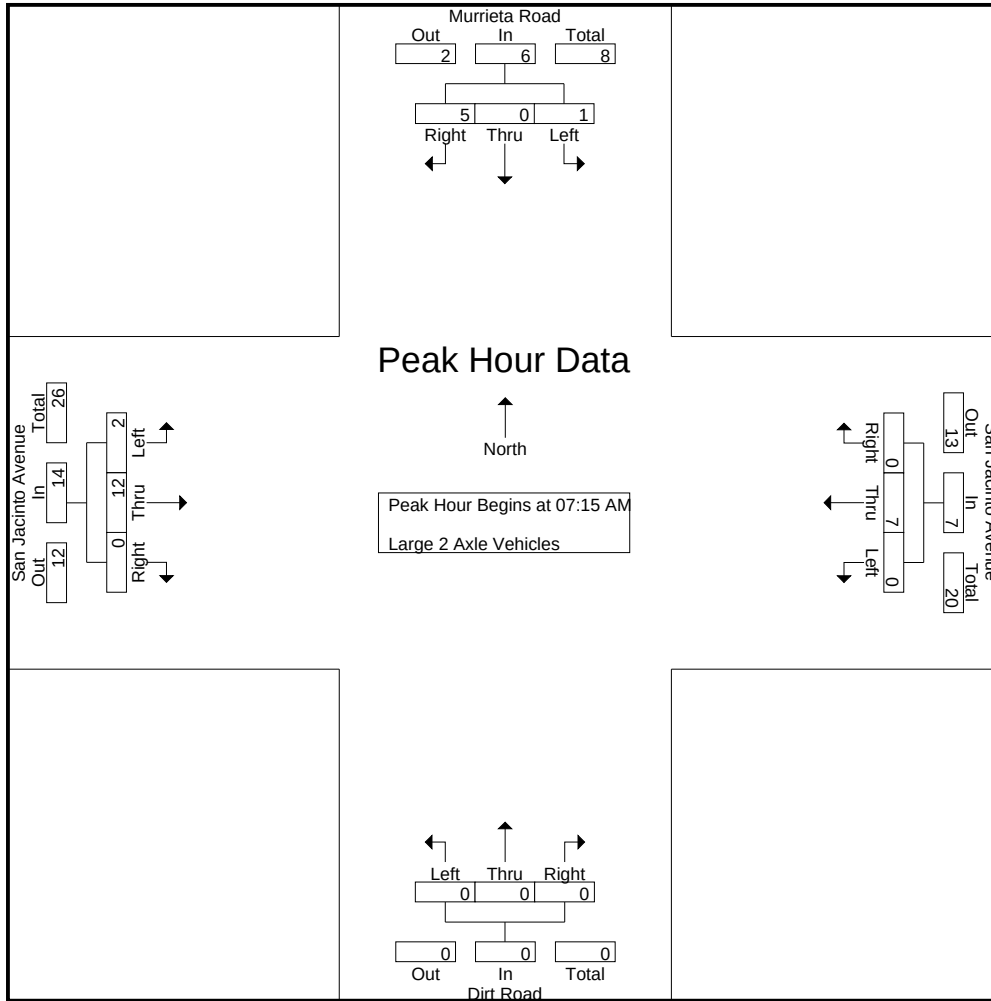
Groups Printed- Large 2 Axle Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
06:15 AM	0	0	2	2	0	2	0	2	0	0	0	0	0	1	0	1	5
06:30 AM	0	0	2	2	0	4	0	4	0	0	0	0	2	4	0	6	12
06:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	5	3	0	8	9
Total	0	0	4	4	0	11	0	11	0	0	0	0	7	13	0	20	35
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	4	0	5	6
07:15 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	1	0	2	4
07:30 AM	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4	9
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	1	2	0	3	8
Total	1	0	4	5	0	8	0	8	0	0	0	0	3	11	0	14	27
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5	6
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	1	1	0	3	0	3	0	0	0	0	0	8	0	8	12
Grand Total	1	0	9	10	0	22	0	22	0	0	0	0	10	32	0	42	74
Apprch %	10	0	90		0	100	0		0	0	0		23.8	76.2	0		
Total %	1.4	0	12.2	13.5	0	29.7	0	29.7	0	0	0	0	13.5	43.2	0	56.8	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	2	2	0	0	0	0	0	0	0	0	1	1	0	2	4
07:30 AM	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4	9
07:45 AM	0	0	1	1	0	4	0	4	0	0	0	0	1	2	0	3	8
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5	6
Total Volume	1	0	5	6	0	7	0	7	0	0	0	0	2	12	0	14	27
% App. Total	16.7	0	83.3		0	100	0		0	0	0		14.3	85.7	0		
PHF	.250	.000	.625	.750	.000	.438	.000	.438	.000	.000	.000	.000	.500	.600	.000	.700	.750

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	2	2	0	0	0	0	0	0	0	0	1	0	0	2
+15 mins.	1	0	1	2	0	3	0	3	0	0	0	0	0	4	0	4
+30 mins.	0	0	1	1	0	4	0	4	0	0	0	0	1	2	0	3
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5
Total Volume	1	0	5	6	0	7	0	7	0	0	0	0	2	12	0	14
% App. Total	16.7	0	83.3		0	100	0		0	0	0		14.3	85.7	0	
PHF	.250	.000	.625	.750	.000	.438	.000	.438	.000	.000	.000	.000	.500	.600	.000	.700

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City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

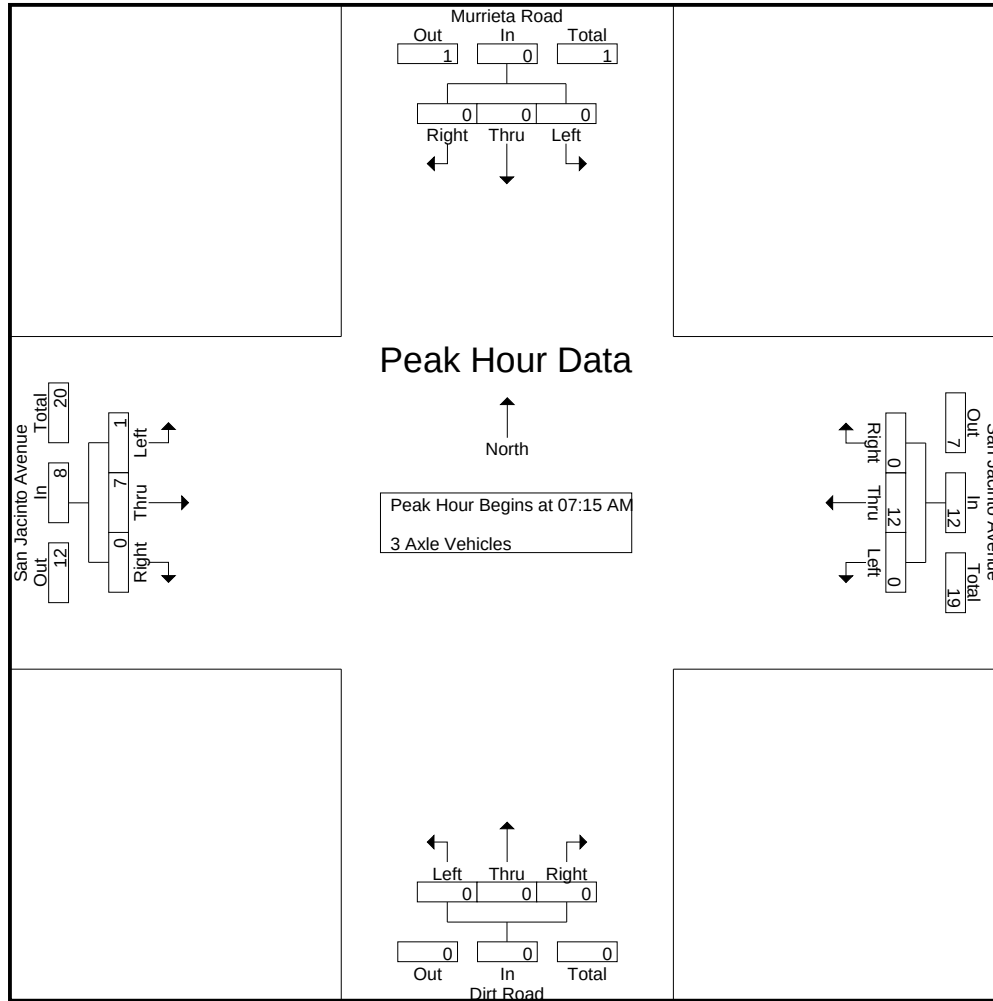
Groups Printed- 3 Axle Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:30 AM	0	0	1	1	0	1	0	1	0	0	0	0	0	6	1	7	9
06:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	3	0	3	0	0	0	0	0	10	1	11	15
07:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
Total	0	0	0	0	0	10	0	10	0	0	0	0	0	7	0	7	17
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	1	2	0	3	7
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	7	0	7	0	0	0	0	1	12	0	13	20
Grand Total	0	0	1	1	0	20	0	20	0	0	0	0	1	29	1	31	52
Apprch %	0	0	100		0	100	0		0	0	0		3.2	93.5	3.2		
Total %	0	0	1.9	1.9	0	38.5	0	38.5	0	0	0	0	1.9	55.8	1.9	59.6	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	1	2	0	3	7
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	1	7	0	8	20
% App. Total	0	0	0		0	100	0		0	0	0		12.5	87.5	0		
PHF	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.250	.583	.000	.667	.625

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	1	2	0	3
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	1	7	0	8
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	12.5	87.5	0	0
PHF	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.250	.583	.000	.667

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City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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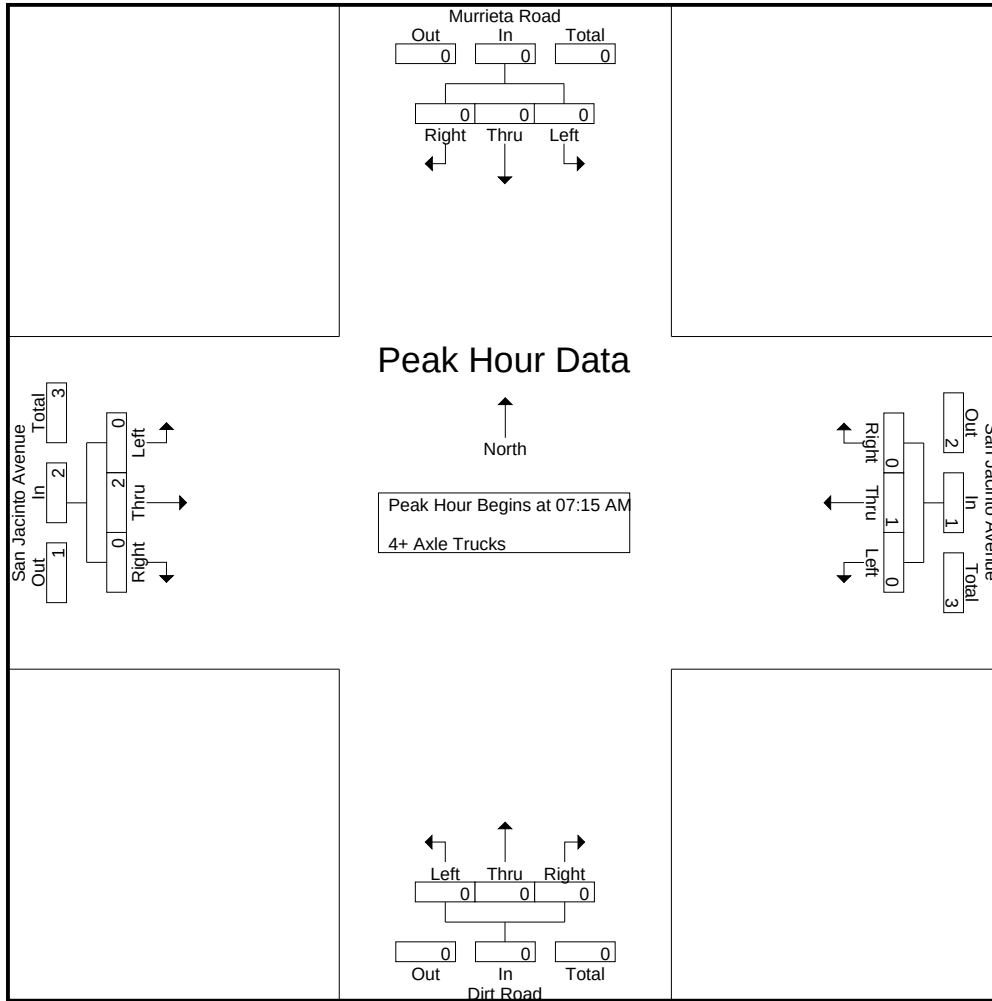
Groups Printed- 4+ Axle Trucks

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
06:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
06:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	0	0	0	0	0	3	0	3	1	0	0	1	1	2	0	3	7
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
Total	0	0	0	0	0	1	0	1	0	0	0	0	1	4	0	5	6
Grand Total	0	0	0	0	0	6	0	6	1	0	0	1	2	7	0	9	16
Apprch %	0	0	0		0	100	0		100	0	0		22.2	77.8	0		
Total %	0	0	0	0	0	37.5	0	37.5	6.2	0	0	6.2	12.5	43.8	0	56.2	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.375

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J AM
Site Code : 99923603
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500

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City of Perris
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Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	29	29	0	64	3	67	0	0	0	0	68	117	0	185	281
03:15 PM	2	0	45	47	0	61	5	66	0	0	0	0	33	110	0	143	256
03:30 PM	5	0	36	41	0	99	6	105	0	0	0	0	35	106	0	141	287
03:45 PM	2	0	27	29	0	54	5	59	0	0	0	0	56	122	0	178	266
Total	9	0	137	146	0	278	19	297	0	0	0	0	192	455	0	647	1090
04:00 PM	2	0	27	29	0	76	1	77	0	0	0	0	45	119	0	164	270
04:15 PM	3	0	46	49	0	58	7	65	0	0	0	0	43	135	0	178	292
04:30 PM	0	0	26	26	0	80	6	86	0	0	0	0	50	120	0	170	282
04:45 PM	4	0	32	36	0	61	3	64	0	0	0	0	41	111	0	152	252
Total	9	0	131	140	0	275	17	292	0	0	0	0	179	485	0	664	1096
05:00 PM	1	0	23	24	0	66	3	69	0	0	0	0	55	143	0	198	291
05:15 PM	2	0	34	36	0	70	4	74	0	0	0	0	63	109	0	172	282
05:30 PM	3	0	33	36	0	56	3	59	0	0	0	0	53	125	0	178	273
05:45 PM	4	0	22	26	0	58	4	62	0	0	0	0	52	97	0	149	237
Total	10	0	112	122	0	250	14	264	0	0	0	0	223	474	0	697	1083
06:00 PM	5	0	42	47	0	67	5	72	0	0	0	0	49	87	0	136	255
06:15 PM	0	0	28	28	0	60	1	61	0	0	0	0	44	101	0	145	234
06:30 PM	1	0	21	22	0	54	2	56	0	0	0	0	57	90	0	147	225
06:45 PM	4	0	18	22	0	55	3	58	0	0	0	0	37	79	0	116	196
Total	10	0	109	119	0	236	11	247	0	0	0	0	187	357	0	544	910
Grand Total	38	0	489	527	0	1039	61	1100	0	0	0	0	781	1771	0	2552	4179
Apprch %	7.2	0	92.8		0	94.5	5.5		0	0	0		30.6	69.4	0		
Total %	0.9	0	11.7	12.6	0	24.9	1.5	26.3	0	0	0	0	18.7	42.4	0	61.1	
Passenger Vehicles	37	0	481	518	0	980	61	1041	0	0	0	0	766	1700	0	2466	4025
% Passenger Vehicles	97.4	0	98.4	98.3	0	94.3	100	94.6	0	0	0	0	98.1	96	0	96.6	96.3
Large 2 Axle Vehicles	1	0	6	7	0	33	0	33	0	0	0	0	11	47	0	58	98
% Large 2 Axle Vehicles	2.6	0	1.2	1.3	0	3.2	0	3	0	0	0	0	1.4	2.7	0	2.3	2.3
3 Axle Vehicles	0	0	2	2	0	14	0	14	0	0	0	0	3	10	0	13	29
% 3 Axle Vehicles	0	0	0.4	0.4	0	1.3	0	1.3	0	0	0	0	0.4	0.6	0	0.5	0.7
4+ Axle Trucks	0	0	0	0	0	12	0	12	0	0	0	0	1	14	0	15	27
% 4+ Axle Trucks	0	0	0	0	0	1.2	0	1.1	0	0	0	0	0.1	0.8	0	0.6	0.6

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	0	46	49	0	58	7	65	0	0	0	0	43	135	0	178	292
04:30 PM	0	0	26	26	0	80	6	86	0	0	0	0	50	120	0	170	282
04:45 PM	4	0	32	36	0	61	3	64	0	0	0	0	41	111	0	152	252
05:00 PM	1	0	23	24	0	66	3	69	0	0	0	0	55	143	0	198	291
Total Volume	8	0	127	135	0	265	19	284	0	0	0	0	189	509	0	698	1117
% App. Total	5.9	0	94.1		0	93.3	6.7		0	0	0		27.1	72.9	0		
PHF	.500	.000	.690	.689	.000	.828	.679	.826	.000	.000	.000	.000	.859	.890	.000	.881	.956

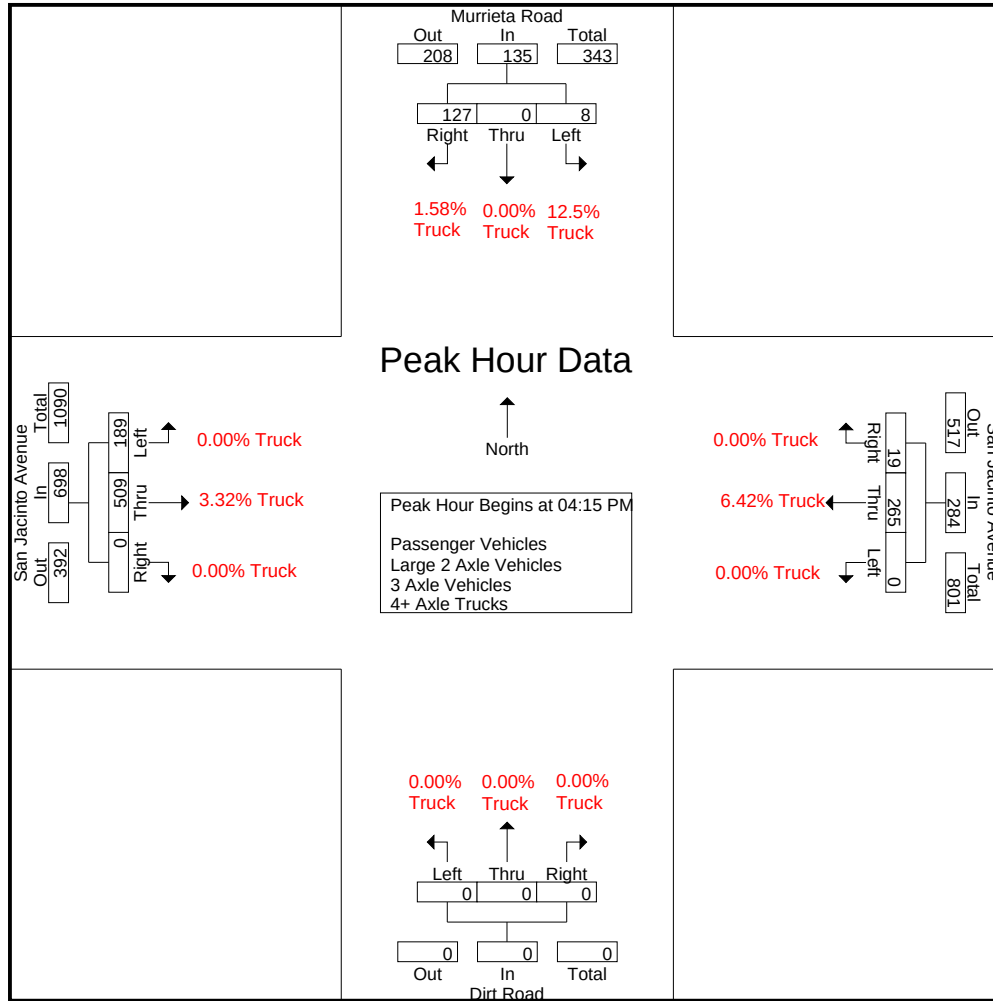
City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
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0.88% Truck

3.76% Truck

4.99% Truck



Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at: 0.00% Truck

	03:30 PM				03:15 PM				03:00 PM				04:45 PM			
+0 mins.	5	0	36	41	0	61	5	66	0	0	0	0	41	111	0	152
+15 mins.	2	0	27	29	0	99	6	105	0	0	0	0	55	143	0	198
+30 mins.	2	0	27	29	0	54	5	59	0	0	0	0	63	109	0	172
+45 mins.	3	0	46	49	0	76	1	77	0	0	0	0	53	125	0	178
Total Volume	12	0	136	148	0	290	17	307	0	0	0	0	212	488	0	700
% App. Total	8.1	0	91.9		0	94.5	5.5		0	0	0		30.3	69.7	0	
PHF	.600	.000	.739	.755	.000	.732	.708	.731	.000	.000	.000	.000	.841	.853	.000	.884

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
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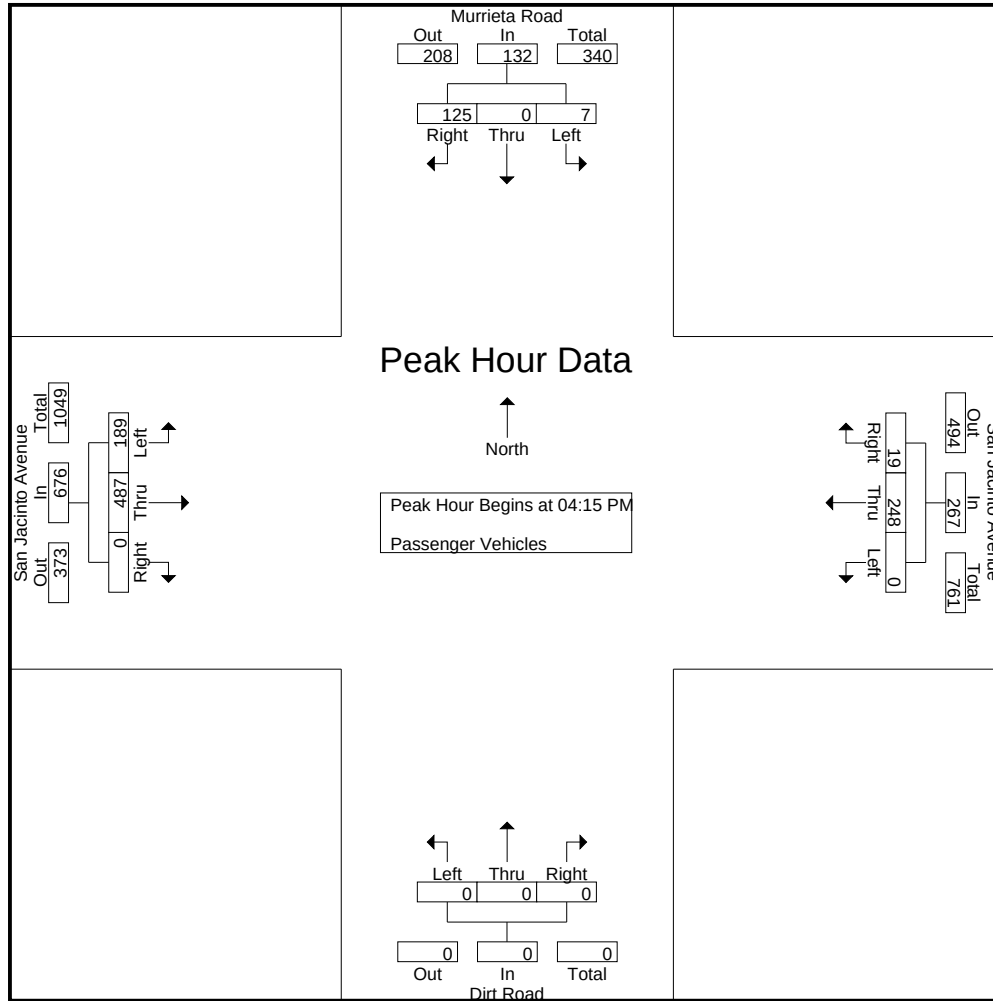
Groups Printed- Passenger Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	28	28	0	56	3	59	0	0	0	0	66	109	0	175	262
03:15 PM	2	0	44	46	0	56	5	61	0	0	0	0	33	104	0	137	244
03:30 PM	5	0	35	40	0	91	6	97	0	0	0	0	33	103	0	136	273
03:45 PM	2	0	27	29	0	49	5	54	0	0	0	0	53	114	0	167	250
Total	9	0	134	143	0	252	19	271	0	0	0	0	185	430	0	615	1029
04:00 PM	2	0	27	29	0	67	1	68	0	0	0	0	45	117	0	162	259
04:15 PM	3	0	44	47	0	49	7	56	0	0	0	0	43	126	0	169	272
04:30 PM	0	0	26	26	0	76	6	82	0	0	0	0	50	116	0	166	274
04:45 PM	4	0	32	36	0	59	3	62	0	0	0	0	41	104	0	145	243
Total	9	0	129	138	0	251	17	268	0	0	0	0	179	463	0	642	1048
05:00 PM	0	0	23	23	0	64	3	67	0	0	0	0	55	141	0	196	286
05:15 PM	2	0	33	35	0	70	4	74	0	0	0	0	63	106	0	169	278
05:30 PM	3	0	32	35	0	55	3	58	0	0	0	0	52	120	0	172	265
05:45 PM	4	0	22	26	0	55	4	59	0	0	0	0	51	95	0	146	231
Total	9	0	110	119	0	244	14	258	0	0	0	0	221	462	0	683	1060
06:00 PM	5	0	42	47	0	66	5	71	0	0	0	0	49	85	0	134	252
06:15 PM	0	0	28	28	0	60	1	61	0	0	0	0	43	96	0	139	228
06:30 PM	1	0	20	21	0	54	2	56	0	0	0	0	54	88	0	142	219
06:45 PM	4	0	18	22	0	53	3	56	0	0	0	0	35	76	0	111	189
Total	10	0	108	118	0	233	11	244	0	0	0	0	181	345	0	526	888
Grand Total	37	0	481	518	0	980	61	1041	0	0	0	0	766	1700	0	2466	4025
Apprch %	7.1	0	92.9		0	94.1	5.9		0	0	0		31.1	68.9	0		
Total %	0.9	0	12	12.9	0	24.3	1.5	25.9	0	0	0	0	19	42.2	0	61.3	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	0	44	47	0	49	7	56	0	0	0	0	43	126	0	169	272
04:30 PM	0	0	26	26	0	76	6	82	0	0	0	0	50	116	0	166	274
04:45 PM	4	0	32	36	0	59	3	62	0	0	0	0	41	104	0	145	243
05:00 PM	0	0	23	23	0	64	3	67	0	0	0	0	55	141	0	196	286
Total Volume	7	0	125	132	0	248	19	267	0	0	0	0	189	487	0	676	1075
% App. Total	5.3	0	94.7		0	92.9	7.1		0	0	0		28	72	0		
PHF	.438	.000	.710	.702	.000	.816	.679	.814	.000	.000	.000	.000	.859	.863	.000	.862	.940

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	3	0	44	47	0	49	7	56	0	0	0	0	43	126	0	169
+15 mins.	0	0	26	26	0	76	6	82	0	0	0	0	50	116	0	166
+30 mins.	4	0	32	36	0	59	3	62	0	0	0	0	41	104	0	145
+45 mins.	0	0	23	23	0	64	3	67	0	0	0	0	55	141	0	196
Total Volume	7	0	125	132	0	248	19	267	0	0	0	0	189	487	0	676
% App. Total	5.3	0	94.7		0	92.9	7.1		0	0	0		28	72	0	
PHF	.438	.000	.710	.702	.000	.816	.679	.814	.000	.000	.000	.000	.859	.863	.000	.862

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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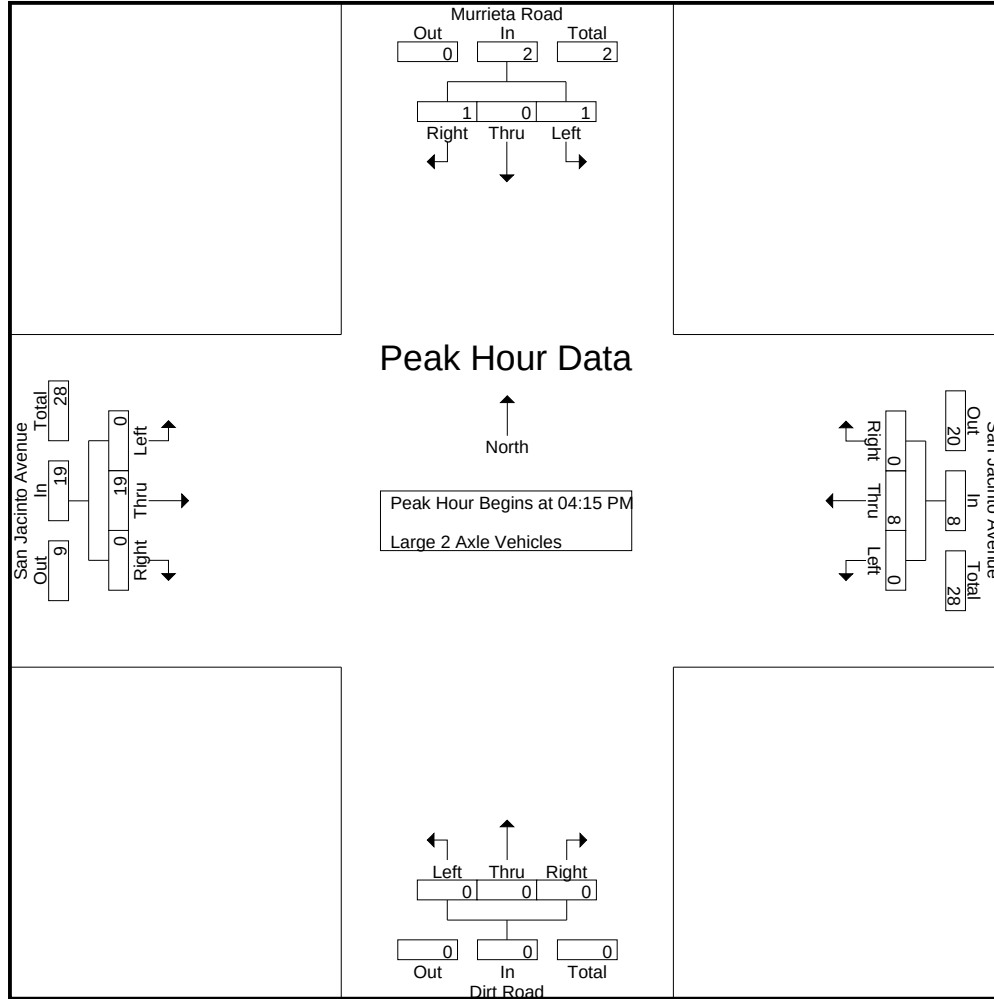
Groups Printed- Large 2 Axle Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	1	3	0	4	8
03:15 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	1	0	1	4
03:30 PM	0	0	1	1	0	6	0	6	0	0	0	0	1	3	0	4	11
03:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	2	5	0	7	9
Total	0	0	2	2	0	14	0	14	0	0	0	0	4	12	0	16	32
04:00 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	0	0	0	7
04:15 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	7	0	7	11
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	8
Total	0	0	1	1	0	14	0	14	0	0	0	0	0	17	0	17	32
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
05:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	1	5	0	6	8
05:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
Total	1	0	2	3	0	5	0	5	0	0	0	0	1	10	0	11	19
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	4
06:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	3	1	0	4	5
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	4
Total	0	0	1	1	0	0	0	0	0	0	0	0	6	8	0	14	15
Grand Total	1	0	6	7	0	33	0	33	0	0	0	0	11	47	0	58	98
Apprch %	14.3	0	85.7		0	100	0		0	0	0		19	81	0		
Total %	1	0	6.1	7.1	0	33.7	0	33.7	0	0	0	0	11.2	48	0	59.2	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	7	0	7	11
04:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
04:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6	8
05:00 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2	4
Total Volume	1	0	1	2	0	8	0	8	0	0	0	0	0	19	0	19	29
% App. Total	50	0	50		0	100	0		0	0	0		0	100	0		
PHF	.250	.000	.250	.500	.000	.667	.000	.667	.000	.000	.000	.000	.000	.679	.000	.679	.659

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	1	1	0	3	0	3	0	0	0	0	0	7	0	7
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	6	0	6
+45 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	2	0	2
Total Volume	1	0	1	2	0	8	0	8	0	0	0	0	0	19	0	19
% App. Total	50	0	50		0	100	0		0	0	0		0	100	0	
PHF	.250	.000	.250	.500	.000	.667	.000	.667	.000	.000	.000	.000	.000	.679	.000	.679

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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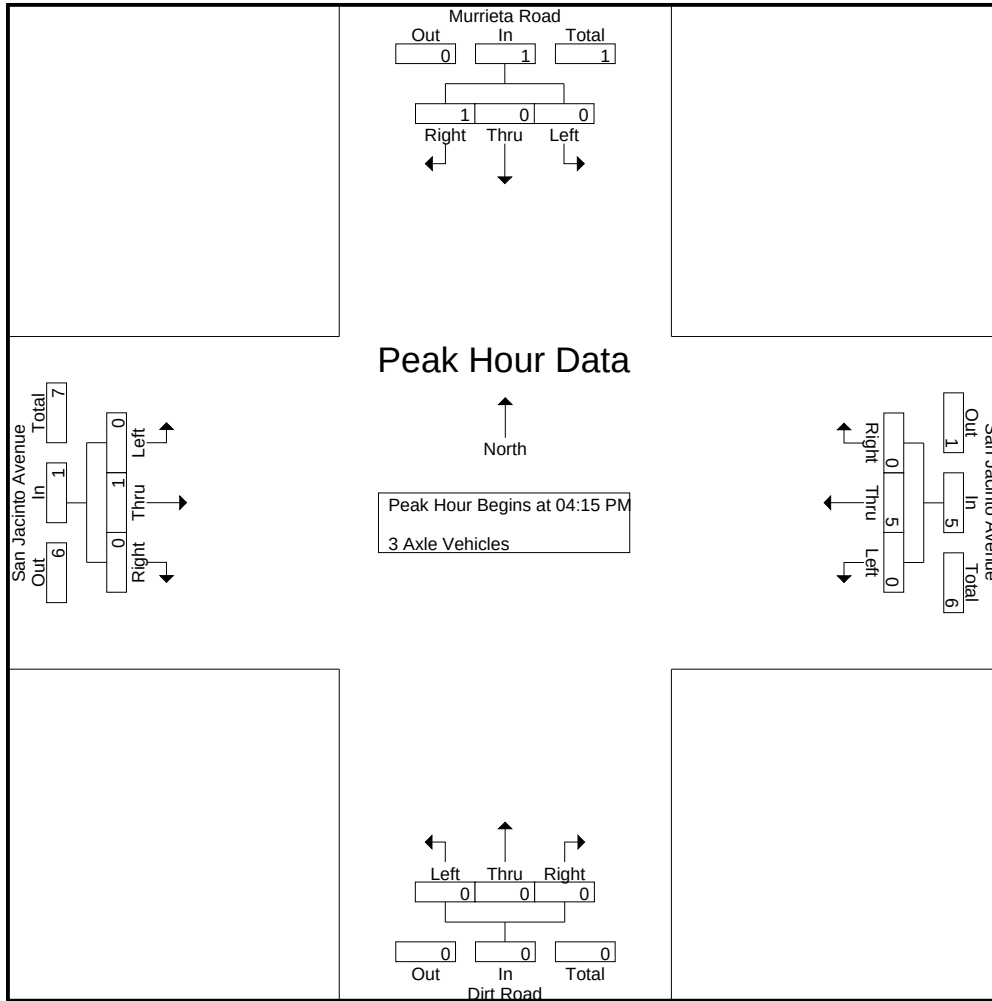
Groups Printed- 3 Axle Vehicles

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	1	1	0	3	0	3	0	0	0	0	1	1	0	2	6
03:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	2	0	3	5
Total	0	0	1	1	0	6	0	6	0	0	0	0	3	6	0	9	16
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	1	1	0	5	0	5	0	0	0	0	0	2	0	2	8
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
06:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
Grand Total	0	0	2	2	0	14	0	14	0	0	0	0	3	10	0	13	29
Apprch %	0	0	100		0	100	0		0	0	0		23.1	76.9	0		
Total %	0	0	6.9	6.9	0	48.3	0	48.3	0	0	0	0	10.3	34.5	0	44.8	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	1	0	1	7
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250	.438

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	1	1	0	3	0	3	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	5	0	5	0	0	0	0	0	1	0	1
% App. Total	0	0	100		0	100	0		0	0	0	0	0	100	0	
PHF	.000	.000	.250	.250	.000	.417	.000	.417	.000	.000	.000	.000	.000	.250	.000	.250

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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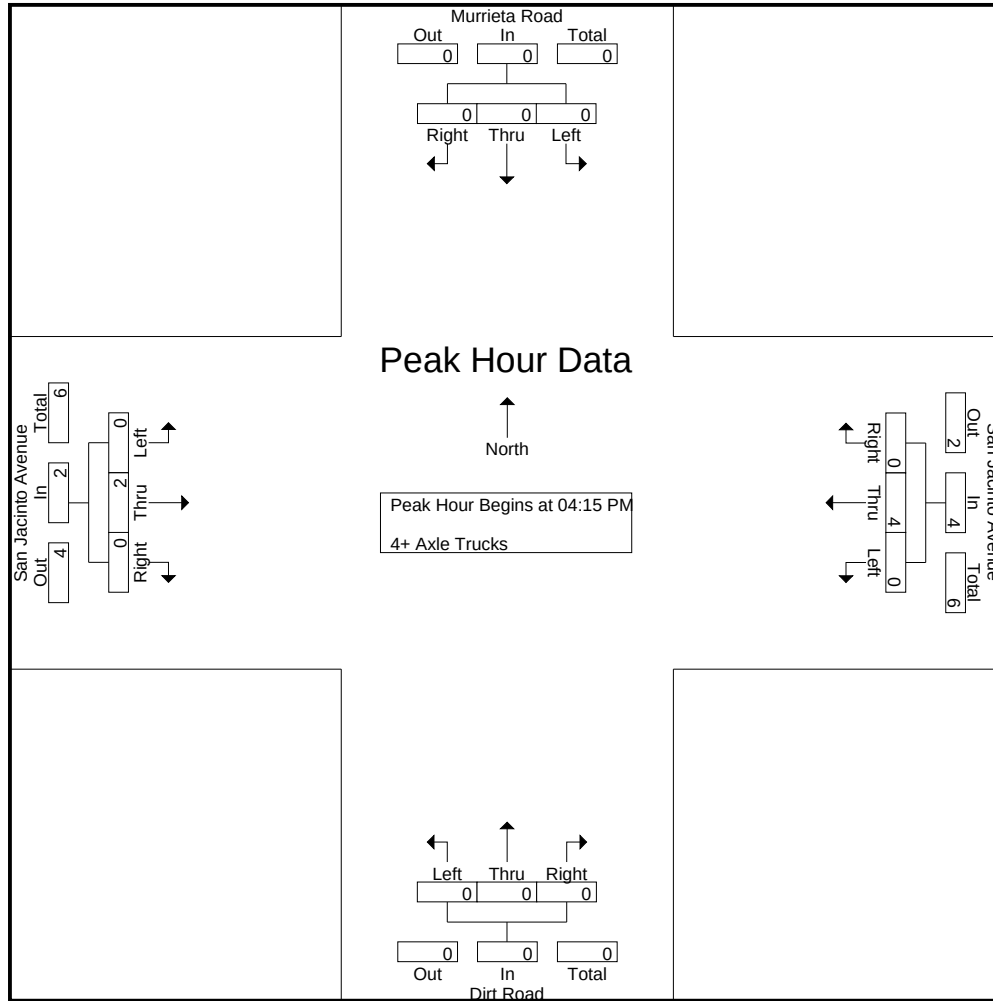
Groups Printed- 4+ Axle Trucks

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	2	0	2	4
03:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	6	0	6	0	0	0	0	0	7	0	7	13
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	5	0	5	0	0	0	0	0	3	0	3	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
Grand Total	0	0	0	0	0	12	0	12	0	0	0	0	1	14	0	15	27
Apprch %	0	0	0		0	100	0		0	0	0		6.7	93.3	0		
Total %	0	0	0		0	44.4	0	44.4	0	0	0		3.7	51.9	0	55.6	

	Murrieta Road Southbound				San Jacinto Avenue Westbound				Dirt Road Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.000	.250	.000	.250	.300

City of Perris
N/S: Murrieta Road
E/W: San Jacinto Avenue
Weather: Clear

File Name : 05_PER_Mur_San J PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2



Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	2	0	2
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	100	0	
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.000	.250	.000	.250

Location: Perris
 N/S: Murrieta Road
 E/W: San Jacinto Avenue



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Murrieta Road	East Leg San Jacinto Avenue	South Leg Murrieta Road	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	6:00 AM	0	0	0	0	0
	6:15 AM	0	0	0	0	0
	6:30 AM	0	0	0	0	0
	6:45 AM	0	0	0	0	0
	7:00 AM	1	0	0	0	1
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	TOTAL VOLUMES:	1	0	0	0	1

		North Leg Murrieta Road	East Leg San Jacinto Avenue	South Leg Murrieta Road	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	3:00 PM	0	0	0	0	0
	3:15 PM	0	0	0	0	0
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	6:00 PM	0	0	0	0	0
	6:15 PM	0	0	0	0	0
	6:30 PM	0	0	0	0	0
	6:45 PM	0	0	0	0	0
	TOTAL VOLUMES:	0	0	0	0	0

Location: Perris
 N/S: Murrieta Road
 E/W: San Jacinto Avenue



Date: 6/8/2023
 Day: Thursday

BICYCLES

		Southbound Murrieta Road			Westbound San Jacinto Avenue			Northbound Murrieta Road			Eastbound San Jacinto Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	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 Murrieta Road			Westbound San Jacinto Avenue			Northbound Murrieta Road			Eastbound San Jacinto Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0	0	0	0	0	0	0	0	0

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Corona, CA 92878
(951) 268-6268

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

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

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	0	18	21	0	49	6	55	0	0	0	0	12	35	0	47	123
06:15 AM	13	0	23	36	0	43	13	56	0	0	0	0	9	32	0	41	133
06:30 AM	10	0	23	33	0	47	10	57	0	0	0	0	18	38	0	56	146
06:45 AM	14	0	25	39	0	42	14	56	0	0	0	0	13	38	0	51	146
Total	40	0	89	129	0	181	43	224	0	0	0	0	52	143	0	195	548
07:00 AM	11	0	30	41	0	46	12	58	0	0	0	0	18	30	0	48	147
07:15 AM	21	0	27	48	0	63	9	72	0	0	0	0	17	33	0	50	170
07:30 AM	13	0	41	54	0	86	18	104	0	0	0	0	26	38	0	64	222
07:45 AM	9	0	22	31	0	64	16	80	0	0	0	0	19	45	0	64	175
Total	54	0	120	174	0	259	55	314	0	0	0	0	80	146	0	226	714
08:00 AM	18	0	30	48	0	58	9	67	0	0	0	0	17	49	0	66	181
08:15 AM	13	0	32	45	0	50	10	60	0	0	0	0	15	37	0	52	157
08:30 AM	18	0	22	40	0	44	6	50	0	0	0	0	9	39	0	48	138
08:45 AM	7	0	20	27	0	36	6	42	0	0	0	0	12	39	0	51	120
Total	56	0	104	160	0	188	31	219	0	0	0	0	53	164	0	217	596
Grand Total	150	0	313	463	0	628	129	757	0	0	0	0	185	453	0	638	1858
Apprch %	32.4	0	67.6		0	83	17		0	0	0		29	71	0		
Total %	8.1	0	16.8	24.9	0	33.8	6.9	40.7	0	0	0	0	10	24.4	0	34.3	
Passenger Vehicles	145	0	303	448	0	593	123	716	0	0	0	0	167	405	0	572	1736
% Passenger Vehicles	96.7	0	96.8	96.8	0	94.4	95.3	94.6	0	0	0	0	90.3	89.4	0	89.7	93.4
Large 2 Axle Vehicles	5	0	4	9	0	15	6	21	0	0	0	0	10	19	0	29	59
% Large 2 Axle Vehicles	3.3	0	1.3	1.9	0	2.4	4.7	2.8	0	0	0	0	5.4	4.2	0	4.5	3.2
3 Axle Vehicles	0	0	4	4	0	16	0	16	0	0	0	0	3	28	0	31	51
% 3 Axle Vehicles	0	0	1.3	0.9	0	2.5	0	2.1	0	0	0	0	1.6	6.2	0	4.9	2.7
4+ Axle Trucks	0	0	2	2	0	4	0	4	0	0	0	0	5	1	0	6	12
% 4+ Axle Trucks	0	0	0.6	0.4	0	0.6	0	0.5	0	0	0	0	2.7	0.2	0	0.9	0.6

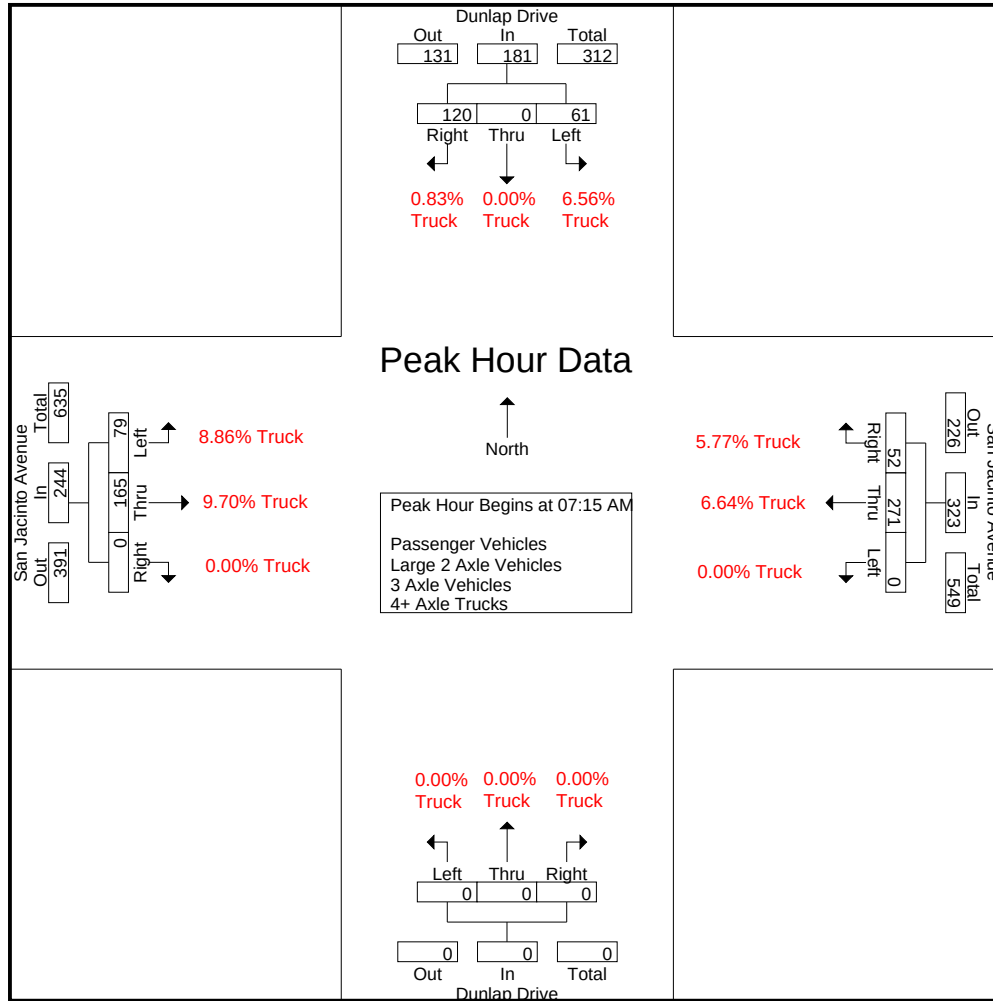
	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	21	0	27	48	0	63	9	72	0	0	0	0	17	33	0	50	170
07:30 AM	13	0	41	54	0	86	18	104	0	0	0	0	26	38	0	64	222
07:45 AM	9	0	22	31	0	64	16	80	0	0	0	0	19	45	0	64	175
08:00 AM	18	0	30	48	0	58	9	67	0	0	0	0	17	49	0	66	181
Total Volume	61	0	120	181	0	271	52	323	0	0	0	0	79	165	0	244	748
% App. Total	33.7	0	66.3		0	83.9	16.1		0	0	0		32.4	67.6	0		
PHF	.726	.000	.732	.838	.000	.788	.722	.776	.000	.000	.000	.000	.760	.842	.000	.924	.842

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 2

4.81% Truck

6.61% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1 **0.00% Truck**
Peak Hour for Each Approach Begins at:

	06:45 AM				07:15 AM				06:00 AM				07:30 AM			
+0 mins.	14	0	25	39	0	63	9	72	0	0	0	0	26	38	0	64
+15 mins.	11	0	30	41	0	86	18	104	0	0	0	0	19	45	0	64
+30 mins.	21	0	27	48	0	64	16	80	0	0	0	0	17	49	0	66
+45 mins.	13	0	41	54	0	58	9	67	0	0	0	0	15	37	0	52
Total Volume	59	0	123	182	0	271	52	323	0	0	0	0	77	169	0	246
% App. Total	32.4	0	67.6		0	83.9	16.1		0	0	0		31.3	68.7	0	
PHF	.702	.000	.750	.843	.000	.788	.722	.776	.000	.000	.000	.000	.740	.862	.000	.932

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City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

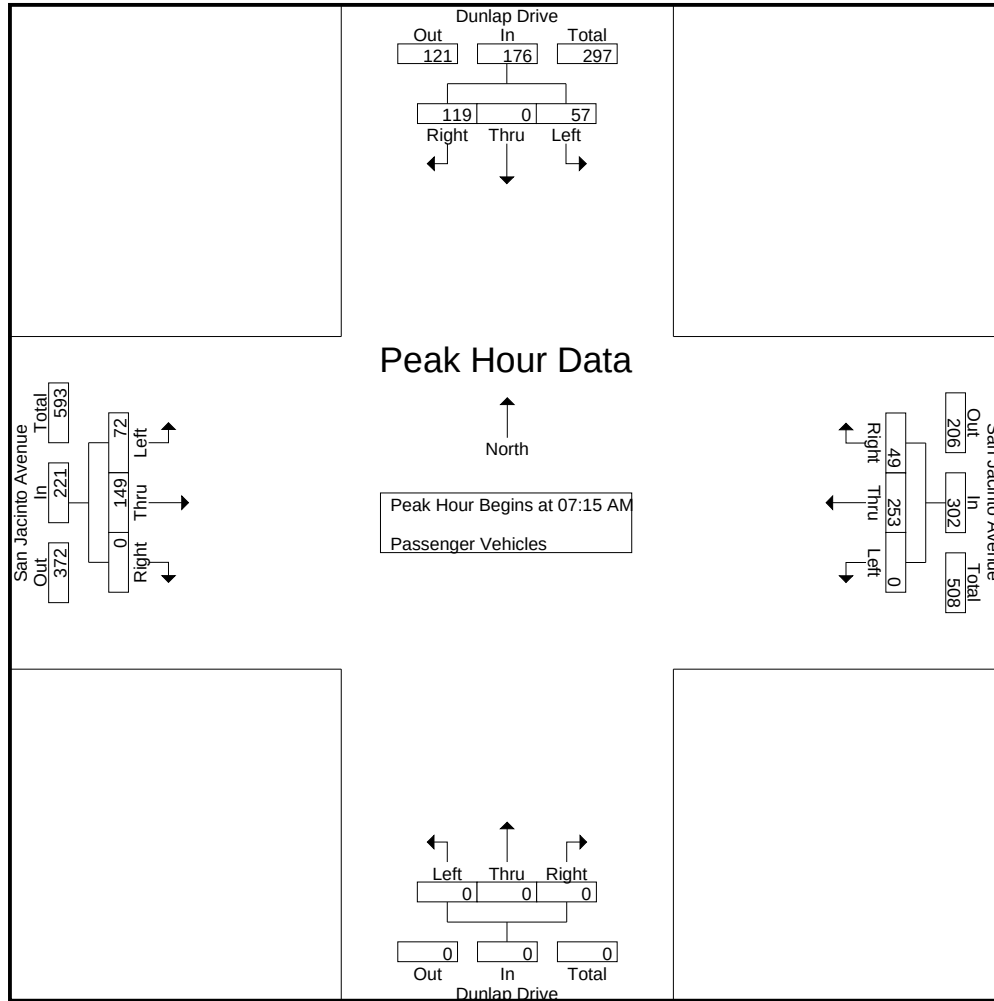
Groups Printed- Passenger Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	3	0	17	20	0	46	6	52	0	0	0	0	10	31	0	41	113
06:15 AM	13	0	23	36	0	40	12	52	0	0	0	0	8	30	0	38	126
06:30 AM	9	0	21	30	0	44	9	53	0	0	0	0	16	31	0	47	130
06:45 AM	14	0	24	38	0	41	14	55	0	0	0	0	12	34	0	46	139
Total	39	0	85	124	0	171	41	212	0	0	0	0	46	126	0	172	508
07:00 AM	11	0	28	39	0	44	12	56	0	0	0	0	17	27	0	44	139
07:15 AM	20	0	27	47	0	62	9	71	0	0	0	0	15	32	0	47	165
07:30 AM	13	0	40	53	0	82	16	98	0	0	0	0	24	35	0	59	210
07:45 AM	7	0	22	29	0	55	16	71	0	0	0	0	18	40	0	58	158
Total	51	0	117	168	0	243	53	296	0	0	0	0	74	134	0	208	672
08:00 AM	17	0	30	47	0	54	8	62	0	0	0	0	15	42	0	57	166
08:15 AM	13	0	30	43	0	47	9	56	0	0	0	0	13	34	0	47	146
08:30 AM	18	0	21	39	0	43	6	49	0	0	0	0	9	35	0	44	132
08:45 AM	7	0	20	27	0	35	6	41	0	0	0	0	10	34	0	44	112
Total	55	0	101	156	0	179	29	208	0	0	0	0	47	145	0	192	556
Grand Total	145	0	303	448	0	593	123	716	0	0	0	0	167	405	0	572	1736
Apprch %	32.4	0	67.6		0	82.8	17.2		0	0	0		29.2	70.8	0		
Total %	8.4	0	17.5	25.8	0	34.2	7.1	41.2	0	0	0	0	9.6	23.3	0	32.9	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	0	27	47	0	62	9	71	0	0	0	0	15	32	0	47	165
07:30 AM	13	0	40	53	0	82	16	98	0	0	0	0	24	35	0	59	210
07:45 AM	7	0	22	29	0	55	16	71	0	0	0	0	18	40	0	58	158
08:00 AM	17	0	30	47	0	54	8	62	0	0	0	0	15	42	0	57	166
Total Volume	57	0	119	176	0	253	49	302	0	0	0	0	72	149	0	221	699
% App. Total	32.4	0	67.6		0	83.8	16.2		0	0	0		32.6	67.4	0		
PHF	.713	.000	.744	.830	.000	.771	.766	.770	.000	.000	.000	.000	.750	.887	.000	.936	.832

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	20	0	27	47	0	62	9	71	0	0	0	0	15	32	0	47
+15 mins.	13	0	40	53	0	82	16	98	0	0	0	0	24	35	0	59
+30 mins.	7	0	22	29	0	55	16	71	0	0	0	0	18	40	0	58
+45 mins.	17	0	30	47	0	54	8	62	0	0	0	0	15	42	0	57
Total Volume	57	0	119	176	0	253	49	302	0	0	0	0	72	149	0	221
% App. Total	32.4	0	67.6		0	83.8	16.2		0	0	0		32.6	67.4	0	
PHF	.713	.000	.744	.830	.000	.771	.766	.770	.000	.000	.000	.000	.750	.887	.000	.936

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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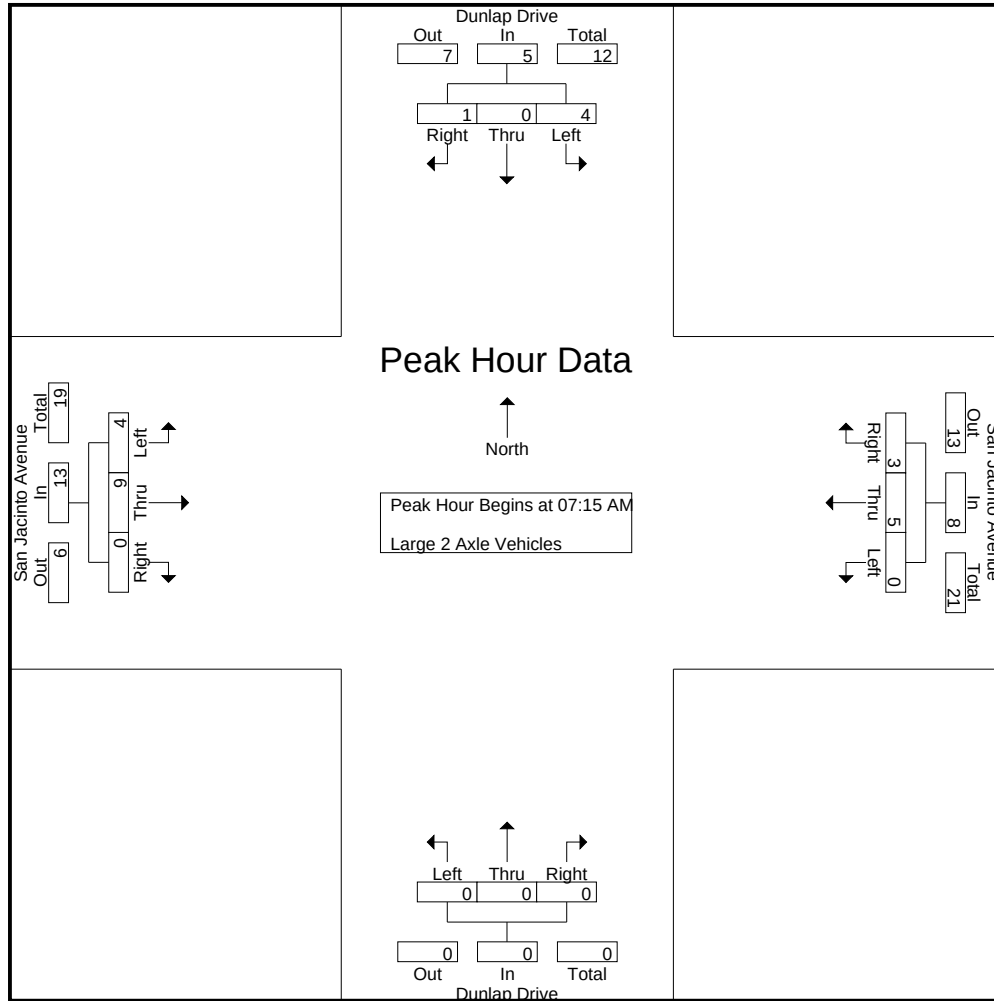
Groups Printed- Large 2 Axle Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	2	2	0	4	6
06:15 AM	0	0	0	0	0	2	1	3	0	0	0	0	1	0	0	1	4
06:30 AM	1	0	1	2	0	2	1	3	0	0	0	0	1	2	0	3	8
06:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	2	0	3	4
Total	1	0	1	2	0	7	2	9	0	0	0	0	5	6	0	11	22
07:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	2	0	2	3
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
07:30 AM	0	0	1	1	0	2	2	4	0	0	0	0	1	2	0	3	8
07:45 AM	2	0	0	2	0	3	0	3	0	0	0	0	0	3	0	3	8
Total	3	0	1	4	0	6	2	8	0	0	0	0	3	7	0	10	22
08:00 AM	1	0	0	1	0	0	1	1	0	0	0	0	1	4	0	5	7
08:15 AM	0	0	1	1	0	2	1	3	0	0	0	0	1	0	0	1	5
08:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	1	0	2	3	0	2	2	4	0	0	0	0	2	6	0	8	15
Grand Total	5	0	4	9	0	15	6	21	0	0	0	0	10	19	0	29	59
Apprch %	55.6	0	44.4		0	71.4	28.6		0	0	0		34.5	65.5	0		
Total %	8.5	0	6.8	15.3	0	25.4	10.2	35.6	0	0	0	0	16.9	32.2	0	49.2	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2	3
07:30 AM	0	0	1	1	0	2	2	4	0	0	0	0	1	2	0	3	8
07:45 AM	2	0	0	2	0	3	0	3	0	0	0	0	0	3	0	3	8
08:00 AM	1	0	0	1	0	0	1	1	0	0	0	0	1	4	0	5	7
Total Volume	4	0	1	5	0	5	3	8	0	0	0	0	4	9	0	13	26
% App. Total	80	0	20		0	62.5	37.5		0	0	0		30.8	69.2	0		
PHF	.500	.000	.250	.625	.000	.417	.375	.500	.000	.000	.000	.000	.500	.563	.000	.650	.813

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	2
+15 mins.	0	0	1	1	0	2	2	4	0	0	0	0	1	2	0	3
+30 mins.	2	0	0	2	0	3	0	3	0	0	0	0	0	3	0	3
+45 mins.	1	0	0	1	0	0	1	1	0	0	0	0	1	4	0	5
Total Volume	4	0	1	5	0	5	3	8	0	0	0	0	4	9	0	13
% App. Total	80	0	20		0	62.5	37.5		0	0	0		30.8	69.2	0	
PHF	.500	.000	.250	.625	.000	.417	.375	.500	.000	.000	.000	.000	.500	.563	.000	.650

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

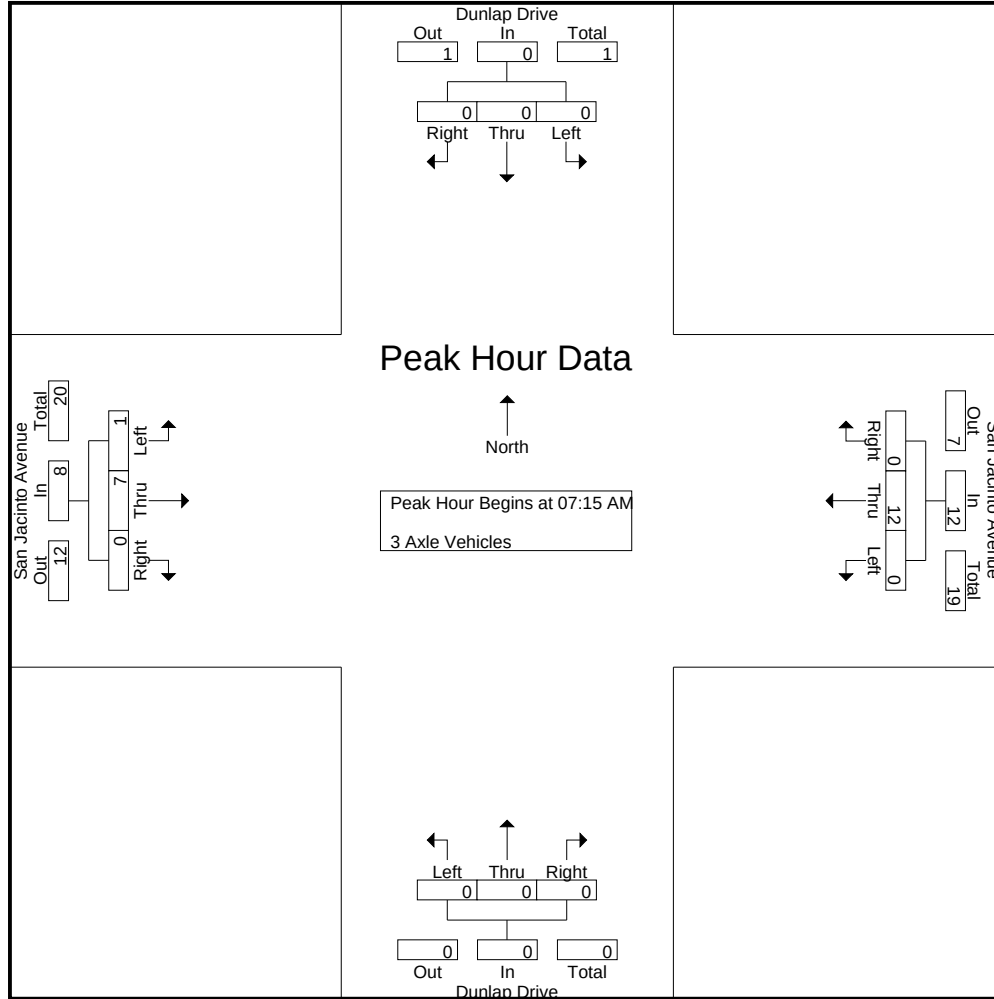
Groups Printed- 3 Axle Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
06:30 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	5	0	5	6
06:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2	0	2	3
Total	0	0	3	3	0	0	0	0	0	0	0	0	0	11	0	11	14
07:00 AM	0	0	1	1	0	1	0	1	0	0	0	0	1	1	0	2	4
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
Total	0	0	1	1	0	9	0	9	0	0	0	0	2	5	0	7	17
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
08:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	3	0	4	5
08:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	3	0	3	4
Total	0	0	0	0	0	7	0	7	0	0	0	0	1	12	0	13	20
Grand Total	0	0	4	4	0	16	0	16	0	0	0	0	3	28	0	31	51
Apprch %	0	0	100		0	100	0		0	0	0		9.7	90.3	0		
Total %	0	0	7.8	7.8	0	31.4	0	31.4	0	0	0	0	5.9	54.9	0	60.8	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
07:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2	4
07:45 AM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3	7
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	1	7	0	8	20
% App. Total	0	0	0		0	100	0		0	0	0		12.5	87.5	0		
PHF	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.250	.583	.000	.667	.714

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	2
+30 mins.	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2
+45 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	3	0	3
Total Volume	0	0	0	0	0	12	0	12	0	0	0	0	1	7	0	8
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	12.5	87.5	0	0
PHF	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.250	.583	.000	.667

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

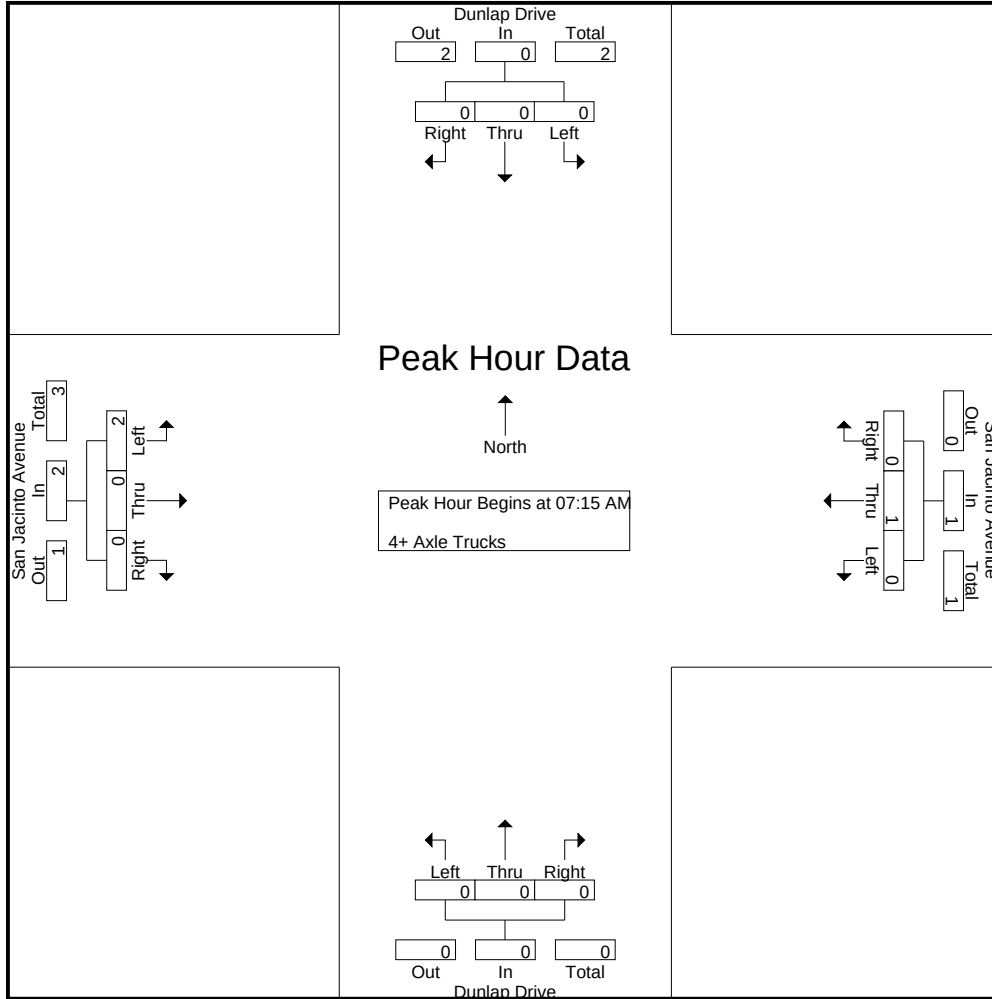
Groups Printed- 4+ Axle Trucks

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	0	3	0	0	0	0	1	0	0	1	4
07:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
Total	0	0	1	1	0	1	0	1	0	0	0	0	1	0	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:15 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	3
Total	0	0	1	1	0	0	0	0	0	0	0	0	3	1	0	4	5
Grand Total	0	0	2	2	0	4	0	4	0	0	0	0	5	1	0	6	12
Apprch %	0	0	100		0	100	0		0	0	0		83.3	16.7	0		
Total %	0	0	16.7	16.7	0	33.3	0	33.3	0	0	0	0	41.7	8.3	0	50	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	2	0	0	2	3
% App. Total	0	0	0		0	100	0		0	0	0		100	0	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500	.000	.000	.500	.375

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J AM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	2	0	0	2
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	100	0	0	0
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.500	.000	.000	.500

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

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

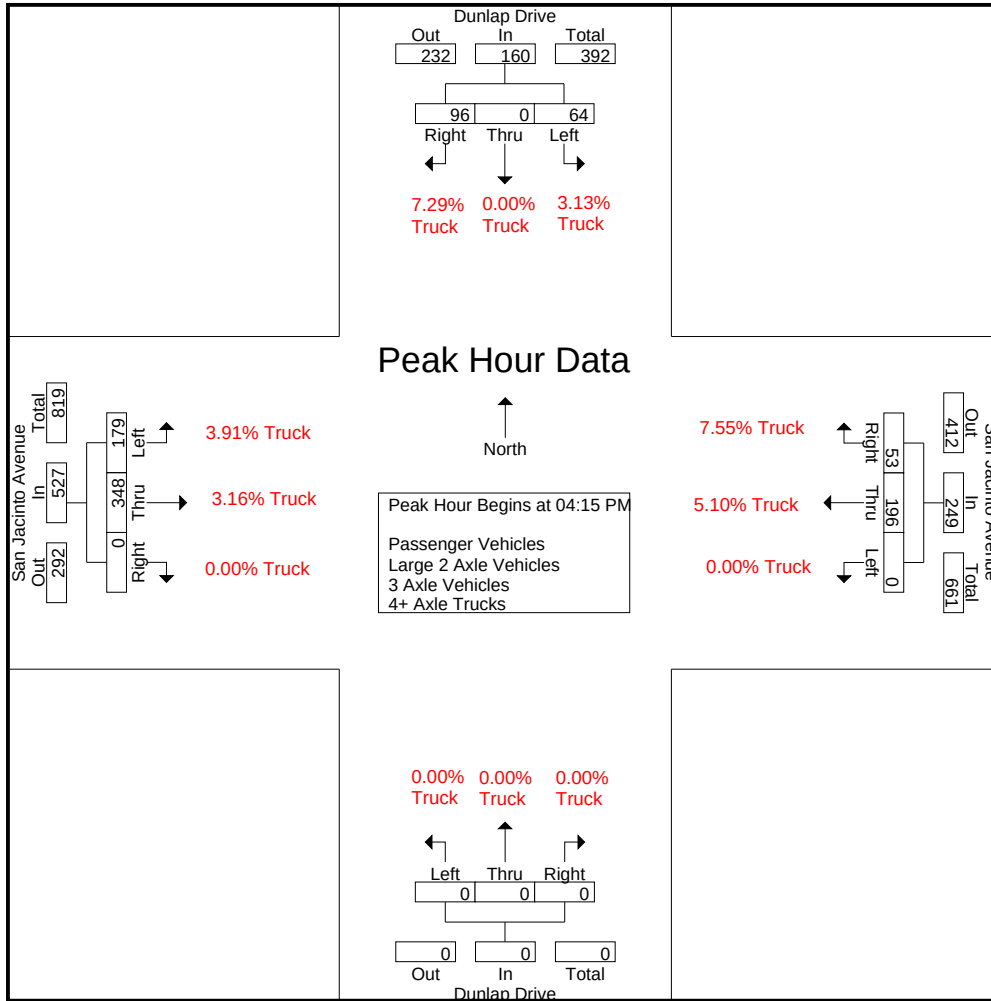
	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	14	0	28	42	0	43	3	46	0	0	0	0	40	79	0	119	207
03:15 PM	13	0	16	29	0	46	16	62	0	0	0	0	44	76	0	120	211
03:30 PM	15	0	34	49	0	75	9	84	0	0	0	0	35	76	0	111	244
03:45 PM	26	0	15	41	0	40	12	52	0	0	0	0	38	83	0	121	214
Total	68	0	93	161	0	204	40	244	0	0	0	0	157	314	0	471	876
04:00 PM	23	0	33	56	0	49	18	67	0	0	0	0	40	74	0	114	237
04:15 PM	12	0	20	32	0	44	11	55	0	0	0	0	48	100	0	148	235
04:30 PM	17	0	25	42	0	63	22	85	0	0	0	0	38	74	0	112	239
04:45 PM	22	0	25	47	0	38	7	45	0	0	0	0	38	88	0	126	218
Total	74	0	103	177	0	194	58	252	0	0	0	0	164	336	0	500	929
05:00 PM	13	0	26	39	0	51	13	64	0	0	0	0	55	86	0	141	244
05:15 PM	15	0	27	42	0	45	11	56	0	0	0	0	51	64	0	115	213
05:30 PM	16	0	18	34	0	39	12	51	0	0	0	0	44	80	0	124	209
05:45 PM	15	0	18	33	0	47	16	63	0	0	0	0	33	79	0	112	208
Total	59	0	89	148	0	182	52	234	0	0	0	0	183	309	0	492	874
06:00 PM	11	0	20	31	0	53	11	64	0	0	0	0	31	66	0	97	192
06:15 PM	17	0	25	42	0	33	13	46	0	0	0	0	33	69	0	102	190
06:30 PM	11	0	24	35	0	32	10	42	0	0	0	0	21	66	0	87	164
06:45 PM	15	0	19	34	0	39	12	51	0	0	0	0	27	63	0	90	175
Total	54	0	88	142	0	157	46	203	0	0	0	0	112	264	0	376	721
Grand Total	255	0	373	628	0	737	196	933	0	0	0	0	616	1223	0	1839	3400
Apprch %	40.6	0	59.4		0	79	21		0	0	0		33.5	66.5	0		
Total %	7.5	0	11	18.5	0	21.7	5.8	27.4	0	0	0	0	18.1	36	0	54.1	
Passenger Vehicles	249	0	356	605	0	693	191	884	0	0	0	0	593	1179	0	1772	3261
% Passenger Vehicles	97.6	0	95.4	96.3	0	94	97.4	94.7	0	0	0	0	96.3	96.4	0	96.4	95.9
Large 2 Axle Vehicles	6	0	12	18	0	23	5	28	0	0	0	0	13	30	0	43	89
% Large 2 Axle Vehicles	2.4	0	3.2	2.9	0	3.1	2.6	3	0	0	0	0	2.1	2.5	0	2.3	2.6
3 Axle Vehicles	0	0	3	3	0	12	0	12	0	0	0	0	5	4	0	9	24
% 3 Axle Vehicles	0	0	0.8	0.5	0	1.6	0	1.3	0	0	0	0	0.8	0.3	0	0.5	0.7
4+ Axle Trucks	0	0	2	2	0	9	0	9	0	0	0	0	5	10	0	15	26
% 4+ Axle Trucks	0	0	0.5	0.3	0	1.2	0	1	0	0	0	0	0.8	0.8	0	0.8	0.8

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	12	0	20	32	0	44	11	55	0	0	0	0	48	100	0	148	235
04:30 PM	17	0	25	42	0	63	22	85	0	0	0	0	38	74	0	112	239
04:45 PM	22	0	25	47	0	38	7	45	0	0	0	0	38	88	0	126	218
05:00 PM	13	0	26	39	0	51	13	64	0	0	0	0	55	86	0	141	244
Total Volume	64	0	96	160	0	196	53	249	0	0	0	0	179	348	0	527	936
% App. Total	40	0	60		0	78.7	21.3		0	0	0		34	66	0		
PHF	.727	.000	.923	.851	.000	.778	.602	.732	.000	.000	.000	.000	.814	.870	.000	.890	.959

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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5.10% Truck



4.27% Truck

4.09% Truck

0.00% Truck

Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:15 PM				03:00 PM				04:15 PM			
+0 mins.	15	0	34	49	0	46	16	62	0	0	0	0	48	100	0	148
+15 mins.	26	0	15	41	0	75	9	84	0	0	0	0	38	74	0	112
+30 mins.	23	0	33	56	0	40	12	52	0	0	0	0	38	88	0	126
+45 mins.	12	0	20	32	0	49	18	67	0	0	0	0	55	86	0	141
Total Volume	76	0	102	178	0	210	55	265	0	0	0	0	179	348	0	527
% App. Total	42.7	0	57.3		0	79.2	20.8		0	0	0		34	66	0	
PHF	.731	.000	.750	.795	.000	.700	.764	.789	.000	.000	.000	.000	.814	.870	.000	.890

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
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File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

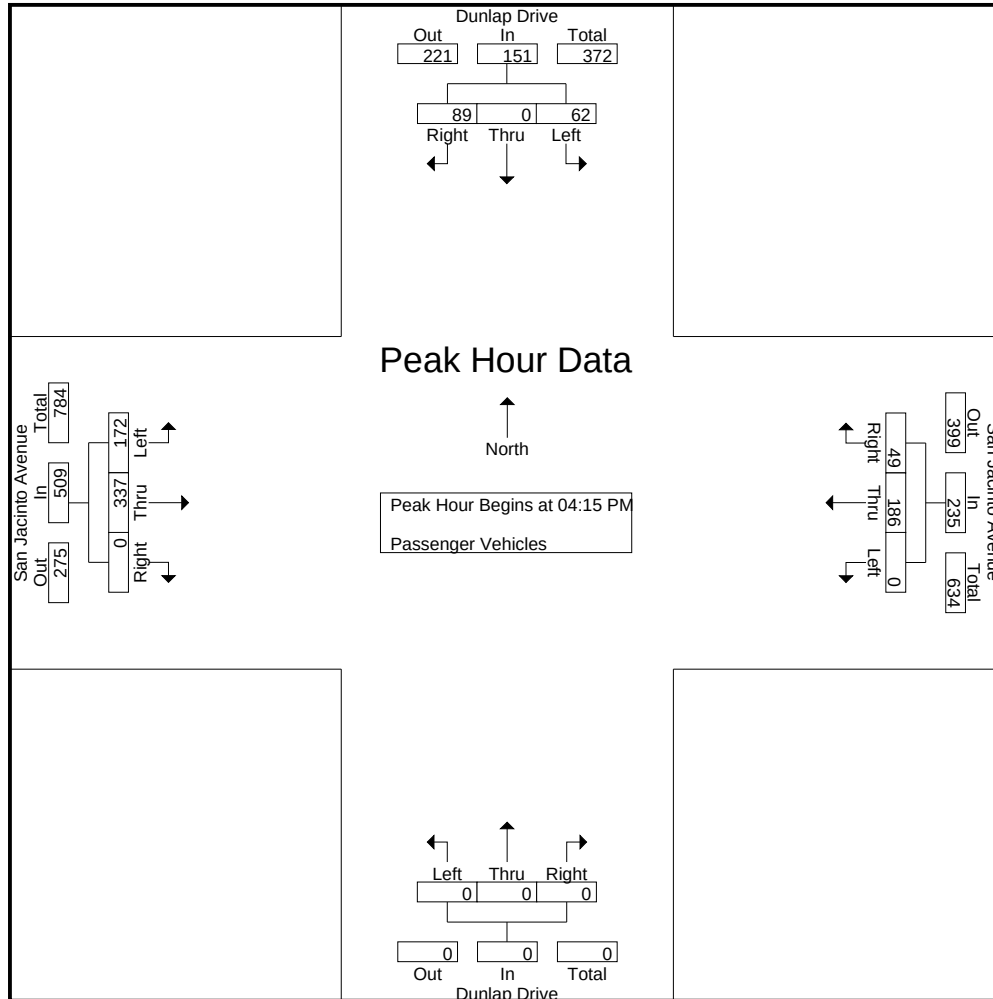
Groups Printed- Passenger Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	14	0	26	40	0	36	3	39	0	0	0	0	39	72	0	111	190
03:15 PM	12	0	16	28	0	42	16	58	0	0	0	0	41	72	0	113	199
03:30 PM	15	0	32	47	0	71	9	80	0	0	0	0	35	73	0	108	235
03:45 PM	23	0	15	38	0	34	12	46	0	0	0	0	37	77	0	114	198
Total	64	0	89	153	0	183	40	223	0	0	0	0	152	294	0	446	822
04:00 PM	23	0	29	52	0	43	18	61	0	0	0	0	38	74	0	112	225
04:15 PM	12	0	16	28	0	38	10	48	0	0	0	0	45	94	0	139	215
04:30 PM	16	0	25	41	0	60	20	80	0	0	0	0	38	71	0	109	230
04:45 PM	21	0	23	44	0	38	6	44	0	0	0	0	35	86	0	121	209
Total	72	0	93	165	0	179	54	233	0	0	0	0	156	325	0	481	879
05:00 PM	13	0	25	38	0	50	13	63	0	0	0	0	54	86	0	140	241
05:15 PM	15	0	27	42	0	45	11	56	0	0	0	0	48	63	0	111	209
05:30 PM	16	0	18	34	0	37	12	49	0	0	0	0	43	76	0	119	202
05:45 PM	15	0	17	32	0	45	16	61	0	0	0	0	33	76	0	109	202
Total	59	0	87	146	0	177	52	229	0	0	0	0	178	301	0	479	854
06:00 PM	11	0	20	31	0	52	11	63	0	0	0	0	29	66	0	95	189
06:15 PM	17	0	25	42	0	33	13	46	0	0	0	0	30	67	0	97	185
06:30 PM	11	0	24	35	0	32	9	41	0	0	0	0	21	65	0	86	162
06:45 PM	15	0	18	33	0	37	12	49	0	0	0	0	27	61	0	88	170
Total	54	0	87	141	0	154	45	199	0	0	0	0	107	259	0	366	706
Grand Total	249	0	356	605	0	693	191	884	0	0	0	0	593	1179	0	1772	3261
Apprch %	41.2	0	58.8		0	78.4	21.6		0	0	0		33.5	66.5	0		
Total %	7.6	0	10.9	18.6	0	21.3	5.9	27.1	0	0	0	0	18.2	36.2	0	54.3	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	12	0	16	28	0	38	10	48	0	0	0	0	45	94	0	139	215
04:30 PM	16	0	25	41	0	60	20	80	0	0	0	0	38	71	0	109	230
04:45 PM	21	0	23	44	0	38	6	44	0	0	0	0	35	86	0	121	209
05:00 PM	13	0	25	38	0	50	13	63	0	0	0	0	54	86	0	140	241
Total Volume	62	0	89	151	0	186	49	235	0	0	0	0	172	337	0	509	895
% App. Total	41.1	0	58.9		0	79.1	20.9		0	0	0		33.8	66.2	0		
PHF	.738	.000	.890	.858	.000	.775	.613	.734	.000	.000	.000	.000	.796	.896	.000	.909	.928

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	12	0	16	28	0	38	10	48	0	0	0	0	45	94	0	139
+15 mins.	16	0	25	41	0	60	20	80	0	0	0	0	38	71	0	109
+30 mins.	21	0	23	44	0	38	6	44	0	0	0	0	35	86	0	121
+45 mins.	13	0	25	38	0	50	13	63	0	0	0	0	54	86	0	140
Total Volume	62	0	89	151	0	186	49	235	0	0	0	0	172	337	0	509
% App. Total	41.1	0	58.9		0	79.1	20.9		0	0	0		33.8	66.2	0	
PHF	.738	.000	.890	.858	.000	.775	.613	.734	.000	.000	.000	.000	.796	.896	.000	.909

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

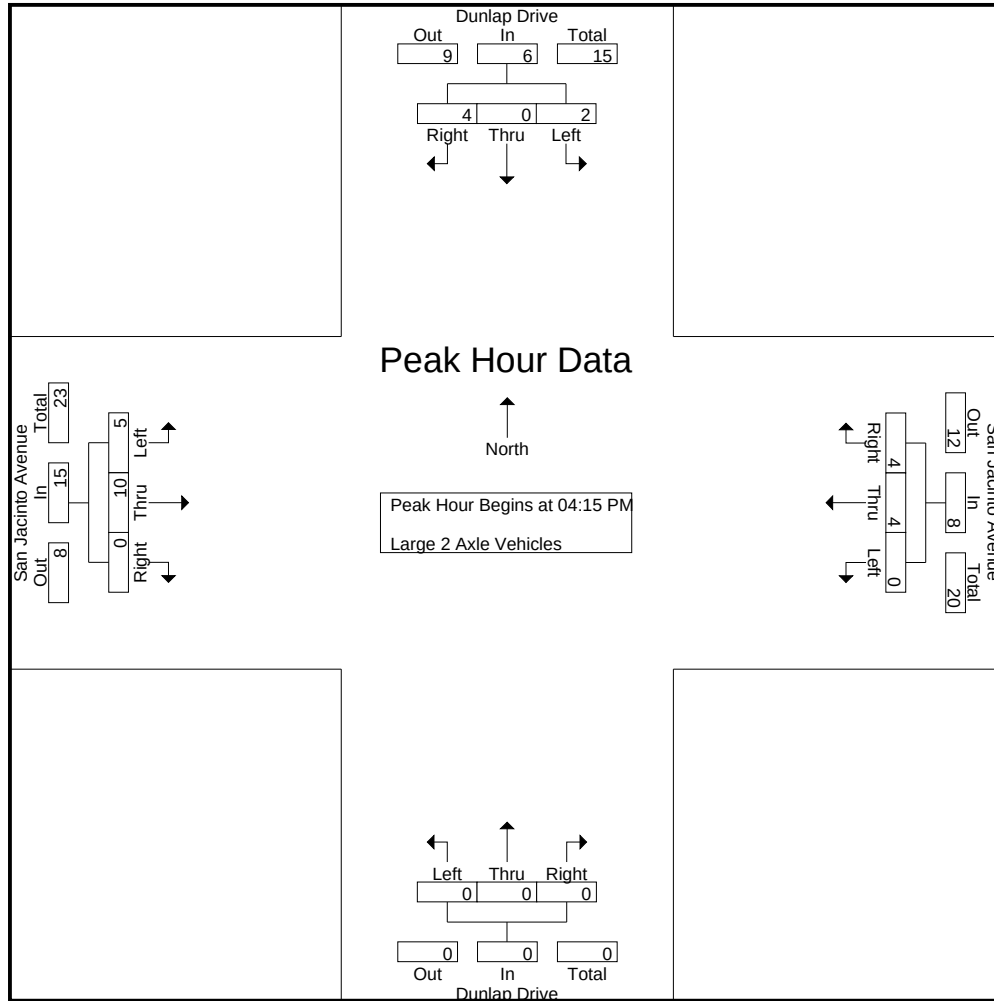
Groups Printed- Large 2 Axle Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	2	2	0	2	0	2	0	0	0	0	0	3	0	3	7
03:15 PM	1	0	0	1	0	2	0	2	0	0	0	0	2	0	0	2	5
03:30 PM	0	0	1	1	0	3	0	3	0	0	0	0	0	3	0	3	7
03:45 PM	3	0	0	3	0	2	0	2	0	0	0	0	1	4	0	5	10
Total	4	0	3	7	0	9	0	9	0	0	0	0	3	10	0	13	29
04:00 PM	0	0	3	3	0	5	0	5	0	0	0	0	0	0	0	0	8
04:15 PM	0	0	1	1	0	2	1	3	0	0	0	0	2	5	0	7	11
04:30 PM	1	0	0	1	0	2	2	4	0	0	0	0	0	3	0	3	8
04:45 PM	1	0	2	3	0	0	1	1	0	0	0	0	2	2	0	4	8
Total	2	0	6	8	0	9	4	13	0	0	0	0	4	10	0	14	35
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	2
05:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	3	0	4	6
05:45 PM	0	0	1	1	0	2	0	2	0	0	0	0	0	3	0	3	6
Total	0	0	2	2	0	4	0	4	0	0	0	0	3	7	0	10	16
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
06:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
06:45 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	1	0	1	3
Total	0	0	1	1	0	1	1	2	0	0	0	0	3	3	0	6	9
Grand Total	6	0	12	18	0	23	5	28	0	0	0	0	13	30	0	43	89
Apprch %	33.3	0	66.7		0	82.1	17.9		0	0	0		30.2	69.8	0		
Total %	6.7	0	13.5	20.2	0	25.8	5.6	31.5	0	0	0	0	14.6	33.7	0	48.3	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	1	1	0	2	1	3	0	0	0	0	2	5	0	7	11
04:30 PM	1	0	0	1	0	2	2	4	0	0	0	0	0	3	0	3	8
04:45 PM	1	0	2	3	0	0	1	1	0	0	0	0	2	2	0	4	8
05:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
Total Volume	2	0	4	6	0	4	4	8	0	0	0	0	5	10	0	15	29
% App. Total	33.3	0	66.7		0	50	50		0	0	0		33.3	66.7	0		
PHF	.500	.000	.500	.500	.000	.500	.500	.500	.000	.000	.000	.000	.625	.500	.000	.536	.659

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	1	1	0	2	1	3	0	0	0	0	2	5	0	7
+15 mins.	1	0	0	1	0	2	2	4	0	0	0	0	0	3	0	3
+30 mins.	1	0	2	3	0	0	1	1	0	0	0	0	2	2	0	4
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	2	0	4	6	0	4	4	8	0	0	0	0	5	10	0	15
% App. Total	33.3	0	66.7		0	50	50		0	0	0		33.3	66.7	0	
PHF	.500	.000	.500	.500	.000	.500	.500	.500	.000	.000	.000	.000	.625	.500	.000	.536

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

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

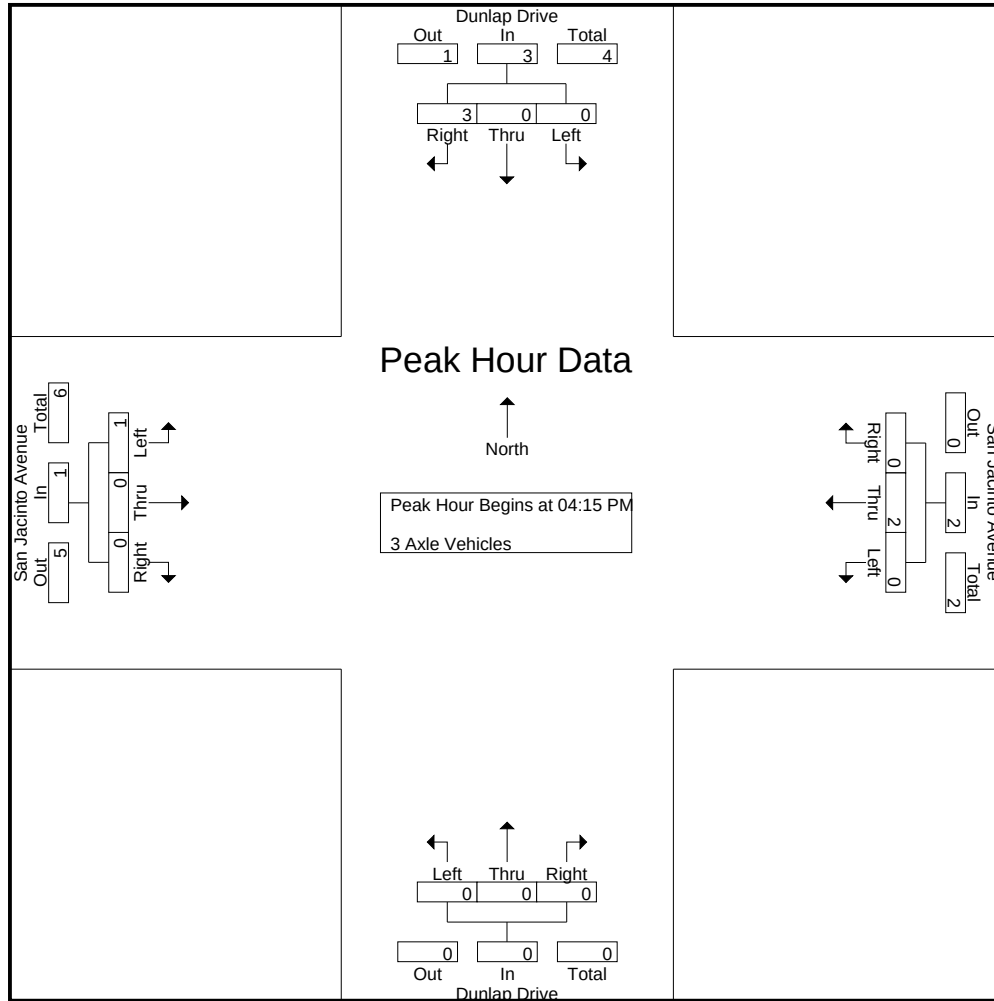
Groups Printed- 3 Axle Vehicles

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	5	0	5	0	0	0	0	0	2	0	2	7
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	0	8	0	8	0	0	0	0	1	3	0	4	12
04:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	1	2
04:15 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	3	3	0	2	0	2	0	0	0	0	2	0	0	2	7
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	2	1	0	3	4
06:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Grand Total	0	0	3	3	0	12	0	12	0	0	0	0	5	4	0	9	24
Apprch %	0	0	100		0	100	0		0	0	0		55.6	44.4	0		
Total %	0	0	12.5	12.5	0	50	0	50	0	0	0	0	20.8	16.7	0	37.5	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	3	3	0	1	0	1	0	0	0	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	3	3	0	2	0	2	0	0	0	0	1	0	0	1	6
% App. Total	0	0	100		0	100	0		0	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.500	.000	.500	.000	.000	.000	.000	.250	.000	.000	.250	.375

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

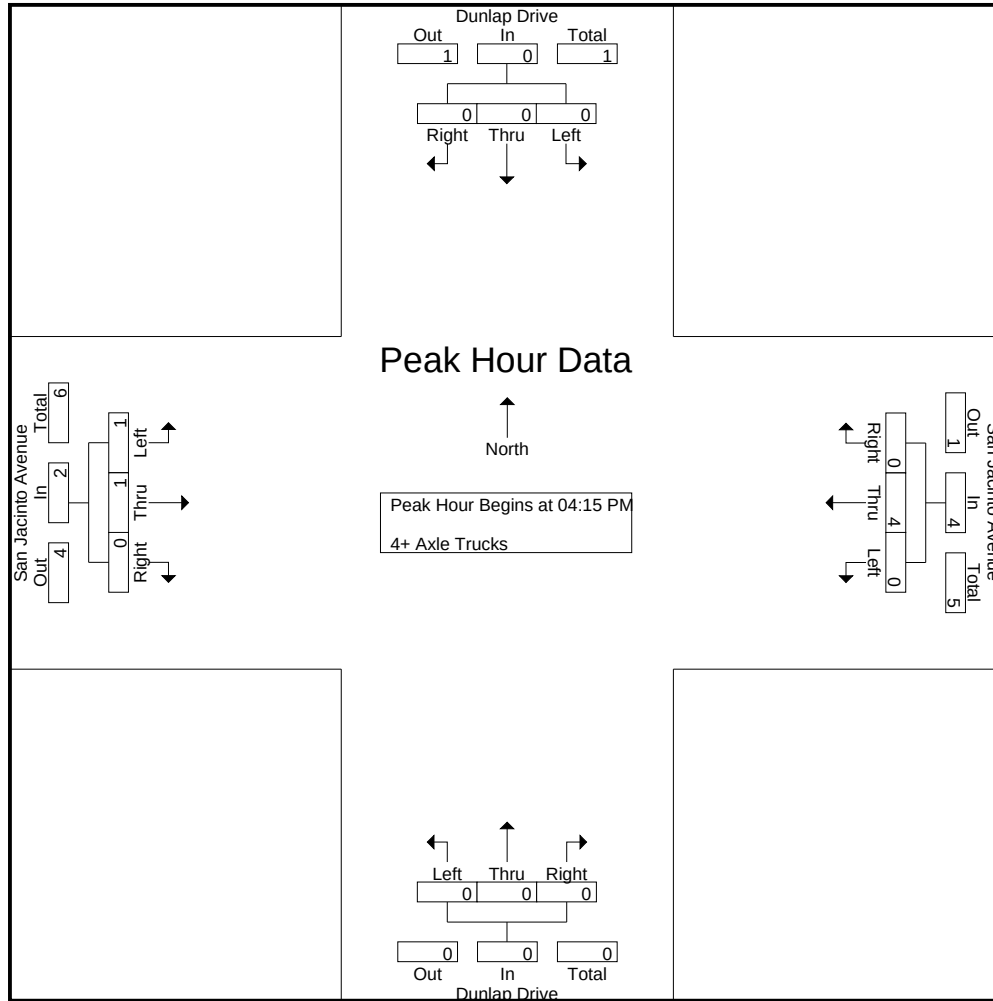
Groups Printed- 4+ Axle Trucks

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	3
03:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	4	0	4	6
03:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	0	0	2
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	1	1	0	4	0	4	0	0	0	0	1	7	0	8	13
04:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	4	0	4	0	0	0	0	2	1	0	3	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	0	1	0	1	0	0	0	0	2	2	0	4	5
Grand Total	0	0	2	2	0	9	0	9	0	0	0	0	5	10	0	15	26
Apprch %	0	0	100		0	100	0		0	0	0		33.3	66.7	0		
Total %	0	0	7.7	7.7	0	34.6	0	34.6	0	0	0	0	19.2	38.5	0	57.7	

	Dunlap Drive Southbound				San Jacinto Avenue Westbound				Dunlap Drive Northbound				San Jacinto Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2	5
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	1	1	0	2	6
% App. Total	0	0	0		0	100	0		0	0	0		50	50	0		
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.250	.250	.000	.250	.300

City of Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue
Weather: Clear

File Name : 06_PER_Dun_San J PM
Site Code : 99923603
Start Date : 6/8/2023
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Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	0	0	0	0	3	0	3	0	0	0	0	1	1	0	2
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	4	0	4	0	0	0	0	1	1	0	2
% App. Total	0	0	0	0	0	100	0	0	0	0	0	0	50	50	0	0
PHF	.000	.000	.000	.000	.000	.333	.000	.333	.000	.000	.000	.000	.250	.250	.000	.250

Location: Perris
 N/S: Dunlap Drive
 E/W: San Jacinto Avenue



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Dunlap Drive	East Leg San Jacinto Avenue	South Leg Dunlap Drive	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	6:00 AM	0	0	0	0	0
	6:15 AM	0	0	0	0	0
	6:30 AM	0	0	0	0	0
	6:45 AM	0	0	0	0	0
	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 Dunlap Drive	East Leg San Jacinto Avenue	South Leg Dunlap Drive	West Leg San Jacinto Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	3:00 PM	0	0	0	0	0
	3:15 PM	0	0	0	0	0
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	6:00 PM	0	0	0	0	0
	6:15 PM	0	0	0	0	0
	6:30 PM	0	0	0	0	0
	6:45 PM	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0

Location: Perris
N/S: Dunlap Drive
E/W: San Jacinto Avenue



Date: 6/8/2023
Day: Thursday

BICYCLES

		Southbound Dunlap Drive			Westbound San Jacinto Avenue			Northbound Dunlap Drive			Eastbound San Jacinto Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	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 Dunlap Drive			Westbound San Jacinto Avenue			Northbound Dunlap Drive			Eastbound San Jacinto Avenue			
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:		0	0	0	0	0	0	0	0	0	0	0	0	0

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City of Perris
N/S: Case Road
E/W: Ellis Avenue
Weather: Clear

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

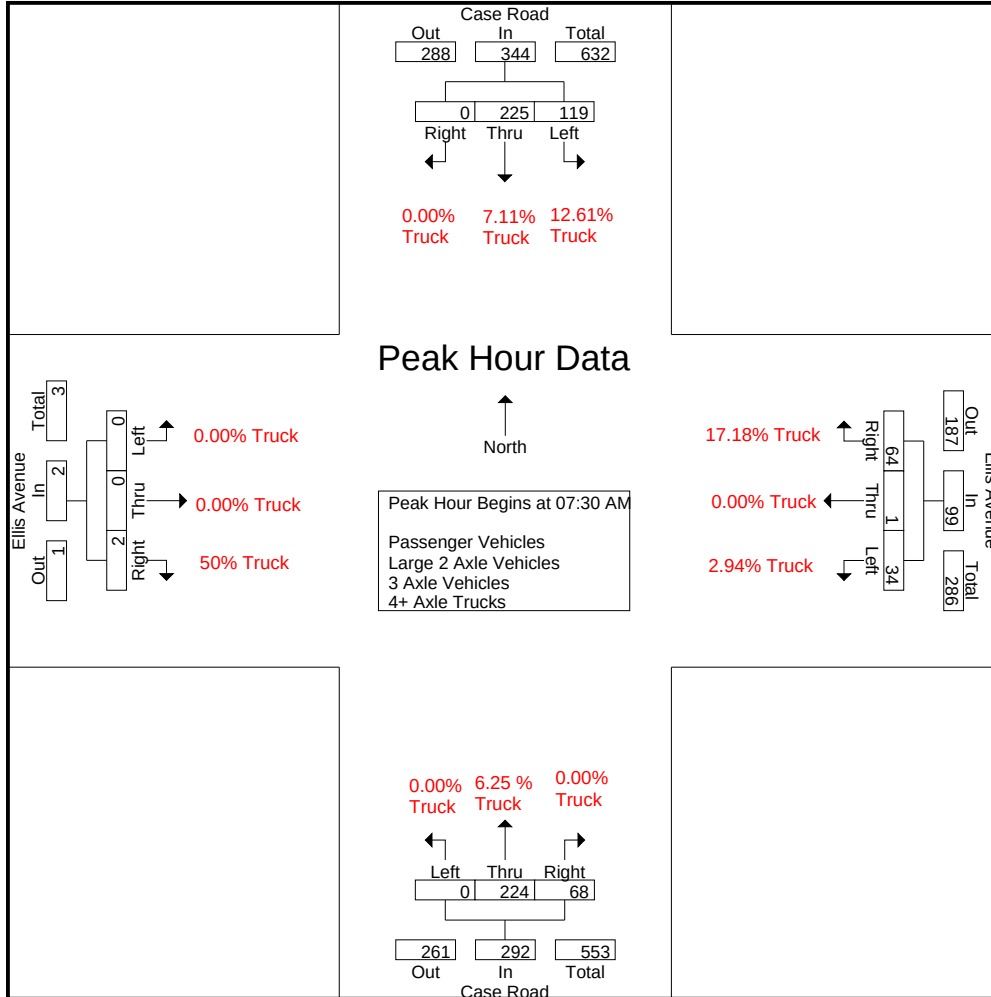
	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	15	32	0	47	6	0	11	17	0	33	8	41	0	0	0	0	105
06:15 AM	14	36	0	50	7	0	6	13	0	34	13	47	0	0	0	0	110
06:30 AM	11	42	0	53	7	0	9	16	0	43	10	53	0	0	0	0	122
06:45 AM	12	51	0	63	3	0	10	13	0	43	15	58	0	0	0	0	134
Total	52	161	0	213	23	0	36	59	0	153	46	199	0	0	0	0	471
07:00 AM	20	35	0	55	11	0	10	21	0	43	17	60	0	0	0	0	136
07:15 AM	18	40	0	58	2	0	15	17	0	41	25	66	0	0	0	0	141
07:30 AM	38	60	0	98	6	1	16	23	0	49	16	65	0	0	1	1	187
07:45 AM	32	51	0	83	7	0	21	28	0	75	28	103	0	0	1	1	215
Total	108	186	0	294	26	1	62	89	0	208	86	294	0	0	2	2	679
08:00 AM	25	62	0	87	14	0	16	30	0	55	13	68	0	0	0	0	185
08:15 AM	24	52	0	76	7	0	11	18	0	45	11	56	0	0	0	0	150
08:30 AM	20	35	0	55	10	0	15	25	0	50	9	59	0	1	0	1	140
08:45 AM	14	39	0	53	3	0	9	12	0	51	12	63	0	0	0	0	128
Total	83	188	0	271	34	0	51	85	0	201	45	246	0	1	0	1	603
Grand Total	243	535	0	778	83	1	149	233	0	562	177	739	0	1	2	3	1753
Apprch %	31.2	68.8	0		35.6	0.4	63.9		0	76	24		0	33.3	66.7		
Total %	13.9	30.5	0	44.4	4.7	0.1	8.5	13.3	0	32.1	10.1	42.2	0	0.1	0.1	0.2	
Passenger Vehicles	211	479	0	690	80	1	127	208	0	522	176	698	0	0	1	1	1597
% Passenger Vehicles	86.8	89.5	0	88.7	96.4	100	85.2	89.3	0	92.9	99.4	94.5	0	0	50	33.3	91.1
Large 2 Axle Vehicles	6	28	0	34	1	0	4	5	0	27	0	27	0	0	1	1	67
% Large 2 Axle Vehicles	2.5	5.2	0	4.4	1.2	0	2.7	2.1	0	4.8	0	3.7	0	0	50	33.3	3.8
3 Axle Vehicles	11	26	0	37	1	0	4	5	0	10	1	11	0	1	0	1	54
% 3 Axle Vehicles	4.5	4.9	0	4.8	1.2	0	2.7	2.1	0	1.8	0.6	1.5	0	100	0	33.3	3.1
4+ Axle Trucks	15	2	0	17	1	0	14	15	0	3	0	3	0	0	0	0	35
% 4+ Axle Trucks	6.2	0.4	0	2.2	1.2	0	9.4	6.4	0	0.5	0	0.4	0	0	0	0	2

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	38	60	0	98	6	1	16	23	0	49	16	65	0	0	1	1	187
07:45 AM	32	51	0	83	7	0	21	28	0	75	28	103	0	0	1	1	215
08:00 AM	25	62	0	87	14	0	16	30	0	55	13	68	0	0	0	0	185
08:15 AM	24	52	0	76	7	0	11	18	0	45	11	56	0	0	0	0	150
Total Volume	119	225	0	344	34	1	64	99	0	224	68	292	0	0	2	2	737
% App. Total	34.6	65.4	0		34.3	1	64.6		0	76.7	23.3		0	0	100		
PHF	.783	.907	.000	.878	.607	.250	.762	.825	.000	.747	.607	.709	.000	.000	.500	.500	.857

City of Perris
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8.86% Truck



Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

5.79% Truck

	07:30 AM				07:45 AM				07:15 AM				07:00 AM			
+0 mins.	38	60	0	98	7	0	21	28	0	41	25	66	0	0	0	0
+15 mins.	32	51	0	83	14	0	16	30	0	49	16	65	0	0	0	0
+30 mins.	25	62	0	87	7	0	11	18	0	75	28	103	0	0	1	1
+45 mins.	24	52	0	76	10	0	15	25	0	55	13	68	0	0	1	1
Total Volume	119	225	0	344	38	0	63	101	0	220	82	302	0	0	2	2
% App. Total	34.6	65.4	0		37.6	0	62.4		0	72.8	27.2		0	0	100	
PHF	.783	.907	.000	.878	.679	.000	.750	.842	.000	.733	.732	.733	.000	.000	.500	.500

City of Perris
N/S: Case Road
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Weather: Clear

File Name : 07_PER_Case_Ell AM
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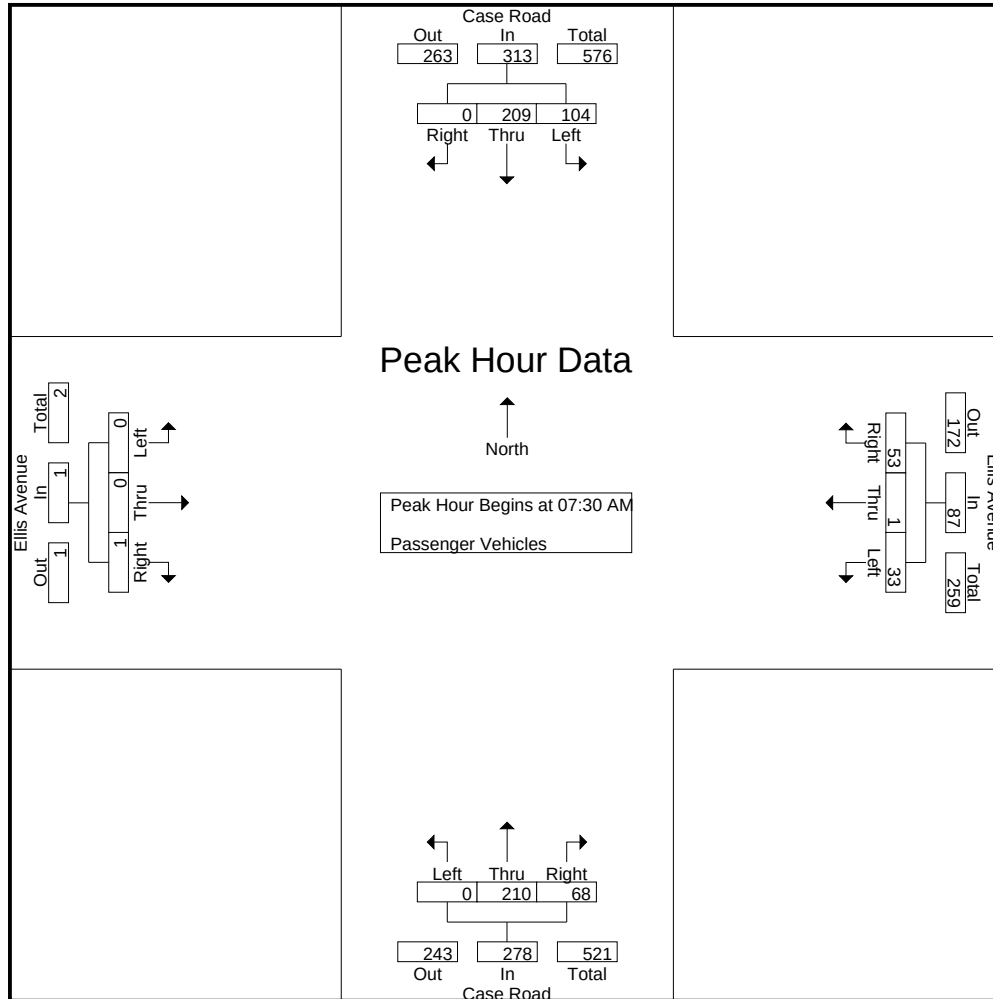
Groups Printed- Passenger Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	14	28	0	42	5	0	8	13	0	29	8	37	0	0	0	0	92
06:15 AM	11	34	0	45	7	0	6	13	0	33	13	46	0	0	0	0	104
06:30 AM	10	33	0	43	7	0	8	15	0	40	10	50	0	0	0	0	108
06:45 AM	10	36	0	46	3	0	10	13	0	41	15	56	0	0	0	0	115
Total	45	131	0	176	22	0	32	54	0	143	46	189	0	0	0	0	419
07:00 AM	19	31	0	50	10	0	9	19	0	43	17	60	0	0	0	0	129
07:15 AM	16	36	0	52	2	0	11	13	0	36	25	61	0	0	0	0	126
07:30 AM	34	57	0	91	5	1	11	17	0	44	16	60	0	0	0	0	168
07:45 AM	29	46	0	75	7	0	18	25	0	71	28	99	0	0	1	1	200
Total	98	170	0	268	24	1	49	74	0	194	86	280	0	0	1	1	623
08:00 AM	22	55	0	77	14	0	14	28	0	51	13	64	0	0	0	0	169
08:15 AM	19	51	0	70	7	0	10	17	0	44	11	55	0	0	0	0	142
08:30 AM	16	33	0	49	10	0	14	24	0	45	9	54	0	0	0	0	127
08:45 AM	11	39	0	50	3	0	8	11	0	45	11	56	0	0	0	0	117
Total	68	178	0	246	34	0	46	80	0	185	44	229	0	0	0	0	555
Grand Total	211	479	0	690	80	1	127	208	0	522	176	698	0	0	1	1	1597
Apprch %	30.6	69.4	0		38.5	0.5	61.1		0	74.8	25.2		0	0	100		
Total %	13.2	30	0	43.2	5	0.1	8	13	0	32.7	11	43.7	0	0	0.1	0.1	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	34	57	0	91	5	1	11	17	0	44	16	60	0	0	0	0	168
07:45 AM	29	46	0	75	7	0	18	25	0	71	28	99	0	0	1	1	200
08:00 AM	22	55	0	77	14	0	14	28	0	51	13	64	0	0	0	0	169
08:15 AM	19	51	0	70	7	0	10	17	0	44	11	55	0	0	0	0	142
Total Volume	104	209	0	313	33	1	53	87	0	210	68	278	0	0	1	1	679
% App. Total	33.2	66.8	0		37.9	1.1	60.9		0	75.5	24.5		0	0	100		
PHF	.765	.917	.000	.860	.589	.250	.736	.777	.000	.739	.607	.702	.000	.000	.250	.250	.849

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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	34	57	0	91	5	1	11	17	0	44	16	60	0	0	0	0
+15 mins.	29	46	0	75	7	0	18	25	0	71	28	99	0	0	1	1
+30 mins.	22	55	0	77	14	0	14	28	0	51	13	64	0	0	0	0
+45 mins.	19	51	0	70	7	0	10	17	0	44	11	55	0	0	0	0
Total Volume	104	209	0	313	33	1	53	87	0	210	68	278	0	0	1	1
% App. Total	33.2	66.8	0		37.9	1.1	60.9		0	75.5	24.5		0	0	100	
PHF	.765	.917	.000	.860	.589	.250	.736	.777	.000	.739	.607	.702	.000	.000	.250	.250

City of Perris
N/S: Case Road
E/W: Ellis Avenue
Weather: Clear

File Name : 07_PER_Case_Ell AM
Site Code : 99923603
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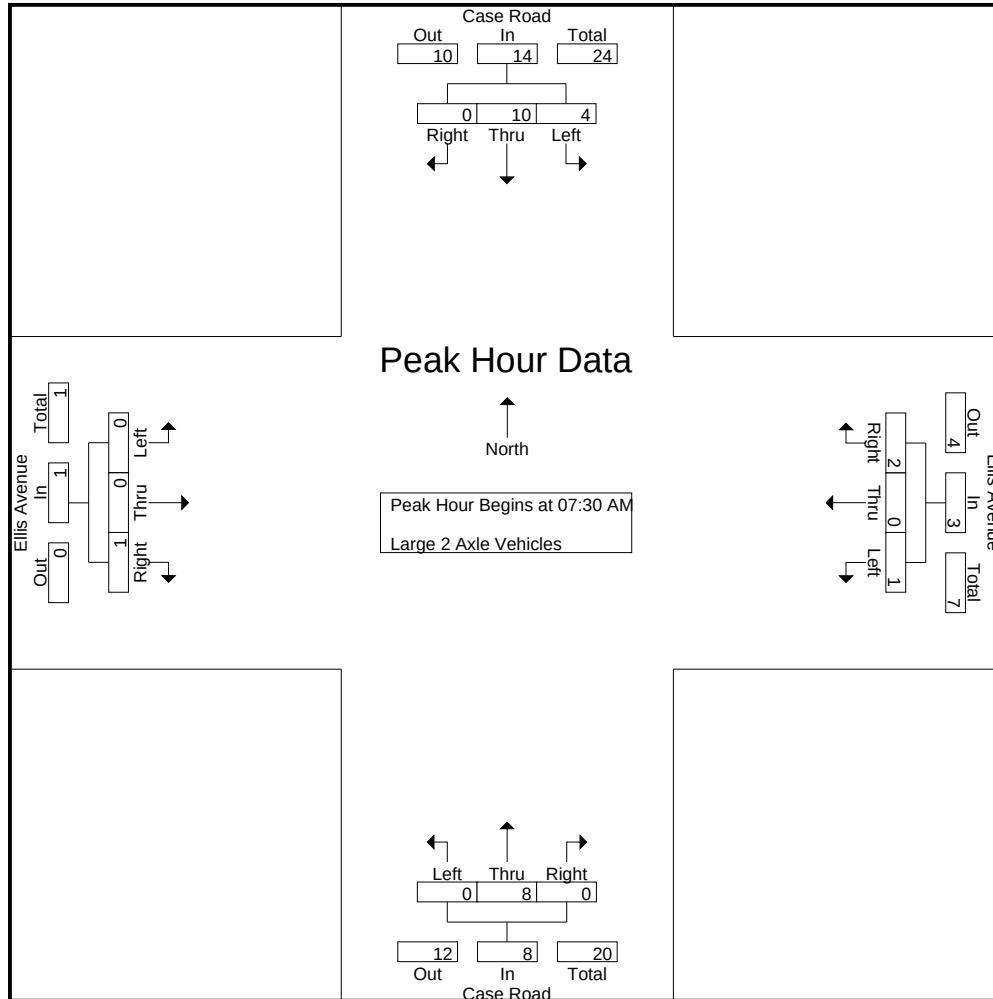
Groups Printed- Large 2 Axle Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	3	0	3	0	0	1	1	0	2	0	2	0	0	0	0	6
06:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
06:30 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
06:45 AM	1	5	0	6	0	0	0	0	0	1	0	1	0	0	0	0	7
Total	1	13	0	14	0	0	1	1	0	6	0	6	0	0	0	0	21
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	1	1	0	2	0	0	1	1	0	4	0	4	0	0	0	0	7
07:30 AM	2	1	0	3	1	0	1	2	0	3	0	3	0	0	1	1	9
07:45 AM	2	4	0	6	0	0	1	1	0	2	0	2	0	0	0	0	9
Total	5	8	0	13	1	0	3	4	0	9	0	9	0	0	1	1	27
08:00 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
08:45 AM	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	5
Total	0	7	0	7	0	0	0	0	0	12	0	12	0	0	0	0	19
Grand Total	6	28	0	34	1	0	4	5	0	27	0	27	0	0	1	1	67
Apprch %	17.6	82.4	0		20	0	80		0	100	0		0	0	100		
Total %	9	41.8	0	50.7	1.5	0	6	7.5	0	40.3	0	40.3	0	0	1.5	1.5	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	1	0	3	1	0	1	2	0	3	0	3	0	0	1	1	9
07:45 AM	2	4	0	6	0	0	1	1	0	2	0	2	0	0	0	0	9
08:00 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	4	10	0	14	1	0	2	3	0	8	0	8	0	0	1	1	26
% App. Total	28.6	71.4	0		33.3	0	66.7		0	100	0		0	0	100		
PHF	.500	.500	.000	.583	.250	.000	.500	.375	.000	.667	.000	.667	.000	.000	.250	.250	.722

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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	2	1	0	3	1	0	1	2	0	3	0	3	0	0	1	1
+15 mins.	2	4	0	6	0	0	1	1	0	2	0	2	0	0	0	0
+30 mins.	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	4	10	0	14	1	0	2	3	0	8	0	8	0	0	1	1
% App. Total	28.6	71.4	0		33.3	0	66.7		0	100	0		0	0	100	
PHF	.500	.500	.000	.583	.250	.000	.500	.375	.000	.667	.000	.667	.000	.000	.250	.250

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City of Perris
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File Name : 07_PER_Case_Ell AM
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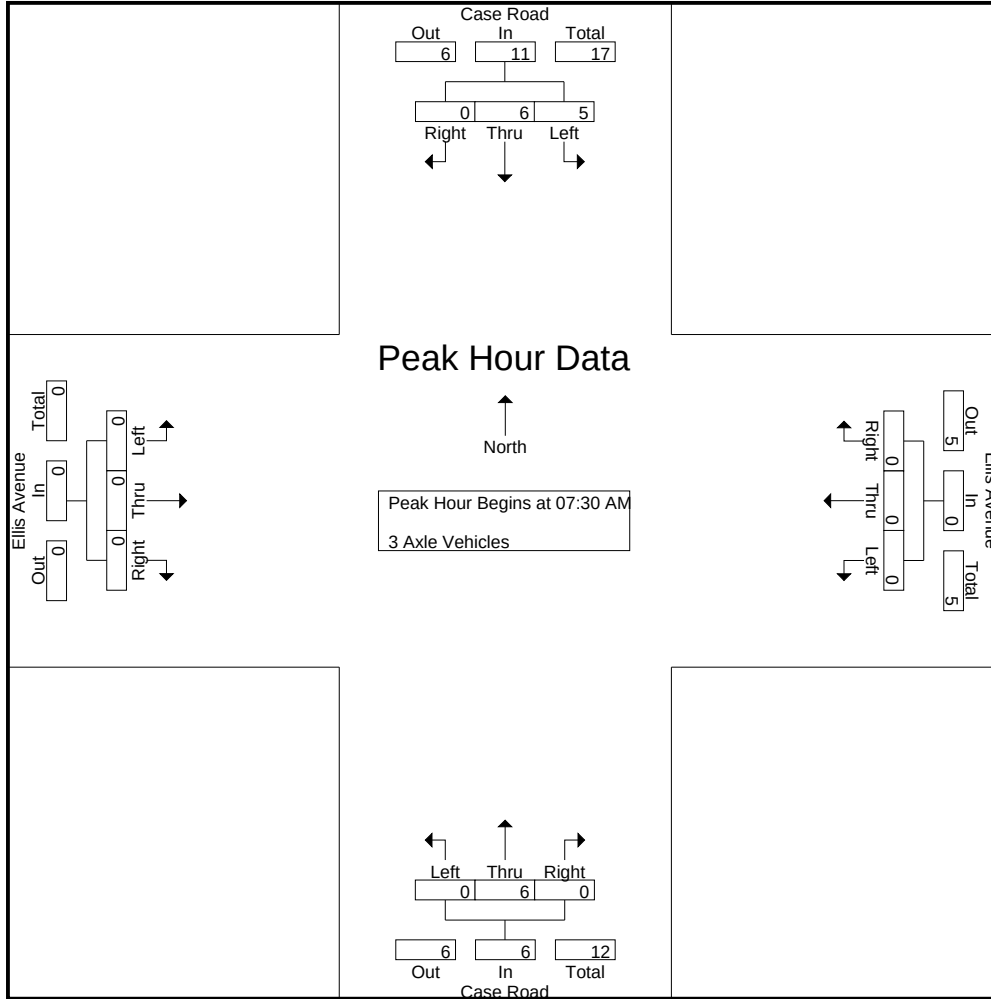
Groups Printed- 3 Axle Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
06:15 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:30 AM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	6
06:45 AM	1	10	0	11	0	0	0	0	0	1	0	1	0	0	0	0	12
Total	2	16	0	18	1	0	0	1	0	2	0	2	0	0	0	0	21
07:00 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	1	2	0	3	0	0	2	2	0	1	0	1	0	0	0	0	6
07:30 AM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
07:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	3	7	0	10	0	0	2	2	0	5	0	5	0	0	0	0	17
08:00 AM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	3	0	0	3	0	0	1	1	0	1	0	1	0	1	0	1	6
08:45 AM	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	2
Total	6	3	0	9	0	0	2	2	0	3	1	4	0	1	0	1	16
Grand Total	11	26	0	37	1	0	4	5	0	10	1	11	0	1	0	1	54
Apprch %	29.7	70.3	0		20	0	80		0	90.9	9.1		0	100	0		
Total %	20.4	48.1	0	68.5	1.9	0	7.4	9.3	0	18.5	1.9	20.4	0	1.9	0	1.9	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
07:45 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:15 AM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	5	6	0	11	0	0	0	0	0	6	0	6	0	0	0	0	17
% App. Total	45.5	54.5	0		0	0	0		0	100	0		0	0	0		
PHF	.625	.750	.000	.688	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000	.708

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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	2	2	0	4	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	5	6	0	11	0	0	0	0	0	6	0	6	0	0	0	0
% App. Total	45.5	54.5	0		0	0	0		0	100	0		0	0	0	
PHF	.625	.750	.000	.688	.000	.000	.000	.000	.000	.750	.000	.750	.000	.000	.000	.000

File Name : 07_PER_Case_Ell AM
Site Code : 99923603
Start Date : 6/8/2023
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City of Perris
N/S: Case Road
E/W: Ellis Avenue
Weather: Clear

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

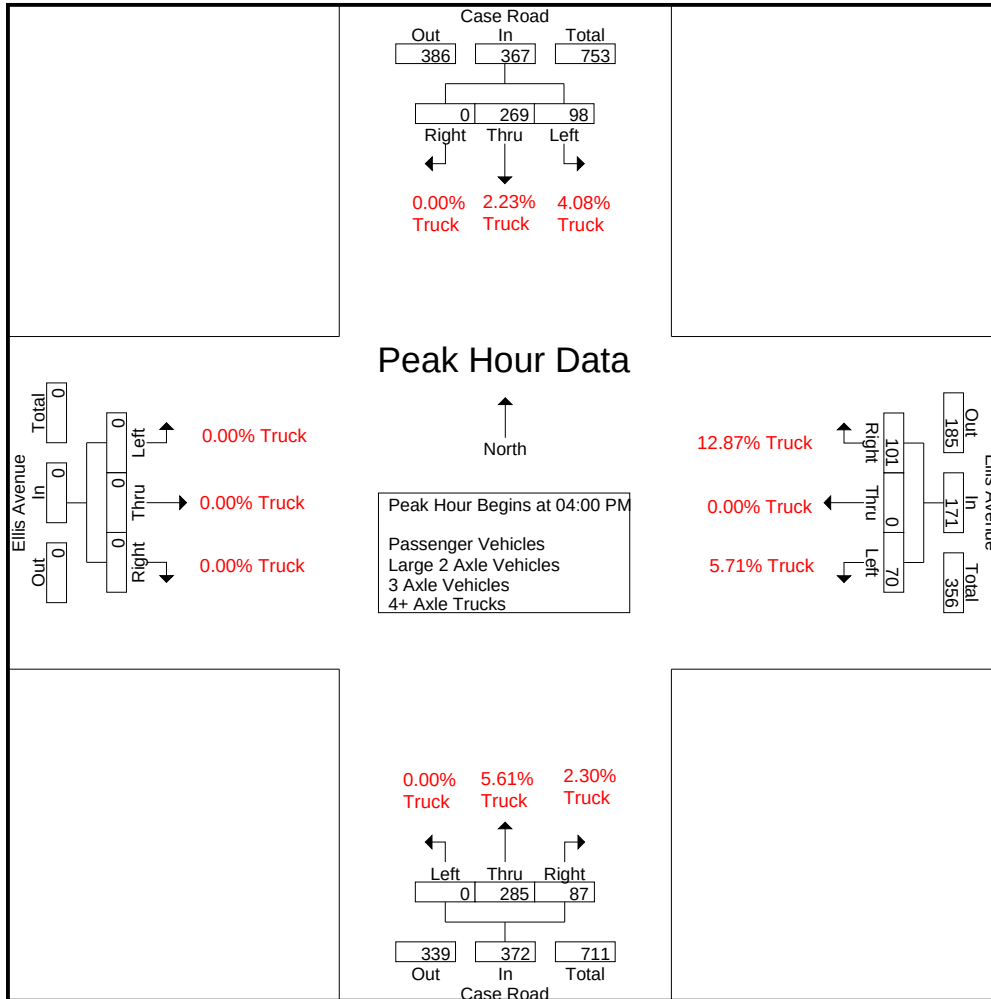
	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	28	86	0	114	17	1	19	37	0	69	18	87	0	1	0	1	239
03:15 PM	16	60	0	76	17	1	15	33	0	61	20	81	0	1	0	1	191
03:30 PM	30	87	0	117	15	0	17	32	0	69	21	90	0	0	0	0	239
03:45 PM	13	52	0	65	16	2	20	38	1	63	17	81	0	0	0	0	184
Total	87	285	0	372	65	4	71	140	1	262	76	339	0	2	0	2	853
04:00 PM	22	62	0	84	18	0	25	43	0	69	26	95	0	0	0	0	222
04:15 PM	20	75	0	95	14	0	23	37	0	70	18	88	0	0	0	0	220
04:30 PM	35	77	0	112	15	0	34	49	0	74	22	96	0	0	0	0	257
04:45 PM	21	55	0	76	23	0	19	42	0	72	21	93	0	0	0	0	211
Total	98	269	0	367	70	0	101	171	0	285	87	372	0	0	0	0	910
05:00 PM	20	71	0	91	31	0	16	47	0	60	19	79	0	2	0	2	219
05:15 PM	14	79	0	93	17	0	18	35	0	69	15	84	0	1	0	1	213
05:30 PM	25	69	0	94	22	0	21	43	0	54	14	68	0	0	0	0	205
05:45 PM	8	62	0	70	13	0	13	26	0	46	10	56	0	0	0	0	152
Total	67	281	0	348	83	0	68	151	0	229	58	287	0	3	0	3	789
06:00 PM	13	66	0	79	18	0	17	35	0	58	21	79	0	0	0	0	193
06:15 PM	25	48	0	73	12	0	14	26	0	56	7	63	0	0	0	0	162
06:30 PM	7	52	0	59	7	0	13	20	0	65	12	77	0	0	0	0	156
06:45 PM	11	38	0	49	15	0	9	24	0	52	7	59	0	0	0	0	132
Total	56	204	0	260	52	0	53	105	0	231	47	278	0	0	0	0	643
Grand Total	308	1039	0	1347	270	4	293	567	1	1007	268	1276	0	5	0	5	3195
Apprch %	22.9	77.1	0		47.6	0.7	51.7		0.1	78.9	21		0	100	0		
Total %	9.6	32.5	0	42.2	8.5	0.1	9.2	17.7	0	31.5	8.4	39.9	0	0.2	0	0.2	
Passenger Vehicles	286	1015	0	1301	265	3	262	530	1	947	259	1207	0	4	0	4	3042
% Passenger Vehicles	92.9	97.7	0	96.6	98.1	75	89.4	93.5	100	94	96.6	94.6	0	80	0	80	95.2
Large 2 Axle Vehicles	5	15	0	20	4	1	7	12	0	30	9	39	0	1	0	1	72
% Large 2 Axle Vehicles	1.6	1.4	0	1.5	1.5	25	2.4	2.1	0	3	3.4	3.1	0	20	0	20	2.3
3 Axle Vehicles	11	8	0	19	0	0	16	16	0	28	0	28	0	0	0	0	63
% 3 Axle Vehicles	3.6	0.8	0	1.4	0	0	5.5	2.8	0	2.8	0	2.2	0	0	0	0	2
4+ Axle Trucks	6	1	0	7	1	0	8	9	0	2	0	2	0	0	0	0	18
% 4+ Axle Trucks	1.9	0.1	0	0.5	0.4	0	2.7	1.6	0	0.2	0	0.2	0	0	0	0	0.6

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	22	62	0	84	18	0	25	43	0	69	26	95	0	0	0	0	222
04:15 PM	20	75	0	95	14	0	23	37	0	70	18	88	0	0	0	0	220
04:30 PM	35	77	0	112	15	0	34	49	0	74	22	96	0	0	0	0	257
04:45 PM	21	55	0	76	23	0	19	42	0	72	21	93	0	0	0	0	211
Total Volume	98	269	0	367	70	0	101	171	0	285	87	372	0	0	0	0	910
% App. Total	26.7	73.3	0		40.9	0	59.1		0	76.6	23.4		0	0	0		
PHF	.700	.873	.000	.819	.761	.000	.743	.872	.000	.963	.837	.969	.000	.000	.000	.000	.885

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5.18% Truck



0.00% Truck

6.46% truck

3.94% Truck

Peak Hour Analysis From 03:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM				04:15 PM				04:00 PM				04:30 PM			
+0 mins.	20	75	0	95	14	0	23	37	0	69	26	95	0	0	0	0
+15 mins.	35	77	0	112	15	0	34	49	0	70	18	88	0	0	0	0
+30 mins.	21	55	0	76	23	0	19	42	0	74	22	96	0	2	0	2
+45 mins.	20	71	0	91	31	0	16	47	0	72	21	93	0	1	0	1
Total Volume	96	278	0	374	83	0	92	175	0	285	87	372	0	3	0	3
% App. Total	25.7	74.3	0		47.4	0	52.6		0	76.6	23.4		0	100	0	
PHF	.686	.903	.000	.835	.669	.000	.676	.893	.000	.963	.837	.969	.000	.375	.000	.375

City of Perris
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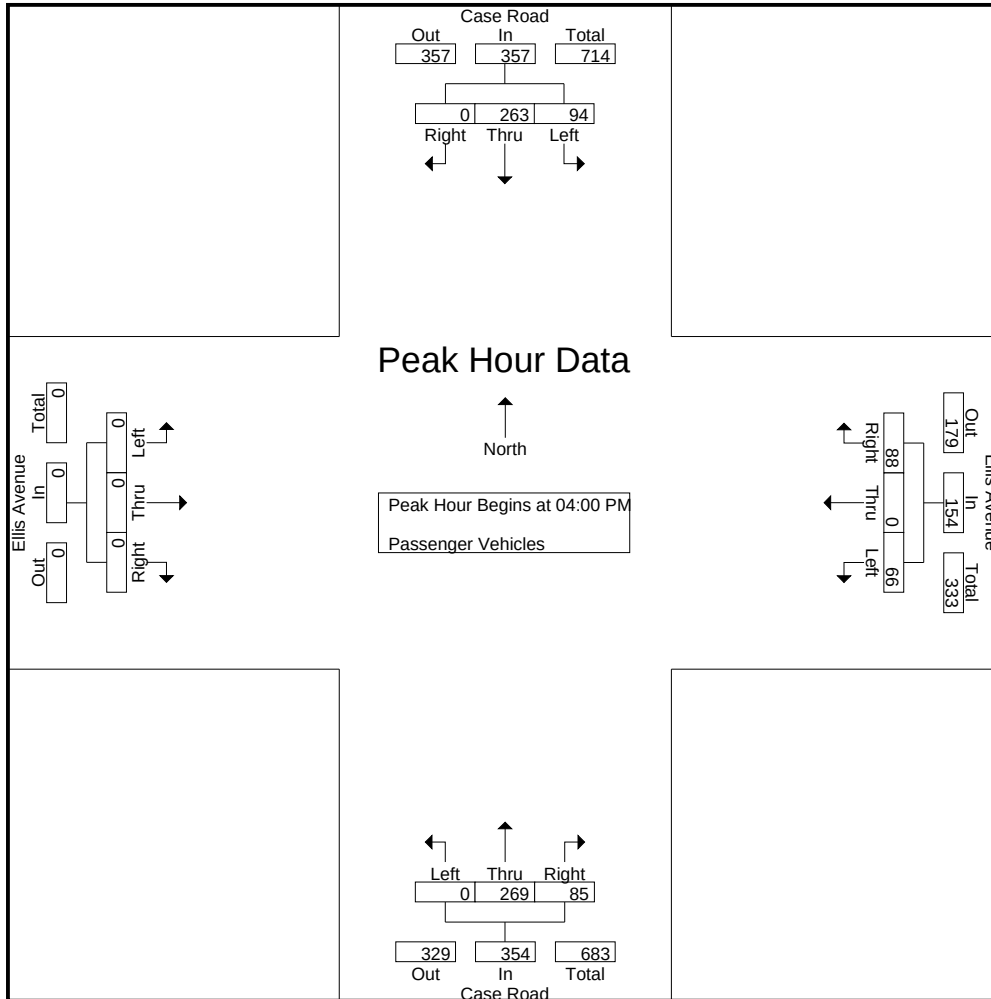
Groups Printed- Passenger Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	25	83	0	108	17	0	16	33	0	67	17	84	0	1	0	1	226
03:15 PM	13	57	0	70	17	1	15	33	0	55	20	75	0	0	0	0	178
03:30 PM	25	85	0	110	15	0	16	31	0	66	20	86	0	0	0	0	227
03:45 PM	13	50	0	63	15	2	17	34	1	57	14	72	0	0	0	0	169
Total	76	275	0	351	64	3	64	131	1	245	71	317	0	1	0	1	800
04:00 PM	22	61	0	83	17	0	24	41	0	67	26	93	0	0	0	0	217
04:15 PM	18	71	0	89	12	0	19	31	0	65	16	81	0	0	0	0	201
04:30 PM	34	76	0	110	14	0	27	41	0	68	22	90	0	0	0	0	241
04:45 PM	20	55	0	75	23	0	18	41	0	69	21	90	0	0	0	0	206
Total	94	263	0	357	66	0	88	154	0	269	85	354	0	0	0	0	865
05:00 PM	19	70	0	89	31	0	15	46	0	56	19	75	0	2	0	2	212
05:15 PM	11	78	0	89	17	0	16	33	0	65	15	80	0	1	0	1	203
05:30 PM	24	64	0	88	22	0	20	42	0	50	14	64	0	0	0	0	194
05:45 PM	8	62	0	70	13	0	11	24	0	43	10	53	0	0	0	0	147
Total	62	274	0	336	83	0	62	145	0	214	58	272	0	3	0	3	756
06:00 PM	11	66	0	77	18	0	16	34	0	53	21	74	0	0	0	0	185
06:15 PM	25	47	0	72	12	0	12	24	0	55	5	60	0	0	0	0	156
06:30 PM	7	52	0	59	7	0	12	19	0	63	12	75	0	0	0	0	153
06:45 PM	11	38	0	49	15	0	8	23	0	48	7	55	0	0	0	0	127
Total	54	203	0	257	52	0	48	100	0	219	45	264	0	0	0	0	621
Grand Total	286	1015	0	1301	265	3	262	530	1	947	259	1207	0	4	0	4	3042
Apprch %	22	78	0		50	0.6	49.4		0.1	78.5	21.5		0	100	0		
Total %	9.4	33.4	0	42.8	8.7	0.1	8.6	17.4	0	31.1	8.5	39.7	0	0.1	0	0.1	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	22	61	0	83	17	0	24	41	0	67	26	93	0	0	0	0	217
04:15 PM	18	71	0	89	12	0	19	31	0	65	16	81	0	0	0	0	201
04:30 PM	34	76	0	110	14	0	27	41	0	68	22	90	0	0	0	0	241
04:45 PM	20	55	0	75	23	0	18	41	0	69	21	90	0	0	0	0	206
Total Volume	94	263	0	357	66	0	88	154	0	269	85	354	0	0	0	0	865
% App. Total	26.3	73.7	0		42.9	0	57.1		0	76	24		0	0	0		
PHF	.691	.865	.000	.811	.717	.000	.815	.939	.000	.975	.817	.952	.000	.000	.000	.000	.897

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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	22	61	0	83	17	0	24	41	0	67	26	93	0	0	0	0
+15 mins.	18	71	0	89	12	0	19	31	0	65	16	81	0	0	0	0
+30 mins.	34	76	0	110	14	0	27	41	0	68	22	90	0	0	0	0
+45 mins.	20	55	0	75	23	0	18	41	0	69	21	90	0	0	0	0
Total Volume	94	263	0	357	66	0	88	154	0	269	85	354	0	0	0	0
% App. Total	26.3	73.7	0		42.9	0	57.1		0	76	24		0	0	0	
PHF	.691	.865	.000	.811	.717	.000	.815	.939	.000	.975	.817	.952	.000	.000	.000	.000

City of Perris
N/S: Case Road
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File Name : 07_PER_Case_Ell PM
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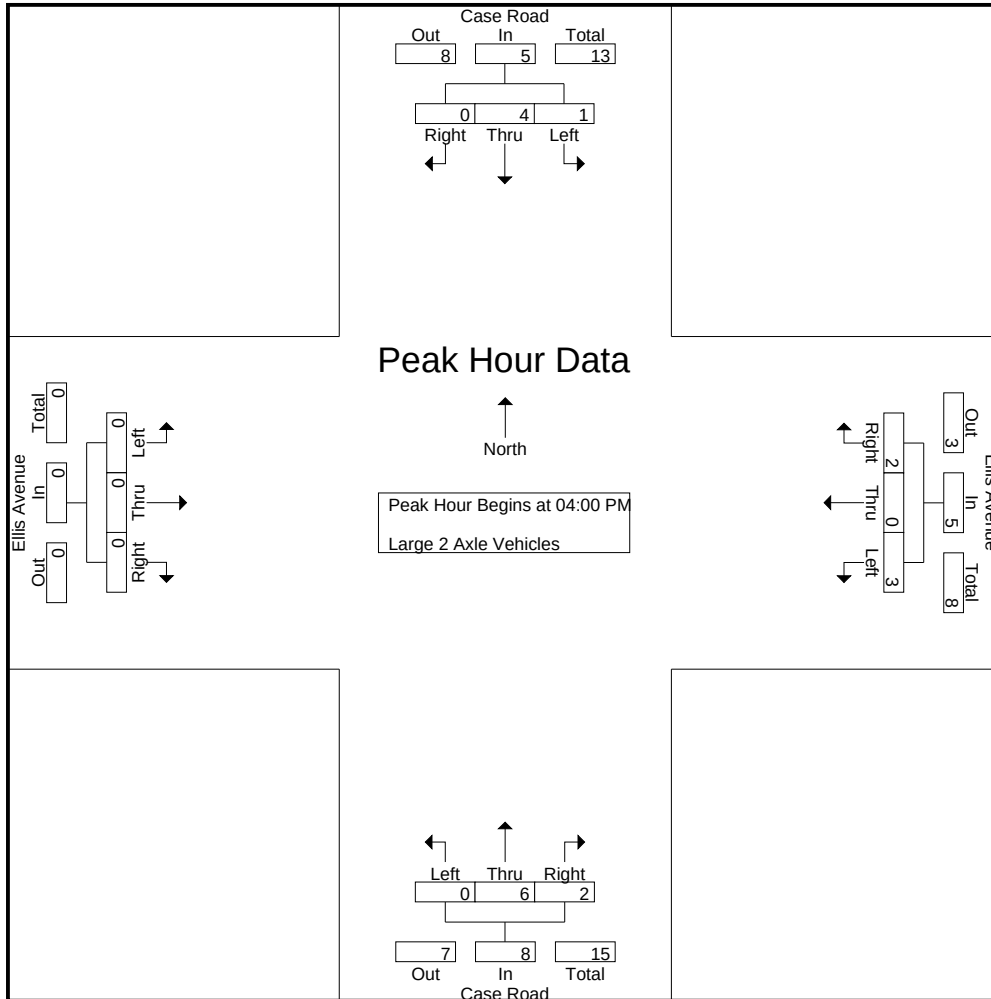
Groups Printed- Large 2 Axle Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	1	0	1	0	2	1	3	0	0	0	0	5
03:15 PM	2	2	0	4	0	0	0	0	0	4	0	4	0	1	0	1	9
03:30 PM	1	0	0	1	0	0	1	1	0	2	1	3	0	0	0	0	5
03:45 PM	0	1	0	1	1	0	0	1	0	4	3	7	0	0	0	0	9
Total	3	4	0	7	1	1	1	3	0	12	5	17	0	1	0	1	28
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	1	3	0	4	2	0	0	2	0	2	2	4	0	0	0	0	10
04:30 PM	0	0	0	0	1	0	1	2	0	2	0	2	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	1	4	0	5	3	0	2	5	0	6	2	8	0	0	0	0	18
05:00 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
05:15 PM	0	1	0	1	0	0	1	1	0	4	0	4	0	0	0	0	6
05:30 PM	0	5	0	5	0	0	1	1	0	2	0	2	0	0	0	0	8
05:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
Total	0	7	0	7	0	0	3	3	0	10	0	10	0	0	0	0	20
06:00 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 PM	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	3
06:30 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	0	0	1	1	0	2	2	4	0	0	0	0	6
Grand Total	5	15	0	20	4	1	7	12	0	30	9	39	0	1	0	1	72
Apprch %	25	75	0		33.3	8.3	58.3		0	76.9	23.1		0	100	0		
Total %	6.9	20.8	0	27.8	5.6	1.4	9.7	16.7	0	41.7	12.5	54.2	0	1.4	0	1.4	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	1	3	0	4	2	0	0	2	0	2	2	4	0	0	0	0	10
04:30 PM	0	0	0	0	1	0	1	2	0	2	0	2	0	0	0	0	4
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total Volume	1	4	0	5	3	0	2	5	0	6	2	8	0	0	0	0	18
% App. Total	20	80	0		60	0	40		0	75	25		0	0	0		
PHF	.250	.333	.000	.313	.375	.000	.500	.625	.000	.750	.250	.500	.000	.000	.000	.000	.450

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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	1	3	0	4	2	0	0	2	0	2	2	4	0	0	0	0
+30 mins.	0	0	0	0	1	0	1	2	0	2	0	2	0	0	0	0
+45 mins.	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0
Total Volume	1	4	0	5	3	0	2	5	0	6	2	8	0	0	0	0
% App. Total	20	80	0		60	0	40		0	75	25		0	0	0	
PHF	.250	.333	.000	.313	.375	.000	.500	.625	.000	.750	.250	.500	.000	.000	.000	.000

City of Perris
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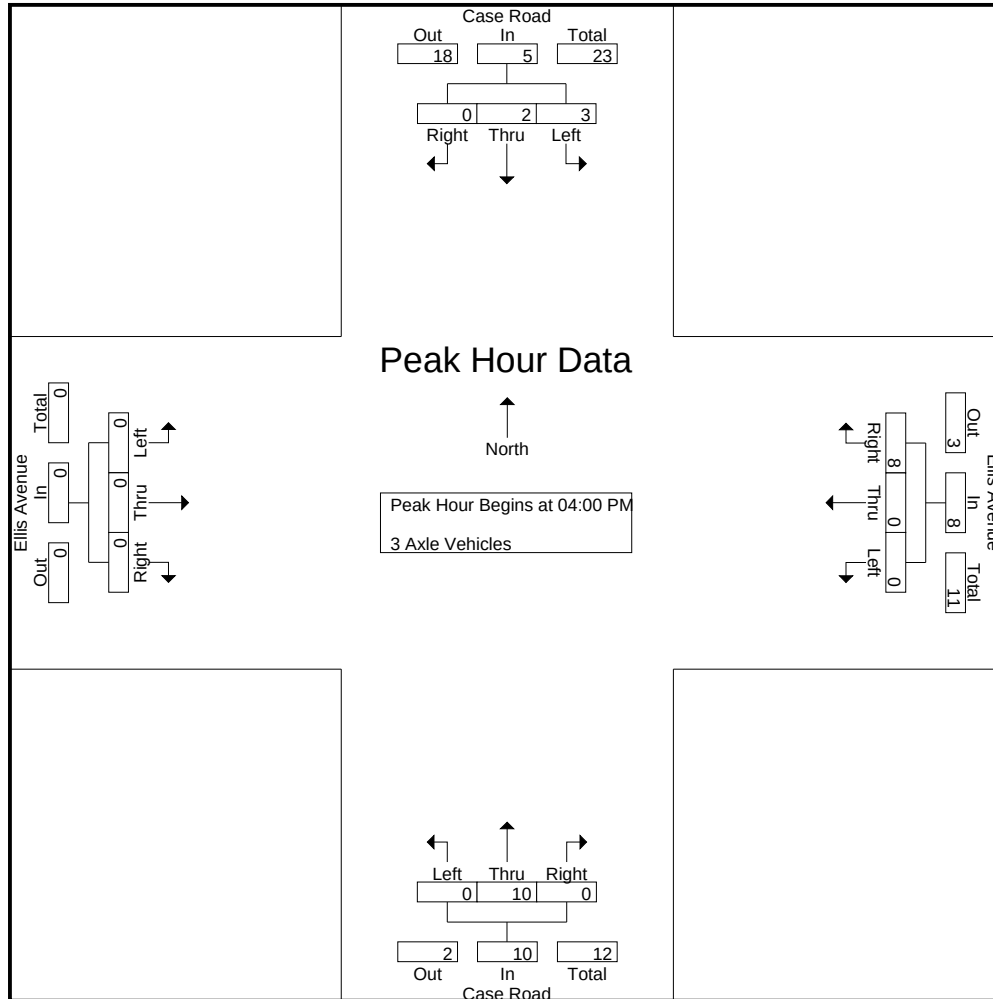
Groups Printed- 3 Axle Vehicles

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	2	0	3	0	0	3	3	0	0	0	0	0	0	0	0	6
03:15 PM	1	1	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
03:30 PM	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
03:45 PM	0	1	0	1	0	0	1	1	0	2	0	2	0	0	0	0	4
Total	6	6	0	12	0	0	4	4	0	4	0	4	0	0	0	0	20
04:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
04:15 PM	1	1	0	2	0	0	2	2	0	3	0	3	0	0	0	0	7
04:30 PM	1	1	0	2	0	0	5	5	0	4	0	4	0	0	0	0	11
04:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	3	2	0	5	0	0	8	8	0	10	0	10	0	0	0	0	23
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	1	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	2
05:30 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:45 PM	0	0	0	0	0	0	1	1	0	3	0	3	0	0	0	0	4
Total	2	0	0	2	0	0	2	2	0	5	0	5	0	0	0	0	9
06:00 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
06:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
06:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:45 PM	0	0	0	0	0	0	1	1	0	4	0	4	0	0	0	0	5
Total	0	0	0	0	0	0	2	2	0	9	0	9	0	0	0	0	11
Grand Total	11	8	0	19	0	0	16	16	0	28	0	28	0	0	0	0	63
Apprch %	57.9	42.1	0		0	0	100		0	100	0		0	0	0		
Total %	17.5	12.7	0	30.2	0	0	25.4	25.4	0	44.4	0	44.4	0	0	0	0	

	Case Road Southbound				Ellis Avenue Westbound				Case Road Northbound				Ellis Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
04:15 PM	1	1	0	2	0	0	2	2	0	3	0	3	0	0	0	0	7
04:30 PM	1	1	0	2	0	0	5	5	0	4	0	4	0	0	0	0	11
04:45 PM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total Volume	3	2	0	5	0	0	8	8	0	10	0	10	0	0	0	0	23
% App. Total	60	40	0		0	0	100		0	100	0		0	0	0		
PHF	.750	.500	.000	.625	.000	.000	.400	.400	.000	.625	.000	.625	.000	.000	.000	.000	.523

City of Perris
N/S: Case Road
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Weather: Clear

File Name : 07_PER_Case_Ell PM
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Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0
+15 mins.	1	1	0	2	0	0	2	2	0	3	0	3	0	0	0	0
+30 mins.	1	1	0	2	0	0	5	5	0	4	0	4	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	3	2	0	5	0	0	8	8	0	10	0	10	0	0	0	0
% App. Total	60	40	0		0	0	100		0	100	0		0	0	0	
PHF	.750	.500	.000	.625	.000	.000	.400	.400	.000	.625	.000	.625	.000	.000	.000	.000

File Name : 07_PER_Case_Ell PM
Site Code : 99923603
Start Date : 6/8/2023
Page No : 1

Location: Perris
 N/S: Case Road
 E/W: Ellis Avenue



Date: 6/8/2023
 Day: Thursday

PEDESTRIANS

		North Leg Case Road	East Leg Ellis Avenue	South Leg Case Road	West Leg Ellis Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	6:00 AM	0	0	0	0	0
	6:15 AM	0	0	0	0	0
	6:30 AM	0	0	0	0	0
	6:45 AM	0	0	0	0	0
	7:00 AM	1	0	0	0	1
	7:15 AM	0	0	0	0	0
	7:30 AM	0	0	0	0	0
	7:45 AM	0	0	0	0	0
	8:00 AM	0	0	0	0	0
	8:15 AM	0	0	0	0	0
	8:30 AM	0	0	0	0	0
	8:45 AM	0	0	0	0	0
	TOTAL VOLUMES:	1	0	0	0	1

		North Leg Case Road	East Leg Ellis Avenue	South Leg Case Road	West Leg Ellis Avenue	
		Pedestrians	Pedestrians	Pedestrians	Pedestrians	
	3:00 PM	0	0	0	0	0
	3:15 PM	1	0	0	0	1
	3:30 PM	0	0	0	0	0
	3:45 PM	0	0	0	0	0
	4:00 PM	0	0	0	0	0
	4:15 PM	0	0	0	0	0
	4:30 PM	0	0	0	0	0
	4:45 PM	0	0	0	0	0
	5:00 PM	0	0	0	0	0
	5:15 PM	0	0	0	0	0
	5:30 PM	0	0	0	0	0
	5:45 PM	0	0	0	0	0
	6:00 PM	0	0	0	0	0
	6:15 PM	0	0	0	0	0
	6:30 PM	0	0	0	0	0
	6:45 PM	0	0	0	0	0
	TOTAL VOLUMES:	1	0	0	0	1

Location: Perris
 N/S: Case Road
 E/W: Ellis Avenue



Date: 6/8/2023
 Day: Thursday

BICYCLES

	Southbound Case Road			Westbound Ellis Avenue			Northbound Case Road			Eastbound Ellis Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	1	0	1	0	0	0	0	2

	Southbound Case Road			Westbound Ellis Avenue			Northbound Case Road			Eastbound Ellis Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	1	0	1	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	0	1	0	1	0	0	0	0	3

Location: 215 S/B @ REDLANDS AVENUE

System: ISOLATED

District: 08

Master At:

I/C:

Designed By:

Installed By: SAFWAN SAYED

Service Info:

Timing Change:

Date Start:

3/14/2012

Date End:

Designed:

Installed:

3/14/2012

Intersection Layout

FLASH

	1) W/B REDLANDS AVE-LEFT TO SB 215	[]
P	2) E/B REDLANDS AVENUE	[]
H	3)	[]
A	4) S/B 215 OFF RAMP	[]
S	5)	[]
E	6) W/B REDLANDS AVENUE	[]
	7)	[]
	8)	[]
O	A)	[]
V	B)	[]
E	C)	[]
R	D)	[]
L	E)	[]
A	F)	[]
P		[]

Comments and Notes:

RAM Checksum

Page 2: 23FC	Page 7: D2FD
Page 3: 2775	Page 8: D364
Page 4: 3C9A	Page 9: 0ADD
Page 5: AF57	Page 10: EF20
Page 6: 85AF	Page 11: C381

CONFIGURATION PHASE FLAGS

Phases (2-1-1-1) *	
Permitted	1 2 . 4 . 6 . .
Restricted	

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	
Pedestrian	
Bicycle	

Phase Locks (2-1-1-3) *	
Red	
Yellow	
Force/Max	

Phase Features (2-1-1-4)	
Double Entry	
Rest In Walk	
Rest In Red	
Walk 2	
Max Green 2	
Max Green 3	

Startup (2-1-1-5) *	
First Green Phases	. . . 4
Yellow Start Phases	. 2 . . . 6 . .
Yellow Start Overlaps	
Startup All-Red	5.0
Vehicle Calls	1 2 . 4 . 6 . .
Pedestrian Calls	 6 . .

Call To Phase (2-1-2-1)		Omit On Green	
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	
Yellow Flash Overlap	
Flash In Red Phases	
Flash In Red Overlap	

Special Operation (2-1-2-3)	
Single Exit Phase	
Driveway Signal Phases	
Driveway Signal Overlaps	
Leading Ped Phases	

Protected Permissive (2-1-2-4)	
Protected Permissive	

Pedestrian (2-1-3) *	
P1	
P2	
P3	
P4	
P5	
P6	 6 . .
P7	
P8	

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A				
B				
C				
D				
E				
F				

PHASE TIMING

Phase (2-2)	-1- *	-2- *	-3- *	-4- *	-5- *	-6- *	-7- *	-8- *
--- Walk 1 ---	0	0	0	0	0	7	0	0
Flash Don't Walk	0	0	0	0	0	20	0	0
Minimum Green	5	5	0	5	0	5	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	25	35	0	35	0	35	0	0
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
Maximum Gap	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
Minimum Gap	3.0	3.0	0.0	3.0	0.0	3.0	0.0	0.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	5.0	3.0	4.5	3.0	5.0	3.0	3.0
All-Red	1.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
Red To Sec (2-6)	
Red To Sec	OFF

COORDINATION

Local Plan (7-1...9) TIMING DATA [Offsets] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Perm	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor														
Plan 2	Green Factor														
Plan 3	Green Factor														
Plan 4	Green Factor														
Plan 5	Green Factor														
Plan 6	Green Factor														
Plan 7	Green Factor														
Plan 8	Green Factor														
Plan 9	Green Factor														

Local Plan (7-1...9) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1								
Plan 2								
Plan 3								
Plan 4								
Plan 5								
Plan 6								
Plan 7								
Plan 8								
Plan 9								

Master Timer Sync (7-A)	
Enable in Plans	
.....	

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	.....
Veh Min	Veh Max
. 2 ... 6 ..	.....
Ped	Bike
.....	
Cond	Cond Grn
.....	10

MANUAL COMMANDS

Manual Plan (4-1)	Plan: 1-9
Plan	OffSet
	A

15 or 254 = Flash
14 or 255 = Free
Offset A, B, or C

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	. 2	NO	I2U	1			10	1.1
2	COUNT+CALL+EXTEND	 6 . .	NO	J2U	2			10	1.2
3	COUNT+CALL+EXTEND	. . . 4	NO	I6U	3			10	1.3
4	COUNT+CALL+EXTEND	 8	NO	J6U	4			10	1.4
5	COUNT+CALL+EXTEND	. 2	NO	I2L	5			10	1.5
6	COUNT+CALL+EXTEND	 6 . .	NO	J2L	6			10	1.6
7	COUNT+CALL+EXTEND	. . . 4	NO	I6L	7			10	1.7
8	COUNT+CALL+EXTEND	 8	NO	J6L	8			10	1.8
9	COUNT+CALL+EXTEND	. 2	NO	I4	9			10	2.1
10	COUNT+CALL+EXTEND	 6 . .	NO	J4	10			10	2.2
11	COUNT+CALL+EXTEND	. . . 4	NO	I8	11			10	2.3
12	COUNT+CALL+EXTEND	 8	NO	J8	12			10	2.4
13	COUNT+CALL+EXTEND	 5 . .	NO	J1	13			10	3.1
14	COUNT+CALL+EXTEND	1	NO	I1	14			10	3.2
15	COUNT+CALL+EXTEND	 7 . .	NO	J5	15			10	3.3
16	COUNT+CALL+EXTEND	. . 3	NO	I5	16			10	3.4
17	COUNT+CALL+EXTEND	 5 . .	NO	J9U	17			10	3.5
18	COUNT+CALL+EXTEND	1	NO	I9U	18			10	3.6
19	COUNT+CALL+EXTEND	 7 . .	NO	J9L	19			10	3.7
20	COUNT+CALL+EXTEND	1	NO	I9L	20			10	3.8
21	COUNT+CALL+EXTEND	. 2	NO	I3L	21			10	6.2
22	COUNT+CALL+EXTEND	 6 . .	NO	J3L	22			10	6.3
23	COUNT+CALL+EXTEND	. . . 4	NO	I7L	23			10	6.4
24	COUNT+CALL+EXTEND	 8	NO	J7L	24			10	6.5
25	COUNT+CALL+EXTEND	. 2	NO	I3U	25			10	4.5
26	COUNT+CALL+EXTEND	 6 . .	NO	J3U	26			10	4.6
27	COUNT+CALL+EXTEND	. . . 4	NO	I7U	27			10	4.7
28	COUNT+CALL+EXTEND	 8	NO	J7U	28			10	4.8
29	PEDESTRIAN	. 2	NO	I12U	29			10	5.1
30	PEDESTRIAN	 6 . .	NO	I13U	30			10	5.2
31	PEDESTRIAN	. . . 4	NO	I12L	31			10	5.3
32	PEDESTRIAN	 8	NO	I13L	32			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	
Detectors 9-16	
Detectors 17-24	
Detectors 25-32	

System Detector Assignment (5-5)								
Sys Det	1	2	3	4	5	6	7	8
Det Num								
Sys Det	9	10	11	12	13	14	15	16
Det Num								

CIC Operation (5-6-1)

Enable in Plans	

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)								
Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6		6.6	5.1	5.2	6.7
		1.5	6.2			1.7	6.4		3.8		2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5		2.8	5.5	5.6	2.5
		1.6	6.3			1.8	6.5		3.7		6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)			Table 2 (8-2-2)			Table 3 (8-2-3)			Table 4 (8-2-4)			Table 5 (8-2-5)			Table 6 (8-2-6)		
Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES**Floating Holiday Table (8-2-8)**

#	Mnth	Week	DOW	Table
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS**TOD Functions (8-3)**

#	Start	End	DOW	Action	Phases
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Action Codes:

0. None
 1. Permitted
 2. Restricted
 4. Veh Min Recall
 5. Veh Max Recall
 6. Ped Recall
 7. Bike Recall
 8. Red Lock
 9. Yellow Lock
 10. Force/Max Lock
 11. Double Entry
 12. Y-Coord C
 13. Y-Coord D
 14. Free
 15. Flashing
 16. Walk 2
 17. Max Green 2

18. Max Green 3
 19. Rest in Walk
 20. Rest in Red
 21. Free Lag Phases
 22. Special Functions
 23. Truck Preempt
 24. Conditional Service
 25. Conditional Service
 26. Leading Ped

41. Protected Permissive
 42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Limit Access	
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Limit Access:

0-None

1-Status Only

2-Status, Set Pattern, Time

3-Status, Set Pattern, Time, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
	Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear1	10	. 2 . . 5 . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....
	Clear 2		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Clear 3		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Hold		.....	.....	1 2 3 4 5 6 7 8	.....	.....	.....	.....	.....	A B C D E F
	Exit	5	Exit Parameters (3-1-5)				Configuration (3-1-6)				
	Min Grn		Phase Green	Overlap Green	Vehicle Recall	Ped Call	Port	Latching	Power-Up		
	Ped Clr		.....	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	2.5	YES	FLASHING		

RR 2	(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
	Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear1	10	. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....
	Clear 2		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Clear 3		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Hold		1 2 3 . . 6 . .	.....	.....	. 2 . . . 6 . .	.....	. . . 4 . . . 8	.....	.....	.....
	Exit		Exit Parameters (3-2-5)				Configuration (3-2-6)				
	Min Grn		Phase Green	Overlap Green	Vehicle Recall	Ped Recall	Port	Latching	Power-up		
	Ped Clr		.....	.....	. . . 4 . . 7 .	.....	2.6	YES	DARK		

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
	*	10	30	. 2 . . . . .	.....
	Port	Latching	Phase Termination		
	5.5	NO	ADVANCE		

EVC (3-C)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
	*	10	30	1 6 . .	.....
	Port	Latching	Phase Termination		
	5.7	NO	ADVANCE		

EVB (3-B)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . . 4 . . 7 .	.....
	Port	Latching	Phase Termination		
	5.6	NO	ADVANCE		

EVD (3-D)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . 3 8	.....
	Port	Latching	Phase Termination		
	5.8	NO	ADVANCE		

INPUTS

7 Wire I/C (2-1-5-1)					
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	6.6
Advance Enable	6.6

Battery Backup (2-1-5-5) *	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

OUTPUTS

Loadswitch Assignments (2-1-6) +							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

0 Unused (no output)

1-8 Vehicle 1-8

9-14 Overlap A-F

21-28 Ped 1-8

41-47 Special Functions

41 Protected Permissive Flashing Phase 1

43 Protected Permissive Flashing Phase 3

45 Protected Permissive Flashing Phase 5

47 Protected Permissive Flashing Phase 7

51-57 Special Functions

71-72 Seven Wire I/C

+ middle output of
loadswitches 3 and 6
Channel 9 and 10

YELLOW YIELD COORDINATION

					Force-Offs								Coord	Lag	Min Recall	Restricted
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-				
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....

TRANSIT PRIORITY

Local Plans (3-E1...9)		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											

Enable Priority (3-E-A)

Enable in Plan

Free Plans (3-E-E)

Max Green Hold Hold Phase

.....

Access Utilities (9-5)

Password ***

Timeout

TRUCK PREEMPTION

Truck Preemption (3-F)	Passage	CarryOver	Clearance	Next Preempt	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output

Location: 215 N/B @ REDLANDS AVENUE

System: ISOLATED

District: 08

Master At:

I/C:

Designed By:

Installed By: SAFWAN SAYED

Service Info:

Timing Change:

Date Start:

3/13/2012

Date End:

Designed:

Installed:

3/13/2012

Intersection Layout

FLASH

- 1)
P 2) E/B REDLANDS AVENUE
H 3)
A 4)
S 5) E/B REDLANDS AVE-LEFT TO NB 215
E 6) W/B REDLANDS AVENUE
7)
8) N/B I-215 OFF RAMP

[]
[]
[]
[]
[]
[]
[]
[]

- O A)
V B)
E C)
R D)
L E)
A F)
P

[]
[]
[]
[]
[]
[]

Comments and Notes:

S/N: 821010767 (2021)

RAM Checksum

Page 2: 42A2	Page 8: 85AF
Page 3: 3BC2	Page 9: D2FD
Page 4: F29E	Page 10: 51E0
Page 5: 191A	Page 11: 5E25
Page 6: 191A	Page 12: D68F
Page 7: B935	Page 13: 86F7

CONFIGURATION PHASE FLAGS

Cabinet
332
Configuration
CALTRANS

Phases (2-1-1-1)	
Permitted	. 2 . . 5 6 . 8
Restricted	

Phase Features (2-1-1-4)	
Double Entry	
Rest In Walk	
Rest In Red	
Walk 2	
Max Green 2	
Max Green 3	

Startup (2-1-1-5)	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	
Vehicle Calls	. 2 . . 5 6 . 8
Pedestrian Calls	 6 . .
Yellow Start Overlaps	
Startup All-Red	6.0

Phase Recalls (2-1-1-2)	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	
Pedestrian	
Bicycle	

Phase Locks (2-1-1-3)	
Red	
Yellow	
Force/Max	

Call To Phase (2-1-2-1)		Omit On Green	
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	

Flashing Colors (2-1-2-2)	
Yellow Flash Phases	
Yellow Flash Overlap	
Flash In Red Phases	
Flash In Red Overlap	

Special Operation (2-1-2-3)	
Single Exit Phase	
Driveway Signal Phases	
Driveway Signal Overlaps	
Leading Ped Phases	

Protected Permissive (2-1-2-4)	
Protected Permissive	

Pedestrian (2-1-3)	
P1	
P2	
P3	
P4	
P5	
P6	 6 . .
P7	
P8	

Overlap (2-1-4)				
Overlap	Parent	Omit	No Start	Not
A				
B				
C				
D				
E				
F				

P H A S E T I M I N G

Phase (2-2)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	0	0	0	0	7	0	0
Flash Don't Walk	0	0	0	0	0	18	0	0
Minimum Green	0	5	0	0	5	5	0	5
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0
Max Green 1	0	35	0	0	25	35	0	35
Max Green 2	0	0	0	0	0	0	0	0
Max Green 3	0	0	0	0	0	0	0	0
Extension	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0
Maximum Gap	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0
Minimum Gap	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0
Add Per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Gap By	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.0	5.0	3.0	3.0	3.5	5.0	3.0	5.0
All-Red	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

OVERLAP TIMING

Overlap (2-4)	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

Red Revert

Red Revert (2-5)	
Time	5.0
All-Red Sec/Min (2-6)	
All-Red Sec/Min:	OFF

Max 2 Extension

Max/Gap Out (2-7)	
Max Cnt	0
Gap Cnt	0

Local Plan 1...9 (7-1) TIMING DATA**COORDINATION**

		[Offsets]			Green Factors or Press [F] to Select Force-Off										
		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor			.....											
Plan 2	Green Factor			.....											
Plan 3	Green Factor			.....											
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Local Plan 1...9 (7-1) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1								
Plan 2								
Plan 3								
Plan 4								
Plan 5								
Plan 6								
Plan 7								
Plan 8								
Plan 9								

Master Timer Sync (7-A)**Enable in Plans**

1-9	.....
11-19	.....
21-29	.....

Master Sub Master

Input

Output

FREE PLAN PHASE FLAGS

(7-E) Free	
Lag	Omit
. 2 . 4 . 6 . 8	.....
Veh Min	Veh Max
. 2 ... 6 ..	.....
Ped	Bike
.....	
Cond	Cond Grn
.....	10

MANUAL COMMANDS**Manual Plan (4-1)**

Plan	OffSet
	A

Plan: 1-9
 15 or 254 = Flash
 14 or 255 = Free
 Offset A, B, or C

Special Function Override (4-2)

#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset

(4-3)

Local Manual (4-4)

OFF

Local Plan 11...19 (7-2) TIMING DATA**COORDINATION**

[Offsets]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

Local Plan 11...19 (7-2) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11								
Plan 12								
Plan 13								
Plan 14								
Plan 15								
Plan 16								
Plan 17								
Plan 18								
Plan 19								

Local Plan 21...29 (7-3) TIMING DATA**COORDINATION**

[Offsets]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

Local Plan 21...29 (7-3) PHASE FLAGS

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21								
Plan 22								
Plan 23								
Plan 24								
Plan 25								
Plan 26								
Plan 27								
Plan 28								
Plan 29								

DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	1	NO	I1U	1			10	3.2
2	COUNT+CALL+EXTEND	1	NO	I1L	2			10	7.2
3	COUNT+CALL+EXTEND	. 2	NO	I2U	3			10	1.1
4	COUNT+CALL+EXTEND	. 2	NO	I2L	4			10	1.5
5	COUNT+CALL+EXTEND	. 2	NO	I3U	5			10	4.5
6	COUNT+CALL+EXTEND	. 2	NO	I3L	6			10	6.2
7	COUNT+CALL+EXTEND	. 2	NO	I4U	7			10	2.1
8	COUNT+CALL+EXTEND	. 2	NO	I4L	8			10	7.4
9	COUNT+CALL+EXTEND	. . 3	NO	I5U	9			10	3.4
10	COUNT+CALL+EXTEND	. . 3	NO	I5L	10			10	7.6
11	COUNT+CALL+EXTEND	. . . 4	NO	I6U	11			10	1.3
12	COUNT+CALL+EXTEND	. . . 4	NO	I6L	12			10	1.7
13	COUNT+CALL+EXTEND	. . . 4	NO	I7U	13			10	4.7
14	COUNT+CALL+EXTEND	. . . 4	NO	I7L	14			10	6.4
15	COUNT+CALL+EXTEND	. . . 4	NO	I8U	15			10	2.3
16	COUNT+CALL+EXTEND	. . . 4	NO	I8L	16			10	7.8
17	COUNT+CALL+EXTEND	1	NO	I9U	17			10	3.6
18	COUNT+CALL+EXTEND	. . 3	NO	I9L	18			10	3.8
19	COUNT+CALL+EXTEND	. 2	NO	I10U	19			10	4.1
20	COUNT+CALL+EXTEND	. . . 4	NO	I10L	20			10	4.2
21	COUNT+CALL+EXTEND	 5	NO	J1U	21			10	3.1
22	COUNT+CALL+EXTEND	 5	NO	J1L	22			10	7.1
23	COUNT+CALL+EXTEND	 6	NO	J2U	23			10	1.2
24	COUNT+CALL+EXTEND	 6	NO	J2L	24			10	1.6
25	COUNT+CALL+EXTEND	 6	NO	J3U	25			10	4.6
26	COUNT+CALL+EXTEND	 6	NO	J3L	26			10	6.3
27	COUNT+CALL+EXTEND	 6	NO	J4U	27			10	2.2
28	COUNT+CALL+EXTEND	 6	NO	J4L	28			10	7.3
29	COUNT+CALL+EXTEND	 7	NO	J5U	29			10	3.3
30	COUNT+CALL+EXTEND	 7	NO	J5L	30			10	7.5
31	COUNT+CALL+EXTEND	 8	NO	J6U	31			10	1.4
32	COUNT+CALL+EXTEND	 8	NO	J6L	32			10	1.8
33	COUNT+CALL+EXTEND	 8	NO	J7U	33			10	4.8
34	COUNT+CALL+EXTEND	 8	NO	J7L	34			10	6.5
35	COUNT+CALL+EXTEND	 8	NO	J8U	35			10	2.4
36	COUNT+CALL+EXTEND	 8	NO	J8L	36			10	7.7
37	COUNT+CALL+EXTEND	 5	NO	J9U	37			10	3.5
38	COUNT+CALL+EXTEND	 5	NO	J9L	38			10	3.7
39	COUNT+CALL+EXTEND	 6	NO	J10U	39			10	4.3
40	COUNT+CALL+EXTEND	 8	NO	J10L	40			10	4.4
41	PEDESTRIAN	. 2	NO	I12U	41			10	5.1
42	PEDESTRIAN	. . . 4	NO	I12L	42			10	5.3
43	PEDESTRIAN	 6	NO	I13U	43			10	5.2
44	PEDESTRIAN	 8	NO	I13L	44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....
Detectors 33-40	.....
Detectors 41-44	.....

System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Num								
Sys Det	9	10	11	12	13	14	15	16
Det Num								

CIC Operation (5-6-1)

Enable in Plans	

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

TOD SCHEDULE

Table 1 (8-2-1)			Table 2 (8-2-2)			Table 3 (8-2-3)			Table 4 (8-2-4)			Table 5 (8-2-5)			Table 6 (8-2-6)		
Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A

WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

HOLIDAY TABLES**Floating Holiday Table (8-2-8)**

#	Mnth	Week	DOW	Table
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Fixed Holiday Table (8-2-9)

#	Mnth	Day	DOW	Table
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				

Solar Clock Data (8-4)

North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)

Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

Daylight Saving (8-6)

Enabled	YES

TOD FUNCTIONS**TOD Functions (8-3)**

#	Start	End	DOW	Action	Phases
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Action Codes:

- 0. None
- 1. Permitted
- 2. Restricted
- 4. Veh Min Recall
- 5. Veh Max Recall
- 6. Ped Recall
- 7. Bike Recall
- 8. Red Lock
- 9. Yellow Lock
- 10. Force/Max Lock
- 11. Double Entry
- 12. Y-Coord C
- 13. Y-Coord D
- 14. Free
- 15. Flashing
- 16. Walk 2
- 17. Max Green 2

- 18. Max Green 3
- 19. Rest in Walk
- 20. Rest in Red
- 21. Free Lag Phases
- 22. Special Functions
- 23. Truck Preempt
- 24. Conditional Service
- 25. Conditional Service
- 26. Leading Ped
- 27. Traffic Actuated Max 2
- 41. Protected Permissive
- 42. Protected Permissive

Action Code = Phases added to normal setting

100+Action Code = Phases removed

200+Action Code = Phases replaced

COMMUNICATIONS

C2 (6-1-1)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C20 (6-1-2)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

C21 (6-1-3)	
Address	
Protocol	AB3418
Access Level	0
Baud	1200
Parity	NONE
Data Bits	8
Stop Bits	1
RTS On Time	20
RTS Off Time	20
Handshaking	NORMAL

Access Levels:

- 0-Full Access
- 1-Status Only
- 2-Status, Set Pattern, Time
- 3-Status, Set Pattern, Time, Manual Plan
- 4-Reserved
- 5-Full Access with No Set Pattern
- 6-Full Access with No Set Time
- 7-Full Access with No Set Pattern, Manual Plan
- 8-Full Access with No Set Time, Pattern, Manual Plan

SOFT LOGIC

Soft Logic (6-2)							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

*Refer to User's Manual for Data and OP Codes

CALLBACK NUMBERS

Callback Numbers (6-3...3)	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	
Line Out	
Local Toll	
Long Distance	
Delay	10
Area Code	
Phone Number	

NETWORK

Network (6-4)	
Address	1
Protocol	AB3418
Port	27002
Type	STATIC
Central Access	6
Field Access	7

IP Address	172	25	52	5
Netmask	255	255	255	192
Broadcast	172	25	52	255
Gateway	172	25	52	1

RAILROAD PREEMPTION

RR 1	(3-1-1)	Timing	Phase Flags (3-1-2)			Pedestrian Flags (3-1-3)			Overlap Flags (3-1-4)		
	Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	. 2 . . 5 . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....
	Clear 2		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Clear 3		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Hold		.....	.....	1 2 3 4 5 6 7 8	.....	.....	.....	.....	.....	A B C D E F
	Exit		Exit Parameters (3-1-5)				Configuration (3-1-6)				
	Min Grn		Phase Green	Overlap Green	Vehicle Call	Ped Call	Primary Port	Secondary Port	Latching	Power-Up	
	Ped Clr		.....	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	2.5	0.0	YES	FLASHING	

RR 2	(3-2-1)	Timing	Phase Flags (3-2-2)			Pedestrian Flags (3-2-3)			Overlap Flags (3-2-4)		
	Delay		Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash
	Clear 1	10	. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....
	Clear 2		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Clear 3		.....	.....	.....	.....	.....	.....	.....	.....	.....
	Hold		1 2 3 . . 6 . .	.....	.....	. 2 . . . 6 . .	.....	. . . 4 . . . 8	.....	.....	.....
	Exit		Exit Parameters (3-2-5)				Configuration (3-2-6)				
	Min Grn		Phase Green	Overlap Green	Vehicle Call	Ped Call	Primary Port	Secondary Port	Latching	Power-up	
	Ped Clr		.....	.....	. . . 4 . . 7 .	.....	2.6	0.0	YES	DARK	

EMERGENCY VEHICLE PREEMPTION

EVA (3-A)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		10	30	. 2 . . 5 . .	.....
	Port	Latching	Phase Termination		
	5.5	NO	ADVANCE		

EVB (3-B)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . . 4 . . 7 .	.....
	Port	Latching	Phase Termination		
	5.6	NO	ADVANCE		

EVC (3-C)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		10	30	 6 . .	.....
	Port	Latching	Phase Termination		
	5.7	NO	ADVANCE		

EVD (3-D)	Preempt Timers			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . 3 8	.....
	Port	Latching	Phase Termination		
	5.8	NO	ADVANCE		

INPUTS

7 Wire I/C (2-1-5-1)					
		Input	Port	Input	Port
Enable	NO	R1	3.8	Free	3.6
Max ON		R2	3.5	D2	2.8
Max OFF		R3	3.7	D3	6.1

Manual Control (2-1-5-2)	
Input	Port
Manual Advance	
Advance Enable	

Battery Backup (2-1-5-5)	
Port	Operation
2.7	FLASHING

Y-Coordination (2-1-5-6)	
Port C	Port D
6.1	2.8

Cabinet Status (2-1-5-3)	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function (2-1-5-4)	
Input	Port
1	
2	
3	
4	

OUTPUTS

Loadswitch Assignments (2-1-6)								+
A	1	2	22	3	4	24	9	
B	5	6	26	7	8	28	10	
X	13	14	0	11	12	0	0	

Loadswitch Codes:

0 Unused (no output)

1-8 Vehicle 1-8

9-14 Overlap A-F

21-28 Ped 1-8

41-47 Special Functions

41 Protected Permissive Flashing Phase 1

43 Protected Permissive Flashing Phase 3

45 Protected Permissive Flashing Phase 5

47 Protected Permissive Flashing Phase 7

51-57 Special Functions

71-72 Seven Wire I/C

+ middle output of
loadswitches 3 and 6
Channel 9 and 10

TRANSIT PRIORITY

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Transit Priority Configuration (3-E-A)		Indicator Output			
Enable in Plans		Input	Type	Stop	Go
Plan 1-9	.....	0.0	OPT	0	0
Plan 11-19	.....	0.0	OPT	0	0

Queue Jump (3-E-B)	
Grn Hold	Hold Phase
	
	

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	

Access Utilities (9-5)	
Password	***
Timeout	30

YELLOW YIELD COORDINATION

					Force-Offs											
Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	Coord	Lag	Min Recall	Restricted
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....

TRUCK PRIORITY

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
						0.0	0.0	0.0	0	0.0	0

Last Database Change: NONE

N/S Street Name: Redlands
E/W Street Name: San Jacinto

Group Assignment: 0
Field Master Assignment: 0
System Reference Number: 0

Change Record			
Change	By	Date	By

Notes:

Manual Plan
0 = Automatic
1-8 = Plan 1-9
14 = Free
15 = Flash

Manual Offset
0 = Automatic
1 = Offset A
2 = Offset B
3 = Offset C

Drop Number	<C/0+0+0>
Zone Number	<C/0+0+1>
Area Number	<C/0+0+2>
Area Address	<C/0+0+3>
QuickNet Channel	(QuickNet)

Flash Start	<F/1+0+E>
Red Revert	2.0 <F/1+0+F>
All Red Start	6.0 <F/1+C+0>

Exclusive Walk	<F/1+0+0>
Exclusive FDW	<F/1+0+1>
All Red Clear	<F/1+0+2>

Exclusive Ped Phase
(Outputs specified in Assignable
Outputs at E127+A+E & F)

Manual Plan	14 <C/0+A+1>
Manual Offset	<C/0+B+1>

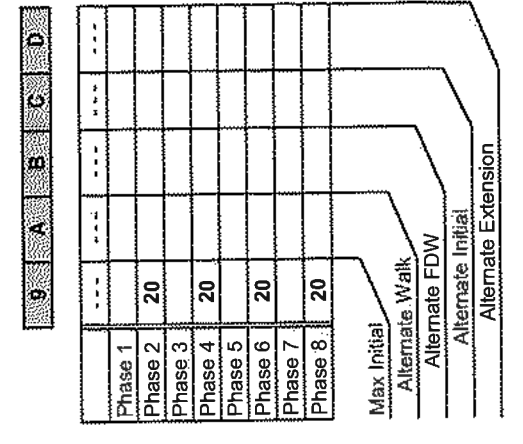
Start / Revert Times

Manual Selection

Exclusive Walk	<F/1+0+0>
Exclusive FDW	<F/1+0+1>
All Red Clear	<F/1+0+2>

Phase										
Column Numbers	1	2	3	4	5	6	7	8	<C+0+F=1>	
Phase Name	1	2	3	4	5	6	7	8		
Ped Walk	10	22	10	28	10	22	10	18		
Ped FDW	7	12	9	7	7	12	10	9		
Min Green	1.5	3.5	2.0	2.0	1.5	3.5	2.0	2.0		
Type 3 Disconnect	1.5	5.0	2.0	2.0	1.5	5.0	2.0	2.0		
Added per Vehicle	1.5	2.0	2.0	2.0	1.5	2.0	2.0	2.0		
Van Extension	20	45	20	20	20	45	20	20		
Max Gap										
Min Gap										
Max Limit										
Max Limit 2										
Adv. / Delay Walk	22			28		22		18		
PE Min Ped FDW										
Cond Serv Check										
Reduce Every	3.2	4.3	4.3	4.3	3.2	4.3	4.3	4.3		
Yellow Change	0.5	1.0	1.0	1.0	0.5	1.0	1.0	1.0		
Red Clear										

Phase Timing - Bank 1



Phase	RR-1 Delay	RR-1 Clear	EV-A Delay	EV-A Clear	EV-B Delay	EV-B Clear	EV-C Delay	EV-C Clear	EV-D Delay	EV-D Clear	RR-2 Delay	RR-2 Clear	View EV Delay	View EV Clear	View RR Delay	View RR Clear
Phase 1																
Phase 2																
Phase 3																
Phase 4																
Phase 5																
Phase 6																
Phase 7																
Phase 8																

Phase	RR-1 Delay	RR-1 Clear	EV-A Delay	EV-A Clear	EV-B Delay	EV-B Clear	EV-C Delay	EV-C Clear	EV-D Delay	EV-D Clear	RR-2 Delay	RR-2 Clear	View EV Delay	View EV Clear	View RR Delay	View RR Clear
Phase 1																
Phase 2																
Phase 3																
Phase 4																
Phase 5																
Phase 6																
Phase 7																
Phase 8																

Phase	RR-1 Delay	RR-1 Clear	EV-A Delay	EV-A Clear	EV-B Delay	EV-B Clear	EV-C Delay	EV-C Clear	EV-D Delay	EV-D Clear	RR-2 Delay	RR-2 Clear	View EV Delay	View EV Clear	View RR Delay	View RR Clear
Phase 1																
Phase 2																
Phase 3																
Phase 4																
Phase 5																
Phase 6																
Phase 7																
Phase 8																

Phase Functions

Preempt Timing

Alternate Timing

Phase Functions

Coord Extra

1 = Programmed WALK Time for Sync Phases
2 = Always Terminate Sync Phase Peds

Plan									
Column Numbers	1	2	3	4	5	6	7	8	9
Plan Name									
Cycle Length									
Phase 1 - ForceOff									
Phase 2 - ForceOff									
Phase 3 - ForceOff									
Phase 4 - ForceOff									
Phase 5 - ForceOff									
Phase 6 - ForceOff									
Phase 7 - ForceOff									
Phase 8 - ForceOff									
Ring Offset									
Offset 1									
Offset 2									
Offset 3									
Perm 1 - End									
Hold Release									
Zone Offset									

Coordination - Bank 1

<C+0+C=1>

Row	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Plan 1 - Sync																
Plan 2 - Sync																
Plan 3 - Sync																
Plan 4 - Sync																
Plan 5 - Sync																
Plan 6 - Sync																
Plan 7 - Sync																
Plan 8 - Sync																
Plan 9 - Sync																
NEMA Sync																
NEMA Hold																
Coord Extra																

Sync Phases

<C+0+C=1>

Row	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Ped Adjustment																
Perm 2 - Start																
Perm 2 - End																
Perm 3 - Start																
Perm 3 - End																
Reservice Time																
Reservice Phases																
Prelimed Phases																
Max Recall																
Perm 1 Veh Phase																
Perm 1 Ped Phase																
Perm 2 Veh Phase																
Perm 2 Ped Phase																
Perm 3 Veh Phase																
Perm 3 Ped Phase																

Coordination - Bank 2

<C+0+C=2>

Row	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Free Lag																
Plan 1 - Lag																
Plan 2 - Lag																
Plan 3 - Lag																
Plan 4 - Lag																
Plan 5 - Lag																
Plan 6 - Lag																
Plan 7 - Lag																
Plan 8 - Lag																
Plan 9 - Lag																
External Lag																

Lag Phases

<C+0+C=1>

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F					
0	Spec. Funct. 1	0	NOT-3	0	Prelimed	0	Set Monday	0	Dial 2 (7-Wire)	0	Sim Term	0
1	Spec. Funct. 2	0	NOT-4	0	Plan 1	0	Ext. Perm 1	0	Dial 3 (7-Wire)	0	EV-A	71
2	Spec. Funct. 3	0	OR-4 (a)	0	Plan 2	0	Ext. Perm 2	0	Offset 1 (7-Wire)	0	EV-B	72
3	Spec. Funct. 4	0	OR-4 (b)	0	Plan 3	0	Dimming	0	Offset 2 (7-Wire)	0	EV-C	73
4	NAND-3 (a)	0	OR-5 (a)	0	Plan 4	0	Set Clock	0	Offset 3 (7-Wire)	0	EV-D	74
5	NAND-3 (b)	0	OR-5 (b)	0	Plan 5	0	Stop Time	82	Free (7-Wire)	0	RR-1	51
6	NAND-4 (a)	0	OR-6 (a)	0	Plan 6	0	Flash Sense	81	Flash (7-Wire)	0	RR-2	52
7	NAND-4 (b)	0	OR-6 (b)	0	Plan 7	0	Manual Enable	0	Excl. Ped Omit	0	Spec. Event 1	0
8	OR-7 (a)	0	Fig 3 Diamond	0	Plan 8	0	Man. Advance	0	NOT-1	0	Spec. Event 2	0
9	OR-7 (b)	0	Fig 4 Diamond	0	Plan 9	0	External Alarm	0	NOT-2	0	External Lag	0
A	OR-7 (c)	0	AND-4 (a)	0	DELAY-A	0	Phase Bank 2	0	OR-1 (a)	0	AND-1 (a)	0
B	OR-7 (d)	0	AND-4 (b)	0	DELAY-B	0	Phase Bank 3	0	OR-1 (b)	0	AND-1 (b)	0
C	OR-8 (a)	0	NAND-1 (a)	0	DELAY-C	0	Overlap Set 2	0	OR-2 (a)	0	AND-2 (a)	0
D	OR-8 (b)	0	NAND-1 (b)	0	DELAY-D	0	Overlap Set 3	0	OR-2 (b)	0	AND-2 (b)	0
E	OR-8 (c)	0	NAND-2 (a)	0	DELAY-E	0	Detector Set 2	0	OR-3 (a)	0	AND-3 (a)	0
F	OR-8 (d)	0	NAND-2 (b)	0	DELAY-F	0	Detector Set 3	0	OR-3 (b)	0	AND-3 (b)	0

<C+0+E=126>

Assignable Inputs

<C+D+E=126>

Assignable Inputs

Row	Column 9	Column A	Column B	Column C	Column D	Column E	Column F							
0	Phase ON - 1	0	Preempt Fail	0	Flasher 0	0	Free	0	NOT-1	0	TOD Out 1	0	Dial 2 (7-Wire)	0
1	Phase ON - 2	0	Sp Evt Out 1	0	Flasher 1	0	Plan 1	0	OR-1	0	TOD Out 2	0	Dial 3 (7-Wire)	0
2	Phase ON - 3	0	Sp Evt Out 2	0	Fast Flasher	0	Plan 2	0	OR-2	0	TOD Out 3	0	Offset 1 (7-Wire)	0
3	Phase ON - 4	0	Sp Evt Out 3	0	Fig 3 Diamond	0	Plan 3	0	OR-3	0	TOD Out 4	0	Offset 2 (7-Wire)	0
4	Phase ON - 5	0	Sp Evt Out 4	0	Fig 4 Diamond	0	Plan 4	0	AND-1	0	TOD Out 5	0	Offset 3 (7-Wire)	0
5	Phase ON - 6	0	Sp Evt Out 5	0		0	Plan 5	0	AND-2	0	TOD Out 6	0	Free (7-Wire)	0
6	Phase ON - 7	0	Sp Evt Out 6	0		0	Plan 6	0	AND-3	0	TOD Out 7	0	Flash (7-Wire)	0
7	Phase ON - 8	0	Sp Evt Out 7	0		0	Plan 7	0	NOT-2	0	TOD Out 8	0	Preempt	0
8	Ph. Check - 1	0	Sp Evt Out 8	0	NOT-3	0	Plan 8	0	EV-A	0	Adv. Warn - 1	0	Low Priority A	0
9	Ph. Check - 2	0		0	NOT-4	0	Plan 9	0	EV-B	0	Adv. Warn - 2	0	Low Priority B	0
A	Ph. Check - 3	0	Detector Fail	0	OR-4	0	Spec. Funct. 3	0	EV-C	0	DELAY-A	0	Low Priority C	0
B	Ph. Check - 4	0	Spec. Funct. 1	0	OR-5	0	Spec. Funct. 4	0	EV-D	0	DELAY-B	0	Low Priority D	0
C	Ph. Check - 5	0	Spec. Funct. 2	0	OR-6	0	NAND-3	0	RR-1	0	DELAY-C	0		
D	Ph. Check - 6	0	Central Control	0	AND-4	0	NAND-4	0	RR-2	0	DELAY-D	0		
E	Ph. Check - 7	0	Excl. Ped DW	0	NAND-1	0	OR-7	0	Spec. Event 1	0	DELAY-E	0		
F	Ph. Check - 8	0	Excl. Ped WK	0	NAND-2	0	OR-8	0	Spec. Event 2	0	DELAY-F	0		

Row

Column 9

Column A

Column B

Column C

Column D

Column E

Column F

0

1

2

3

4

5

6

7

8

9

A

B

C

D

E

F

Assignable Outouts

<C+O+E=127>

<C+D+E=127>

Assignable Outputs

Row	Phase Names →	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 2

<C+0+F=2>

Row	Phase Names →	Phase							
		1	2	3	4	5	6	7	8
0	Ped Walk								
1	Ped FDW								
2	Min Green								
3	Type 3 Disconnect								
4	Added per Vehicle								
5	Veh Extension								
6	Max Gap								
7	Min Gap								
8	Max Limit								
9	Max Limit 2								
A	Adv. / Delay Walk								
B	PE Min Ped FDW								
C	Cond Serv Check								
D	Reduce Every								
E	Yellow Change								
F	Red Clear								

Phase Timing - Bank 3

<C+0+F=3>

Phase	A B C D			
	1	2	3	4
Phase 1				
Phase 2				
Phase 3				
Phase 4				
Phase 5				
Phase 6				
Phase 7				
Phase 8				
Max Initial				
Alternate Walk				
Alternate FDW				
Alternate Initial				
Alternate Extension				

Alternate Timing

Phase	A B C D			
	1	2	3	4
Phase 1				
Phase 2				
Phase 3				
Phase 4				
Phase 5				
Phase 6				
Phase 7				
Phase 8				
Max Initial				
Alternate Walk				
Alternate FDW				
Alternate Initial				
Alternate Extension				

Alternate Timing

Transition Type **0.3** **<C/5+1+9>**
TBC Transition

Transition Type
 0.X = Shortway
 1.X = Lengthen
 X.1 thru X.4 =
 Number of
 cycles when
 lengthening

Lag Hold Phases **<C/5+1+A>**
Coordinated Lag Hold Phases

Sync Output Time **<C/5+1+C>**
7-Wire Master

Begin Month **3** **<C/5+2+A>**
 Begin Week **2** **<C/5+2+B>**
 End Month **11** **<C/5+2+C>**
 End Week **1** **<C/5+2+D>**

Daylight Savings
 Date
 If set to all zeros,
 standard dates
 will be used.

Daylight Savings Time

Time B4 Yellow **<F/1+C+E>**
 Phase Number **<F/1+C+F>**
Advance Warning Beacon - Sign 1

Time B4 Yellow **<F/1+D+E>**
 Phase Number **<F/1+D+F>**
Advance Warning Beacon - Sign 2

Long Failure **0.7** **<F/1+0+6>**
 Short Failure **0.7** **<F/1+0+7>**
Power Cycle Correction (Default = 0.7)

Column Numbers ->				Ped / Phase / Overlap			
Row	0	1	2	3	4	5	6
0	39	45.7	2	123.8			
1	40	45.7	6	123.8			
2	41	45.7	4	123.8			
3	42	45.7	8	123.8			
4	43	45.7	2	123.8			
5	44	45.7	6	123.8			
6	45	45.7	4	123.8			
7	46	45.7	8	123.8			
8	47	6.7	2	123.8			
9	48	6.7	6	123.8			
A	49	6.7	4	123.8			
B	50	6.7	8	123.8			
C	55	45.7	5	123.8			
D	56	45.7	1	123.8			
E	57	45.7	7	123.8			
F	58	45.7	3	123.8			

Column Numbers ->				Ped / Phase / Overlap			
Row	0	1	2	3	4	5	6
0	Walk						
1	Don't Walk						
2	Phase Green						
3	Phase Yellow						
4	Phase Red						
5	Overlap Green						
6	Overlap Yellow						
7	Overlap Red						

Redirect Phase Outputs <C+0+E=127>

Cabinet Type	0	<E/125+D+0>
Enable Redirection (Enable Redirection = 30)		

Max OFF (minutes)	0	<D/0+0+1>
Max ON (minutes)	0	<D/0+0+2>

Detector Failure Monitor

Column Numbers ->				Ped / Phase / Overlap			
Row	0	1	2	3	4	5	6
0	59	45.7	5	123.8			
1	60	45.7	1	123.8			
2	61	45.7	7	123.8			
3	62	45.7	3	123.8			
4	63	45.7	2	123.8			
5	64	45.7	6	123.8			
6	65	45.7	4	123.8			
7	66	45.7	8	123.8			
8	67	2	2	123.8			
9	68	2	6	123.8			
A	69	2	4	123.8			
B	70	2	8	123.8			
C	76	45.7	2	123.8			
D	77	45.7	6	123.8			
E	78	45.7	4	123.8			
F	79	45.7	8	123.8			

Detector Assignments <C+0+E=126>

Column Numbers ->				Ped / Phase / Overlap			
Row	0	1	2	3	4	5	6
0	1 = Full Time Delay						
1	2 = Ped Call						
2	3 =						
3	4 = Count						
4	5 = Extension						
5	6 = Type 3						
6	7 = Calling						
7	8 = Alternate						

Detector Attributes

- 1 = Full Time Delay
- 2 = Ped Call
- 3 =
- 4 = Count
- 5 = Extension
- 6 = Type 3
- 7 = Calling
- 8 = Alternate

Det. Assignments

- 1 = Det. Set 1
- 2 = Det. Set 2
- 3 = Det. Set 3
- 4 =
- 5 =
- 6 = Failure - Min Recall
- 7 = Failure - Max Recall
- 8 = Report on Failure

Column Numbers ->				Ped / Phase / Overlap			
Row	0	1	2	3	4	5	6
0	Number of Digits	0					
1	1 st Digit	0					
2	2 ed Digit	0					
3	3 ed Digit	0					
4	4 th Digit	0					
5	5 th Digit	0					
6	6 th Digit	0					
7	7 th Digit	0					
8	8 th Digit	0					
9	9 th Digit	0					
10	10 th Digit	0					
11	11 th Digit	0					
12	12 th Digit	0					
13	13 th Digit	0					
14	14 th Digit	0					
15	15 th Digit	0					

Delay Logic Times
<C+0+D=0> (seconds)

Disable Alarm Reporting
<C/5+F+D>

Redial Time (minutes)
<C/5+C+0>
(View Redial Timer at E/2+D+6)

Dial-Back Telephone Number
<C+0+C=5>

T.O.D. Functions

0 =
 1 = Red Lock
 2 = Yellow Lock
 3 = Veh Min Recall
 4 = Ped Recall
 5 =
 6 = Rest In Walk
 7 = Red Rest
 8 = Double Entry
 9 = Veh Max Recall
 A = Veh Soft Recall
 B = Maximum 2
 C = Conditional Service
 D = Free Lag Phases
 E = Bit 1 - Local Override
 Bit 4 - Disable Detector
 OFF Monitor
 Bit 5 - Disable Low
 Priority Preempt
 Bit 7 - Detector Count
 Monitor
 Bit 8 - Real Time Split
 Monitor
 F = Output Bits 1 thru 8

TOD Coordination <C+0+9=0.1>
(Bank 1)

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

TOD Function <C+0+7=0.1>
(Bank 1)

Time	Plan	Offset	Day of Week
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

TOD Dates <C+0+8=1.1>
(Bank 1)

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Events <C+0+9=1.1>
(Bank 1)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

TOD Coordination <C+0+9=0.2>
(Bank 2)

Row	Time	Plan	Offset	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

Holiday Dates <C+0+8=1.2>
(Bank 2)

Day	Year	Month	Holiday Type
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	
00	00	0	

Holiday Events <C+0+9=1.2>
(Bank 2)

Time	Plan	Offset	Holiday Type
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	
00:00	0	0	

Row	6	7	8	9	A	B	C	D	E	F
Clear	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 1

<C+0+E=27>

0 <E/27+5+F>
Limited Service Interval

Notes:

Row	6	7	8	9	A	B	C	D	E	F
Clear	Clear	Time	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit Phases	Ped Omit	Output
0		0								
1		0								
2		0								
3		0								
4		0								
5		0								
6		0								
7		0								
8		0								
9		0								
A		0								
B		0								
C		0								
D		0								
E		0								
F		0								

Special Event Schedule -- Table 2

<C+0+E=28>

0 <E/28+5+F>
Limited Service Interval

Notes:

Min Time (seconds) 0 <F/1+0+8>
Min Green Before PE Force Off

Max Time (minutes) 2 <F/1+0+9>
Max Preempt Time Before Failure

Min Time (seconds) 0 <F/1+0+A>
Min Time Between Same Preempts
(Does Not Apply To Railroad Preempt)

Low Pri. Channel 1234 <E/125+C+8>
Disable Low Priority Channel

Low Priority
 1 = Channel A
 2 = Channel B
 3 = Channel C
 4 = Channel D

Delay Time (seconds) 0 <F/1+A+D>
Bus Delay

Max Time (seconds) 0 <F/1+A+E>
Max Early Green

Max Time (seconds) 0 <F/1+A+F>
Max Green Extension

Headway Time (minutes)
 1 thru 9 = 1 thru 9
 A = 10
 B = 11
 C = 12
 D = 13
 E = 14
 F = 15

Row	Time	Headway	Direction	Day of Week
0	00:00	0	0	
1	00:00	0	0	
2	00:00	0	0	
3	00:00	0	0	
4	00:00	0	0	
5	00:00	0	0	
6	00:00	0	0	
7	00:00	0	0	
8	00:00	0	0	
9	00:00	0	0	
A	00:00	0	0	
B	00:00	0	0	
C	00:00	0	0	
D	00:00	0	0	
E	00:00	0	0	
F	00:00	0	0	

Headway <C+0+9=2.1>

Low Priority Preemption (Bus Priority)

Only available with Program 233RV2.B (and above)
 Note: Also see "Time of Day Functions", Function E, Bit 5 (Disable Low Priority)

QuicNet® System	
System ID	
Group	
Field Master	
N-S Street	CASE ROAD
E-W Street	E ELLIS AVENUE
Communications	
Channel	
Address	
Area Number	
Area Address	
Database	
Last Changed	1/19/2016

QuicNet Timing Notes

Phase Timing - Bank 1

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
		SB		WB	SL	NB	WB OL	EB
Min Green		5		16	6	9	16	8
Extension		3.0		3.0	2.0	3.0	3.0	3.0
Max		40		25	20	40	25	25
Max 2								
Cond Serve Check								
Clearance Timing								
Yellow Change		5.5		3.7	3.6	5.5	3.7	3.7
Red Clear		1.0		1.0	1.0	1.0	1.0	1.0
Pedestrian Timing								
Walk								
Pedestrian Change								
Advance/Delay Walk								
PE Min. Ped. Change								
Volume-Density								
Type 3 Disconnect								
Add per Vehicle								
Max Added Initial		20		20		20		20
Min Gap		3.0		3.0	2.0	3.0	3.0	3.0
Max Gap		3.0		3.0	2.0	3.0	3.0	3.0
Reduce Every								
Alternate Timing								
Alternate Walk								
Alternate Ped. Change								
Alternate Minimum								
Alternate Extension								

Phase Timing - Exclusive Pedestrian

Exclusive Ped Assignment	
Exclusive Walk	
Exclusive Pedestrian Change	
Red Clear	
Walk Output	
Don't Walk Output	

Phase Functions - Page 1

Red Lock	___4___
Yellow Lock	
Simultaneous Gap	___2___6___
Rest In Walk	
Advance Walk	
Flashing Walk	
Max Extension	
Red Rest	
Dual Entry	
Sequential Timing	
Inhibit Ped Reservice	
Delay Walk	
Guaranteed Passage	
Conditional Service	

Phase Functions - Page 2

Minimum Recall	___2___6___
Ped Recall	
Maximum Recall	
Green Flash	
Overlap Green Flash	
Flashing Yellow Arrow for PPLT	
Soft Recall	
External Recall	
Manual Control Calls	
Fast Green Flash	
Fast Overlap Green Flash	
Semi-Actuated	

Phase Timing - Bank 2								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								
Clearance Timing								
Yellow Change								
Red Clear								
Pedestrian Timing								
Walk								
Pedestrian Change								
Advance/Delay Walk								
PE Min. Ped. Change								
Volume-Density								
Type 3 Disconnect								
Add per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								
Alternate Timing								
Alternate Walk								
Alternate Ped. Change								
Alternate Minimum								
Alternate Extension								

Phase Timing - Bank 3								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Min Green								
Extension								
Max								
Max 2								
Cond Serve Check								
Clearance Timing								
Yellow Change								
Red Clear								
Pedestrian Timing								
Walk								
Pedestrian Change								
Advance/Delay Walk								
PE Min. Ped. Change								
Volume-Density								
Type 3 Disconnect								
Add per Vehicle								
Max Added Initial								
Min Gap								
Max Gap								
Reduce Every								
Alternate Timing								
Alternate Walk								
Alternate Ped. Change								
Alternate Minimum								
Alternate Extension								

Preemption - General		
Min. Green Before Preempt Forc off	5	
Max. EV Preempt Duration	10	
Min. Time Between Same EV Preempt	0	
Disable Low Priority Preempt		
Leave Flash to Service Preempt		

Preemption - Relative Priority	
Special Event 1	1
Special Event 2	1
Special Event 3	1
Special Event 4	1
Special Event 5	1
Special Event 6	1
Emergency Vehicle A	1
Emergency Vehicle B	1
Emergency Vehicle C	1
Emergency Vehicle D	1

Misc Preemption Configuration	
Disable Low Priority	
Flash to Preempt	
Non-LTD FYA During RR LTD	
FYA During EVP/RR Clear	N
Log Preempt Events	Y

Preemption - Railroad 1	
Delay	
Clear Time	
Clear Phases	

Preemption - Railroad 2	
Delay	
Clear Time	
Clear Phases	
Limited Service Phases	

Preemption - Emergency Vehicle			
	Delay	Clear	Clearance Phases
EV A		1	2_5_
EV B		1	4_7_
EV C		1	6_
EV D		1	8

Preemption - Railroad 3	
Enabled	Y
Advance Ped. Max. Time	0
Track Clear Min. Time	27
Track Clear Max. Time	60
Track Clear Phases	7_
Limited Service Max. Time	10
Limited Service Phases	2_6_
Truncate Green	Y
Truncate Walk	Y

I/O		
	Input	Output
Advance Ped.	0	111
Advance Preempt	134	112
Supervisor	135	113
Crossing Active	136	114
Gate Down	137	115
Fault	138	116
Watchdog Echo		118

Special Event Sequence 1										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Onrit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence 2										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Onit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence 3										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Onit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence 4										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence 5										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Onit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Special Event Sequence 6										
Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Onit	Output
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										

Coordination - Cycle Offsets, & Forceoffs									
	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Cycle									
Offset 1									
Offset 2									
Offset 3									
Zone Offset									
Ring Offset									
Hold Release									
Ped. Adjust									
Forceoff Phase 1									
Forceoff Phase 2									
Forceoff Phase 3									
Forceoff Phase 4									
Forceoff Phase 5									
Forceoff Phase 6									
Forceoff Phase 7									
Forceoff Phase 8									
Adaptive Operation									

Coordination - General	
Transition Type	0.3
0 = Shortway	
1 = Dwell	
2 = Shorten	
Tenths Digit: # Cycles to get in step (1-4)	
Coordination Extra	
1 = Programmed Walk Time for Sync Phases	
2 = Always Terminate Sync Phase Peds	
3 = Floating Forceoffs	
4 = Reserve for Ped Calls	
5 = Start of Green Offset Reference	
8 = Mainline Coord. During Spec. Event Preempt	
QuickTrac Max Cycle Length	0
QuickTrac Max Cycle Length Change	0

Coordination - Phase Minimums							
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8

Coordination - Permissives & Phase Sequences									
	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6	Plan 7	Plan 8	Plan 9
Perm 1 - Begin									
Perm 1 - End									
Perm 1 - Veh Phases									
Perm 1 - Ped Phases									
Perm 2 - Begin									
Perm 2 - End									
Perm 2 - Veh Phases									
Perm 2 - Ped Phases									
Perm 3 - Begin									
Perm 3 - End									
Perm 3 - Veh Phases									
Perm 3 - Ped Phases									
Max Inhibit Phases									
Max Recall Phases									
Reserve Time									
Reserve Phases									
Sync Phases									
Lag Phases									
Pre-Timed Phases									

	Overlaps							
	Overlap 1	Overlap 2	Overlap 3	Overlap 4	Overlap 5	Overlap 6	Overlap 7	Overlap 8
Load Switch Number	7	3						
Vehicle Set 1	4.7	2.4.6						
Vehicle Set 2	4.7							
Vehicle Set 3								
Negative Vehicle	2.56.8	5.78						
Negative Ped								
Green Ornit								
Green Clear Ornit								
Green Clearance	8.0							
Yellow Change	3.6							
Red Clearance	1.0							

AND Gates						
	AND 1	AND 2	AND 3	AND 4	AND 5	AND 6
Input A						
Input B						
Output						

NAND Gates				
	NAND 1	NAND 2	NAND 3	NAND 4
Input A				
Input B				
Output				

NOT Gates				
	NOT 1	NOT 2	NOT 3	NOT 4
Input				
Output				

Delay Timers						
	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input						
Time						
Output						

Extension Timers						
	ET 1	ET 2	ET 3	ET 4	ET 5	ET 6
Input						
Time						
Output						

OR Gates										
	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6	OR 7	OR 8	OR 9	OR 10
Input A	134	203								
Input B	136									
Input C										
Input D										
Output	203	35								

Latches								
	LATCH 1	LATCH 2	LATCH 3	LATCH 4	LATCH 5	LATCH 6	LATCH 7	LATCH 8
Set								
Reset								
Output								
NOT Output								

One Shot Timers						
	OS 1	OS 2	OS 3	OS 4	OS 5	OS 6
Input						
Time						
Output						

Inputs - Plan	
Plan 1	
Plan 2	
Plan 3	
Plan 4	
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Free	
Flash	

Inputs - NEMA Functions	
Call to Non-Actuated	
CNA Phases	
Forceoff Ring A	
Forceoff Ring B	
Hold	
Hold Phases	
Max. Inhibit	

Outputs - General	
Advance Warning Sign 1	
Advance Warning Sign 2	
Detector Failure	
Flasher 1	
Flasher 2	
Fast Flasher	
On Line	
Exclusive Pedestrian Walk	
Exclusive Pedestrian Don't Walk	

Outputs - Plan	
Plan 1	
Plan 2	
Plan 3	
Plan 4	
Plan 5	
Plan 6	
Plan 7	
Plan 8	
Plan 9	
Free	
Flash	

Outputs - Pedestrian Loadswitch Assignments	
Loadswitch 2P Phases	2
Loadswitch 4P Phases	4
Loadswitch 6P Phases	5
Loadswitch 8P Phases	8

Outputs - Preemption		
	Steady	Flashing
Railroad 1		
Railroad 2		
Special Event 1		
Special Event 2		
Special Event 3		
Special Event 4		
Special Event 5		
Special Event 6		
EV A		
EV B		
EV C		
EV D		
Any Preempt		
Preempt Failure		

Outputs - Phase Redirection								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Red								
Yellow								
Green								
Walk								
Don't Walk								

Outputs - Overlap Redirection								
	Overlap 1	Overlap 2	Overlap 3	Overlap 4	Overlap 5	Overlap 6	Overlap 7	Overlap 8
Red								
Yellow								
Green								

Outputs - Time of Day								
TOD Out 1	TOD Out 2	TOD Out 3	TOD Out 4	TOD Out 5	TOD Out 6	TOD Out 7	TOD Out 8	

Outputs - Special Event							
SE Out 1	SE Out 2	SE Out 3	SE Out 4	SE Out 5	SE Out 6	SE Out 7	SE Out 8

Outputs - Special Function							
SF Out 1	SF Out 2	SF Out 3	SF Out 4	SF Out 5	SF Out 6	SF Out 7	SF Out 8

Outputs - Phase Status								
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8
Check								
On								

Outputs - Flashing Yellow Arrow							
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8

Time Base Coordination Events						
No.	Days of Week	Seasons	Hour	Minute	Plan	Offset
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Time of Day Function Events						
No.	Days of Week	Seasons	Hour	Minute	Function	Phases or Fm 14 Bits
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						

Function 1 = Red Lock

Function 2 = Yellow Lock

Function 3 = Minimum Recall

Function 4 = Pedestrian Recall

Function 6 = Rest in Walk

Function 7 = Red Rest

Function 8 = Double Entry

Function 9 = Maximum Recall

Function 10 = Soft Recall

Function 11 = Max 2

Function 12 = Conditional Service

Function 13 = Lag Free

Function 14 = (see Function 14 Bits)

Function 15 = Time of Day Outputs

Function 14 Bits

Bit 1 = Local Override

Bit 2 = Skip Overlap Green Clearance

Bit 4 = Disable Detector Off Monitoring

Bit 5 = Disable Bus Priority

Bit 6 = Inhibit FYA

Bit 7 = Detector Count Recording

Bit 8 = Split Monitor Recording

Holiday Definitions				
No.	Holiday Types	Day	Month	Year
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				

Holiday Time Base Coordination Events					
No.	Holiday Types	Hour	Minute	Plan	Offset
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Holiday Time of Day Function Events				
No.	Holiday Types	Hour	Minute	Function
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Season Definitions			
No.	Start Month	Start Day	End Day
1	1	1	42
2			31
3			
4			
5			
6			
7			
8			

Startup

Flash Start	0
All Red Start	5.0
Yellow Start Phases	5.
First Green Phases	2_6
Startup Vehicle Calls	2_45678
Startup Ped Calls	

Configuration

Exclusive Phases	8
Protected/Permissive Phases	
Disable Phase Min. Yellow	2_4_6_8
Free Lag Phases	2_4_6_8
External Lag Phases	2_4_6_8
Pedestrian Forceoff Phases	
Extra One	3

1 = TBC Type 1

2 = (unused)

3 = Adjust Clock for Daylight Saving Time

4 = Terminate Ped. for EV Preempt

5 = QuicComm Extended Status

6 = International Style Pedestrian Change Interval

7 = (unused)

8 = Split Ring Operation

Permitted Phases	2_45678
Restricted Phases	
Disable Overlap Min. Yellow	
External Permit 1	
External Permit 2	
External Permit 3	
Extra Two	
1 = Adv. Warn. Signs On During Min. Init.	
2 = Siemens I2 Communications Protocol	
3 = Disable Minimum Walk Check	
4 = QuicNet System Communications	
5 = Ignore Anti-Backup During Preempt	
6 = Bridgeport Naztec TS 2 I/O Map	
7 = Allow Remote Preemption Calls	
8 = Caltrans Traf. Resp. FM Comm.	

Advance Warning Signs

	Sign 1	Sign 2
Phase Number		
Time Before Yellow		

Software Flash

Flash Entry Phases	
Flash Yellow Phases	
Flash Yellow Overlaps	
Flash Type	0
0 = All On/All Off (1-2-3-4-5-6-7-8, dark)	
1 = Main/Side (1-2-5-6, 3-4-7-8)	
2 = Odd/Even (1-3-5-7, 2-4-6-8)	
3 = Ring Pairs (1-6, 4-7, 2-5, 3-8)	

Flashing Yellow Arrow

FYA Delay	
FYA During Preempt	

Front Panel

Keyboard Beep	N
Backlight Timeout	36

Miscellaneous

Red Revert	5.0
Log Preemption Events	Y
Soft Recall Delay	9.0 / 1.0

Special Event Limited Service Intervals

SE 1	SE 2	SE 3	SE 4	SE 5	SE 6

Detector Monitoring

Max On	5
Max Off	15
Chatter	45

Daylight Saving Time

Start Month	3
Start Week	2
End Month	11
End Week	1

Manual Operation

Manual Plan	14
1-9 = Coordination Plans	
14 = Free	
15 = Flash	
Manual Offset	0

Bus Priority - Schedule					
Event No.	Day of Week	Hour	Minute	Headway	Direction
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					

Bus Priority - Timing				
	Direction A	Direction B	Direction C	Direction D
Delay				
Early Green				
Green Extension				
Phases				
Non-Priority Phase Maximum Adjustments				
Phase 1				
Phase 2				
Phase 3				
Phase 4				
Phase 5				
Phase 6				
Phase 7				
Phase 8				

APPENDIX C

SYNCHRO OUTPUTS FOR EXISTING (2023) CONDITIONS

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	79	160	275	52	61	120
Future Vol, veh/h	79	160	275	52	61	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	9	10	7	6	6	2
Mvmt Flow	94	190	327	62	73	143
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	389	0	-	0	736	358
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	378	-
Critical Hdwy	4.19	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.281	-	-	-	3.554	3.318
Pot Cap-1 Maneuver	1132	-	-	-	380	686
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	684	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1132	-	-	-	345	686
Mov Cap-2 Maneuver	-	-	-	-	345	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	684	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.8	0		16.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1132	-	-	-	515	
HCM Lane V/C Ratio	0.083	-	-	-	0.418	
HCM Control Delay (s)	8.5	0	-	-	16.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	2	

Intersection						
Int Delay, s/veh	5.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	171	225	361	34	14	247
Future Vol, veh/h	171	225	361	34	14	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	9	2	2	7	2
Mvmt Flow	192	253	406	38	16	278
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	444	0	-	0	1062	425
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	637	-
Critical Hdwy	4.12	-	-	-	6.47	6.22
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.318
Pot Cap-1 Maneuver	1116	-	-	-	242	629
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	517	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1116	-	-	-	200	629
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	517	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.8	0		18.1		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1116	-	-	-	564	
HCM Lane V/C Ratio	0.172	-	-	-	0.52	
HCM Control Delay (s)	8.9	-	-	-	18.1	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.6	-	-	-	3	

Queues
9: Redlands Ave & San Jacinto Ave

Existing
Existing AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	94	20	91	744	46	45	122	384	543	37	539
v/c Ratio	0.19	0.10	0.38	0.81	0.12	0.12	0.51	0.31	0.61	0.20	0.61
Control Delay	32.1	34.8	13.6	35.8	26.5	2.2	39.0	19.3	5.4	36.5	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	34.8	13.6	35.8	26.5	2.2	39.0	19.3	5.4	36.5	27.4
Queue Length 50th (ft)	19	8	0	164	17	0	53	73	0	16	112
Queue Length 95th (ft)	42	28	34	#281	45	4	101	101	39	44	157
Internal Link Dist (ft)	439			612			723			624	
Turn Bay Length (ft)	150				280	500	200	300			275
Base Capacity (vph)	983	1014	878	916	987	860	502	2237	1162	507	2239
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.02	0.10	0.81	0.05	0.05	0.24	0.17	0.47	0.07	0.24

Intersection Summary

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

HCM 6th Signalized Intersection Summary 9: Redlands Ave & San Jacinto Ave

Existing
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	16	75	610	38	37	100	315	445	30	400	42
Future Volume (veh/h)	77	16	75	610	38	37	100	315	445	30	400	42
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1826	1841	1870	1856	1856	1841	1826	1870	1870	1796
Adj Flow Rate, veh/h	94	20	91	744	46	45	122	384	543	37	488	51
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	5	4	2	3	3	4	5	2	2	7
Cap, veh/h	369	146	121	780	375	315	163	1425	630	86	1181	123
Arrive On Green	0.11	0.08	0.08	0.23	0.20	0.20	0.09	0.41	0.41	0.05	0.36	0.36
Sat Flow, veh/h	3456	1870	1547	3401	1870	1570	1767	3497	1545	1781	3247	338
Grp Volume(v), veh/h	94	20	91	744	46	45	122	384	543	37	266	273
Grp Sat Flow(s),veh/h/ln	1728	1870	1547	1700	1870	1570	1767	1749	1545	1781	1777	1809
Q Serve(g_s), s	2.1	0.8	4.8	17.9	1.7	2.0	5.6	6.1	26.6	1.7	9.3	9.4
Cycle Q Clear(g_c), s	2.1	0.8	4.8	17.9	1.7	2.0	5.6	6.1	26.6	1.7	9.3	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	369	146	121	780	375	315	163	1425	630	86	646	658
V/C Ratio(X)	0.25	0.14	0.75	0.95	0.12	0.14	0.75	0.27	0.86	0.43	0.41	0.41
Avail Cap(c_a), veh/h	834	858	710	780	632	531	427	1900	840	430	965	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.0	35.6	37.4	31.5	27.1	27.3	36.7	16.3	22.4	38.3	19.7	19.7
Incr Delay (d2), s/veh	0.1	0.2	3.6	21.4	0.1	0.1	2.6	0.1	7.6	1.2	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	0.8	0.4	1.8	9.1	0.7	0.7	2.4	2.3	9.8	0.7	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	35.7	41.0	52.9	27.2	27.3	39.2	16.4	30.0	39.5	20.2	20.2
LnGrp LOS	C	D	D	D	C	C	D	B	C	D	C	C
Approach Vol, veh/h		205			835			1049			576	
Approach Delay, s/veh		37.3			50.1			26.1			21.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	39.1	24.3	11.8	11.3	35.4	14.1	21.9				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+I1), s	3.7	28.6	19.9	6.8	7.6	11.4	4.1	4.0				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.2	0.1	3.8	0.1	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			33.5									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	111	380	535	73	16	150
Future Vol, veh/h	111	380	535	73	16	150
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	380	535	73	16	150
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	608	0	-	0	1137	535
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	602	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	970	-	-	-	223	545
Stage 1	-	-	-	-	587	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	198	545
Mov Cap-2 Maneuver	-	-	-	-	198	-
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	547	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.1	0		16.9		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	970	-	-	-	466	
HCM Lane V/C Ratio	0.114	-	-	-	0.356	
HCM Control Delay (s)	9.2	-	-	-	16.9	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.4	-	-	-	1.6	

Queues
14: Redlands Ave & 4th St

Existing
Existing AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	704	23	21	5	31	19	352	20	43	327	815
v/c Ratio	0.68	0.03	0.03	0.03	0.08	0.10	0.47	0.05	0.20	0.33	0.59
Control Delay	25.6	16.0	0.1	30.8	19.4	31.2	24.9	0.2	31.2	18.8	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	16.0	0.1	30.8	19.4	31.2	24.9	0.2	31.2	18.8	3.6
Queue Length 50th (ft)	128	5	0	2	2	7	68	0	16	48	0
Queue Length 95th (ft)	201	23	0	11	13	25	96	0	43	87	21
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250			250			270			100	
Base Capacity (vph)	1038	1206	1086	561	2097	535	1636	803	561	1605	1727
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.02	0.02	0.01	0.01	0.04	0.22	0.02	0.08	0.20	0.47
Intersection Summary											

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Existing
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	570	19	17	4	10	15	15	285	16	35	265	660
Future Volume (veh/h)	570	19	17	4	10	15	15	285	16	35	265	660
Initial Q (Qb), veh	0	0	0	0	0	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	1796	1826	1870	1870	1870	1811	1796	1826	1870	1870	1796	1841
Adj Flow Rate, veh/h	704	23	21	5	12	19	19	352	20	43	327	815
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	7	5	2	2	2	6	7	5	2	2	7	4
Cap, veh/h	811	606	526	16	172	153	53	1133	517	100	1200	966
Arrive On Green	0.24	0.33	0.33	0.01	0.10	0.10	0.03	0.33	0.33	0.06	0.35	0.35
Sat Flow, veh/h	3319	1826	1585	1781	1777	1585	1711	3469	1585	1781	3413	2745
Grp Volume(v), veh/h	704	23	21	5	12	19	19	352	20	43	327	815
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1781	1777	1585	1711	1735	1585	1781	1706	1373
Q Serve(g_s), s	14.7	0.6	0.6	0.2	0.4	0.8	0.8	5.5	0.6	1.7	5.0	19.8
Cycle Q Clear(g_c), s	14.7	0.6	0.6	0.2	0.4	0.8	0.8	5.5	0.6	1.7	5.0	19.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	811	606	526	16	172	153	53	1133	517	100	1200	966
V/C Ratio(X)	0.87	0.04	0.04	0.30	0.07	0.12	0.36	0.31	0.04	0.43	0.27	0.84
Avail Cap(c_a), veh/h	917	1060	920	492	1031	920	473	1438	657	492	1415	1138
HCM Platoon Ratio	1.00	1.00	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	26.2	16.4	16.4	35.6	29.7	29.9	34.4	18.3	16.6	33.0	16.8	21.6
Incr Delay (d2), s/veh	8.1	0.0	0.0	10.0	0.2	0.4	4.1	0.2	0.0	2.9	0.1	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.2	0.2	0.1	0.2	0.3	0.4	2.0	0.2	0.8	1.8	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.3	16.4	16.4	45.6	29.9	30.2	38.5	18.4	16.7	36.0	16.9	26.8
LnGrp LOS	C	B	B	D	C	C	D	B	B	D	B	C
Approach Vol, veh/h	748			36			391			1185		
Approach Delay, s/veh	33.3			32.3			19.3			24.4		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	29.1	5.2	29.5	6.7	31.0	22.2	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	3.7	7.5	2.2	2.6	2.8	21.8	16.7	2.8				
Green Ext Time (p_c), s	0.1	2.2	0.0	0.2	0.0	3.6	1.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	26.5											
HCM 6th LOS	C											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Existing
Existing AM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	137	679	1113	179	272	266	245
v/c Ratio	0.34	0.37	0.51	0.29	0.61	0.57	0.42
Control Delay	34.0	10.3	19.6	4.8	29.4	21.5	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	10.4	19.6	4.8	29.4	21.5	6.3
Queue Length 50th (ft)	27	77	104	0	102	72	3
Queue Length 95th (ft)	62	137	163	34	202	164	47
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	1169	3063	3414	851	862	835	896
Starvation Cap Reductn	0	631	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	0.12	0.28	0.33	0.21	0.32	0.32	0.27
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Existing
Existing AM

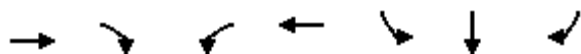
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	570	0	0	935	150	368	0	290	0	0	0
Future Volume (veh/h)	115	570	0	0	935	150	368	0	290	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1693	1826	0	0	1870	1722	1811	1870	1841			
Adj Flow Rate, veh/h	137	679	0	0	1113	179	545	0	230			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	14	5	0	0	2	12	6	2	4			
Cap, veh/h	262	1838	0	0	2306	523	815	0	369			
Arrive On Green	0.08	0.53	0.00	0.00	0.36	0.36	0.24	0.00	0.24			
Sat Flow, veh/h	3127	3561	0	0	6696	1459	3450	0	1560			
Grp Volume(v), veh/h	137	679	0	0	1113	179	545	0	230			
Grp Sat Flow(s),veh/h/ln	1564	1735	0	0	1609	1459	1725	0	1560			
Q Serve(g_s), s	2.2	5.9	0.0	0.0	6.9	4.6	7.4	0.0	6.8			
Cycle Q Clear(g_c), s	2.2	5.9	0.0	0.0	6.9	4.6	7.4	0.0	6.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	262	1838	0	0	2306	523	815	0	369			
V/C Ratio(X)	0.52	0.37	0.00	0.00	0.48	0.34	0.67	0.00	0.62			
Avail Cap(c_a), veh/h	1524	2367	0	0	4390	996	2354	0	1064			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.5	7.1	0.0	0.0	12.8	12.0	17.8	0.0	17.5			
Incr Delay (d2), s/veh	1.6	0.1	0.0	0.0	0.2	0.4	1.0	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	0.8	1.5	0.0	0.0	2.1	1.3	2.5	0.0	2.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	7.2	0.0	0.0	12.9	12.4	18.7	0.0	19.3			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	816			1292			775					
Approach Delay, s/veh	10.0			12.9			18.9					
Approach LOS	B			B			B					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	33.2			8.8			24.4			18.1		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	7.9			4.2			8.9			9.4		
Green Ext Time (p_c), s	4.9			0.4			9.5			2.8		
Intersection Summary												
HCM 6th Ctrl Delay	13.7											
HCM 6th LOS	B											

Queues

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Existing

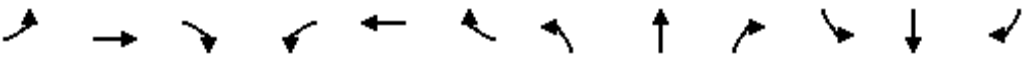
Existing AM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	651	360	558	957	106	101	97
v/c Ratio	0.39	0.37	0.61	0.45	0.39	0.41	0.41
Control Delay	18.2	3.7	22.5	6.5	27.6	15.7	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	3.7	22.5	6.6	27.6	15.7	12.0
Queue Length 50th (ft)	50	0	84	74	33	8	0
Queue Length 95th (ft)	86	26	148	121	85	51	35
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	3956	1788	1558	3388	999	698	612
Starvation Cap Reductn	0	0	0	609	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	0.16	0.20	0.36	0.34	0.11	0.14	0.16
Intersection Summary							

HCM 6th Signalized Intersection Summary 20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Existing
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	560	310	480	823	0	0	0	0	125	0	137
Future Volume (veh/h)	0	560	310	480	823	0	0	0	0	125	0	137
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	1826	1767	1870	1841	0				1767	1870	877
Adj Flow Rate, veh/h	0	651	360	558	957	0				197	0	104
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	5	9	2	4	0				9	2	69
Cap, veh/h	0	1747	733	773	2061	0				632	0	140
Arrive On Green	0.00	0.28	0.28	0.22	0.59	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	6537	2635	3456	3589	0				3365	0	744
Grp Volume(v), veh/h	0	651	360	558	957	0				197	0	104
Grp Sat Flow(s),veh/h/ln	0	1570	1317	1728	1749	0				1682	0	744
Q Serve(g_s), s	0.0	4.3	5.9	7.7	8.0	0.0				2.6	0.0	6.8
Cycle Q Clear(g_c), s	0.0	4.3	5.9	7.7	8.0	0.0				2.6	0.0	6.8
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1747	733	773	2061	0				632	0	140
V/C Ratio(X)	0.00	0.37	0.49	0.72	0.46	0.00				0.31	0.00	0.74
Avail Cap(c_a), veh/h	0	4263	1788	1675	2373	0				2284	0	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	15.0	15.6	18.5	6.0	0.0				18.1	0.0	19.8
Incr Delay (d2), s/veh	0.0	0.1	0.5	1.3	0.2	0.0				0.3	0.0	7.6
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	1.3	1.6	2.8	1.9	0.0				0.9	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.1	16.1	19.8	6.2	0.0				18.3	0.0	27.4
LnGrp LOS	A	B	B	B	A	A				B	A	C
Approach Vol, veh/h		1011			1515						301	
Approach Delay, s/veh		15.5			11.2						21.5	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.0	20.3		15.2		36.4						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	9.7	7.9		8.8		10.0						
Green Ext Time (p_c), s	1.8	6.5		1.0		7.3						
Intersection Summary												
HCM 6th Ctrl Delay			13.8									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Existing
Existing AM



Lane Group	EBT	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	2	115	138	262	260	79
v/c Ratio	0.00	0.32	0.74	0.25	0.44	0.13
Control Delay	0.0	12.5	51.9	9.7	18.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	12.5	51.9	9.7	18.5	0.9
Queue Length 50th (ft)	0	8	30	28	48	0
Queue Length 95th (ft)	0	54	#169	130	162	2
Internal Link Dist (ft)	435	541		502	590	
Turn Bay Length (ft)			130			125
Base Capacity (vph)	815	681	186	1234	787	779
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	0.00	0.17	0.74	0.21	0.33	0.10

Intersection Summary

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

HCM 6th Signalized Intersection Summary 25: Case Rd & Ellis Ave

Existing
Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	2	34	1	64	119	225	0	0	224	68
Future Volume (veh/h)	0	0	2	34	1	64	119	225	0	0	224	68
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1159	1856	1870	1648	1707	1796	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	2	40	1	74	138	262	0	0	260	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	2	50	3	2	17	13	7	0	2	6	2
Cap, veh/h	0	0	14	85	2	156	169	771	0	0	376	
Arrive On Green	0.00	0.00	0.01	0.15	0.15	0.15	0.10	0.43	0.00	0.00	0.21	0.00
Sat Flow, veh/h	0	0	1585	574	14	1062	1626	1796	0	0	1811	1585
Grp Volume(v), veh/h	0	0	2	115	0	0	138	262	0	0	260	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1650	0	0	1626	1796	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	3.2	3.7	0.0	0.0	5.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.4	0.0	0.0	3.2	3.7	0.0	0.0	5.1	0.0
Prop In Lane	0.00		1.00	0.35		0.64	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	0	14	243	0	0	169	771	0	0	376	
V/C Ratio(X)	0.00	0.00	0.14	0.47	0.00	0.00	0.81	0.34	0.00	0.00	0.69	
Avail Cap(c_a), veh/h	0	0	744	775	0	0	212	843	0	0	850	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	18.9	15.0	0.0	0.0	16.8	7.3	0.0	0.0	14.1	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.6	1.4	0.0	0.0	17.5	0.3	0.0	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.9	0.0	0.0	1.7	0.7	0.0	0.0	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	23.5	16.4	0.0	0.0	34.3	7.6	0.0	0.0	16.3	0.0
LnGrp LOS	A	A	C	B	A	A	C	A	A	A	B	
Approach Vol, veh/h	2			115			400			260		
Approach Delay, s/veh	23.5			16.4			16.8			16.3		
Approach LOS	C			B			B			B		
Timer - Assigned Phs	1	2	4			6	8					
Phs Duration (G+Y+Rc), s	8.5	14.5	5.0			23.0	10.3					
Change Period (Y+Rc), s	4.5	6.5	* 4.7			6.5	4.7					
Max Green Setting (Gmax), s	5.0	18.0	* 18			18.0	18.0					
Max Q Clear Time (g_c+I1), s	5.2	7.1	2.0			5.7	4.4					
Green Ext Time (p_c), s	0.0	0.9	0.0			0.9	0.5					

Intersection Summary

HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
30: SR-74

Existing
Existing AM

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	173	17	756	658	859
v/c Ratio	0.41	0.08	0.48	0.45	0.59
Control Delay	16.2	19.7	8.6	10.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.2	19.7	8.6	10.7	1.7
Queue Length 50th (ft)	23	3	49	41	0
Queue Length 95th (ft)	95	21	105	141	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	1452	1061	3223	2879	1468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.12	0.02	0.23	0.23	0.59
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Existing
Existing AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	132	23	15	680	592	773
Future Volume (veh/h)	132	23	15	680	592	773
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1722	1781	1722	1767	1752
Adj Flow Rate, veh/h	147	26	17	756	658	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	12	8	12	9	10
Cap, veh/h	191	34	37	1688	1069	
Arrive On Green	0.13	0.13	0.02	0.52	0.32	0.00
Sat Flow, veh/h	1431	253	1697	3358	3445	1485
Grp Volume(v), veh/h	174	0	17	756	658	0
Grp Sat Flow(s),veh/h/ln	1694	0	1697	1636	1678	1485
Q Serve(g_s), s	3.0	0.0	0.3	4.4	5.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.3	4.4	5.0	0.0
Prop In Lane	0.84	0.15	1.00			1.00
Lane Grp Cap(c), veh/h	226	0	37	1688	1069	
V/C Ratio(X)	0.77	0.00	0.46	0.45	0.62	
Avail Cap(c_a), veh/h	1962	0	1404	3790	3888	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.6	0.0	14.6	4.6	8.7	0.0
Incr Delay (d2), s/veh	2.1	0.0	3.2	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.1	0.2	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.8	0.0	17.8	4.7	8.9	0.0
LnGrp LOS	B	A	B	A	A	
Approach Vol, veh/h	174			773	658	
Approach Delay, s/veh	14.8			5.0	8.9	
Approach LOS	B			A	A	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	20.9		9.3		6.0	14.9
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	35.0		35.0		25.0	35.0
Max Q Clear Time (g_c+I1), s	6.4		5.0		2.3	7.0
Green Ext Time (p_c), s	3.1		0.2		0.0	2.6
Intersection Summary						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			
Notes						
User approved volume balancing among the lanes for turning movement.						
Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.						

Queues
32: SR-74 & Trumble Rd

Existing
Existing AM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	68	357	192	700	1165
v/c Ratio	0.30	0.68	0.64	0.32	0.81
Control Delay	32.5	10.7	39.5	5.5	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	10.7	39.5	5.5	24.9
Queue Length 50th (ft)	28	0	82	48	210
Queue Length 95th (ft)	68	73	172	121	#487
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	433	683	459	2648	1607
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.52	0.42	0.26	0.72

Intersection Summary

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

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Existing
Existing AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	62	325	175	637	1040	20
Future Volume (veh/h)	62	325	175	637	1040	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1411	1648	1767	1707	1767	1870
Adj Flow Rate, veh/h	68	357	192	700	1143	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	33	17	9	13	9	2
Cap, veh/h	371	385	233	1910	1317	25
Arrive On Green	0.28	0.28	0.14	0.59	0.39	0.39
Sat Flow, veh/h	1344	1397	1682	3329	3457	65
Grp Volume(v), veh/h	68	357	192	700	569	596
Grp Sat Flow(s),veh/h/ln	1344	1397	1682	1622	1678	1755
Q Serve(g_s), s	3.1	19.7	8.8	8.9	24.7	24.7
Cycle Q Clear(g_c), s	3.1	19.7	8.8	8.9	24.7	24.7
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	371	385	233	1910	656	686
V/C Ratio(X)	0.18	0.93	0.82	0.37	0.87	0.87
Avail Cap(c_a), veh/h	391	406	426	1910	743	777
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	27.8	33.1	8.5	22.2	22.2
Incr Delay (d2), s/veh	0.1	25.8	2.8	0.1	9.8	9.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.8	3.5	2.4	10.0	10.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.9	53.6	35.9	8.6	32.0	31.6
LnGrp LOS	C	D	D	A	C	C
Approach Vol, veh/h	425			892	1165	
Approach Delay, s/veh	48.6			14.5	31.8	
Approach LOS	D			B	C	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	52.5			26.5	15.6	36.9
Change Period (Y+Rc), s	6.0			* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s	35.0			* 23	* 20	35.0
Max Q Clear Time (g_c+I1), s	10.9			21.7	10.8	26.7
Green Ext Time (p_c), s	4.4			0.1	0.2	4.2
Intersection Summary						
HCM 6th Ctrl Delay			28.4			
HCM 6th LOS			C			
Notes						

Queues

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Existing

Existing AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	30	169	219	472	612	26
v/c Ratio	0.19	0.11	0.65	0.30	0.64	0.02
Control Delay	33.2	0.1	34.1	2.4	17.3	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	0.1	34.1	2.4	17.3	0.0
Queue Length 50th (ft)	9	0	62	0	111	0
Queue Length 95th (ft)	39	0	160	97	#431	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	681	1524	656	1615	1007	1583
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	0.04	0.11	0.33	0.29	0.61	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Existing
Existing AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	150	195	420	545	23
Future Volume (veh/h)	27	150	195	420	545	23
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1811	1781	1752	1752	1870
Adj Flow Rate, veh/h	30	0	219	472	612	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	8	10	10	2
Cap, veh/h	61		277	1207	719	
Arrive On Green	0.03	0.00	0.16	0.69	0.41	0.00
Sat Flow, veh/h	1753	1535	1697	1752	1752	1585
Grp Volume(v), veh/h	30	0	219	472	612	0
Grp Sat Flow(s), veh/h/ln	1753	1535	1697	1752	1752	1585
Q Serve(g_s), s	0.7	0.0	5.4	5.0	13.8	0.0
Cycle Q Clear(g_c), s	0.7	0.0	5.4	5.0	13.8	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	61		277	1207	719	
V/C Ratio(X)	0.49		0.79	0.39	0.85	
Avail Cap(c_a), veh/h	1009		976	1411	1411	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	20.6	0.0	17.5	2.9	11.6	0.0
Incr Delay (d2), s/veh	2.2	0.0	1.9	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.7	0.0	3.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.8	0.0	19.4	3.0	12.7	0.0
LnGrp LOS	C		B	A	B	
Approach Vol, veh/h	30			691	612	
Approach Delay, s/veh	22.8			8.2	12.7	
Approach LOS	C			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	12.1	23.8		7.5		35.9
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	7.4	15.8		2.7		7.0
Green Ext Time (p_c), s	0.2	2.1		0.0		1.6

Intersection Summary

HCM 6th Ctrl Delay	10.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	177	340	190	53	64	95
Future Vol, veh/h	177	340	190	53	64	95
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	3	5	7	3	7
Mvmt Flow	184	354	198	55	67	99
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	253	0	-	0	948	226
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	722	-
Critical Hdwy	4.14	-	-	-	6.43	6.27
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.236	-	-	-	3.527	3.363
Pot Cap-1 Maneuver	1301	-	-	-	288	801
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	479	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1301	-	-	-	237	801
Mov Cap-2 Maneuver	-	-	-	-	237	-
Stage 1	-	-	-	-	667	-
Stage 2	-	-	-	-	479	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.8	0		19.7		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1301	-	-	-	409	
HCM Lane V/C Ratio	0.142	-	-	-	0.405	
HCM Control Delay (s)	8.2	0	-	-	19.7	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.5	-	-	-	1.9	

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	189	509	265	20	8	127
Future Vol, veh/h	189	509	265	20	8	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	3	6	2	12	2
Mvmt Flow	197	530	276	21	8	132
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	297	0	-	0	1211	287
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	924	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.218	-	-	-	3.608	3.318
Pot Cap-1 Maneuver	1264	-	-	-	192	752
Stage 1	-	-	-	-	739	-
Stage 2	-	-	-	-	371	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1264	-	-	-	162	752
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	624	-
Stage 2	-	-	-	-	371	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.3	0		12.5		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1264	-	-	-	619	
HCM Lane V/C Ratio	0.156	-	-	-	0.227	
HCM Control Delay (s)	8.4	-	-	-	12.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.6	-	-	-	0.9	

Queues

9: Redlands Ave & San Jacinto Ave

Existing

Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	49	47	107	458	33	28	141	438	719	53	417
v/c Ratio	0.11	0.24	0.41	0.54	0.10	0.08	0.51	0.38	0.72	0.27	0.55
Control Delay	32.6	36.5	12.9	28.6	26.8	0.4	37.2	21.8	6.8	37.0	28.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.6	36.5	12.9	28.6	26.8	0.4	37.2	21.8	6.8	37.0	28.8
Queue Length 50th (ft)	10	20	0	90	12	0	59	87	0	22	86
Queue Length 95th (ft)	30	58	47	177	40	0	129	139	86	63	145
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	928	957	865	848	932	824	478	2153	1235	478	2121
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.05	0.12	0.54	0.04	0.03	0.29	0.20	0.58	0.11	0.20

Intersection Summary

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Existing
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	45	103	440	32	27	135	420	690	51	361	39
Future Volume (veh/h)	47	45	103	440	32	27	135	420	690	51	361	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	1870	1870	1870	1811	1870	1870	1870	1870	1856	1870	1870	1870
Adj Flow Rate, veh/h	49	47	107	458	33	28	141	438	719	53	376	41
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	3	2	2	2
Cap, veh/h	268	171	145	544	330	279	181	1696	750	100	1396	151
Arrive On Green	0.08	0.09	0.09	0.16	0.18	0.18	0.10	0.48	0.48	0.06	0.43	0.43
Sat Flow, veh/h	3456	1870	1585	3346	1870	1582	1781	3554	1572	1781	3233	350
Grp Volume(v), veh/h	49	47	107	458	33	28	141	438	719	53	206	211
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1673	1870	1582	1781	1777	1572	1781	1777	1806
Q Serve(g_s), s	1.2	2.2	6.1	12.2	1.4	1.4	7.1	6.8	40.6	2.7	6.9	6.9
Cycle Q Clear(g_c), s	1.2	2.2	6.1	12.2	1.4	1.4	7.1	6.8	40.6	2.7	6.9	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	268	171	145	544	330	279	181	1696	750	100	767	780
V/C Ratio(X)	0.18	0.27	0.74	0.84	0.10	0.10	0.78	0.26	0.96	0.53	0.27	0.27
Avail Cap(c_a), veh/h	749	770	653	689	568	480	386	1734	767	386	867	881
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	39.1	40.8	37.5	31.8	31.8	40.4	14.4	23.2	42.3	16.8	16.9
Incr Delay (d2), s/veh	0.3	0.9	7.1	7.5	0.1	0.2	7.1	0.1	22.6	4.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	2.5	5.3	0.6	0.5	3.4	2.6	17.7	1.2	2.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	39.9	48.0	45.0	32.0	32.0	47.5	14.5	45.8	46.6	17.0	17.0
LnGrp LOS	D	D	D	D	C	C	D	B	D	D	B	B
Approach Vol, veh/h	203			519			1298			470		
Approach Delay, s/veh	44.2			43.5			35.4			20.4		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	49.3	20.3	13.7	13.1	45.1	12.5	21.6				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+I1), s	4.7	42.6	14.2	8.1	9.1	8.9	3.2	3.4				
Green Ext Time (p_c), s	0.1	1.4	0.8	0.5	0.2	2.3	0.1	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	35.0											
HCM 6th LOS	C											

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	116	670	370	22	28	129
Future Vol, veh/h	116	670	370	22	28	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	670	370	22	28	129
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	392	0	-	0	1272	370
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	902	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1167	-	-	-	185	676
Stage 1	-	-	-	-	699	-
Stage 2	-	-	-	-	396	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1167	-	-	-	167	676
Mov Cap-2 Maneuver	-	-	-	-	167	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	396	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		17.7		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1167	-	-	-	438	
HCM Lane V/C Ratio	0.099	-	-	-	0.358	
HCM Control Delay (s)	8.4	-	-	-	17.7	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	1.6	

Queues
14: Redlands Ave & 4th St

Existing
Existing PM



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	763	31	46	8	81	42	340	14	31	268	665
v/c Ratio	0.69	0.03	0.06	0.04	0.20	0.20	0.39	0.03	0.15	0.38	0.61
Control Delay	25.5	15.4	1.1	30.6	14.1	31.1	21.9	0.1	31.1	24.0	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	15.4	1.1	30.6	14.1	31.1	21.9	0.1	31.1	24.0	4.8
Queue Length 50th (ft)	145	7	0	3	3	16	50	0	12	51	0
Queue Length 95th (ft)	#265	31	6	16	24	47	104	0	38	85	42
Internal Link Dist (ft)		361			375		311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	1102	1256	1084	568	2132	568	1704	802	562	1624	1648
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.02	0.04	0.01	0.04	0.07	0.20	0.02	0.06	0.17	0.40

Intersection Summary

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

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Existing
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	740	30	45	8	18	60	41	330	14	30	260	645
Future Volume (veh/h)	740	30	45	8	18	60	41	330	14	30	260	645
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1796	1826
Adj Flow Rate, veh/h	763	31	46	8	19	62	42	340	14	31	268	665
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	7	5
Cap, veh/h	879	635	531	26	177	158	99	1124	495	80	1044	833
Arrive On Green	0.25	0.34	0.34	0.01	0.10	0.10	0.06	0.32	0.32	0.05	0.31	0.31
Sat Flow, veh/h	3456	1870	1565	1781	1777	1585	1781	3554	1565	1767	3413	2723
Grp Volume(v), veh/h	763	31	46	8	19	62	42	340	14	31	268	665
Grp Sat Flow(s),veh/h/ln	1728	1870	1565	1781	1777	1585	1781	1777	1565	1767	1706	1362
Q Serve(g_s), s	14.9	0.8	1.4	0.3	0.7	2.6	1.6	5.1	0.4	1.2	4.2	15.8
Cycle Q Clear(g_c), s	14.9	0.8	1.4	0.3	0.7	2.6	1.6	5.1	0.4	1.2	4.2	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	879	635	531	26	177	158	99	1124	495	80	1044	833
V/C Ratio(X)	0.87	0.05	0.09	0.31	0.11	0.39	0.42	0.30	0.03	0.39	0.26	0.80
Avail Cap(c_a), veh/h	983	1117	935	507	1062	947	507	1517	668	503	1456	1162
HCM Platoon Ratio	1.00	1.00	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	25.1	15.6	15.8	34.3	28.8	29.7	32.1	18.2	16.6	32.6	18.4	22.4
Incr Delay (d2), s/veh	7.7	0.0	0.1	6.7	0.3	1.6	2.8	0.1	0.0	3.1	0.1	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.3	0.5	0.2	0.3	1.0	0.7	1.9	0.1	0.6	1.5	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	15.6	15.9	41.0	29.1	31.2	34.9	18.3	16.6	35.7	18.5	25.1
LnGrp LOS	C	B	B	D	C	C	C	B	B	D	B	C
Approach Vol, veh/h	840			89			396			964		
Approach Delay, s/veh	31.3			31.7			20.0			23.6		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	27.7	5.5	29.4	8.4	27.0	22.4	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	3.2	7.1	2.3	3.4	3.6	17.8	16.9	4.6				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.3	0.1	3.7	1.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	26.1											
HCM 6th LOS	C											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Existing
Existing PM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	151	779	821	131	318	302	293
v/c Ratio	0.33	0.46	0.48	0.26	0.62	0.52	0.49
Control Delay	30.3	12.8	21.5	6.2	24.8	11.2	10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	12.8	21.5	6.2	24.8	11.2	10.0
Queue Length 50th (ft)	26	93	73	0	104	37	30
Queue Length 95th (ft)	67	190	134	40	220	121	106
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	1335	3257	3624	934	933	915	938
Starvation Cap Reductn	0	399	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	0.11	0.27	0.23	0.14	0.34	0.33	0.31
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Existing
Existing PM

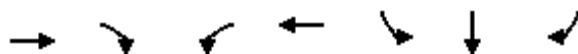
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	740	0	0	780	124	360	2	505	0	0	0
Future Volume (veh/h)	143	740	0	0	780	124	360	2	505	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1781	1856	0	0	1841	1811	1811	1870	1856			
Adj Flow Rate, veh/h	151	779	0	0	821	131	569	0	330			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	8	3	0	0	4	6	6	2	3			
Cap, veh/h	292	1631	0	0	1790	434	1014	0	462			
Arrive On Green	0.09	0.46	0.00	0.00	0.28	0.28	0.29	0.00	0.29			
Sat Flow, veh/h	3291	3618	0	0	6590	1535	3450	0	1572			
Grp Volume(v), veh/h	151	779	0	0	821	131	569	0	330			
Grp Sat Flow(s),veh/h/ln	1646	1763	0	0	1583	1535	1725	0	1572			
Q Serve(g_s), s	2.2	7.5	0.0	0.0	5.3	3.3	6.9	0.0	9.2			
Cycle Q Clear(g_c), s	2.2	7.5	0.0	0.0	5.3	3.3	6.9	0.0	9.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	292	1631	0	0	1790	434	1014	0	462			
V/C Ratio(X)	0.52	0.48	0.00	0.00	0.46	0.30	0.56	0.00	0.71			
Avail Cap(c_a), veh/h	1669	2503	0	0	4495	1089	2449	0	1116			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.5	9.1	0.0	0.0	14.6	13.9	14.7	0.0	15.5			
Incr Delay (d2), s/veh	1.4	0.2	0.0	0.0	0.2	0.4	0.5	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	0.8	2.2	0.0	0.0	1.6	1.0	2.1	0.0	2.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.9	9.4	0.0	0.0	14.8	14.3	15.2	0.0	17.6			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	930			952			899					
Approach Delay, s/veh	11.6			14.7			16.1					
Approach LOS	B			B			B					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	28.8			8.9			19.9			20.5		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	9.5			4.2			7.3			11.2		
Green Ext Time (p_c), s	5.7			0.4			6.7			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	14.1											
HCM 6th LOS	B											

Queues

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Existing

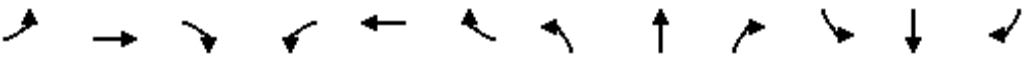
Existing PM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	826	488	430	895	137	133	125
v/c Ratio	0.40	0.40	0.56	0.42	0.45	0.42	0.34
Control Delay	17.2	3.0	26.1	6.7	30.0	21.8	8.7
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	17.2	3.0	26.1	6.8	30.0	21.8	8.7
Queue Length 50th (ft)	65	0	71	72	47	29	0
Queue Length 95th (ft)	111	27	139	129	114	90	40
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	3793	1832	1451	3244	995	908	907
Starvation Cap Reductn	0	0	0	696	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.27	0.30	0.35	0.14	0.15	0.14
Intersection Summary							

HCM 6th Signalized Intersection Summary 20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Existing
 Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	710	420	370	770	0	0	0	0	173	2	165
Future Volume (veh/h)	0	710	420	370	770	0	0	0	0	173	2	165
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	1870	1856	1870	1826	0				1870	1870	1811
Adj Flow Rate, veh/h	0	826	488	430	895	0				262	0	129
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	3	2	5	0				2	2	6
Cap, veh/h	0	2265	974	635	2171	0				513	0	221
Arrive On Green	0.00	0.35	0.35	0.18	0.63	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	6696	2768	3456	3561	0				3563	0	1535
Grp Volume(v), veh/h	0	826	488	430	895	0				262	0	129
Grp Sat Flow(s),veh/h/ln	0	1609	1384	1728	1735	0				1781	0	1535
Q Serve(g_s), s	0.0	4.8	6.9	5.8	6.5	0.0				3.4	0.0	3.9
Cycle Q Clear(g_c), s	0.0	4.8	6.9	5.8	6.5	0.0				3.4	0.0	3.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2265	974	635	2171	0				513	0	221
V/C Ratio(X)	0.00	0.36	0.50	0.68	0.41	0.00				0.51	0.00	0.58
Avail Cap(c_a), veh/h	0	4508	1939	1730	2431	0				2496	0	1075
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.0	12.7	19.0	4.7	0.0				19.8	0.0	20.0
Incr Delay (d2), s/veh	0.0	0.1	0.4	1.3	0.1	0.0				0.8	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.8	2.1	1.3	0.0				1.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.1	13.1	20.3	4.8	0.0				20.5	0.0	22.4
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		1314			1325						391	
Approach Delay, s/veh		12.5			9.8						21.2	
Approach LOS		B			A						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	13.7	23.6		12.7		37.3						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	7.8	8.9		5.9		8.5						
Green Ext Time (p_c), s	1.4	8.7		1.3		6.8						
Intersection Summary												
HCM 6th Ctrl Delay			12.5									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Existing
Existing PM



Lane Group	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	195	111	306	324	99
v/c Ratio	0.44	0.57	0.30	0.54	0.09
Control Delay	8.0	34.7	6.4	16.0	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.0	34.7	6.4	16.0	1.1
Queue Length 50th (ft)	4	26	34	62	0
Queue Length 95th (ft)	43	#89	74	127	8
Internal Link Dist (ft)	541		502	590	
Turn Bay Length (ft)		130			125
Base Capacity (vph)	737	196	1160	731	1287
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.26	0.57	0.26	0.44	0.08

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Existing
Existing PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	70	0	101	98	269	0	0	285	87
Future Volume (veh/h)	0	0	0	70	0	101	98	269	0	0	285	87
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1811	1870	1707	1841	1870	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	0	80	0	115	111	306	0	0	324	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	6	2	13	4	2	0	2	6	2
Cap, veh/h	0	5	0	134	0	192	166	896	0	0	459	
Arrive On Green	0.00	0.00	0.00	0.20	0.00	0.20	0.09	0.48	0.00	0.00	0.25	0.00
Sat Flow, veh/h	0	1870	0	681	0	979	1753	1870	0	0	1811	1585
Grp Volume(v), veh/h	0	0	0	195	0	0	111	306	0	0	324	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1660	0	0	1753	1870	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	3.7	0.0	0.0	2.1	3.5	0.0	0.0	5.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.7	0.0	0.0	2.1	3.5	0.0	0.0	5.6	0.0
Prop In Lane	0.00		0.00	0.41		0.59	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	5	0	326	0	0	166	896	0	0	459	
V/C Ratio(X)	0.00	0.00	0.00	0.60	0.00	0.00	0.67	0.34	0.00	0.00	0.71	
Avail Cap(c_a), veh/h	0	977	0	867	0	0	254	977	0	0	946	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	12.6	0.0	0.0	15.1	5.6	0.0	0.0	11.7	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.8	0.0	0.0	4.5	0.2	0.0	0.0	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	0.0	0.8	0.4	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	14.4	0.0	0.0	19.6	5.8	0.0	0.0	13.7	0.0
LnGrp LOS	A	A	A	B	A	A	B	A	A	A	B	
Approach Vol, veh/h	0			195			417			324		
Approach Delay, s/veh	0.0			14.4			9.5			13.7		
Approach LOS				B			A			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	7.8	15.2		0.0		23.0		11.5				
Change Period (Y+Rc), s	4.5	6.5		* 4.7		6.5		4.7				
Max Green Setting (Gmax), s	5.0	18.0		* 18		18.0		18.0				
Max Q Clear Time (g_c+l1), s	4.1	7.6		0.0		5.5		5.7				
Green Ext Time (p_c), s	0.0	1.1		0.0		1.1		0.9				

Intersection Summary

HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
30: SR-74

Existing
Existing PM

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	217	21	1069	586	739
v/c Ratio	0.51	0.10	0.64	0.38	0.50
Control Delay	18.8	22.4	10.9	10.8	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	22.4	10.9	10.8	1.2
Queue Length 50th (ft)	40	5	93	42	0
Queue Length 95th (ft)	115	24	182	133	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	1280	971	3406	2810	1482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.02	0.31	0.21	0.50
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Existing
Existing PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	165	39	20	1005	551	695
Future Volume (veh/h)	165	39	20	1005	551	695
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1781	1826	1811	1826	1767
Adj Flow Rate, veh/h	176	41	21	1069	586	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	15	8	5	6	5	9
Cap, veh/h	223	52	46	1655	983	
Arrive On Green	0.18	0.18	0.03	0.48	0.28	0.00
Sat Flow, veh/h	1261	294	1739	3532	3561	1497
Grp Volume(v), veh/h	218	0	21	1069	586	0
Grp Sat Flow(s),veh/h/ln	1562	0	1739	1721	1735	1497
Q Serve(g_s), s	4.1	0.0	0.4	7.2	4.5	0.0
Cycle Q Clear(g_c), s	4.1	0.0	0.4	7.2	4.5	0.0
Prop In Lane	0.81	0.19	1.00			1.00
Lane Grp Cap(c), veh/h	276	0	46	1655	983	
V/C Ratio(X)	0.79	0.00	0.45	0.65	0.60	
Avail Cap(c_a), veh/h	1765	0	1403	3888	3920	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	12.2	0.0	14.9	6.1	9.6	0.0
Incr Delay (d2), s/veh	1.9	0.0	2.5	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	0.1	0.6	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.1	0.0	17.4	6.2	9.8	0.0
LnGrp LOS	B	A	B	A	A	
Approach Vol, veh/h	218			1090	586	
Approach Delay, s/veh	14.1			6.4	9.8	
Approach LOS	B			A	A	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	20.2		10.8		6.1	14.1
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	35.0		35.0		25.0	35.0
Max Q Clear Time (g_c+I1), s	9.2		6.1		2.4	6.5
Green Ext Time (p_c), s	4.7		0.3		0.0	2.3
Intersection Summary						
HCM 6th Ctrl Delay			8.4			
HCM 6th LOS			A			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
32: SR-74 & Trumble Rd

Existing
Existing PM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	43	355	290	968	1052
v/c Ratio	0.16	0.66	0.79	0.41	0.82
Control Delay	31.1	10.3	46.5	5.9	27.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.1	10.3	46.5	5.9	27.6
Queue Length 50th (ft)	19	0	130	73	224
Queue Length 95th (ft)	47	70	#310	177	#420
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	498	695	415	2687	1479
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.09	0.51	0.70	0.36	0.71

Intersection Summary

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

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Existing
Existing PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	40	330	270	900	916	62
Future Volume (veh/h)	40	330	270	900	916	62
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1781	1678	1811	1781	877
Adj Flow Rate, veh/h	43	355	290	968	985	67
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	8	15	6	8	69
Cap, veh/h	426	385	324	2121	1149	78
Arrive On Green	0.26	0.26	0.20	0.62	0.36	0.36
Sat Flow, veh/h	1668	1510	1598	3532	3304	219
Grp Volume(v), veh/h	43	355	290	968	518	534
Grp Sat Flow(s),veh/h/ln	1668	1510	1598	1721	1692	1742
Q Serve(g_s), s	1.6	19.1	14.7	12.5	23.6	23.6
Cycle Q Clear(g_c), s	1.6	19.1	14.7	12.5	23.6	23.6
Prop In Lane	1.00	1.00	1.00			0.13
Lane Grp Cap(c), veh/h	426	385	324	2121	605	622
V/C Ratio(X)	0.10	0.92	0.90	0.46	0.86	0.86
Avail Cap(c_a), veh/h	461	417	384	2121	712	732
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	30.2	32.3	8.5	24.8	24.8
Incr Delay (d2), s/veh	0.0	23.8	18.8	0.2	9.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.5	6.9	3.5	9.8	10.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.7	54.0	51.1	8.7	33.8	33.6
LnGrp LOS	C	D	D	A	C	C
Approach Vol, veh/h	398			1258	1052	
Approach Delay, s/veh	50.7			18.5	33.7	
Approach LOS	D			B	C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		57.3		25.9	21.6	35.7
Change Period (Y+Rc), s		6.0		* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s		35.0		* 23	* 20	35.0
Max Q Clear Time (g_c+I1), s		14.5		21.1	16.7	25.6
Green Ext Time (p_c), s		6.2		0.2	0.1	4.1
Intersection Summary						
HCM 6th Ctrl Delay			29.1			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Queues

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Existing

Existing PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	29	277	255	386	837	45
v/c Ratio	0.20	0.18	0.71	0.24	0.81	0.03
Control Delay	35.0	0.3	36.4	2.1	24.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	0.3	36.4	2.1	24.9	0.0
Queue Length 50th (ft)	10	0	84	0	192	0
Queue Length 95th (ft)	39	0	188	74	#697	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	634	1524	634	1679	1032	1524
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	0.05	0.18	0.40	0.23	0.81	0.03

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Existing
Existing PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	27	255	235	355	770	41
Future Volume (veh/h)	27	255	235	355	770	41
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1826	1870	1811
Adj Flow Rate, veh/h	29	0	255	386	837	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	6	7	5	2	6
Cap, veh/h	55		308	1384	917	
Arrive On Green	0.03	0.00	0.18	0.76	0.49	0.00
Sat Flow, veh/h	1711	1535	1711	1826	1870	1535
Grp Volume(v), veh/h	29	0	255	386	837	0
Grp Sat Flow(s),veh/h/ln	1711	1535	1711	1826	1870	1535
Q Serve(g_s), s	1.0	0.0	8.2	3.7	23.6	0.0
Cycle Q Clear(g_c), s	1.0	0.0	8.2	3.7	23.6	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	55		308	1384	917	
V/C Ratio(X)	0.53		0.83	0.28	0.91	
Avail Cap(c_a), veh/h	747		747	1384	1144	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	27.3	0.0	22.6	2.1	13.5	0.0
Incr Delay (d2), s/veh	2.9	0.0	2.2	0.0	8.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	3.0	0.0	8.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.1	0.0	24.8	2.2	22.0	0.0
LnGrp LOS	C		C	A	C	
Approach Vol, veh/h	29			641	837	
Approach Delay, s/veh	30.1			11.2	22.0	
Approach LOS	C			B	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.3	34.1		7.8		49.4
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	10.2	25.6		3.0		5.7
Green Ext Time (p_c), s	0.3	2.4		0.0		1.2

Intersection Summary

HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX D

SYNCHRO OUTPUTS FOR OPENING YEAR (2030) -NO IMPROVEMENTS

Intersection						
Int Delay, s/veh	7.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	97	197	338	64	75	148
Future Vol, veh/h	97	197	338	64	75	148
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	9	10	7	6	6	2
Mvmt Flow	115	235	402	76	89	176
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	478	0	-	0	905	440
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	465	-
Critical Hdwy	4.19	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.281	-	-	-	3.554	3.318
Pot Cap-1 Maneuver	1049	-	-	-	302	617
Stage 1	-	-	-	-	641	-
Stage 2	-	-	-	-	624	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1049	-	-	-	264	617
Mov Cap-2 Maneuver	-	-	-	-	264	-
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	624	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.9	0		26.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1049	-	-	-	426	
HCM Lane V/C Ratio	0.11	-	-	-	0.623	
HCM Control Delay (s)	8.9	0	-	-	26.4	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0.4	-	-	-	4.1	

Intersection						
Int Delay, s/veh	9.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	210	277	444	42	17	304
Future Vol, veh/h	210	277	444	42	17	304
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	9	2	2	7	2
Mvmt Flow	236	311	499	47	19	342
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	546	0	-	0	1306	523
Stage 1	-	-	-	-	523	-
Stage 2	-	-	-	-	783	-
Critical Hdwy	4.12	-	-	-	6.47	6.22
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.318
Pot Cap-1 Maneuver	1023	-	-	-	172	554
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	442	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1023	-	-	-	132	554
Mov Cap-2 Maneuver	-	-	-	-	132	-
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	442	-
Approach	EB	WB		SB		
HCM Control Delay, s	4.1	0		32.9		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1023	-	-	-	474	
HCM Lane V/C Ratio	0.231	-	-	-	0.761	
HCM Control Delay (s)	9.6	-	-	-	32.9	
HCM Lane LOS	A	-	-	-	D	
HCM 95th %tile Q(veh)	0.9	-	-	-	6.5	

Queues

Opening-No Improvements

9: Redlands Ave & San Jacinto Ave

Opening AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	24	112	915	57	56	150	472	667	45	663
v/c Ratio	0.27	0.14	0.46	1.14	0.17	0.16	0.60	0.35	0.67	0.27	0.68
Control Delay	36.6	39.2	14.9	109.0	30.7	4.2	44.1	19.1	5.5	41.8	29.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	39.2	14.9	109.0	30.7	4.2	44.1	19.1	5.5	41.8	29.7
Queue Length 50th (ft)	26	11	0	~272	23	0	70	93	0	21	150
Queue Length 95th (ft)	56	35	40	#444	58	10	130	126	35	55	207
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	862	889	792	803	865	765	440	1961	1140	444	1964
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.03	0.14	1.14	0.07	0.07	0.34	0.24	0.59	0.10	0.34

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.

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Opening-No Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	95	20	92	750	47	46	123	387	547	37	492	52
Future Volume (veh/h)	95	20	92	750	47	46	123	387	547	37	492	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1826	1841	1870	1856	1856	1841	1826	1870	1870	1796
Adj Flow Rate, veh/h	116	24	112	915	57	56	150	472	667	45	600	63
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	5	4	2	3	3	4	5	2	2	7
Cap, veh/h	344	171	142	673	355	298	185	1593	704	91	1304	137
Arrive On Green	0.10	0.09	0.09	0.20	0.19	0.19	0.10	0.46	0.46	0.05	0.40	0.40
Sat Flow, veh/h	3456	1870	1547	3401	1870	1570	1767	3497	1546	1781	3245	340
Grp Volume(v), veh/h	116	24	112	915	57	56	150	472	667	45	328	335
Grp Sat Flow(s),veh/h/ln	1728	1870	1547	1700	1870	1570	1767	1749	1546	1781	1777	1809
Q Serve(g_s), s	3.0	1.1	6.8	19.0	2.4	2.9	8.0	8.2	39.7	2.4	13.0	13.1
Cycle Q Clear(g_c), s	3.0	1.1	6.8	19.0	2.4	2.9	8.0	8.2	39.7	2.4	13.0	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	344	171	142	673	355	298	185	1593	704	91	714	727
V/C Ratio(X)	0.34	0.14	0.79	1.36	0.16	0.19	0.81	0.30	0.95	0.50	0.46	0.46
Avail Cap(c_a), veh/h	720	740	612	673	545	458	368	1639	724	371	833	848
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.3	40.1	42.7	38.5	32.5	32.7	42.1	16.5	25.0	44.4	21.1	21.1
Incr Delay (d2), s/veh	0.2	0.1	3.7	171.4	0.1	0.1	3.2	0.1	21.4	1.5	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	1.2	0.5	2.6	23.5	1.1	1.1	3.6	3.1	17.0	1.0	5.1	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	40.3	46.4	209.9	32.6	32.8	45.3	16.6	46.4	45.9	21.6	21.6
LnGrp LOS	D	D	D	F	C	C	D	B	D	D	C	C
Approach Vol, veh/h	252				1028				1289		708	
Approach Delay, s/veh	43.1				190.4				35.4		23.2	
Approach LOS	D				F				D		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	49.0	24.3	14.1	13.8	43.9	14.8	23.5				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+l1), s	4.4	41.7	21.0	8.8	10.0	15.1	5.0	4.9				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.2	0.1	4.8	0.1	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	82.0											
HCM 6th LOS	F											

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	137	467	658	90	20	184
Future Vol, veh/h	137	467	658	90	20	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	467	658	90	20	184
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	748	0	-	0	1399	658
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	741	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	861	-	-	-	155	464
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	861	-	-	-	130	464
Mov Cap-2 Maneuver	-	-	-	-	130	-
Stage 1	-	-	-	-	433	-
Stage 2	-	-	-	-	471	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.3	0		25.9		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	861	-	-	-	371	
HCM Lane V/C Ratio	0.159	-	-	-	0.55	
HCM Control Delay (s)	10	-	-	-	25.9	
HCM Lane LOS	A	-	-	-	D	
HCM 95th %tile Q(veh)	0.6	-	-	-	3.2	

Queues

Opening-No Improvements

14: Redlands Ave & 4th St

Opening AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	865	28	26	6	37	22	433	25	53	402	1002
v/c Ratio	0.89	0.04	0.03	0.03	0.11	0.12	0.47	0.05	0.26	0.38	0.65
Control Delay	40.3	18.8	0.1	34.4	21.3	34.8	23.7	0.2	34.9	20.0	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.3	18.8	0.1	34.4	21.3	34.8	23.7	0.2	34.9	20.0	3.7
Queue Length 50th (ft)	179	6	0	2	3	9	87	0	21	61	0
Queue Length 95th (ft)	#331	29	0	13	16	30	117	0	54	105	17
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250		80		270		100		200
Base Capacity (vph)	967	1124	1019	523	1965	498	1524	755	523	1496	1769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.89	0.02	0.03	0.01	0.02	0.04	0.28	0.03	0.10	0.27	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Opening-No Improvements
Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	701	23	21	5	12	18	18	351	20	43	326	812
Future Volume (veh/h)	701	23	21	5	12	18	18	351	20	43	326	812
Initial Q (Qb), veh	0	0	0	0	0	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	1796	1826	1870	1870	1870	1811	1796	1826	1870	1870	1796	1841
Adj Flow Rate, veh/h	865	28	26	6	15	22	22	433	25	53	402	1002
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	7	5	2	2	2	6	7	5	2	2	7	4
Cap, veh/h	833	599	520	19	156	139	58	1213	554	108	1285	1033
Arrive On Green	0.25	0.33	0.33	0.01	0.09	0.09	0.03	0.35	0.35	0.06	0.38	0.38
Sat Flow, veh/h	3319	1826	1585	1781	1777	1585	1711	3469	1585	1781	3413	2745
Grp Volume(v), veh/h	865	28	26	6	15	22	22	433	25	53	402	1002
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1781	1777	1585	1711	1735	1585	1781	1706	1373
Q Serve(g_s), s	20.0	0.8	0.9	0.3	0.6	1.0	1.0	7.4	0.8	2.3	6.6	28.6
Cycle Q Clear(g_c), s	20.0	0.8	0.9	0.3	0.6	1.0	1.0	7.4	0.8	2.3	6.6	28.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	833	599	520	19	156	139	58	1213	554	108	1285	1033
V/C Ratio(X)	1.04	0.05	0.05	0.31	0.10	0.16	0.38	0.36	0.05	0.49	0.31	0.97
Avail Cap(c_a), veh/h	833	962	835	447	936	835	429	1306	597	447	1285	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	18.3	18.3	39.1	33.4	33.6	37.7	19.3	17.1	36.2	17.6	24.4
Incr Delay (d2), s/veh	41.6	0.0	0.0	8.7	0.3	0.5	4.1	0.2	0.0	3.4	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	0.3	0.3	0.2	0.3	0.4	0.5	2.8	0.3	1.1	2.5	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.5	18.3	18.3	47.8	33.7	34.1	41.7	19.4	17.2	39.7	17.7	45.3
LnGrp LOS	F	B	B	D	C	C	D	B	B	D	B	D
Approach Vol, veh/h	919			43			480			1457		
Approach Delay, s/veh	68.4			35.9			20.3			37.5		
Approach LOS	E			D			C			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	33.4	5.4	31.6	7.2	35.5	24.5	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	4.3	9.4	2.3	2.9	3.0	30.6	22.0	3.0				
Green Ext Time (p_c), s	0.1	2.7	0.0	0.2	0.0	0.0	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	44.4											
HCM 6th LOS	D											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Opening-No Improvements
Opening AM

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	168	835	1369	219	334	324	306
v/c Ratio	0.44	0.44	0.58	0.33	0.69	0.65	0.55
Control Delay	39.9	12.6	22.9	4.7	34.3	26.3	15.6
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	12.7	22.9	4.7	34.3	26.3	15.6
Queue Length 50th (ft)	43	126	162	0	164	125	61
Queue Length 95th (ft)	78	194	225	39	254	214	131
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	973	2737	2842	761	717	707	745
Starvation Cap Reductn	0	736	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	0.17	0.42	0.48	0.29	0.47	0.46	0.41
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Opening-No Improvements
Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	701	0	0	1150	184	453	0	357	0	0	0
Future Volume (veh/h)	141	701	0	0	1150	184	453	0	357	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	1693	1826	0	0	1870	1722	1811	1870	1841			
Adj Flow Rate, veh/h	168	835	0	0	1369	219	671	0	283			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	14	5	0	0	2	12	6	2	4			
Cap, veh/h	272	1879	0	0	2460	558	915	0	414			
Arrive On Green	0.09	0.54	0.00	0.00	0.38	0.38	0.27	0.00	0.27			
Sat Flow, veh/h	3127	3561	0	0	6696	1459	3450	0	1560			
Grp Volume(v), veh/h	168	835	0	0	1369	219	671	0	283			
Grp Sat Flow(s),veh/h/ln	1564	1735	0	0	1609	1459	1725	0	1560			
Q Serve(g_s), s	3.2	9.0	0.0	0.0	10.4	6.8	11.0	0.0	10.1			
Cycle Q Clear(g_c), s	3.2	9.0	0.0	0.0	10.4	6.8	11.0	0.0	10.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	272	1879	0	0	2460	558	915	0	414			
V/C Ratio(X)	0.62	0.44	0.00	0.00	0.56	0.39	0.73	0.00	0.68			
Avail Cap(c_a), veh/h	1257	1953	0	0	3622	821	1942	0	878			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	27.4	8.6	0.0	0.0	15.1	14.0	20.8	0.0	20.5			
Incr Delay (d2), s/veh	2.3	0.2	0.0	0.0	0.2	0.4	1.2	0.0	2.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	2.7	0.0	0.0	3.3	2.0	3.9	0.0	3.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.7	8.8	0.0	0.0	15.3	14.4	22.0	0.0	22.5			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h	1003			1588			954					
Approach Delay, s/veh	12.3			15.1			22.1					
Approach LOS	B			B			C					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	39.7			9.9			29.8			22.5		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	11.0			5.2			12.4			13.0		
Green Ext Time (p_c), s	6.1			0.5			11.4			3.5		
Intersection Summary												
HCM 6th Ctrl Delay	16.2											
HCM 6th LOS	B											

Notes

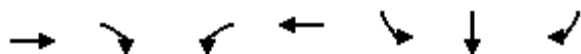
User approved volume balancing among the lanes for turning movement.

Queues

Opening-No Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening AM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	801	443	686	1177	131	124	119
v/c Ratio	0.44	0.41	0.69	0.52	0.48	0.51	0.55
Control Delay	21.2	3.6	27.2	7.5	34.4	21.8	23.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	21.2	3.6	27.2	7.6	34.4	21.8	23.6
Queue Length 50th (ft)	77	0	126	110	52	19	16
Queue Length 95th (ft)	122	28	231	197	117	76	72
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	3270	1580	1288	3125	826	589	512
Starvation Cap Reductn	0	0	17	760	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.28	0.54	0.50	0.16	0.21	0.23
Intersection Summary							

HCM 6th Signalized Intersection Summary
 20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening-No Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	689	381	590	1012	0	0	0	0	154	0	168
Future Volume (veh/h)	0	689	381	590	1012	0	0	0	0	154	0	168
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	1826	1767	1870	1841	0				1767	1870	877
Adj Flow Rate, veh/h	0	801	443	686	1177	0				242	0	127
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	5	9	2	4	0				9	2	69
Cap, veh/h	0	1852	777	858	2141	0				712	0	157
Arrive On Green	0.00	0.29	0.29	0.25	0.61	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	6537	2635	3456	3589	0				3365	0	744
Grp Volume(v), veh/h	0	801	443	686	1177	0				242	0	127
Grp Sat Flow(s),veh/h/ln	0	1570	1317	1728	1749	0				1682	0	744
Q Serve(g_s), s	0.0	6.7	9.3	12.1	12.8	0.0				4.0	0.0	10.6
Cycle Q Clear(g_c), s	0.0	6.7	9.3	12.1	12.8	0.0				4.0	0.0	10.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1852	777	858	2141	0				712	0	157
V/C Ratio(X)	0.00	0.43	0.57	0.80	0.55	0.00				0.34	0.00	0.81
Avail Cap(c_a), veh/h	0	3369	1413	1324	2141	0				1805	0	399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.6	19.5	23.0	7.4	0.0				21.8	0.0	24.5
Incr Delay (d2), s/veh	0.0	0.2	0.7	2.0	0.3	0.0				0.3	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	0.0	2.2	2.6	4.7	3.6	0.0				1.4	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.7	20.2	25.0	7.7	0.0				22.1	0.0	33.8
LnGrp LOS	A	B	C	C	A	A				C	A	C
Approach Vol, veh/h		1244			1863						369	
Approach Delay, s/veh		19.3			14.1						26.1	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.7	25.2		19.3		45.9						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	14.1	11.3		12.6		14.8						
Green Ext Time (p_c), s	2.0	7.9		1.2		8.6						
Intersection Summary												
HCM 6th Ctrl Delay			17.2									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Opening-No Improvements
Opening AM



Lane Group	EBT	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	2	142	170	322	320	98
v/c Ratio	0.00	0.38	0.94	0.30	0.51	0.09
Control Delay	0.0	12.9	85.1	10.0	20.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	12.9	85.1	10.0	20.0	1.6
Queue Length 50th (ft)	0	10	41	36	61	0
Queue Length 95th (ft)	0	61	#210	165	#209	12
Internal Link Dist (ft)	435	541		502	590	
Turn Bay Length (ft)			130			125
Base Capacity (vph)	771	675	181	1186	744	1350
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	0.00	0.21	0.94	0.27	0.43	0.07

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Opening-No Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	2	42	1	79	146	277	0	0	275	84
Future Volume (veh/h)	0	0	2	42	1	79	146	277	0	0	275	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1159	1856	1870	1648	1707	1796	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	2	49	1	92	170	322	0	0	320	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	2	50	3	2	17	13	7	0	2	6	2
Cap, veh/h	0	0	14	87	2	164	193	828	0	0	427	
Arrive On Green	0.00	0.00	0.01	0.15	0.15	0.15	0.12	0.46	0.00	0.00	0.24	0.00
Sat Flow, veh/h	0	0	1585	569	12	1069	1626	1796	0	0	1811	1585
Grp Volume(v), veh/h	0	0	2	142	0	0	170	322	0	0	320	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1650	0	0	1626	1796	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.1	3.4	0.0	0.0	4.3	5.0	0.0	0.0	6.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.4	0.0	0.0	4.3	5.0	0.0	0.0	6.9	0.0
Prop In Lane	0.00		1.00	0.35		0.65	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	0	14	254	0	0	193	828	0	0	427	
V/C Ratio(X)	0.00	0.00	0.14	0.56	0.00	0.00	0.88	0.39	0.00	0.00	0.75	
Avail Cap(c_a), veh/h	0	0	676	704	0	0	193	828	0	0	772	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	20.8	16.5	0.0	0.0	18.3	7.5	0.0	0.0	15.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.6	1.9	0.0	0.0	34.6	0.3	0.0	0.0	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.3	0.0	0.0	3.1	1.0	0.0	0.0	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	25.4	18.5	0.0	0.0	52.9	7.8	0.0	0.0	17.6	0.0
LnGrp LOS	A	A	C	B	A	A	D	A	A	A	B	
Approach Vol, veh/h	2			142			492			320		
Approach Delay, s/veh	25.4			18.5			23.4			17.6		
Approach LOS	C			B			C			B		
Timer - Assigned Phs	1	2	4			6	8					
Phs Duration (G+Y+Rc), s	9.5	16.4	5.1			25.9	11.2					
Change Period (Y+Rc), s	4.5	6.5	* 4.7			6.5	4.7					
Max Green Setting (Gmax), s	5.0	18.0	* 18			18.0	18.0					
Max Q Clear Time (g_c+I1), s	6.3	8.9	2.1			7.0	5.4					
Green Ext Time (p_c), s	0.0	1.0	0.0			1.2	0.6					

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	211	20	929	809	1057
v/c Ratio	0.47	0.09	0.59	0.54	0.72
Control Delay	18.7	23.8	10.3	12.0	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.7	23.8	10.3	12.0	3.1
Queue Length 50th (ft)	35	4	74	61	0
Queue Length 95th (ft)	131	27	152	192	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	1360	970	3190	2693	1468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.02	0.29	0.30	0.72
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Opening-No Improvements

Opening AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	162	28	18	836	728	951
Future Volume (veh/h)	162	28	18	836	728	951
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1722	1781	1722	1767	1752
Adj Flow Rate, veh/h	180	31	20	929	809	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	12	8	12	9	10
Cap, veh/h	233	40	43	1747	1197	
Arrive On Green	0.16	0.16	0.03	0.53	0.36	0.00
Sat Flow, veh/h	1439	248	1697	3358	3445	1485
Grp Volume(v), veh/h	212	0	20	929	809	0
Grp Sat Flow(s),veh/h/ln	1695	0	1697	1636	1678	1485
Q Serve(g_s), s	4.2	0.0	0.4	6.4	7.1	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.4	6.4	7.1	0.0
Prop In Lane	0.85	0.15	1.00			1.00
Lane Grp Cap(c), veh/h	275	0	43	1747	1197	
V/C Ratio(X)	0.77	0.00	0.47	0.53	0.68	
Avail Cap(c_a), veh/h	1701	0	1217	3285	3370	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	14.0	0.0	16.8	5.3	9.5	0.0
Incr Delay (d2), s/veh	1.7	0.0	2.9	0.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.1	0.5	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.7	0.0	19.7	5.4	9.8	0.0
LnGrp LOS	B	A	B	A	A	
Approach Vol, veh/h	212			949	809	
Approach Delay, s/veh	15.7			5.7	9.8	
Approach LOS	B			A	A	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	23.9		11.0		6.2	17.7
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	35.0		35.0		25.0	35.0
Max Q Clear Time (g_c+I1), s	8.4		6.2		2.4	9.1
Green Ext Time (p_c), s	4.0		0.3		0.0	3.3
Intersection Summary						
HCM 6th Ctrl Delay			8.4			
HCM 6th LOS			A			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
32: SR-74 & Trumble Rd

Opening-No Improvements
Opening AM

					
Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	84	440	236	860	1432
v/c Ratio	0.38	0.78	0.75	0.39	0.97
Control Delay	35.1	15.9	46.5	6.0	40.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	15.9	46.5	6.0	40.5
Queue Length 50th (ft)	37	17	104	63	317
Queue Length 95th (ft)	81	118	211	156	#669
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	399	689	424	2443	1483
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.64	0.56	0.35	0.97

Intersection Summary

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

HCM 6th Signalized Intersection Summary

32: SR-74 & Trumble Rd

Opening-No Improvements

Opening AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	76	400	215	783	1279	25
Future Volume (veh/h)	76	400	215	783	1279	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1411	1648	1767	1707	1767	1870
Adj Flow Rate, veh/h	84	440	236	860	1405	27
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	33	17	9	13	9	2
Cap, veh/h	353	367	272	1995	1347	26
Arrive On Green	0.26	0.26	0.16	0.62	0.40	0.40
Sat Flow, veh/h	1344	1397	1682	3329	3457	65
Grp Volume(v), veh/h	84	440	236	860	699	733
Grp Sat Flow(s),veh/h/ln	1344	1397	1682	1622	1678	1755
Q Serve(g_s), s	4.3	23.0	12.0	12.2	35.0	35.0
Cycle Q Clear(g_c), s	4.3	23.0	12.0	12.2	35.0	35.0
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	353	367	272	1995	671	702
V/C Ratio(X)	0.24	1.20	0.87	0.43	1.04	1.04
Avail Cap(c_a), veh/h	353	367	384	1995	671	702
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.4	32.3	35.8	8.8	26.3	26.3
Incr Delay (d2), s/veh	0.1	113.0	10.7	0.1	46.3	46.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	11.5	5.4	3.3	20.7	21.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.5	145.3	46.5	9.0	72.6	72.3
LnGrp LOS	C	F	D	A	F	F
Approach Vol, veh/h	524			1096	1432	
Approach Delay, s/veh	126.1			17.1	72.4	
Approach LOS	F			B	E	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	59.8		27.7		18.8	41.0
Change Period (Y+Rc), s	6.0		* 4.7		* 4.7	6.0
Max Green Setting (Gmax), s	35.0		* 23		* 20	35.0
Max Q Clear Time (g_c+I1), s	14.2		25.0		14.0	37.0
Green Ext Time (p_c), s	5.4		0.0		0.2	0.0
Intersection Summary						
HCM 6th Ctrl Delay			61.7			
HCM 6th LOS			E			
Notes						

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues

Opening-No Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	37	207	270	581	753	31
v/c Ratio	0.24	0.14	0.73	0.39	0.84	0.02
Control Delay	37.5	0.2	38.6	3.6	29.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	0.2	38.6	3.6	29.4	0.0
Queue Length 50th (ft)	16	0	117	74	308	0
Queue Length 95th (ft)	47	0	198	132	#641	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	619	1524	596	1547	901	1583
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	0.06	0.14	0.45	0.38	0.84	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening-No Improvements
Opening AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	184	240	517	670	28
Future Volume (veh/h)	33	184	240	517	670	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1811	1781	1752	1752	1870
Adj Flow Rate, veh/h	37	0	270	581	753	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	8	10	10	2
Cap, veh/h	68		324	1315	827	
Arrive On Green	0.04	0.00	0.19	0.75	0.47	0.00
Sat Flow, veh/h	1753	1535	1697	1752	1752	1585
Grp Volume(v), veh/h	37	0	270	581	753	0
Grp Sat Flow(s),veh/h/ln	1753	1535	1697	1752	1752	1585
Q Serve(g_s), s	1.2	0.0	8.7	7.1	22.7	0.0
Cycle Q Clear(g_c), s	1.2	0.0	8.7	7.1	22.7	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	68		324	1315	827	
V/C Ratio(X)	0.54		0.83	0.44	0.91	
Avail Cap(c_a), veh/h	768		744	1315	1075	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	26.9	0.0	22.2	2.7	13.9	0.0
Incr Delay (d2), s/veh	2.5	0.0	2.2	0.1	8.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.1	0.2	8.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.4	0.0	24.4	2.7	22.2	0.0
LnGrp LOS	C		C	A	C	
Approach Vol, veh/h	37			851	753	
Approach Delay, s/veh	29.4			9.6	22.2	
Approach LOS	C			A	C	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	15.9	32.9		8.2		48.8
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	10.7	24.7		3.2		9.1
Green Ext Time (p_c), s	0.3	2.2		0.0		2.0

Intersection Summary

HCM 6th Ctrl Delay	15.8
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	218	418	234	65	79	117
Future Vol, veh/h	218	418	234	65	79	117
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	3	5	7	3	7
Mvmt Flow	227	435	244	68	82	122
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	312	0	-	0	1167	278
Stage 1	-	-	-	-	278	-
Stage 2	-	-	-	-	889	-
Critical Hdwy	4.14	-	-	-	6.43	6.27
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.236	-	-	-	3.527	3.363
Pot Cap-1 Maneuver	1237	-	-	-	213	749
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	400	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1237	-	-	-	161	749
Mov Cap-2 Maneuver	-	-	-	-	161	-
Stage 1	-	-	-	-	581	-
Stage 2	-	-	-	-	400	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.9	0		38.3		
HCM LOS				E		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1237	-	-	-	303	
HCM Lane V/C Ratio	0.184	-	-	-	0.674	
HCM Control Delay (s)	8.6	0	-	-	38.3	
HCM Lane LOS	A	A	-	-	E	
HCM 95th %tile Q(veh)	0.7	-	-	-	4.5	

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	232	626	326	25	10	156
Future Vol, veh/h	232	626	326	25	10	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	3	6	2	12	2
Mvmt Flow	242	652	340	26	10	163
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	366	0	-	0	1489	353
Stage 1	-	-	-	-	353	-
Stage 2	-	-	-	-	1136	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.218	-	-	-	3.608	3.318
Pot Cap-1 Maneuver	1193	-	-	-	130	691
Stage 1	-	-	-	-	689	-
Stage 2	-	-	-	-	293	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1193	-	-	-	104	691
Mov Cap-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	293	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.4	0		15.5		
HCM LOS	C					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1193	-	-	-	516	
HCM Lane V/C Ratio	0.203	-	-	-	0.335	
HCM Control Delay (s)	8.8	-	-	-	15.5	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.8	-	-	-	1.5	

Queues

Opening-No Improvements

9: Redlands Ave & San Jacinto Ave

Opening PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	57	132	564	41	34	173	539	884	66	513
v/c Ratio	0.14	0.30	0.47	0.73	0.11	0.09	0.59	0.44	0.81	0.34	0.57
Control Delay	38.6	43.0	13.9	38.8	31.6	0.5	42.8	22.8	9.4	43.4	29.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.6	43.0	13.9	38.8	31.6	0.5	42.8	22.8	9.4	43.4	29.1
Queue Length 50th (ft)	13	27	0	132	17	0	80	114	17	31	117
Queue Length 95th (ft)	41	77	56	#311	55	0	179	175	150	86	186
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	845	871	810	772	848	758	435	1960	1241	435	1932
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.07	0.16	0.73	0.05	0.04	0.40	0.28	0.71	0.15	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 9: Redlands Ave & San Jacinto Ave

Opening-No Improvements
Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	55	127	541	39	33	166	517	849	63	444	48
Future Volume (veh/h)	58	55	127	541	39	33	166	517	849	63	444	48
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1870	1811	1870	1870	1870	1870	1856	1870	1870	1870
Adj Flow Rate, veh/h	60	57	132	564	41	34	173	539	884	66	462	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	3	2	2	2
Cap, veh/h	281	200	170	624	397	336	210	1603	709	105	1269	137
Arrive On Green	0.08	0.11	0.11	0.19	0.21	0.21	0.12	0.45	0.45	0.06	0.39	0.39
Sat Flow, veh/h	3456	1870	1585	3346	1870	1583	1781	3554	1572	1781	3235	349
Grp Volume(v), veh/h	60	57	132	564	41	34	173	539	884	66	253	259
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1673	1870	1583	1781	1777	1572	1781	1777	1807
Q Serve(g_s), s	1.6	2.8	8.1	16.5	1.8	1.7	9.5	9.8	45.0	3.6	10.1	10.2
Cycle Q Clear(g_c), s	1.6	2.8	8.1	16.5	1.8	1.7	9.5	9.8	45.0	3.6	10.1	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	281	200	170	624	397	336	210	1603	709	105	697	709
V/C Ratio(X)	0.21	0.28	0.78	0.90	0.10	0.10	0.82	0.34	1.25	0.63	0.36	0.37
Avail Cap(c_a), veh/h	693	712	604	637	525	444	357	1603	709	357	801	815
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.9	41.0	43.4	39.7	31.6	31.6	43.0	17.7	27.4	45.9	21.5	21.5
Incr Delay (d2), s/veh	0.4	0.8	7.4	16.2	0.1	0.1	7.9	0.1	122.5	6.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	3.4	7.8	0.8	0.6	4.6	3.9	39.2	1.7	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	41.8	50.8	55.9	31.8	31.8	50.9	17.8	149.9	51.9	21.8	21.8
LnGrp LOS	D	D	D	E	C	C	D	B	F	D	C	C
Approach Vol, veh/h	249			639			1596			578		
Approach Delay, s/veh	46.9			53.1			94.6			25.3		
Approach LOS	D			D			F			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	50.3	23.9	16.0	15.4	44.4	13.4	26.5				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+I1), s	5.6	47.0	18.5	10.1	11.5	12.2	3.6	3.8				
Green Ext Time (p_c), s	0.1	0.0	0.1	0.7	0.3	2.9	0.1	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	69.0											
HCM 6th LOS	E											

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	143	824	455	27	34	159
Future Vol, veh/h	143	824	455	27	34	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	824	455	27	34	159
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	482	0	-	0	1565	455
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	1110	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1081	-	-	-	123	605
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	315	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1081	-	-	-	107	605
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	315	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.3	0		29.9		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1081	-	-	-	332	
HCM Lane V/C Ratio	0.132	-	-	-	0.581	
HCM Control Delay (s)	8.8	-	-	-	29.9	
HCM Lane LOS	A	-	-	-	D	
HCM 95th %tile Q(veh)	0.5	-	-	-	3.5	

Queues

Opening-No Improvements

14: Redlands Ave & 4th St

Opening PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	938	38	57	10	99	52	419	18	38	330	818
v/c Ratio	0.90	0.05	0.08	0.05	0.24	0.25	0.47	0.04	0.19	0.39	0.64
Control Delay	39.7	17.4	2.3	33.7	14.6	33.9	23.7	0.2	33.9	23.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.7	17.4	2.3	33.7	14.6	33.9	23.7	0.2	33.9	23.4	4.4
Queue Length 50th (ft)	209	9	0	4	4	22	83	0	16	65	0
Queue Length 95th (ft)	#409	39	12	20	28	58	128	0	47	105	44
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	1040	1185	1029	536	2020	536	1608	762	530	1533	1676
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.03	0.06	0.02	0.05	0.10	0.26	0.02	0.07	0.22	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Opening-No Improvements
Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	910	37	55	10	22	74	50	406	17	37	320	793
Future Volume (veh/h)	910	37	55	10	22	74	50	406	17	37	320	793
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1796	1826
Adj Flow Rate, veh/h	938	38	57	10	23	76	52	419	18	38	330	818
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	7	5
Cap, veh/h	877	608	509	31	158	141	108	1257	554	89	1172	936
Arrive On Green	0.25	0.32	0.32	0.02	0.09	0.09	0.06	0.35	0.35	0.05	0.34	0.34
Sat Flow, veh/h	3456	1870	1565	1781	1777	1585	1781	3554	1565	1767	3413	2723
Grp Volume(v), veh/h	938	38	57	10	23	76	52	419	18	38	330	818
Grp Sat Flow(s),veh/h/ln	1728	1870	1565	1781	1777	1585	1781	1777	1565	1767	1706	1362
Q Serve(g_s), s	20.0	1.1	2.0	0.4	0.9	3.6	2.2	6.8	0.6	1.6	5.5	22.2
Cycle Q Clear(g_c), s	20.0	1.1	2.0	0.4	0.9	3.6	2.2	6.8	0.6	1.6	5.5	22.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	877	608	509	31	158	141	108	1257	554	89	1172	936
V/C Ratio(X)	1.07	0.06	0.11	0.32	0.15	0.54	0.48	0.33	0.03	0.43	0.28	0.87
Avail Cap(c_a), veh/h	877	996	834	452	947	844	452	1352	596	448	1299	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.4	18.3	18.6	38.3	33.2	34.4	35.9	18.7	16.7	36.3	18.8	24.3
Incr Delay (d2), s/veh	50.9	0.0	0.1	5.8	0.4	3.2	3.3	0.2	0.0	3.3	0.1	7.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	0.5	0.7	0.2	0.4	1.5	1.0	2.6	0.2	0.8	2.1	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	18.4	18.7	44.1	33.6	37.6	39.2	18.8	16.7	39.6	18.9	32.2
LnGrp LOS	F	B	B	D	C	D	D	B	B	D	B	C
Approach Vol, veh/h	1033			109			489			1186		
Approach Delay, s/veh	74.7			37.3			20.9			28.7		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.5	33.4	5.9	31.1	9.3	32.6	24.5	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	3.6	8.8	2.4	4.0	4.2	24.2	22.0	5.6				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.4	0.1	2.9	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay	44.5											
HCM 6th LOS	D											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Opening-No Improvements
Opening PM

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	185	958	1009	161	391	371	360
v/c Ratio	0.43	0.55	0.54	0.28	0.70	0.64	0.61
Control Delay	36.9	15.7	24.5	5.6	30.6	20.3	19.1
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	36.9	15.7	24.5	5.6	30.6	20.3	19.1
Queue Length 50th (ft)	42	162	117	0	164	103	92
Queue Length 95th (ft)	88	253	177	43	326	247	223
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	1097	2931	2980	807	767	754	770
Starvation Cap Reductn	0	551	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	0.17	0.40	0.34	0.20	0.51	0.49	0.47
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Opening-No Improvements
Opening PM

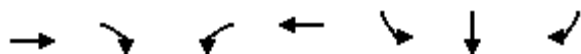
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	910	0	0	959	153	443	2	621	0	0	0
Future Volume (veh/h)	176	910	0	0	959	153	443	2	621	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1781	1856	0	0	1841	1811	1811	1870	1856			
Adj Flow Rate, veh/h	185	958	0	0	1009	161	700	0	405			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	8	3	0	0	4	6	6	2	3			
Cap, veh/h	303	1655	0	0	1918	465	1143	0	521			
Arrive On Green	0.09	0.47	0.00	0.00	0.30	0.30	0.33	0.00	0.33			
Sat Flow, veh/h	3291	3618	0	0	6590	1535	3450	0	1572			
Grp Volume(v), veh/h	185	958	0	0	1009	161	700	0	405			
Grp Sat Flow(s),veh/h/ln	1646	1763	0	0	1583	1535	1725	0	1572			
Q Serve(g_s), s	3.3	11.9	0.0	0.0	8.0	4.9	10.3	0.0	14.0			
Cycle Q Clear(g_c), s	3.3	11.9	0.0	0.0	8.0	4.9	10.3	0.0	14.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	303	1655	0	0	1918	465	1143	0	521			
V/C Ratio(X)	0.61	0.58	0.00	0.00	0.53	0.35	0.61	0.00	0.78			
Avail Cap(c_a), veh/h	1364	2046	0	0	3674	891	2002	0	912			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.3	11.7	0.0	0.0	17.4	16.4	16.9	0.0	18.2			
Incr Delay (d2), s/veh	2.0	0.3	0.0	0.0	0.2	0.4	0.5	0.0	2.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.3	3.9	0.0	0.0	2.6	1.6	3.4	0.0	4.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	12.0	0.0	0.0	17.7	16.8	17.4	0.0	20.7			
LnGrp LOS	C	B	A	A	B	B	B	A	C			
Approach Vol, veh/h	1143			1170			1105					
Approach Delay, s/veh	14.6			17.5			18.6					
Approach LOS	B			B			B					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	34.3			10.1			24.3			26.0		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	13.9			5.3			10.0			16.0		
Green Ext Time (p_c), s	6.8			0.6			8.3			4.0		
Intersection Summary												
HCM 6th Ctrl Delay	16.9											
HCM 6th LOS	B											

Queues

Opening-No Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening PM



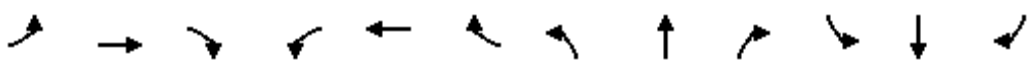
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1015	601	529	1101	169	164	153
v/c Ratio	0.44	0.44	0.67	0.49	0.54	0.52	0.45
Control Delay	19.7	2.9	32.2	7.7	36.9	27.6	18.9
Queue Delay	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Total Delay	19.7	2.9	32.2	7.9	36.9	27.6	18.9
Queue Length 50th (ft)	99	0	114	112	75	52	27
Queue Length 95th (ft)	159	30	193	193	154	126	86
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	3125	1653	1195	2935	819	756	750
Starvation Cap Reductn	0	0	15	846	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	0.32	0.36	0.45	0.53	0.21	0.22	0.20
Intersection Summary							

HCM 6th Signalized Intersection Summary

Opening-No Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	873	517	455	947	0	0	0	0	213	2	203
Future Volume (veh/h)	0	873	517	455	947	0	0	0	0	213	2	203
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	1870	1856	1870	1826	0				1870	1870	1811
Adj Flow Rate, veh/h	0	1015	601	529	1101	0				322	0	158
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	3	2	5	0				2	2	6
Cap, veh/h	0	2425	1043	706	2273	0				556	0	240
Arrive On Green	0.00	0.38	0.38	0.20	0.66	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	6696	2768	3456	3561	0				3563	0	1535
Grp Volume(v), veh/h	0	1015	601	529	1101	0				322	0	158
Grp Sat Flow(s),veh/h/ln	0	1609	1384	1728	1735	0				1781	0	1535
Q Serve(g_s), s	0.0	7.1	10.5	8.8	9.8	0.0				5.1	0.0	5.9
Cycle Q Clear(g_c), s	0.0	7.1	10.5	8.8	9.8	0.0				5.1	0.0	5.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2425	1043	706	2273	0				556	0	240
V/C Ratio(X)	0.00	0.42	0.58	0.75	0.48	0.00				0.58	0.00	0.66
Avail Cap(c_a), veh/h	0	3697	1590	1418	2273	0				2047	0	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.0	15.1	22.8	5.3	0.0				23.8	0.0	24.2
Incr Delay (d2), s/veh	0.0	0.1	0.5	1.6	0.2	0.0				1.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.3	2.9	3.4	2.3	0.0				2.0	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.2	15.6	24.4	5.5	0.0				24.8	0.0	27.3
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		1616			1630						480	
Approach Delay, s/veh		14.7			11.6						25.6	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.9	29.0		15.0		45.9						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	10.8	12.5		7.9		11.8						
Green Ext Time (p_c), s	1.7	10.4		1.6		8.4						
Intersection Summary												
HCM 6th Ctrl Delay			14.8									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Opening-No Improvements

Opening PM



Lane Group	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	239	138	376	399	122
v/c Ratio	0.53	0.77	0.36	0.60	0.11
Control Delay	10.6	54.8	7.4	17.6	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.6	54.8	7.4	17.6	0.8
Queue Length 50th (ft)	15	37	43	81	0
Queue Length 95th (ft)	59	#122	109	177	7
Internal Link Dist (ft)	541		502	590	
Turn Bay Length (ft)		130			125
Base Capacity (vph)	690	179	1063	669	1406
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.77	0.35	0.60	0.09

Intersection Summary

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

HCM 6th Signalized Intersection Summary 25: Case Rd & Ellis Ave

Opening-No Improvements

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	86	0	124	121	331	0	0	351	107
Future Volume (veh/h)	0	0	0	86	0	124	121	331	0	0	351	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1811	1870	1707	1841	1870	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	0	98	0	141	138	376	0	0	399	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	6	2	13	4	2	0	2	6	2
Cap, veh/h	0	5	0	135	0	194	177	948	0	0	521	
Arrive On Green	0.00	0.00	0.00	0.20	0.00	0.20	0.10	0.51	0.00	0.00	0.29	0.00
Sat Flow, veh/h	0	1870	0	681	0	979	1753	1870	0	0	1811	1585
Grp Volume(v), veh/h	0	0	0	239	0	0	138	376	0	0	399	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1660	0	0	1753	1870	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	5.1	0.0	0.0	2.9	4.7	0.0	0.0	7.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.1	0.0	0.0	2.9	4.7	0.0	0.0	7.7	0.0
Prop In Lane	0.00		0.00	0.41		0.59	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	5	0	329	0	0	177	948	0	0	521	
V/C Ratio(X)	0.00	0.00	0.00	0.73	0.00	0.00	0.78	0.40	0.00	0.00	0.77	
Avail Cap(c_a), veh/h	0	886	0	786	0	0	231	948	0	0	858	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.3	0.0	0.0	16.7	5.8	0.0	0.0	12.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.1	0.0	0.0	11.9	0.3	0.0	0.0	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.9	0.0	0.0	1.4	0.6	0.0	0.0	2.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	17.3	0.0	0.0	28.6	6.1	0.0	0.0	14.7	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	A	B	
Approach Vol, veh/h	0			239			514			399		
Approach Delay, s/veh	0.0			17.3			12.1			14.7		
Approach LOS				B			B			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.3	17.4		0.0		25.8		12.2				
Change Period (Y+Rc), s	4.5	6.5		* 4.7		6.5		4.7				
Max Green Setting (Gmax), s	5.0	18.0		* 18		18.0		18.0				
Max Q Clear Time (g_c+I1), s	4.9	9.7		0.0		6.7		7.1				
Green Ext Time (p_c), s	0.0	1.3		0.0		1.4		1.1				

Intersection Summary

HCM 6th Ctrl Delay 14.1

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
30: SR-74

Opening-No Improvements
Opening PM

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	267	27	1315	721	910
v/c Ratio	0.61	0.14	0.74	0.47	0.61
Control Delay	24.5	28.8	13.6	14.1	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	28.8	13.6	14.1	1.9
Queue Length 50th (ft)	70	8	144	61	0
Queue Length 95th (ft)	162	34	297	191	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	1051	822	3335	2302	1482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	0.03	0.39	0.31	0.61
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Opening-No Improvements

Opening PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	203	48	25	1236	678	855
Future Volume (veh/h)	203	48	25	1236	678	855
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1781	1826	1811	1826	1767
Adj Flow Rate, veh/h	216	51	27	1315	721	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	15	8	5	6	5	9
Cap, veh/h	268	63	57	1757	1179	
Arrive On Green	0.21	0.21	0.03	0.51	0.34	0.00
Sat Flow, veh/h	1258	297	1739	3532	3561	1497
Grp Volume(v), veh/h	268	0	27	1315	721	0
Grp Sat Flow(s),veh/h/ln	1561	0	1739	1721	1735	1497
Q Serve(g_s), s	6.3	0.0	0.6	11.6	6.6	0.0
Cycle Q Clear(g_c), s	6.3	0.0	0.6	11.6	6.6	0.0
Prop In Lane	0.81	0.19	1.00			1.00
Lane Grp Cap(c), veh/h	332	0	57	1757	1179	
V/C Ratio(X)	0.81	0.00	0.48	0.75	0.61	
Avail Cap(c_a), veh/h	1425	0	1134	3141	3167	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	14.3	0.0	18.2	7.4	10.5	0.0
Incr Delay (d2), s/veh	1.8	0.0	2.3	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	0.2	1.6	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.1	0.0	20.5	7.7	10.7	0.0
LnGrp LOS	B	A	C	A	B	
Approach Vol, veh/h	268			1342	721	
Approach Delay, s/veh	16.1			7.9	10.7	
Approach LOS	B			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		24.9		13.5	6.5	18.3
Change Period (Y+Rc), s		5.3		5.3	5.3	5.3
Max Green Setting (Gmax), s		35.0		35.0	25.0	35.0
Max Q Clear Time (g_c+I1), s		13.6		8.3	2.6	8.6
Green Ext Time (p_c), s		6.0		0.4	0.0	2.9
Intersection Summary						
HCM 6th Ctrl Delay			9.7			
HCM 6th LOS			A			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
32: SR-74 & Trumble Rd

Opening-No Improvements
Opening PM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	53	437	357	1190	1294
v/c Ratio	0.21	0.77	0.95	0.49	0.96
Control Delay	32.2	14.7	68.7	6.5	41.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	14.7	68.7	6.5	41.9
Queue Length 50th (ft)	25	15	175	98	311
Queue Length 95th (ft)	55	106	#406	237	#587
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	454	701	377	2446	1348
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.12	0.62	0.95	0.49	0.96

Intersection Summary

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

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Opening-No Improvements
Opening PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	49	406	332	1107	1127	76
Future Volume (veh/h)	49	406	332	1107	1127	76
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1781	1678	1811	1781	877
Adj Flow Rate, veh/h	53	437	357	1190	1212	82
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	8	15	6	8	69
Cap, veh/h	411	372	342	2199	1206	81
Arrive On Green	0.25	0.25	0.21	0.64	0.37	0.37
Sat Flow, veh/h	1668	1510	1598	3532	3306	217
Grp Volume(v), veh/h	53	437	357	1190	637	657
Grp Sat Flow(s),veh/h/ln	1668	1510	1598	1721	1692	1742
Q Serve(g_s), s	2.3	23.0	20.0	17.8	35.0	35.0
Cycle Q Clear(g_c), s	2.3	23.0	20.0	17.8	35.0	35.0
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	411	372	342	2199	634	653
V/C Ratio(X)	0.13	1.18	1.04	0.54	1.00	1.01
Avail Cap(c_a), veh/h	411	372	342	2199	634	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.4	35.2	36.7	9.3	29.2	29.2
Incr Delay (d2), s/veh	0.1	103.7	60.4	0.3	36.8	36.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	27.6	13.0	5.2	19.1	19.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.5	138.9	97.1	9.6	66.0	66.1
LnGrp LOS	C	F	F	A	F	F
Approach Vol, veh/h	490			1547	1294	
Approach Delay, s/veh	126.8			29.8	66.0	
Approach LOS	F			C	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		65.7		27.7	24.7	41.0
Change Period (Y+Rc), s		6.0		* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s		35.0		* 23	* 20	35.0
Max Q Clear Time (g_c+I1), s		19.8		25.0	22.0	37.0
Green Ext Time (p_c), s		6.8		0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			58.1			
HCM 6th LOS			E			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Queues

Opening-No Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	36	341	314	475	1029	54
v/c Ratio	0.25	0.22	0.76	0.31	1.10	0.04
Control Delay	38.8	0.3	38.6	2.9	84.6	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.8	0.3	38.6	2.9	84.6	0.0
Queue Length 50th (ft)	17	0	139	54	~616	0
Queue Length 95th (ft)	47	0	235	99	#966	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	591	1524	591	1593	935	1524
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	0.06	0.22	0.53	0.30	1.10	0.04

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.

HCM 6th Signalized Intersection Summary
36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening-No Improvements

Opening PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	314	289	437	947	50
Future Volume (veh/h)	33	314	289	437	947	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1826	1870	1811
Adj Flow Rate, veh/h	36	0	314	475	1029	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	6	7	5	2	6
Cap, veh/h	62		360	1443	948	
Arrive On Green	0.04	0.00	0.21	0.79	0.51	0.00
Sat Flow, veh/h	1711	1535	1711	1826	1870	1535
Grp Volume(v), veh/h	36	0	314	475	1029	0
Grp Sat Flow(s), veh/h/ln	1711	1535	1711	1826	1870	1535
Q Serve(g_s), s	1.4	0.0	12.3	5.1	35.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	12.3	5.1	35.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	62		360	1443	948	
V/C Ratio(X)	0.58		0.87	0.33	1.09	
Avail Cap(c_a), veh/h	619		619	1443	948	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	32.8	0.0	26.3	2.1	17.0	0.0
Incr Delay (d2), s/veh	3.2	0.0	3.0	0.0	55.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	4.7	0.2	25.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.0	0.0	29.3	2.1	72.2	0.0
LnGrp LOS	D		C	A	F	
Approach Vol, veh/h	36			789	1029	
Approach Delay, s/veh	36.0			12.9	72.2	
Approach LOS	D			B	E	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	19.5	41.0		8.5		60.5
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	14.3	37.0		3.4		7.1
Green Ext Time (p_c), s	0.3	0.0		0.0		1.6

Intersection Summary

HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX E

SYNCHRO OUTPUTS FOR OPENING YEAR (2030) WITH IMPROVEMENTS

Queues
5: San Jacinto Ave & Dunlap Dr

Opening with Improvements

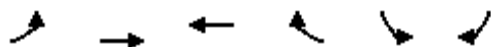
Opening AM



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	115	235	478	265
v/c Ratio	0.42	0.16	0.56	0.37
Control Delay	26.5	7.5	18.6	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	26.5	7.5	18.6	8.0
Queue Length 50th (ft)	33	19	64	21
Queue Length 95th (ft)	74	31	95	66
Internal Link Dist (ft)		577	616	608
Turn Bay Length (ft)	300			
Base Capacity (vph)	338	2211	1268	712
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.34	0.11	0.38	0.37
Intersection Summary				

HCM 6th Signalized Intersection Summary 5: San Jacinto Ave & Dunlap Dr

Opening with Improvements
Opening AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	97	197	338	64	75	148
Future Volume (veh/h)	97	197	338	64	75	148
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1752	1796	1811	1811	1870
Adj Flow Rate, veh/h	115	235	402	76	89	176
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	9	10	7	6	6	2
Cap, veh/h	146	1349	629	118	211	418
Arrive On Green	0.09	0.41	0.22	0.22	0.40	0.40
Sat Flow, veh/h	1682	3416	2958	538	533	1055
Grp Volume(v), veh/h	115	235	238	240	266	0
Grp Sat Flow(s),veh/h/ln	1682	1664	1706	1699	1595	0
Q Serve(g_s), s	3.0	2.1	5.7	5.8	5.5	0.0
Cycle Q Clear(g_c), s	3.0	2.1	5.7	5.8	5.5	0.0
Prop In Lane	1.00			0.32	0.33	0.66
Lane Grp Cap(c), veh/h	146	1349	375	373	632	0
V/C Ratio(X)	0.79	0.17	0.63	0.64	0.42	0.00
Avail Cap(c_a), veh/h	371	2419	695	692	632	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.3	8.6	16.1	16.1	9.9	0.0
Incr Delay (d2), s/veh	9.0	0.1	1.8	1.9	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.6	2.1	2.1	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.3	8.7	17.9	18.0	12.0	0.0
LnGrp LOS	C	A	B	B	B	A
Approach Vol, veh/h		350	478		266	
Approach Delay, s/veh		15.5	17.9		12.0	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		22.9		22.5	8.4	14.5
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	10.0	18.5
Max Q Clear Time (g_c+I1), s		4.1		7.5	5.0	7.8
Green Ext Time (p_c), s		1.6		0.6	0.1	2.1
Intersection Summary						
HCM 6th Ctrl Delay			15.7			
HCM 6th LOS			B			

Queues

7: San Jacinto Ave & Murrieta Rd

Opening with Improvements

Opening AM



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	236	291	97	446	48	33	71	19	54	342
v/c Ratio	0.59	0.25	0.37	0.57	0.24	0.14	0.18	0.10	0.14	0.38
Control Delay	27.5	14.3	28.9	23.3	30.1	26.9	1.0	28.0	25.6	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.5	14.3	28.9	23.3	30.1	26.9	1.0	28.0	25.6	6.7
Queue Length 50th (ft)	73	36	31	71	16	10	0	6	17	33
Queue Length 95th (ft)	151	66	80	123	50	37	0	26	51	92
Internal Link Dist (ft)		670		607		1021			337	
Turn Bay Length (ft)	300		200		100			100		
Base Capacity (vph)	546	1454	327	1114	209	608	675	535	979	1016
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.20	0.30	0.40	0.23	0.05	0.11	0.04	0.06	0.34

Intersection Summary

HCM 6th Signalized Intersection Summary

7: San Jacinto Ave & Murrieta Rd

Opening with Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	212	49	89	355	42	44	30	65	17	50	304
Future Volume (veh/h)	210	212	49	89	355	42	44	30	65	17	50	304
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1767	1870	1870	1870	1870	1870	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	236	238	53	97	399	47	48	33	71	19	54	342
Peak Hour Factor	0.89	0.89	0.92	0.92	0.89	0.89	0.92	0.92	0.92	0.89	0.92	0.89
Percent Heavy Veh, %	2	9	2	2	2	2	2	2	2	7	2	2
Cap, veh/h	301	779	170	132	608	71	87	339	287	171	435	636
Arrive On Green	0.17	0.28	0.28	0.07	0.19	0.19	0.05	0.18	0.18	0.10	0.23	0.23
Sat Flow, veh/h	1781	2739	599	1781	3204	375	1781	1870	1585	1711	1870	1585
Grp Volume(v), veh/h	236	144	147	97	220	226	48	33	71	19	54	342
Grp Sat Flow(s),veh/h/ln	1781	1678	1659	1781	1777	1803	1781	1870	1585	1711	1870	1585
Q Serve(g_s), s	6.3	3.4	3.5	2.7	5.7	5.8	1.3	0.7	1.9	0.5	1.1	8.2
Cycle Q Clear(g_c), s	6.3	3.4	3.5	2.7	5.7	5.8	1.3	0.7	1.9	0.5	1.1	8.2
Prop In Lane	1.00		0.36	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	301	478	472	132	337	342	87	339	287	171	435	636
V/C Ratio(X)	0.78	0.30	0.31	0.74	0.65	0.66	0.55	0.10	0.25	0.11	0.12	0.54
Avail Cap(c_a), veh/h	624	839	830	374	640	649	239	692	587	616	1115	1213
HCM Platoon Ratio	1.00	1.00	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	19.9	14.0	14.0	22.7	18.7	18.8	23.2	17.1	17.5	20.5	15.2	11.4
Incr Delay (d2), s/veh	4.5	0.4	0.4	7.7	2.1	2.2	5.4	0.1	0.4	0.3	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.1	1.1	1.2	2.1	2.2	0.6	0.3	0.6	0.2	0.4	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.4	14.3	14.4	30.4	20.9	20.9	28.7	17.2	18.0	20.8	15.3	12.1
LnGrp LOS	C	B	B	C	C	C	C	B	B	C	B	B
Approach Vol, veh/h	527			543			152			415		
Approach Delay, s/veh	18.9			22.6			21.2			12.9		
Approach LOS	B			C			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	13.6	8.2	18.7	6.9	16.1	12.9	14.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	18.5	10.5	25.0	6.7	29.8	17.5	18.0				
Max Q Clear Time (g_c+I1), s	2.5	3.9	4.7	5.5	3.3	10.2	8.3	7.8				
Green Ext Time (p_c), s	0.0	0.3	0.1	1.4	0.0	1.4	0.4	1.7				
Intersection Summary												
HCM 6th Ctrl Delay	18.8											
HCM 6th LOS	B											

Queues

9: Redlands Ave & San Jacinto Ave

Opening with Improvements

Opening AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	116	24	112	806	57	110	150	472	588	105	603
v/c Ratio	0.30	0.16	0.45	0.73	0.10	0.21	0.69	0.51	0.51	0.57	0.70
Control Delay	39.9	43.0	10.6	32.1	25.3	6.5	56.6	29.6	2.2	52.1	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.9	43.0	10.6	32.1	25.3	6.5	56.6	29.6	2.2	52.1	34.4
Queue Length 50th (ft)	30	13	0	200	23	0	81	119	0	56	158
Queue Length 95th (ft)	56	36	24	271	52	31	#162	148	18	107	191
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	387	798	738	1101	1197	1033	217	1295	1198	205	1270
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.03	0.15	0.73	0.05	0.11	0.69	0.36	0.49	0.51	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Opening with Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	95	20	92	661	47	90	123	387	482	86	443	52
Future Volume (veh/h)	95	20	92	661	47	90	123	387	482	86	443	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1826	1841	1870	1856	1856	1841	1826	1870	1870	1796
Adj Flow Rate, veh/h	116	24	112	806	57	110	150	472	588	105	540	63
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	5	4	2	3	3	4	5	2	2	7
Cap, veh/h	386	174	144	905	464	389	189	1151	921	136	957	111
Arrive On Green	0.11	0.09	0.09	0.27	0.25	0.25	0.11	0.33	0.33	0.08	0.30	0.30
Sat Flow, veh/h	3456	1870	1547	3401	1870	1571	1767	3497	1546	1781	3206	373
Grp Volume(v), veh/h	116	24	112	806	57	110	150	472	588	105	299	304
Grp Sat Flow(s),veh/h/ln	1728	1870	1547	1700	1870	1571	1767	1749	1546	1781	1777	1802
Q Serve(g_s), s	2.6	1.0	5.9	19.0	2.0	4.7	6.9	8.7	20.7	4.8	11.8	11.9
Cycle Q Clear(g_c), s	2.6	1.0	5.9	19.0	2.0	4.7	6.9	8.7	20.7	4.8	11.8	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	386	174	144	905	464	389	189	1151	921	136	531	538
V/C Ratio(X)	0.30	0.14	0.78	0.89	0.12	0.28	0.79	0.41	0.64	0.77	0.56	0.57
Avail Cap(c_a), veh/h	414	851	704	1182	1277	1072	233	1387	1025	220	690	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	34.8	37.0	29.5	24.4	25.4	36.4	21.7	11.0	37.8	24.7	24.7
Incr Delay (d2), s/veh	0.2	0.1	3.4	6.0	0.0	0.1	11.2	0.3	1.3	3.4	1.1	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	1.0	0.4	2.2	7.9	0.8	1.7	3.5	3.4	5.8	2.1	4.7	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	34.9	40.3	35.4	24.4	25.5	47.6	22.0	12.3	41.3	25.8	25.8
LnGrp LOS	C	C	D	D	C	C	D	C	B	D	C	C
Approach Vol, veh/h	252		973				1210		708			
Approach Delay, s/veh	37.0		33.7				20.5		28.1			
Approach LOS	D		C				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	32.8	27.5	13.1	12.6	30.2	14.6	26.0				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	10.3	33.1	29.0	38.0	11.0	32.4	10.0	57.0				
Max Q Clear Time (g_c+I1), s	6.8	22.7	21.0	7.9	8.9	13.9	4.6	6.7				
Green Ext Time (p_c), s	0.0	4.7	1.2	0.2	0.0	3.8	0.1	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									
Notes												

Intersection						
Int Delay, s/veh	2.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	137	451	613	90	20	184
Future Vol, veh/h	137	451	613	90	20	184
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	137	451	613	90	20	184
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	703	0	-	0	1158	352
Stage 1	-	-	-	-	658	-
Stage 2	-	-	-	-	500	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	890	-	-	-	189	644
Stage 1	-	-	-	-	477	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	890	-	-	-	160	644
Mov Cap-2 Maneuver	-	-	-	-	286	-
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	575	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.3	0		14.7		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	890	-	-	-	574	
HCM Lane V/C Ratio	0.154	-	-	-	0.355	
HCM Control Delay (s)	9.8	-	-	-	14.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	1.6	

Queues

14: Redlands Ave & 4th St

Opening with Improvements

Opening AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	865	28	26	6	37	22	353	25	53	232	1002
v/c Ratio	0.69	0.03	0.03	0.03	0.11	0.13	0.48	0.06	0.31	0.28	0.46
Control Delay	24.4	14.7	0.0	35.2	21.6	36.6	27.7	0.2	39.4	23.6	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	24.4	14.7	0.0	35.2	21.6	36.6	27.7	0.2	39.4	23.6	1.2
Queue Length 50th (ft)	172	6	0	3	3	9	80	0	23	40	0
Queue Length 95th (ft)	249	26	0	13	16	30	104	0	56	71	7
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	1258	1569	1386	173	1859	164	1129	617	173	1115	2196
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	185
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.02	0.02	0.03	0.02	0.13	0.31	0.04	0.31	0.21	0.50
Intersection Summary											

HCM 6th Signalized Intersection Summary

14: Redlands Ave & 4th St

Opening with Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	701	23	21	5	12	18	18	286	20	43	188	812
Future Volume (veh/h)	701	23	21	5	12	18	18	286	20	43	188	812
Initial Q (Qb), veh	0	0	0	0	0	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	1796	1826	1870	1870	1870	1811	1796	1826	1870	1870	1796	1841
Adj Flow Rate, veh/h	865	28	26	6	15	22	22	353	25	53	232	1002
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	7	5	2	2	2	6	7	5	2	2	7	4
Cap, veh/h	1007	708	615	20	170	152	59	918	419	112	1000	1638
Arrive On Green	0.30	0.39	0.39	0.01	0.10	0.10	0.03	0.26	0.26	0.06	0.29	0.29
Sat Flow, veh/h	3319	1826	1585	1781	1777	1585	1711	3469	1585	1781	3413	2745
Grp Volume(v), veh/h	865	28	26	6	15	22	22	353	25	53	232	1002
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1781	1777	1585	1711	1735	1585	1781	1706	1373
Q Serve(g_s), s	18.0	0.7	0.7	0.2	0.6	0.9	0.9	6.1	0.9	2.1	3.8	17.0
Cycle Q Clear(g_c), s	18.0	0.7	0.7	0.2	0.6	0.9	0.9	6.1	0.9	2.1	3.8	17.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1007	708	615	20	170	152	59	918	419	112	1000	1638
V/C Ratio(X)	0.86	0.04	0.04	0.31	0.09	0.15	0.37	0.38	0.06	0.47	0.23	0.61
Avail Cap(c_a), veh/h	1248	1560	1354	170	1020	910	164	1114	509	170	1096	1715
HCM Platoon Ratio	1.00	1.00	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	24.0	13.9	13.9	35.9	30.2	30.3	34.5	22.0	20.1	33.1	19.6	9.4
Incr Delay (d2), s/veh	5.2	0.0	0.0	8.6	0.2	0.4	3.9	0.3	0.1	3.0	0.1	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	7.2	0.3	0.3	0.1	0.2	0.4	0.4	2.3	0.3	1.0	1.4	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	13.9	14.0	44.5	30.4	30.8	38.4	22.3	20.2	36.1	19.7	10.0
LnGrp LOS	C	B	B	D	C	C	D	C	C	D	B	A
Approach Vol, veh/h	919			43			400			1287		
Approach Delay, s/veh	28.4			32.5			23.0			12.8		
Approach LOS	C			C			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	24.9	5.3	33.9	7.0	26.9	26.7	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	7.0	23.5	7.0	62.5	7.0	23.5	27.5	42.0				
Max Q Clear Time (g_c+I1), s	4.1	8.1	2.2	2.7	2.9	19.0	20.0	2.9				
Green Ext Time (p_c), s	0.0	1.9	0.0	0.2	0.0	2.5	2.2	0.2				
Intersection Summary												
HCM 6th Ctrl Delay	20.1											
HCM 6th LOS	C											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Opening with Improvements

Opening AM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	168	757	1205	219	334	324	306
v/c Ratio	0.44	0.42	0.56	0.35	0.68	0.62	0.55
Control Delay	37.1	12.3	21.7	5.0	30.6	21.6	15.3
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	12.5	21.7	5.0	30.6	21.6	15.3
Queue Length 50th (ft)	38	105	131	0	144	101	60
Queue Length 95th (ft)	73	167	180	38	225	178	125
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	460	2206	2741	742	761	756	772
Starvation Cap Reductn	0	617	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	0.37	0.48	0.44	0.30	0.44	0.43	0.40
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Opening with Improvements

Opening AM

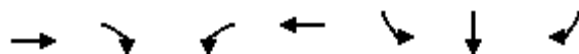
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	636	0	0	1012	184	453	0	357	0	0	0
Future Volume (veh/h)	141	636	0	0	1012	184	453	0	357	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1693	1826	0	0	1870	1722	1811	1870	1841			
Adj Flow Rate, veh/h	168	757	0	0	1205	219	671	0	283			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	14	5	0	0	2	12	6	2	4			
Cap, veh/h	266	1785	0	0	2249	510	940	0	425			
Arrive On Green	0.08	0.51	0.00	0.00	0.35	0.35	0.27	0.00	0.27			
Sat Flow, veh/h	3127	3561	0	0	6696	1459	3450	0	1560			
Grp Volume(v), veh/h	168	757	0	0	1205	219	671	0	283			
Grp Sat Flow(s),veh/h/ln	1564	1735	0	0	1609	1459	1725	0	1560			
Q Serve(g_s), s	2.9	7.6	0.0	0.0	8.4	6.5	9.9	0.0	9.1			
Cycle Q Clear(g_c), s	2.9	7.6	0.0	0.0	8.4	6.5	9.9	0.0	9.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	266	1785	0	0	2249	510	940	0	425			
V/C Ratio(X)	0.63	0.42	0.00	0.00	0.54	0.43	0.71	0.00	0.67			
Avail Cap(c_a), veh/h	583	2773	0	0	3428	778	2022	0	914			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.9	8.5	0.0	0.0	14.7	14.0	18.5	0.0	18.2			
Incr Delay (d2), s/veh	2.5	0.2	0.0	0.0	0.2	0.6	1.0	0.0	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	2.2	0.0	0.0	2.7	1.9	3.4	0.0	2.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.4	8.6	0.0	0.0	14.9	14.6	19.5	0.0	20.0			
LnGrp LOS	C	A	A	A	B	B	B	A	C			
Approach Vol, veh/h	925			1424			954					
Approach Delay, s/veh	12.1			14.8			19.7					
Approach LOS	B			B			B					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	35.0			9.3			25.7			21.3		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	45.0			10.5			30.0			33.0		
Max Q Clear Time (g_c+I1), s	9.6			4.9			10.4			11.9		
Green Ext Time (p_c), s	5.9			0.2			9.2			3.4		
Intersection Summary												
HCM 6th Ctrl Delay	15.4											
HCM 6th LOS	B											

Queues

Opening with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening AM



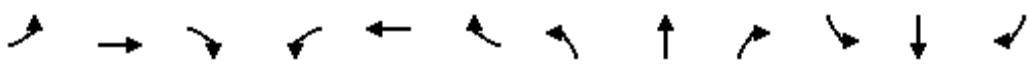
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	726	443	686	1016	131	124	119
v/c Ratio	0.44	0.43	0.68	0.46	0.47	0.48	0.46
Control Delay	21.1	4.1	24.4	6.9	31.8	17.0	12.4
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	21.1	4.1	24.5	7.0	31.8	17.0	12.4
Queue Length 50th (ft)	64	0	116	85	47	12	0
Queue Length 95th (ft)	112	30	192	150	108	61	40
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	2155	1192	1783	3060	557	432	398
Starvation Cap Reductn	0	0	39	711	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	0.37	0.39	0.43	0.24	0.29	0.30
Intersection Summary							

HCM 6th Signalized Intersection Summary

Opening with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	624	381	590	874	0	0	0	0	154	0	168
Future Volume (veh/h)	0	624	381	590	874	0	0	0	0	154	0	168
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	1826	1767	1870	1841	0				1767	1870	877
Adj Flow Rate, veh/h	0	726	443	686	1016	0				242	0	127
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	5	9	2	4	0				9	2	69
Cap, veh/h	0	1648	692	893	2086	0				710	0	157
Arrive On Green	0.00	0.26	0.26	0.26	0.60	0.00				0.21	0.00	0.21
Sat Flow, veh/h	0	6537	2635	3456	3589	0				3365	0	744
Grp Volume(v), veh/h	0	726	443	686	1016	0				242	0	127
Grp Sat Flow(s),veh/h/ln	0	1570	1317	1728	1749	0				1682	0	744
Q Serve(g_s), s	0.0	5.8	8.9	11.0	9.9	0.0				3.6	0.0	9.7
Cycle Q Clear(g_c), s	0.0	5.8	8.9	11.0	9.9	0.0				3.6	0.0	9.7
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1648	692	893	2086	0				710	0	157
V/C Ratio(X)	0.00	0.44	0.64	0.77	0.49	0.00				0.34	0.00	0.81
Avail Cap(c_a), veh/h	0	2210	927	1824	3341	0				1212	0	268
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.4	19.5	20.5	6.9	0.0				20.0	0.0	22.4
Incr Delay (d2), s/veh	0.0	0.2	1.0	1.4	0.2	0.0				0.3	0.0	9.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.9	2.5	4.1	2.6	0.0				1.3	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.5	20.5	21.9	7.0	0.0				20.3	0.0	31.9
LnGrp LOS	A	B	C	C	A	A				C	A	C
Approach Vol, veh/h		1169			1702						369	
Approach Delay, s/veh		19.3			13.0						24.3	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	19.9	21.7		18.1		41.6						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	31.5	21.0		21.5		57.0						
Max Q Clear Time (g_c+I1), s	13.0	10.9		11.7		11.9						
Green Ext Time (p_c), s	2.5	4.8		0.9		9.0						
Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Opening with Improvements

Opening AM



Lane Group	EBT	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	2	151	186	322	320	98
v/c Ratio	0.00	0.45	0.55	0.32	0.65	0.11
Control Delay	0.0	15.7	30.8	9.2	27.8	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	15.7	30.8	9.2	27.8	1.9
Queue Length 50th (ft)	0	13	48	36	82	0
Queue Length 95th (ft)	0	70	#176	164	#253	11
Internal Link Dist (ft)	435	541		502	590	
Turn Bay Length (ft)			130			125
Base Capacity (vph)	730	577	403	1266	674	1170
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	0.00	0.26	0.46	0.25	0.47	0.08

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Opening with Improvements

Opening AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	2	42	1	87	160	277	0	0	275	84
Future Volume (veh/h)	0	0	2	42	1	87	160	277	0	0	275	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1159	1856	1870	1648	1707	1796	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	2	49	1	101	186	322	0	0	320	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	2	50	3	2	17	13	7	0	2	6	2
Cap, veh/h	0	0	14	81	2	168	235	864	0	0	425	
Arrive On Green	0.00	0.00	0.01	0.15	0.15	0.15	0.14	0.48	0.00	0.00	0.23	0.00
Sat Flow, veh/h	0	0	1585	534	11	1101	1626	1796	0	0	1811	1585
Grp Volume(v), veh/h	0	0	2	151	0	0	186	322	0	0	320	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1646	0	0	1626	1796	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.1	3.8	0.0	0.0	4.9	5.0	0.0	0.0	7.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.1	3.8	0.0	0.0	4.9	5.0	0.0	0.0	7.3	0.0
Prop In Lane	0.00		1.00	0.32		0.67	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	0	14	250	0	0	235	864	0	0	425	
V/C Ratio(X)	0.00	0.00	0.14	0.60	0.00	0.00	0.79	0.37	0.00	0.00	0.75	
Avail Cap(c_a), veh/h	0	0	643	667	0	0	494	1541	0	0	820	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	21.8	17.6	0.0	0.0	18.3	7.3	0.0	0.0	15.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.6	2.3	0.0	0.0	5.9	0.3	0.0	0.0	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.5	0.0	0.0	1.8	1.0	0.0	0.0	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	26.5	19.9	0.0	0.0	24.2	7.6	0.0	0.0	18.5	0.0
LnGrp LOS	A	A	C	B	A	A	C	A	A	A	B	
Approach Vol, veh/h	2					151		508		320		
Approach Delay, s/veh	26.5					19.9		13.6		18.5		
Approach LOS	C					B		B		B		
Timer - Assigned Phs	1	2	4			6		8				
Phs Duration (G+Y+Rc), s	10.9	16.9	5.1			27.9		11.5				
Change Period (Y+Rc), s	4.5	6.5	* 4.7			6.5		4.7				
Max Green Setting (Gmax), s	13.5	20.1	* 18			38.1		18.0				
Max Q Clear Time (g_c+I1), s	6.9	9.3	2.1			7.0		5.8				
Green Ext Time (p_c), s	0.2	1.1	0.0			1.6		0.6				

Intersection Summary

HCM 6th Ctrl Delay 16.2

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	211	20	929	809	1057
v/c Ratio	0.51	0.09	0.57	0.52	0.72
Control Delay	19.9	23.3	9.5	11.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	19.9	23.3	9.5	11.2	3.1
Queue Length 50th (ft)	33	4	66	54	0
Queue Length 95th (ft)	131	26	149	188	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	990	307	3096	3011	1468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.07	0.30	0.27	0.72
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Opening with Improvements

Opening AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	162	28	18	836	728	951
Future Volume (veh/h)	162	28	18	836	728	951
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1722	1781	1722	1767	1752
Adj Flow Rate, veh/h	180	31	20	929	809	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	12	8	12	9	10
Cap, veh/h	232	40	43	1751	1202	
Arrive On Green	0.16	0.16	0.03	0.54	0.36	0.00
Sat Flow, veh/h	1439	248	1697	3358	3445	1485
Grp Volume(v), veh/h	212	0	20	929	809	0
Grp Sat Flow(s),veh/h/ln	1695	0	1697	1636	1678	1485
Q Serve(g_s), s	4.2	0.0	0.4	6.4	7.1	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.4	6.4	7.1	0.0
Prop In Lane	0.85	0.15	1.00			1.00
Lane Grp Cap(c), veh/h	274	0	43	1751	1202	
V/C Ratio(X)	0.77	0.00	0.47	0.53	0.67	
Avail Cap(c_a), veh/h	1198	0	374	5123	4007	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	14.0	0.0	16.8	5.3	9.5	0.0
Incr Delay (d2), s/veh	1.8	0.0	2.9	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.1	0.5	1.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	15.8	0.0	19.7	5.4	9.7	0.0
LnGrp LOS	B	A	B	A	A	
Approach Vol, veh/h	212			949	809	
Approach Delay, s/veh	15.8			5.7	9.7	
Approach LOS	B			A	A	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	24.0		10.9		6.2	17.8
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	54.7		24.7		7.7	41.7
Max Q Clear Time (g_c+I1), s	8.4		6.2		2.4	9.1
Green Ext Time (p_c), s	4.1		0.3		0.0	3.4
Intersection Summary						
HCM 6th Ctrl Delay			8.4			
HCM 6th LOS			A			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	84	440	236	860	1432
v/c Ratio	0.32	0.87	0.87	0.40	0.95
Control Delay	31.6	29.4	67.3	7.3	37.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.6	29.4	67.3	7.3	37.3
Queue Length 50th (ft)	38	70	120	88	358
Queue Length 95th (ft)	77	#226	#275	158	#599
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	379	600	274	2173	1514
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.22	0.73	0.86	0.40	0.95

Intersection Summary

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

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Opening with Improvements
Opening AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	76	400	215	783	1279	25
Future Volume (veh/h)	76	400	215	783	1279	25
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1411	1648	1767	1707	1767	1870
Adj Flow Rate, veh/h	84	440	236	860	1405	27
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	33	17	9	13	9	2
Cap, veh/h	345	358	256	2026	1415	27
Arrive On Green	0.26	0.26	0.15	0.62	0.42	0.42
Sat Flow, veh/h	1344	1397	1682	3329	3457	65
Grp Volume(v), veh/h	84	440	236	860	699	733
Grp Sat Flow(s),veh/h/ln	1344	1397	1682	1622	1678	1755
Q Serve(g_s), s	4.5	23.1	12.4	12.2	37.3	37.4
Cycle Q Clear(g_c), s	4.5	23.1	12.4	12.2	37.3	37.4
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	345	358	256	2026	705	737
V/C Ratio(X)	0.24	1.23	0.92	0.42	0.99	0.99
Avail Cap(c_a), veh/h	345	358	256	2026	705	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	33.4	37.6	8.6	26.0	26.0
Incr Delay (d2), s/veh	0.1	124.6	35.3	0.1	31.9	31.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	28.0	7.3	3.3	19.1	19.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.7	158.0	72.9	8.8	57.8	57.5
LnGrp LOS	C	F	E	A	E	E
Approach Vol, veh/h	524			1096	1432	
Approach Delay, s/veh	137.0			22.6	57.7	
Approach LOS	F			C	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		62.2		27.8	18.4	43.8
Change Period (Y+Rc), s		6.0		* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s		56.2		* 23	* 14	37.8
Max Q Clear Time (g_c+I1), s		14.2		25.1	14.4	39.4
Green Ext Time (p_c), s		6.3		0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			58.7			
HCM 6th LOS			E			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Queues

Opening with Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	37	207	270	581	753	31
v/c Ratio	0.27	0.14	0.73	0.38	0.83	0.02
Control Delay	44.2	0.2	41.8	2.7	24.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.2	0.2	41.8	2.7	24.7	0.0
Queue Length 50th (ft)	18	0	125	67	312	0
Queue Length 95th (ft)	51	0	#258	100	484	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	137	1524	501	1571	1282	1583
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	0.27	0.14	0.54	0.37	0.59	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening with Improvements

Opening AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	184	240	517	670	28
Future Volume (veh/h)	33	184	240	517	670	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1811	1781	1752	1752	1870
Adj Flow Rate, veh/h	37	0	270	581	753	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	8	10	10	2
Cap, veh/h	68		322	1321	838	
Arrive On Green	0.04	0.00	0.19	0.75	0.48	0.00
Sat Flow, veh/h	1753	1535	1697	1752	1752	1585
Grp Volume(v), veh/h	37	0	270	581	753	0
Grp Sat Flow(s),veh/h/ln	1753	1535	1697	1752	1752	1585
Q Serve(g_s), s	1.2	0.0	8.9	7.1	22.8	0.0
Cycle Q Clear(g_c), s	1.2	0.0	8.9	7.1	22.8	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	68		322	1321	838	
V/C Ratio(X)	0.54		0.84	0.44	0.90	
Avail Cap(c_a), veh/h	151		557	2208	1482	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	27.3	0.0	22.6	2.6	13.8	0.0
Incr Delay (d2), s/veh	2.5	0.0	2.3	0.1	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	3.2	0.2	6.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.9	0.0	24.9	2.7	15.6	0.0
LnGrp LOS	C		C	A	B	
Approach Vol, veh/h	37			851	753	
Approach Delay, s/veh	29.9			9.7	15.6	
Approach LOS	C			A	B	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	16.0	33.7		8.2		49.7
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	19.0	49.0		5.0		73.0
Max Q Clear Time (g_c+I1), s	10.9	24.8		3.2		9.1
Green Ext Time (p_c), s	0.2	2.9		0.0		2.1

Intersection Summary

HCM 6th Ctrl Delay	12.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Queues
5: San Jacinto Ave & Dunlap Dr

Opening with Improvements
Opening PM



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	227	435	312	204
v/c Ratio	0.67	0.27	0.47	0.31
Control Delay	31.8	8.5	17.3	7.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	31.8	8.5	17.3	7.5
Queue Length 50th (ft)	63	38	35	16
Queue Length 95th (ft)	#156	60	65	59
Internal Link Dist (ft)		577	616	608
Turn Bay Length (ft)	300			
Base Capacity (vph)	359	2278	1213	654
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.63	0.19	0.26	0.31

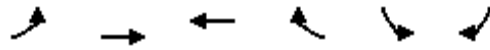
Intersection Summary

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

HCM 6th Signalized Intersection Summary 5: San Jacinto Ave & Dunlap Dr

Opening with Improvements

Opening PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	218	418	234	65	79	117
Future Volume (veh/h)	218	418	234	65	79	117
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1856	1826	1796	1856	1796
Adj Flow Rate, veh/h	227	435	244	68	82	122
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	3	5	7	3	7
Cap, veh/h	284	1474	428	117	256	380
Arrive On Green	0.16	0.42	0.16	0.16	0.39	0.39
Sat Flow, veh/h	1753	3618	2785	735	659	980
Grp Volume(v), veh/h	227	435	155	157	205	0
Grp Sat Flow(s),veh/h/ln	1753	1763	1735	1694	1646	0
Q Serve(g_s), s	5.8	3.8	3.8	4.0	4.0	0.0
Cycle Q Clear(g_c), s	5.8	3.8	3.8	4.0	4.0	0.0
Prop In Lane	1.00			0.43	0.40	0.60
Lane Grp Cap(c), veh/h	284	1474	275	269	639	0
V/C Ratio(X)	0.80	0.30	0.56	0.58	0.32	0.00
Avail Cap(c_a), veh/h	397	2508	673	657	639	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.7	9.0	18.0	18.1	9.9	0.0
Incr Delay (d2), s/veh	7.6	0.1	1.8	2.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	1.2	1.5	1.5	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.3	9.1	19.8	20.1	11.2	0.0
LnGrp LOS	C	A	B	C	B	A
Approach Vol, veh/h		662	312		205	
Approach Delay, s/veh		15.0	20.0		11.2	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		23.9		22.5	12.0	11.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s		5.8		6.0	7.8	6.0
Green Ext Time (p_c), s		3.0		0.4	0.2	1.4
Intersection Summary						
HCM 6th Ctrl Delay			15.7			
HCM 6th LOS			B			

Queues

7: San Jacinto Ave & Murrieta Rd

Opening with Improvements

Opening PM



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	242	607	71	298	53	54	97	10	33	163
v/c Ratio	0.58	0.47	0.29	0.47	0.25	0.22	0.23	0.06	0.08	0.18
Control Delay	25.3	16.1	26.7	22.8	28.0	25.6	1.3	25.9	23.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	16.1	26.7	22.8	28.0	25.6	1.3	25.9	23.9	2.5
Queue Length 50th (ft)	70	87	21	44	16	16	0	3	10	0
Queue Length 95th (ft)	146	145	60	86	50	49	0	17	34	26
Internal Link Dist (ft)		670		607		1021			337	
Turn Bay Length (ft)	300		200		100			100		
Base Capacity (vph)	573	1692	301	1130	226	638	697	537	1020	1042
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.42	0.36	0.24	0.26	0.23	0.08	0.14	0.02	0.03	0.16

Intersection Summary

HCM 6th Signalized Intersection Summary

7: San Jacinto Ave & Murrieta Rd

Opening with Improvements

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	537	44	65	261	25	49	50	89	10	30	156
Future Volume (veh/h)	232	537	44	65	261	25	49	50	89	10	30	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1856	1870	1870	1811	1870	1870	1870	1870	1722	1870	1870
Adj Flow Rate, veh/h	242	559	48	71	272	26	53	54	97	10	33	162
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.92	0.92	0.92	0.96	0.92	0.96
Percent Heavy Veh, %	2	3	2	2	6	2	2	2	2	12	2	2
Cap, veh/h	315	889	76	119	511	48	98	221	188	194	340	568
Arrive On Green	0.18	0.27	0.27	0.07	0.16	0.16	0.05	0.12	0.12	0.12	0.18	0.18
Sat Flow, veh/h	1781	3286	282	1781	3176	301	1781	1870	1585	1640	1870	1585
Grp Volume(v), veh/h	242	299	308	71	146	152	53	54	97	10	33	162
Grp Sat Flow(s),veh/h/ln	1781	1763	1805	1781	1721	1757	1781	1870	1585	1640	1870	1585
Q Serve(g_s), s	5.5	6.3	6.3	1.6	3.3	3.4	1.2	1.1	2.4	0.2	0.6	3.1
Cycle Q Clear(g_c), s	5.5	6.3	6.3	1.6	3.3	3.4	1.2	1.1	2.4	0.2	0.6	3.1
Prop In Lane	1.00		0.16	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	477	488	119	277	282	98	221	188	194	340	568
V/C Ratio(X)	0.77	0.63	0.63	0.60	0.53	0.54	0.54	0.24	0.52	0.05	0.10	0.29
Avail Cap(c_a), veh/h	738	1097	1123	388	733	748	291	819	694	699	1310	1390
HCM Platoon Ratio	1.00	1.00	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	16.6	13.5	13.6	19.2	16.3	16.3	19.5	16.9	17.5	16.5	14.4	9.7
Incr Delay (d2), s/veh	4.0	1.4	1.3	4.7	1.6	1.6	4.6	0.6	2.2	0.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.0	2.0	0.7	1.1	1.2	0.6	0.4	0.8	0.1	0.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	14.9	14.9	23.9	17.8	17.9	24.1	17.5	19.7	16.6	14.5	10.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	B	B	A
Approach Vol, veh/h		849			369			204			205	
Approach Delay, s/veh		16.5			19.0			20.3			11.0	
Approach LOS		B			B			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	9.5	7.3	15.9	6.8	12.2	12.0	11.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	18.5	9.2	26.3	6.9	29.6	17.5	18.0				
Max Q Clear Time (g_c+I1), s	2.2	4.4	3.6	8.3	3.2	5.1	7.5	5.4				
Green Ext Time (p_c), s	0.0	0.4	0.1	3.1	0.0	0.7	0.5	1.2				
Intersection Summary												
HCM 6th Ctrl Delay				16.9								
HCM 6th LOS				B								

Queues

9: Redlands Ave & San Jacinto Ave

Opening with Improvements

Opening PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	60	57	132	496	41	85	173	539	792	111	467
v/c Ratio	0.13	0.28	0.45	0.60	0.10	0.20	0.56	0.61	0.66	0.46	0.63
Control Delay	35.6	39.7	11.8	30.4	25.7	6.4	39.7	30.4	4.7	40.2	32.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	39.7	11.8	30.4	25.7	6.4	39.7	30.4	4.7	40.2	32.5
Queue Length 50th (ft)	13	27	0	109	16	0	79	124	19	51	110
Queue Length 95th (ft)	36	70	48	188	45	30	164	202	96	113	174
Internal Link Dist (ft)	439			612			723			624	
Turn Bay Length (ft)	150				280	500	200				275
Base Capacity (vph)	446	920	852	1013	1250	1079	375	1541	1242	351	1474
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.06	0.15	0.49	0.03	0.08	0.46	0.35	0.64	0.32	0.32
Intersection Summary											

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Opening with Improvements

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	55	127	476	39	82	166	517	760	107	400	48
Future Volume (veh/h)	58	55	127	476	39	82	166	517	760	107	400	48
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1870	1811	1870	1870	1870	1870	1856	1870	1870	1870
Adj Flow Rate, veh/h	60	57	132	496	41	85	173	539	792	111	417	50
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	3	2	2	2
Cap, veh/h	309	208	176	607	379	321	215	1407	908	143	1135	135
Arrive On Green	0.09	0.11	0.11	0.18	0.20	0.20	0.12	0.40	0.40	0.08	0.36	0.36
Sat Flow, veh/h	3456	1870	1585	3346	1870	1583	1781	3554	1572	1781	3196	381
Grp Volume(v), veh/h	60	57	132	496	41	85	173	539	792	111	231	236
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1673	1870	1583	1781	1777	1572	1781	1777	1801
Q Serve(g_s), s	1.4	2.4	6.8	12.1	1.5	3.8	8.0	9.1	33.5	5.2	8.1	8.2
Cycle Q Clear(g_c), s	1.4	2.4	6.8	12.1	1.5	3.8	8.0	9.1	33.5	5.2	8.1	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	309	208	176	607	379	321	215	1407	908	143	631	640
V/C Ratio(X)	0.19	0.27	0.75	0.82	0.11	0.26	0.80	0.38	0.87	0.78	0.37	0.37
Avail Cap(c_a), veh/h	409	840	712	934	1141	965	343	1407	908	322	683	692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.7	34.5	36.5	33.3	27.5	28.4	36.2	18.2	15.2	38.2	20.2	20.2
Incr Delay (d2), s/veh	0.3	0.7	6.3	3.4	0.1	0.4	7.0	0.2	9.3	8.8	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	0.6	1.1	2.8	4.9	0.6	1.4	3.8	3.6	12.5	2.5	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	35.2	42.8	36.7	27.6	28.8	43.3	18.4	24.6	47.0	20.6	20.6
LnGrp LOS	D	D	D	D	C	C	D	B	C	D	C	C
Approach Vol, veh/h		249			622			1504			578	
Approach Delay, s/veh		39.4			35.0			24.5			25.7	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	38.8	20.6	14.7	13.9	35.3	12.9	22.5				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	15.3	33.5	23.6	38.0	16.3	32.5	10.0	51.6				
Max Q Clear Time (g_c+I1), s	7.2	35.5	14.1	8.8	10.0	10.2	3.4	5.8				
Green Ext Time (p_c), s	0.1	0.0	1.3	0.7	0.2	2.4	0.1	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			28.2									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	143	779	439	27	34	159
Future Vol, veh/h	143	779	439	27	34	159
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	779	439	27	34	159
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	466	0	-	0	1129	233
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	676	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1092	-	-	-	198	769
Stage 1	-	-	-	-	607	-
Stage 2	-	-	-	-	467	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1092	-	-	-	172	769
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	467	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.4	0		13.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1092	-	-	-	606	
HCM Lane V/C Ratio	0.131	-	-	-	0.318	
HCM Control Delay (s)	8.8	-	-	-	13.7	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.5	-	-	-	1.4	

Queues

14: Redlands Ave & 4th St

Opening with Improvements

Opening PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	938	38	57	10	99	52	327	18	38	218	818
v/c Ratio	0.70	0.04	0.06	0.06	0.26	0.30	0.47	0.04	0.22	0.33	0.40
Control Delay	23.4	13.1	1.1	34.2	14.9	37.9	28.5	0.2	36.4	26.8	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.4	13.1	1.1	34.2	14.9	37.9	28.5	0.2	36.4	26.8	1.1
Queue Length 50th (ft)	193	8	0	4	5	23	73	0	17	47	0
Queue Length 95th (ft)	296	33	7	20	28	60	112	0	48	78	21
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	1348	1640	1389	176	1909	176	1187	620	174	1132	2043
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.02	0.04	0.06	0.05	0.30	0.28	0.03	0.22	0.19	0.40
Intersection Summary											

HCM 6th Signalized Intersection Summary

14: Redlands Ave & 4th St

Opening with Improvements

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	910	37	55	10	22	74	50	317	17	37	211	793
Future Volume (veh/h)	910	37	55	10	22	74	50	317	17	37	211	793
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1796	1826
Adj Flow Rate, veh/h	938	38	57	10	23	76	52	327	18	38	218	818
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	7	5
Cap, veh/h	1084	732	613	31	170	151	111	947	417	91	872	1551
Arrive On Green	0.31	0.39	0.39	0.02	0.10	0.10	0.06	0.27	0.27	0.05	0.26	0.26
Sat Flow, veh/h	3456	1870	1565	1781	1777	1585	1781	3554	1565	1767	3413	2723
Grp Volume(v), veh/h	938	38	57	10	23	76	52	327	18	38	218	818
Grp Sat Flow(s), veh/h/ln	1728	1870	1565	1781	1777	1585	1781	1777	1565	1767	1706	1362
Q Serve(g_s), s	18.7	0.9	1.7	0.4	0.9	3.3	2.1	5.4	0.6	1.5	3.7	13.6
Cycle Q Clear(g_c), s	18.7	0.9	1.7	0.4	0.9	3.3	2.1	5.4	0.6	1.5	3.7	13.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1084	732	613	31	170	151	111	947	417	91	872	1551
V/C Ratio(X)	0.87	0.05	0.09	0.32	0.14	0.50	0.47	0.35	0.04	0.42	0.25	0.53
Avail Cap(c_a), veh/h	1296	1594	1334	170	1018	908	170	1139	502	169	1094	1727
HCM Platoon Ratio	1.00	1.00	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	23.7	13.9	14.1	35.6	30.4	31.5	33.2	21.7	19.9	33.7	21.7	9.7
Incr Delay (d2), s/veh	5.5	0.0	0.1	5.7	0.4	2.6	3.0	0.2	0.0	3.0	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	0.4	0.6	0.2	0.4	1.3	0.9	2.1	0.2	0.7	1.4	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	13.9	14.1	41.3	30.7	34.1	36.2	21.9	20.0	36.7	21.8	10.0
LnGrp LOS	C	B	B	D	C	C	D	C	B	D	C	A
Approach Vol, veh/h		1033			109			397			1074	
Approach Delay, s/veh		27.8			34.0			23.7			13.3	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.3	25.0	5.8	34.2	9.1	24.2	27.5	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	7.0	23.5	7.0	62.5	7.0	23.5	27.5	42.0				
Max Q Clear Time (g_c+I1), s	3.5	7.4	2.4	3.7	4.1	15.6	20.7	5.3				
Green Ext Time (p_c), s	0.0	1.8	0.0	0.4	0.0	3.2	2.3	0.6				
Intersection Summary												
HCM 6th Ctrl Delay				21.5								
HCM 6th LOS				C								

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Opening with Improvements
Opening PM

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	185	864	895	161	391	371	360
v/c Ratio	0.44	0.52	0.52	0.30	0.69	0.65	0.62
Control Delay	35.4	15.4	23.7	6.0	27.1	20.4	19.2
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	35.4	15.6	23.7	6.0	27.1	20.4	19.2
Queue Length 50th (ft)	38	131	95	0	146	105	94
Queue Length 95th (ft)	85	231	151	44	282	231	209
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	507	2194	2529	709	868	824	842
Starvation Cap Reductn	0	431	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	0.36	0.49	0.35	0.23	0.45	0.45	0.43
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Opening with Improvements
Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	176	821	0	0	850	153	443	2	621	0	0	0
Future Volume (veh/h)	176	821	0	0	850	153	443	2	621	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	1781	1856	0	0	1841	1811	1811	1870	1856			
Adj Flow Rate, veh/h	185	864	0	0	895	161	700	0	405			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	8	3	0	0	4	6	6	2	3			
Cap, veh/h	295	1564	0	0	1726	418	1171	0	534			
Arrive On Green	0.09	0.44	0.00	0.00	0.27	0.27	0.34	0.00	0.34			
Sat Flow, veh/h	3291	3618	0	0	6590	1535	3450	0	1572			
Grp Volume(v), veh/h	185	864	0	0	895	161	700	0	405			
Grp Sat Flow(s),veh/h/ln	1646	1763	0	0	1583	1535	1725	0	1572			
Q Serve(g_s), s	3.0	10.0	0.0	0.0	6.6	4.7	9.3	0.0	12.7			
Cycle Q Clear(g_c), s	3.0	10.0	0.0	0.0	6.6	4.7	9.3	0.0	12.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	295	1564	0	0	1726	418	1171	0	534			
V/C Ratio(X)	0.63	0.55	0.00	0.00	0.52	0.38	0.60	0.00	0.76			
Avail Cap(c_a), veh/h	625	2676	0	0	3090	749	2245	0	1023			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	24.3	11.3	0.0	0.0	17.0	16.4	15.1	0.0	16.3			
Incr Delay (d2), s/veh	2.2	0.3	0.0	0.0	0.2	0.6	0.5	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	1.2	3.2	0.0	0.0	2.1	1.5	3.0	0.0	3.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	11.7	0.0	0.0	17.3	16.9	15.6	0.0	18.5			
LnGrp LOS	C	B	A	A	B	B	B	A	B			
Approach Vol, veh/h	1049			1056			1105					
Approach Delay, s/veh	14.3			17.2			16.7					
Approach LOS	B			B			B					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	30.5			9.5			21.1			24.8		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	42.0			10.5			27.0			36.0		
Max Q Clear Time (g_c+I1), s	12.0			5.0			8.6			14.7		
Green Ext Time (p_c), s	6.7			0.3			6.5			4.1		
Intersection Summary												
HCM 6th Ctrl Delay	16.1											
HCM 6th LOS	B											

Notes

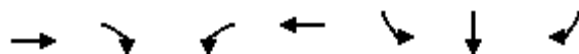
User approved volume balancing among the lanes for turning movement.

Queues

Opening with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening PM



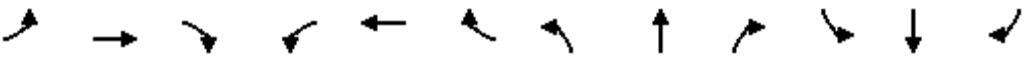
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	912	601	529	974	169	164	153
v/c Ratio	0.44	0.47	0.65	0.45	0.52	0.49	0.39
Control Delay	19.6	3.3	28.0	7.5	32.1	23.2	9.7
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	19.6	3.3	28.0	7.6	32.1	23.2	9.7
Queue Length 50th (ft)	81	0	102	88	67	43	5
Queue Length 95th (ft)	136	31	164	158	132	105	48
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	2504	1444	1422	2890	591	562	598
Starvation Cap Reductn	0	0	0	760	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	0.36	0.42	0.37	0.46	0.29	0.29	0.26
Intersection Summary							

HCM 6th Signalized Intersection Summary

Opening with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	784	517	455	838	0	0	0	0	213	2	203
Future Volume (veh/h)	0	784	517	455	838	0	0	0	0	213	2	203
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	1870	1856	1870	1826	0				1870	1870	1811
Adj Flow Rate, veh/h	0	912	601	529	974	0				322	0	158
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	3	2	5	0				2	2	6
Cap, veh/h	0	2213	952	727	2204	0				564	0	243
Arrive On Green	0.00	0.34	0.34	0.21	0.64	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	6696	2768	3456	3561	0				3563	0	1535
Grp Volume(v), veh/h	0	912	601	529	974	0				322	0	158
Grp Sat Flow(s),veh/h/ln	0	1609	1384	1728	1735	0				1781	0	1535
Q Serve(g_s), s	0.0	6.0	10.1	7.9	7.9	0.0				4.7	0.0	5.4
Cycle Q Clear(g_c), s	0.0	6.0	10.1	7.9	7.9	0.0				4.7	0.0	5.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2213	952	727	2204	0				564	0	243
V/C Ratio(X)	0.00	0.41	0.63	0.73	0.44	0.00				0.57	0.00	0.65
Avail Cap(c_a), veh/h	0	2890	1243	1645	3490	0				1440	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	14.0	15.3	20.5	5.1	0.0				21.7	0.0	22.0
Incr Delay (d2), s/veh	0.0	0.1	0.7	1.4	0.1	0.0				0.9	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	0.0	1.9	2.8	3.0	1.8	0.0				1.7	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.1	16.0	21.9	5.3	0.0				22.6	0.0	24.9
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		1513			1503						480	
Approach Delay, s/veh		14.8			11.1						23.4	
Approach LOS		B			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	16.2	25.1		14.3		41.4						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	26.5	25.0		22.5		56.0						
Max Q Clear Time (g_c+I1), s	9.9	12.1		7.4		9.9						
Green Ext Time (p_c), s	1.8	7.0		1.4		8.5						
Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Opening with Improvements

Opening PM



Lane Group	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	253	151	376	399	122
v/c Ratio	0.58	0.51	0.34	0.67	0.11
Control Delay	14.9	30.5	7.3	22.5	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.9	30.5	7.3	22.5	0.9
Queue Length 50th (ft)	27	43	48	102	0
Queue Length 95th (ft)	87	#122	120	210	10
Internal Link Dist (ft)	541		502	590	
Turn Bay Length (ft)		130			125
Base Capacity (vph)	626	310	1335	812	1280
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.40	0.49	0.28	0.49	0.10

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Opening with Improvements

Opening PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	86	0	136	133	331	0	0	351	107
Future Volume (veh/h)	0	0	0	86	0	136	133	331	0	0	351	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1811	1870	1707	1841	1870	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	0	98	0	155	151	376	0	0	399	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	6	2	13	4	2	0	2	6	2
Cap, veh/h	0	5	0	133	0	210	195	963	0	0	529	
Arrive On Green	0.00	0.00	0.00	0.21	0.00	0.21	0.11	0.51	0.00	0.00	0.29	0.00
Sat Flow, veh/h	0	1870	0	641	0	1014	1753	1870	0	0	1811	1585
Grp Volume(v), veh/h	0	0	0	253	0	0	151	376	0	0	399	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1656	0	0	1753	1870	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	5.8	0.0	0.0	3.4	4.9	0.0	0.0	8.1	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.8	0.0	0.0	3.4	4.9	0.0	0.0	8.1	0.0
Prop In Lane	0.00		0.00	0.39		0.61	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	5	0	343	0	0	195	963	0	0	529	
V/C Ratio(X)	0.00	0.00	0.00	0.74	0.00	0.00	0.77	0.39	0.00	0.00	0.75	
Avail Cap(c_a), veh/h	0	835	0	739	0	0	413	1768	0	0	1083	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.9	0.0	0.0	17.4	5.9	0.0	0.0	13.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	3.1	0.0	0.0	6.4	0.3	0.0	0.0	2.2	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	0.0	0.0	0.0	2.2	0.0	0.0	1.3	0.7	0.0	0.0	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	18.1	0.0	0.0	23.8	6.2	0.0	0.0	15.2	0.0
LnGrp LOS	A	A	A	B	A	A	C	A	A	A	B	
Approach Vol, veh/h	0			253			527			399		
Approach Delay, s/veh	0.0			18.1			11.2			15.2		
Approach LOS				B			B			B		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.0	18.3		0.0		27.3		13.1				
Change Period (Y+Rc), s	4.5	6.5		* 4.7		6.5		4.7				
Max Green Setting (Gmax), s	9.5	24.1		* 18		38.1		18.0				
Max Q Clear Time (g_c+I1), s	5.4	10.1		0.0		6.9		7.8				
Green Ext Time (p_c), s	0.1	1.7		0.0		2.0		1.1				

Intersection Summary

HCM 6th Ctrl Delay 14.0

HCM 6th LOS B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	267	27	1315	721	910
v/c Ratio	0.64	0.15	0.73	0.45	0.61
Control Delay	26.0	29.8	12.8	13.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	29.8	12.8	13.2	1.9
Queue Length 50th (ft)	66	7	141	60	0
Queue Length 95th (ft)	176	36	291	183	0
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	828	226	3110	2734	1482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.32	0.12	0.42	0.26	0.61
Intersection Summary					

HCM 6th Signalized Intersection Summary

30: SR-74

Opening with Improvements

Opening PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	203	48	25	1236	678	855
Future Volume (veh/h)	203	48	25	1236	678	855
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1781	1826	1811	1826	1767
Adj Flow Rate, veh/h	216	51	27	1315	721	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	15	8	5	6	5	9
Cap, veh/h	267	63	56	1783	1217	
Arrive On Green	0.21	0.21	0.03	0.52	0.35	0.00
Sat Flow, veh/h	1258	297	1739	3532	3561	1497
Grp Volume(v), veh/h	268	0	27	1315	721	0
Grp Sat Flow(s),veh/h/ln	1561	0	1739	1721	1735	1497
Q Serve(g_s), s	6.4	0.0	0.6	11.7	6.7	0.0
Cycle Q Clear(g_c), s	6.4	0.0	0.6	11.7	6.7	0.0
Prop In Lane	0.81	0.19	1.00			1.00
Lane Grp Cap(c), veh/h	331	0	56	1783	1217	
V/C Ratio(X)	0.81	0.00	0.48	0.74	0.59	
Avail Cap(c_a), veh/h	1061	0	296	4615	3593	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	14.7	0.0	18.7	7.4	10.5	0.0
Incr Delay (d2), s/veh	1.8	0.0	2.3	0.2	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.2	1.6	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.5	0.0	21.0	7.6	10.6	0.0
LnGrp LOS	B	A	C	A	B	
Approach Vol, veh/h	268			1342	721	
Approach Delay, s/veh	16.5			7.9	10.6	
Approach LOS	B			A	B	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	25.7		13.6		6.6	19.1
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	52.7		26.7		6.7	40.7
Max Q Clear Time (g_c+I1), s	13.7		8.4		2.6	8.7
Green Ext Time (p_c), s	6.7		0.4		0.0	2.9
Intersection Summary						
HCM 6th Ctrl Delay			9.7			
HCM 6th LOS			A			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	53	437	357	1190	1294
v/c Ratio	0.20	0.77	0.99	0.50	0.97
Control Delay	30.3	15.0	79.9	6.8	42.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	15.0	79.9	6.8	42.9
Queue Length 50th (ft)	23	18	169	98	297
Queue Length 95th (ft)	53	109	#406	239	#573
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	473	706	360	2403	1336
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.11	0.62	0.99	0.50	0.97

Intersection Summary

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

HCM 6th Signalized Intersection Summary

32: SR-74 & Trumble Rd

Opening with Improvements

Opening PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	49	406	332	1107	1127	76
Future Volume (veh/h)	49	406	332	1107	1127	76
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1781	1678	1811	1781	877
Adj Flow Rate, veh/h	53	437	357	1190	1212	82
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	8	15	6	8	69
Cap, veh/h	426	386	325	2153	1190	80
Arrive On Green	0.26	0.26	0.20	0.63	0.37	0.37
Sat Flow, veh/h	1668	1510	1598	3532	3306	217
Grp Volume(v), veh/h	53	437	357	1190	637	657
Grp Sat Flow(s),veh/h/ln	1668	1510	1598	1721	1692	1742
Q Serve(g_s), s	2.2	23.0	18.3	17.8	33.3	33.3
Cycle Q Clear(g_c), s	2.2	23.0	18.3	17.8	33.3	33.3
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	426	386	325	2153	626	645
V/C Ratio(X)	0.12	1.13	1.10	0.55	1.02	1.02
Avail Cap(c_a), veh/h	426	386	325	2153	626	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	33.5	35.8	9.6	28.4	28.4
Incr Delay (d2), s/veh	0.0	87.0	79.1	0.3	40.3	40.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	26.1	13.7	5.2	18.9	19.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.8	120.5	115.0	10.0	68.7	68.8
LnGrp LOS	C	F	F	A	F	F
Approach Vol, veh/h	490			1547	1294	
Approach Delay, s/veh	110.3			34.2	68.7	
Approach LOS	F			C	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		62.3		27.7	23.0	39.3
Change Period (Y+Rc), s		6.0		* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s		56.3		* 23	* 18	33.3
Max Q Clear Time (g_c+I1), s		19.8		25.0	20.3	35.3
Green Ext Time (p_c), s		9.6		0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			58.8			
HCM 6th LOS			E			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Queues

Opening with Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	36	341	314	475	1029	54
v/c Ratio	0.36	0.22	0.91	0.30	0.94	0.04
Control Delay	50.8	0.3	67.1	2.1	34.4	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	0.3	67.1	2.1	34.4	0.0
Queue Length 50th (ft)	20	0	179	49	528	0
Queue Length 95th (ft)	51	0	#345	74	#836	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	101	1524	345	1585	1143	1524
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	0.36	0.22	0.91	0.30	0.90	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Opening with Improvements

Opening PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	314	289	437	947	50
Future Volume (veh/h)	33	314	289	437	947	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1826	1870	1811
Adj Flow Rate, veh/h	36	0	314	475	1029	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	6	7	5	2	6
Cap, veh/h	57		339	1509	1066	
Arrive On Green	0.03	0.00	0.20	0.83	0.57	0.00
Sat Flow, veh/h	1711	1535	1711	1826	1870	1535
Grp Volume(v), veh/h	36	0	314	475	1029	0
Grp Sat Flow(s),veh/h/ln	1711	1535	1711	1826	1870	1535
Q Serve(g_s), s	1.8	0.0	15.5	5.2	45.1	0.0
Cycle Q Clear(g_c), s	1.8	0.0	15.5	5.2	45.1	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	57		339	1509	1066	
V/C Ratio(X)	0.63		0.93	0.31	0.97	
Avail Cap(c_a), veh/h	100		339	1554	1112	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	40.9	0.0	33.8	1.7	17.6	0.0
Incr Delay (d2), s/veh	4.1	0.0	30.1	0.0	18.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	8.7	0.2	20.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.0	0.0	63.9	1.8	36.1	0.0
LnGrp LOS	D		E	A	D	
Approach Vol, veh/h	36			789	1029	
Approach Delay, s/veh	45.0			26.5	36.1	
Approach LOS	D			C	D	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	54.9		8.9		76.9
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	17.0	51.0		5.0		73.0
Max Q Clear Time (g_c+I1), s	17.5	47.1		3.8		7.2
Green Ext Time (p_c), s	0.0	1.8		0.0		1.6

Intersection Summary

HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX F

SYNCHRO OUTPUTS FOR HORIZON YEAR (2050) -NO IMPROVEMENTS

Intersection						
Int Delay, s/veh	77.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	142	288	495	94	110	216
Future Vol, veh/h	142	288	495	94	110	216
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	9	10	7	6	6	2
Mvmt Flow	169	343	589	112	131	257
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	701	0	-	0	1326	645
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	681	-
Critical Hdwy	4.19	-	-	-	6.46	6.22
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	2.281	-	-	-	3.554	3.318
Pot Cap-1 Maneuver	864	-	-	-	168	472
Stage 1	-	-	-	-	515	-
Stage 2	-	-	-	-	495	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	864	-	-	-	~ 127	472
Mov Cap-2 Maneuver	-	-	-	-	~ 127	-
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	495	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		\$ 314.8		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	864	-	-	-	246	
HCM Lane V/C Ratio	0.196	-	-	-	1.578	
HCM Control Delay (s)	10.2	0	-	-	\$ 314.8	
HCM Lane LOS	B	A	-	-	F	
HCM 95th %tile Q(veh)	0.7	-	-	-	23.9	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection						
Int Delay, s/veh	114.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	308	405	650	61	25	444
Future Vol, veh/h	308	405	650	61	25	444
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	9	2	2	7	2
Mvmt Flow	346	455	730	69	28	499
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	799	0	-	0	1912	765
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	1147	-
Critical Hdwy	4.12	-	-	-	6.47	6.22
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.318
Pot Cap-1 Maneuver	824	-	-	-	72	~ 403
Stage 1	-	-	-	-	451	-
Stage 2	-	-	-	-	296	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	824	-	-	-	42	~ 403
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	262	-
Stage 2	-	-	-	-	296	-
Approach	EB	WB		SB		
HCM Control Delay, s	5.4	0		\$ 453		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	824	-	-	-	276	
HCM Lane V/C Ratio	0.42	-	-	-	1.909	
HCM Control Delay (s)	12.5	-	-	-	\$ 453	
HCM Lane LOS	B	-	-	-	F	
HCM 95th %tile Q(veh)	2.1	-	-	-	36.7	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Queues

Horizon-No Improvements

9: Redlands Ave & San Jacinto Ave

Horizon AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	170	35	165	1339	83	82	220	691	977	66	971
v/c Ratio	0.47	0.24	0.61	2.09	0.28	0.25	0.71	0.42	0.83	0.44	0.78
Control Delay	48.9	50.9	17.7	521.6	43.0	10.6	54.2	18.9	10.2	56.4	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.9	50.9	17.7	521.6	43.0	10.6	54.2	18.9	10.2	56.4	33.6
Queue Length 50th (ft)	55	22	0	~724	49	0	134	150	34	42	290
Queue Length 95th (ft)	88	52	48	#870	94	31	217	198	77	84	340
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	686	708	687	640	689	627	350	1681	1182	354	1566
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.05	0.24	2.09	0.12	0.13	0.63	0.41	0.83	0.19	0.62

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.

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Horizon-No Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	139	29	135	1098	68	67	180	567	801	54	720	76
Future Volume (veh/h)	139	29	135	1098	68	67	180	567	801	54	720	76
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1826	1841	1870	1856	1856	1841	1826	1870	1870	1796
Adj Flow Rate, veh/h	170	35	165	1339	83	82	220	691	977	66	878	93
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	5	4	2	3	3	4	5	2	2	7
Cap, veh/h	334	237	196	630	403	338	252	1535	678	103	1149	122
Arrive On Green	0.10	0.13	0.13	0.19	0.22	0.22	0.14	0.44	0.44	0.06	0.35	0.35
Sat Flow, veh/h	3456	1870	1547	3401	1870	1570	1767	3497	1546	1781	3241	343
Grp Volume(v), veh/h	170	35	165	1339	83	82	220	691	977	66	481	490
Grp Sat Flow(s),veh/h/ln	1728	1870	1547	1700	1870	1570	1767	1749	1546	1781	1777	1808
Q Serve(g_s), s	4.8	1.7	10.7	19.0	3.7	4.4	12.5	14.2	45.0	3.7	24.6	24.6
Cycle Q Clear(g_c), s	4.8	1.7	10.7	19.0	3.7	4.4	12.5	14.2	45.0	3.7	24.6	24.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	334	237	196	630	403	338	252	1535	678	103	630	641
V/C Ratio(X)	0.51	0.15	0.84	2.12	0.21	0.24	0.87	0.45	1.44	0.64	0.76	0.76
Avail Cap(c_a), veh/h	674	693	574	630	511	429	345	1535	678	348	780	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	39.8	43.8	41.8	33.0	33.3	43.1	20.1	28.8	47.2	29.3	29.3
Incr Delay (d2), s/veh	0.4	0.1	3.7	511.3	0.1	0.1	13.4	0.3	206.4	2.5	3.9	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.8	4.1	52.4	1.6	1.6	6.3	5.6	53.9	1.7	10.5	10.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	39.9	47.5	553.1	33.1	33.4	56.5	20.4	235.1	49.7	33.2	33.1
LnGrp LOS	D	D	D	F	C	C	E	C	F	D	C	C
Approach Vol, veh/h	370			1504			1888			1037		
Approach Delay, s/veh	45.4			496.0			135.7			34.2		
Approach LOS	D			F			F			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	50.3	24.3	18.3	18.3	41.6	15.2	27.4				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+I1), s	5.7	47.0	21.0	12.7	14.5	26.6	6.8	6.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.1	6.6	0.2	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			219.7									
HCM 6th LOS			F									

Intersection						
Int Delay, s/veh	43.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	684	963	131	29	270
Future Vol, veh/h	200	684	963	131	29	270
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	200	684	963	131	29	270
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1094	0	-	0	2047	963
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	1084	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	638	-	-	-	61	310
Stage 1	-	-	-	-	370	-
Stage 2	-	-	-	-	324	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	638	-	-	-	42	310
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	254	-
Stage 2	-	-	-	-	324	-
Approach	EB	WB		SB		
HCM Control Delay, s	3	0		\$ 322.7		
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	638	-	-	-	191	
HCM Lane V/C Ratio	0.313	-	-	-	1.565	
HCM Control Delay (s)	13.2	-	-	-	\$ 322.7	
HCM Lane LOS	B	-	-	-	F	
HCM 95th %tile Q(veh)	1.3	-	-	-	19.3	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Queues

Horizon-No Improvements

14: Redlands Ave & 4th St

Horizon AM



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1267	42	38	9	55	33	633	36	78	589	1467
v/c Ratio	1.52	0.06	0.06	0.06	0.17	0.20	0.58	0.06	0.38	0.47	0.76
Control Delay	264.3	21.1	0.2	37.4	21.2	38.6	26.0	0.2	39.6	21.6	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	264.3	21.1	0.2	37.4	21.2	38.6	26.0	0.2	39.6	21.6	4.3
Queue Length 50th (ft)	~503	14	0	4	5	17	142	0	39	125	0
Queue Length 95th (ft)	#568	40	0	17	20	40	181	0	72	159	10
Internal Link Dist (ft)		361			375		311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	836	971	893	452	1704	431	1317	665	452	1301	1955
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.52	0.04	0.04	0.02	0.03	0.08	0.48	0.05	0.17	0.45	0.75

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Horizon-No Improvements
Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1026	34	31	7	18	27	27	513	29	63	477	1188
Future Volume (veh/h)	1026	34	31	7	18	27	27	513	29	63	477	1188
Initial Q (Qb), veh	0	0	0	0	0	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	1796	1826	1870	1870	1870	1811	1796	1826	1870	1870	1796	1841
Adj Flow Rate, veh/h	1267	42	38	9	22	33	33	633	36	78	589	1467
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	7	5	2	2	2	6	7	5	2	2	7	4
Cap, veh/h	823	582	505	28	154	138	78	1199	548	128	1269	1021
Arrive On Green	0.25	0.32	0.32	0.02	0.09	0.09	0.05	0.35	0.35	0.07	0.37	0.37
Sat Flow, veh/h	3319	1826	1585	1781	1777	1585	1711	3469	1585	1781	3413	2745
Grp Volume(v), veh/h	1267	42	38	9	22	33	33	633	36	78	589	1467
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1781	1777	1585	1711	1735	1585	1781	1706	1373
Q Serve(g_s), s	20.0	1.3	1.3	0.4	0.9	1.6	1.5	11.8	1.2	3.4	10.6	30.0
Cycle Q Clear(g_c), s	20.0	1.3	1.3	0.4	0.9	1.6	1.5	11.8	1.2	3.4	10.6	30.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	823	582	505	28	154	138	78	1199	548	128	1269	1021
V/C Ratio(X)	1.54	0.07	0.08	0.32	0.14	0.24	0.43	0.53	0.07	0.61	0.46	1.44
Avail Cap(c_a), veh/h	823	951	825	442	925	825	424	1290	590	442	1269	1021
HCM Platoon Ratio	1.00	1.00	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	30.3	19.1	19.2	39.3	34.1	34.3	37.5	21.1	17.7	36.3	19.2	25.3
Incr Delay (d2), s/veh	248.9	0.1	0.1	6.3	0.4	0.9	3.7	0.4	0.0	4.7	0.3	202.1
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	36.0	0.5	0.5	0.2	0.4	0.6	0.7	4.4	0.4	1.6	3.9	37.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	279.2	19.2	19.2	45.6	34.5	35.2	41.1	21.5	17.7	41.0	19.5	227.4
LnGrp LOS	F	B	B	D	C	D	D	C	B	D	B	F
Approach Vol, veh/h	1347			64			702			2134		
Approach Delay, s/veh	263.8			36.4			22.2			163.2		
Approach LOS	F			D			C			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	33.4	5.8	31.2	8.2	35.5	24.5	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	5.4	13.8	2.4	3.3	3.5	32.0	22.0	3.6				
Green Ext Time (p_c), s	0.1	3.8	0.0	0.3	0.0	0.0	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	169.9											
HCM 6th LOS	F											

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Horizon-No Improvements
Horizon AM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	246	1221	2004	321	489	479	441
v/c Ratio	0.60	0.67	0.89	0.46	0.87	0.84	0.79
Control Delay	47.1	19.1	36.5	6.9	48.7	40.6	36.3
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	20.0	36.5	6.9	48.7	40.6	36.3
Queue Length 50th (ft)	77	283	345	15	301	261	221
Queue Length 95th (ft)	108	317	381	64	#464	#423	333
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	775	2238	2263	693	571	578	568
Starvation Cap Reductn	0	652	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	0.32	0.77	0.89	0.46	0.86	0.83	0.78

Intersection Summary

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

HCM 6th Signalized Intersection Summary

17: SR-215 NB Off-ramp & Redlands Ave

Horizon-No Improvements

Horizon AM

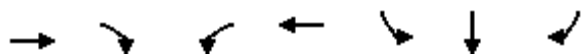
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	207	1026	0	0	1683	270	662	0	522	0	0	0
Future Volume (veh/h)	207	1026	0	0	1683	270	662	0	522	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1693	1826	0	0	1870	1722	1811	1870	1841			
Adj Flow Rate, veh/h	246	1221	0	0	2004	321	981	0	414			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	14	5	0	0	2	12	6	2	4			
Cap, veh/h	333	1857	0	0	2437	553	1142	0	516			
Arrive On Green	0.11	0.54	0.00	0.00	0.38	0.38	0.33	0.00	0.33			
Sat Flow, veh/h	3127	3561	0	0	6696	1459	3450	0	1560			
Grp Volume(v), veh/h	246	1221	0	0	2004	321	981	0	414			
Grp Sat Flow(s),veh/h/ln	1564	1735	0	0	1609	1459	1725	0	1560			
Q Serve(g_s), s	6.9	22.7	0.0	0.0	25.2	15.7	23.9	0.0	21.7			
Cycle Q Clear(g_c), s	6.9	22.7	0.0	0.0	25.2	15.7	23.9	0.0	21.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	333	1857	0	0	2437	553	1142	0	516			
V/C Ratio(X)	0.74	0.66	0.00	0.00	0.82	0.58	0.86	0.00	0.80			
Avail Cap(c_a), veh/h	871	1857	0	0	2508	569	1344	0	608			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	38.9	15.0	0.0	0.0	25.2	22.2	28.1	0.0	27.4			
Incr Delay (d2), s/veh	3.2	0.9	0.0	0.0	2.3	1.4	5.1	0.0	6.6			
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	2.7	8.2	0.0	0.0	9.4	5.3	9.8	0.0	8.3			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	15.8	0.0	0.0	27.4	23.6	33.2	0.0	33.9			
LnGrp LOS	D	B	A	A	C	C	C	A	C			
Approach Vol, veh/h	1467			2325			1395					
Approach Delay, s/veh	20.2			26.9			33.4					
Approach LOS	C			C			C					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	54.1			14.1			40.0			35.7		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	24.7			8.9			27.2			25.9		
Green Ext Time (p_c), s	5.9			0.7			6.8			3.9		
Intersection Summary												
HCM 6th Ctrl Delay	26.8											
HCM 6th LOS	C											

Queues

Horizon-No Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon AM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1172	649	1005	1722	191	183	175
v/c Ratio	0.55	0.49	1.05	0.74	0.61	0.68	0.73
Control Delay	25.9	3.5	77.9	13.6	42.1	33.5	38.3
Queue Delay	0.0	0.0	19.6	5.6	0.0	0.0	0.0
Total Delay	25.9	3.5	97.5	19.2	42.1	33.5	38.3
Queue Length 50th (ft)	149	0	~341	272	111	65	60
Queue Length 95th (ft)	219	32	#539	523	171	134	127
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	2431	1413	957	2497	614	457	399
Starvation Cap Reductn	0	0	46	713	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	0.48	0.46	1.10	0.97	0.31	0.40	0.44

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

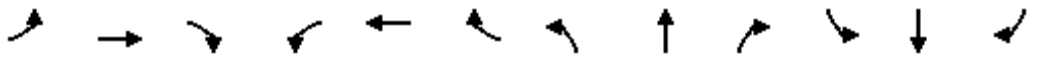
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
 20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon-No Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1008	558	864	1481	0	0	0	0	225	0	247
Future Volume (veh/h)	0	1008	558	864	1481	0	0	0	0	225	0	247
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	1826	1767	1870	1841	0				1767	1870	877
Adj Flow Rate, veh/h	0	1172	649	1005	1722	0				355	0	187
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	5	9	2	4	0				9	2	69
Cap, veh/h	0	1982	831	860	2130	0				930	0	206
Arrive On Green	0.00	0.32	0.32	0.25	0.61	0.00				0.28	0.00	0.28
Sat Flow, veh/h	0	6537	2635	3456	3589	0				3365	0	744
Grp Volume(v), veh/h	0	1172	649	1005	1722	0				355	0	187
Grp Sat Flow(s),veh/h/ln	0	1570	1317	1728	1749	0				1682	0	744
Q Serve(g_s), s	0.0	15.8	22.5	25.0	38.1	0.0				8.6	0.0	24.4
Cycle Q Clear(g_c), s	0.0	15.8	22.5	25.0	38.1	0.0				8.6	0.0	24.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1982	831	860	2130	0				930	0	206
V/C Ratio(X)	0.00	0.59	0.78	1.17	0.81	0.00				0.38	0.00	0.91
Avail Cap(c_a), veh/h	0	2188	918	860	2130	0				1172	0	259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.9	31.2	37.7	15.1	0.0				29.4	0.0	35.1
Incr Delay (d2), s/veh	0.0	0.4	4.0	88.4	2.4	0.0				0.3	0.0	29.0
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	7.3	20.8	13.9	0.0				3.3	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	29.3	35.2	126.2	17.5	0.0				29.7	0.0	64.2
LnGrp LOS	A	C	D	F	B	A				C	A	E
Approach Vol, veh/h		1821			2727						542	
Approach Delay, s/veh		31.4			57.6						41.6	
Approach LOS		C			E						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	29.5	37.7		33.3		67.2						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	27.0	24.5		26.4		40.1						
Green Ext Time (p_c), s	0.0	7.2		1.3		0.0						
Intersection Summary												
HCM 6th Ctrl Delay			46.5									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Horizon-No Improvements

Horizon AM



Lane Group	EBT	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	5	207	249	471	469	142
v/c Ratio	0.01	0.55	1.61	0.50	0.75	0.22
Control Delay	0.0	16.9	326.2	13.3	28.3	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	16.9	326.2	13.3	28.3	4.9
Queue Length 50th (ft)	0	24	~99	62	103	0
Queue Length 95th (ft)	0	92	#317	281	#405	34
Internal Link Dist (ft)	435	541		502	590	
Turn Bay Length (ft)			130			125
Base Capacity (vph)	659	604	155	951	628	652
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	0.01	0.34	1.61	0.50	0.75	0.22

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.

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Horizon-No Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	4	61	2	115	214	405	0	0	403	122
Future Volume (veh/h)	0	0	4	61	2	115	214	405	0	0	403	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1159	1856	1870	1648	1707	1796	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	5	71	2	134	249	471	0	0	469	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	2	50	3	2	17	13	7	0	2	6	2
Cap, veh/h	0	0	34	94	3	178	163	885	0	0	547	
Arrive On Green	0.00	0.00	0.02	0.17	0.17	0.17	0.10	0.49	0.00	0.00	0.30	0.00
Sat Flow, veh/h	0	0	1585	566	16	1068	1626	1796	0	0	1811	1585
Grp Volume(v), veh/h	0	0	5	207	0	0	249	471	0	0	469	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1650	0	0	1626	1796	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.2	6.0	0.0	0.0	5.0	9.0	0.0	0.0	12.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	6.0	0.0	0.0	5.0	9.0	0.0	0.0	12.2	0.0
Prop In Lane	0.00		1.00	0.34		0.65	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	0	34	275	0	0	163	885	0	0	547	
V/C Ratio(X)	0.00	0.00	0.15	0.75	0.00	0.00	1.53	0.53	0.00	0.00	0.86	
Avail Cap(c_a), veh/h	0	0	573	596	0	0	163	885	0	0	654	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	23.9	19.8	0.0	0.0	22.4	8.7	0.0	0.0	16.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.0	4.2	0.0	0.0	265.3	0.6	0.0	0.0	9.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	2.4	0.0	0.0	13.6	2.1	0.0	0.0	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	25.9	23.9	0.0	0.0	287.7	9.3	0.0	0.0	25.9	0.0
LnGrp LOS	A	A	C	C	A	A	F	A	A	A	C	
Approach Vol, veh/h	5			207			720			469		
Approach Delay, s/veh	25.9			23.9			105.6			25.9		
Approach LOS	C			C			F			C		
Timer - Assigned Phs	1	2	4			6	8					
Phs Duration (G+Y+Rc), s	9.5	21.6	5.8			31.1	13.0					
Change Period (Y+Rc), s	4.5	6.5	* 4.7			6.5	4.7					
Max Green Setting (Gmax), s	5.0	18.0	* 18			18.0	18.0					
Max Q Clear Time (g_c+I1), s	7.0	14.2	2.2			11.0	8.0					
Green Ext Time (p_c), s	0.0	0.9	0.0			1.4	0.8					

Intersection Summary

HCM 6th Ctrl Delay 66.6

HCM 6th LOS E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	310	30	1360	1183	1546
v/c Ratio	0.73	0.20	0.72	0.68	1.05
Control Delay	34.3	36.3	13.4	17.5	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	36.3	13.4	17.5	44.1
Queue Length 50th (ft)	102	11	192	150	~64
Queue Length 95th (ft)	221	41	346	#405	#340
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	885	629	2965	1747	1468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.05	0.46	0.68	1.05

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 30: SR-74

Horizon-No Improvements
Horizon AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	238	41	27	1224	1065	1391
Future Volume (veh/h)	238	41	27	1224	1065	1391
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1722	1781	1722	1767	1752
Adj Flow Rate, veh/h	264	46	30	1360	1183	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	12	8	12	9	10
Cap, veh/h	317	55	57	1880	1471	
Arrive On Green	0.22	0.22	0.03	0.57	0.44	0.00
Sat Flow, veh/h	1438	251	1697	3358	3445	1485
Grp Volume(v), veh/h	311	0	30	1360	1183	0
Grp Sat Flow(s),veh/h/ln	1694	0	1697	1636	1678	1485
Q Serve(g_s), s	9.1	0.0	0.9	15.6	15.8	0.0
Cycle Q Clear(g_c), s	9.1	0.0	0.9	15.6	15.8	0.0
Prop In Lane	0.85	0.15	1.00			1.00
Lane Grp Cap(c), veh/h	373	0	57	1880	1471	
V/C Ratio(X)	0.83	0.00	0.52	0.72	0.80	
Avail Cap(c_a), veh/h	1146	0	820	2214	2272	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	19.3	0.0	24.6	8.0	12.6	0.0
Incr Delay (d2), s/veh	1.9	0.0	2.7	0.7	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.4	2.9	4.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.1	0.0	27.3	8.7	13.2	0.0
LnGrp LOS	C	A	C	A	B	
Approach Vol, veh/h	311			1390	1183	
Approach Delay, s/veh	21.1			9.1	13.2	
Approach LOS	C			A	B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		35.0		16.7	7.1	28.0
Change Period (Y+Rc), s		5.3		5.3	5.3	5.3
Max Green Setting (Gmax), s		35.0		35.0	25.0	35.0
Max Q Clear Time (g_c+I1), s		17.6		11.1	2.9	17.8
Green Ext Time (p_c), s		5.9		0.5	0.0	4.9
Intersection Summary						
HCM 6th Ctrl Delay			12.1			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
32: SR-74 & Trumble Rd

Horizon-No Improvements
Horizon AM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	123	643	346	1259	2097
v/c Ratio	0.37	1.01	0.98	0.62	1.69
Control Delay	33.0	52.5	80.9	11.7	339.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	52.5	80.9	11.7	339.2
Queue Length 50th (ft)	61	~180	205	210	~977
Queue Length 95th (ft)	112	#423	#379	272	#1119
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	334	639	354	2042	1240
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.37	1.01	0.98	0.62	1.69

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.

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Horizon-No Improvements
Horizon AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	112	585	315	1146	1872	36
Future Volume (veh/h)	112	585	315	1146	1872	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1411	1648	1767	1707	1767	1870
Adj Flow Rate, veh/h	123	643	346	1259	2057	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	33	17	9	13	9	2
Cap, veh/h	331	344	360	2073	1262	24
Arrive On Green	0.25	0.25	0.21	0.64	0.37	0.37
Sat Flow, veh/h	1344	1397	1682	3329	3456	65
Grp Volume(v), veh/h	123	643	346	1259	1022	1075
Grp Sat Flow(s),veh/h/ln	1344	1397	1682	1622	1678	1755
Q Serve(g_s), s	7.1	23.0	19.0	21.4	35.0	35.0
Cycle Q Clear(g_c), s	7.1	23.0	19.0	21.4	35.0	35.0
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	331	344	360	2073	629	658
V/C Ratio(X)	0.37	1.87	0.96	0.61	1.62	1.64
Avail Cap(c_a), veh/h	331	344	360	2073	629	658
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	35.2	36.3	9.9	29.2	29.2
Incr Delay (d2), s/veh	0.3	402.2	36.7	0.5	288.2	292.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	54.1	10.9	5.9	62.8	66.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.5	437.4	73.0	10.4	317.4	322.0
LnGrp LOS	C	F	E	B	F	F
Approach Vol, veh/h	766			1605	2097	
Approach Delay, s/veh	371.9			23.9	319.8	
Approach LOS	F			C	F	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	65.7		27.7		24.7	41.0
Change Period (Y+Rc), s	6.0		* 4.7		* 4.7	6.0
Max Green Setting (Gmax), s	35.0		* 23		* 20	35.0
Max Q Clear Time (g_c+l1), s	23.4		25.0		21.0	37.0
Green Ext Time (p_c), s	6.2		0.0		0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			222.4			
HCM 6th LOS			F			
Notes						

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues

Horizon-No Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	55	303	394	849	1102	46
v/c Ratio	0.35	0.20	0.78	0.57	1.40	0.03
Control Delay	41.8	0.3	39.3	5.6	212.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	0.3	39.3	5.6	212.5	0.0
Queue Length 50th (ft)	28	0	190	152	~827	0
Queue Length 95th (ft)	63	0	#343	283	#1089	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	564	1524	542	1458	785	1583
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	0.10	0.20	0.73	0.58	1.40	0.03

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon-No Improvements
Horizon AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	270	351	756	981	41
Future Volume (veh/h)	49	270	351	756	981	41
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1811	1781	1752	1752	1870
Adj Flow Rate, veh/h	55	0	394	849	1102	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	8	10	10	2
Cap, veh/h	80		435	1390	823	
Arrive On Green	0.05	0.00	0.26	0.79	0.47	0.00
Sat Flow, veh/h	1753	1535	1697	1752	1752	1585
Grp Volume(v), veh/h	55	0	394	849	1102	0
Grp Sat Flow(s),veh/h/ln	1753	1535	1697	1752	1752	1585
Q Serve(g_s), s	2.3	0.0	16.8	14.5	35.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	16.8	14.5	35.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	80		435	1390	823	
V/C Ratio(X)	0.69		0.91	0.61	1.34	
Avail Cap(c_a), veh/h	588		569	1390	823	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	35.0	0.0	26.8	3.1	19.7	0.0
Incr Delay (d2), s/veh	3.9	0.0	13.2	0.6	160.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	7.5	1.0	47.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.9	0.0	40.0	3.7	180.4	0.0
LnGrp LOS	D		D	A	F	
Approach Vol, veh/h	55			1243	1102	
Approach Delay, s/veh	38.9			15.2	180.4	
Approach LOS	D			B	F	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	24.1	41.0		9.4		65.1
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	18.8	37.0		4.3		16.5
Green Ext Time (p_c), s	0.3	0.0		0.0		3.3

Intersection Summary

HCM 6th Ctrl Delay	91.6
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection						
Int Delay, s/veh	136.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	319	612	342	95	115	171
Future Vol, veh/h	319	612	342	95	115	171
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	4	3	5	7	3	7
Mvmt Flow	332	638	356	99	120	178
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	455	0	-	0	1708	406
Stage 1	-	-	-	-	406	-
Stage 2	-	-	-	-	1302	-
Critical Hdwy	4.14	-	-	-	6.43	6.27
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.236	-	-	-	3.527	3.363
Pot Cap-1 Maneuver	1095	-	-	-	~ 100	634
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	253	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1095	-	-	-	~ 53	634
Mov Cap-2 Maneuver	-	-	-	-	~ 53	-
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	253	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.3	0		\$ 779		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1095	-	-	-	117	
HCM Lane V/C Ratio	0.303	-	-	-	2.546	
HCM Control Delay (s)	9.7	0	-	-	\$ 779	
HCM Lane LOS	A	A	-	-	F	
HCM 95th %tile Q(veh)	1.3	-	-	-	26.8	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection						
Int Delay, s/veh	9.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	340	916	477	36	14	229
Future Vol, veh/h	340	916	477	36	14	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	180	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	3	6	2	12	2
Mvmt Flow	354	954	497	38	15	239
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	535	0	-	0	2178	516
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	1662	-
Critical Hdwy	4.12	-	-	-	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	2.218	-	-	-	3.608	3.318
Pot Cap-1 Maneuver	1033	-	-	-	48	559
Stage 1	-	-	-	-	579	-
Stage 2	-	-	-	-	160	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1033	-	-	-	32	559
Mov Cap-2 Maneuver	-	-	-	-	32	-
Stage 1	-	-	-	-	380	-
Stage 2	-	-	-	-	160	-
Approach	EB		WB		SB	
HCM Control Delay, s	2.8		0		66.4	
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1033	-	-	-	287	
HCM Lane V/C Ratio	0.343	-	-	-	0.882	
HCM Control Delay (s)	10.3	-	-	-	66.4	
HCM Lane LOS	B	-	-	-	F	
HCM 95th %tile Q(veh)	1.5	-	-	-	7.9	

Queues

Horizon-No Improvements

9: Redlands Ave & San Jacinto Ave

Horizon PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	89	84	193	825	60	51	253	788	1294	96	750
v/c Ratio	0.27	0.46	0.59	1.38	0.19	0.15	0.75	0.52	1.18	0.52	0.62
Control Delay	47.9	54.0	14.4	215.5	38.6	3.2	56.3	24.3	104.1	55.1	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.9	54.0	14.4	215.5	38.6	3.2	56.3	24.3	104.1	55.1	31.3
Queue Length 50th (ft)	28	54	0	~378	34	0	161	198	~736	62	216
Queue Length 95th (ft)	57	107	67	#552	75	11	#310	293	#1066	118	295
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	655	675	697	598	657	607	337	1519	1099	337	1499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.12	0.28	1.38	0.09	0.08	0.75	0.52	1.18	0.28	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.

HCM 6th Signalized Intersection Summary

9: Redlands Ave & San Jacinto Ave

Horizon-No Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	81	185	792	58	49	243	756	1242	92	650	70
Future Volume (veh/h)	85	81	185	792	58	49	243	756	1242	92	650	70
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1870	1811	1870	1870	1870	1870	1856	1870	1870	1870
Adj Flow Rate, veh/h	89	84	193	825	60	51	253	788	1294	96	677	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	3	2	2	2
Cap, veh/h	301	274	232	597	444	376	285	1501	664	123	1072	115
Arrive On Green	0.09	0.15	0.15	0.18	0.24	0.24	0.16	0.42	0.42	0.07	0.33	0.33
Sat Flow, veh/h	3456	1870	1585	3346	1870	1583	1781	3554	1572	1781	3235	348
Grp Volume(v), veh/h	89	84	193	825	60	51	253	788	1294	96	372	378
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1673	1870	1583	1781	1777	1572	1781	1777	1807
Q Serve(g_s), s	2.6	4.3	12.6	19.0	2.7	2.7	14.8	17.5	45.0	5.6	18.8	18.9
Cycle Q Clear(g_c), s	2.6	4.3	12.6	19.0	2.7	2.7	14.8	17.5	45.0	5.6	18.8	18.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	301	274	232	597	444	376	285	1501	664	123	589	599
V/C Ratio(X)	0.30	0.31	0.83	1.38	0.14	0.14	0.89	0.52	1.95	0.78	0.63	0.63
Avail Cap(c_a), veh/h	649	667	565	597	492	416	334	1501	664	334	751	763
HCM Platoon Ratio	1.00	1.00	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	45.6	40.6	44.2	43.8	32.0	32.0	43.8	22.8	30.8	48.8	30.1	30.1
Incr Delay (d2), s/veh	0.5	0.6	7.6	182.3	0.1	0.2	21.6	0.3	432.1	10.3	1.1	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	1.1	2.0	5.3	22.6	1.2	1.0	8.1	7.2	95.3	2.8	7.8	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.1	41.3	51.8	226.1	32.1	32.2	65.5	23.2	462.9	59.1	31.2	31.2
LnGrp LOS	D	D	D	F	C	C	E	C	F	E	C	C
Approach Vol, veh/h		366			936			2335			846	
Approach Delay, s/veh		48.0			203.1			271.4			34.4	
Approach LOS		D			F			F			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	50.3	24.3	20.9	20.7	40.6	14.6	30.6				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	20.0	45.0	19.0	38.0	20.0	45.0	20.0	28.0				
Max Q Clear Time (g_c+I1), s	7.6	47.0	21.0	14.6	16.8	20.9	4.6	4.7				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.0	0.2	4.4	0.2	0.4				
Intersection Summary												
HCM 6th Ctrl Delay				194.2								
HCM 6th LOS				F								

Intersection						
Int Delay, s/veh	63.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	209	1206	666	40	50	232
Future Vol, veh/h	209	1206	666	40	50	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	209	1206	666	40	50	232
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	706	0	-	0	2290	666
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	1624	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	892	-	-	-	~ 43	459
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	177	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	892	-	-	-	~ 33	459
Mov Cap-2 Maneuver	-	-	-	-	~ 33	-
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	177	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.5	0		\$ 533.5		
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	892	-	-	-	140	
HCM Lane V/C Ratio	0.234	-	-	-	2.014	
HCM Control Delay (s)	10.3	-	-	-	\$ 533.5	
HCM Lane LOS	B	-	-	-	F	
HCM 95th %tile Q(veh)	0.9	-	-	-	22.5	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Queues

Horizon-No Improvements

14: Redlands Ave & 4th St

Horizon PM



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1373	56	84	14	144	76	612	26	56	482	1197
v/c Ratio	1.57	0.08	0.13	0.09	0.37	0.38	0.52	0.04	0.30	0.45	0.71
Control Delay	288.6	22.1	5.6	39.2	15.5	41.2	24.0	0.2	40.8	23.7	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	288.6	22.1	5.6	39.2	15.5	41.2	24.0	0.2	40.8	23.7	4.2
Queue Length 50th (ft)	~557	19	0	7	8	38	133	0	28	102	0
Queue Length 95th (ft)	#748	57	30	27	37	82	196	0	66	157	47
Internal Link Dist (ft)		361			375		311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	874	996	880	450	1725	450	1370	663	446	1288	1773
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.57	0.06	0.10	0.03	0.08	0.17	0.45	0.04	0.13	0.37	0.68

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.

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Horizon-No Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1332	54	81	14	32	108	74	594	25	54	468	1161
Future Volume (veh/h)	1332	54	81	14	32	108	74	594	25	54	468	1161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1796	1826
Adj Flow Rate, veh/h	1373	56	84	14	33	111	76	612	26	56	482	1197
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	7	5
Cap, veh/h	819	590	493	41	180	161	123	1293	569	107	1213	968
Arrive On Green	0.24	0.32	0.32	0.02	0.10	0.10	0.07	0.36	0.36	0.06	0.36	0.36
Sat Flow, veh/h	3456	1870	1565	1781	1777	1585	1781	3554	1565	1767	3413	2723
Grp Volume(v), veh/h	1373	56	84	14	33	111	76	612	26	56	482	1197
Grp Sat Flow(s),veh/h/ln	1728	1870	1565	1781	1777	1585	1781	1777	1565	1767	1706	1362
Q Serve(g_s), s	20.0	1.8	3.3	0.7	1.4	5.7	3.5	11.2	0.9	2.6	8.9	30.0
Cycle Q Clear(g_c), s	20.0	1.8	3.3	0.7	1.4	5.7	3.5	11.2	0.9	2.6	8.9	30.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	819	590	493	41	180	161	123	1293	569	107	1213	968
V/C Ratio(X)	1.68	0.09	0.17	0.34	0.18	0.69	0.62	0.47	0.05	0.52	0.40	1.24
Avail Cap(c_a), veh/h	819	931	779	422	884	789	422	1293	569	419	1213	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	20.4	20.9	40.6	34.7	36.6	38.2	20.6	17.4	38.4	20.4	27.2
Incr Delay (d2), s/veh	309.7	0.1	0.2	4.7	0.5	5.2	5.0	0.3	0.0	3.9	0.2	115.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	43.2	0.8	1.2	0.3	0.6	2.4	1.6	4.3	0.3	1.2	3.4	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	341.9	20.5	21.1	45.3	35.2	41.8	43.2	20.9	17.4	42.4	20.6	142.5
LnGrp LOS	F	C	C	D	D	D	D	C	B	D	C	F
Approach Vol, veh/h		1513			158			714			1735	
Approach Delay, s/veh		312.2			40.7			23.1			105.4	
Approach LOS		F			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	36.2	6.5	32.1	10.3	35.5	24.5	14.1				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	20.0	30.0	20.0	42.0	20.0	30.0	20.0	42.0				
Max Q Clear Time (g_c+I1), s	4.6	13.2	2.7	5.3	5.5	32.0	22.0	7.7				
Green Ext Time (p_c), s	0.1	3.6	0.0	0.6	0.1	0.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			164.6									
HCM 6th LOS			F									

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Horizon-No Improvements
Horizon PM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	271	1402	1478	235	573	544	526
v/c Ratio	0.61	0.77	0.69	0.35	0.99	1.00	0.91
Control Delay	46.5	22.0	30.4	4.9	70.3	69.8	49.3
Queue Delay	0.0	1.3	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	23.3	30.4	4.9	70.3	69.8	49.3
Queue Length 50th (ft)	85	350	230	0	~391	~368	297
Queue Length 95th (ft)	126	435	289	52	#663	#648	#550
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	824	2300	2238	694	576	545	577
Starvation Cap Reductn	0	628	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	0.33	0.84	0.66	0.34	0.99	1.00	0.91

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Horizon-No Improvements
Horizon PM

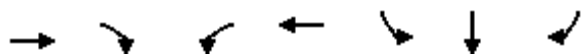
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	1332	0	0	1404	223	648	4	909	0	0	0
Future Volume (veh/h)	257	1332	0	0	1404	223	648	4	909	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1781	1856	0	0	1841	1811	1811	1870	1856			
Adj Flow Rate, veh/h	271	1402	0	0	1478	235	1024	0	594			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	8	3	0	0	4	6	6	2	3			
Cap, veh/h	363	1716	0	0	2071	502	1319	0	601			
Arrive On Green	0.11	0.49	0.00	0.00	0.33	0.33	0.38	0.00	0.38			
Sat Flow, veh/h	3291	3618	0	0	6590	1535	3450	0	1572			
Grp Volume(v), veh/h	271	1402	0	0	1478	235	1024	0	594			
Grp Sat Flow(s),veh/h/ln	1646	1763	0	0	1583	1535	1725	0	1572			
Q Serve(g_s), s	7.3	31.0	0.0	0.0	18.8	11.1	23.9	0.0	34.3			
Cycle Q Clear(g_c), s	7.3	31.0	0.0	0.0	18.8	11.1	23.9	0.0	34.3			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	363	1716	0	0	2071	502	1319	0	601			
V/C Ratio(X)	0.75	0.82	0.00	0.00	0.71	0.47	0.78	0.00	0.99			
Avail Cap(c_a), veh/h	899	1716	0	0	2421	587	1319	0	601			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	39.5	20.0	0.0	0.0	27.0	24.5	24.8	0.0	28.1			
Incr Delay (d2), s/veh	3.1	3.2	0.0	0.0	0.8	0.7	3.0	0.0	33.6			
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	3.0	12.3	0.0	0.0	6.9	4.0	9.4	0.0	17.2			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	23.3	0.0	0.0	27.9	25.2	27.8	0.0	61.6			
LnGrp LOS	D	C	A	A	C	C	C	A	E			
Approach Vol, veh/h	1673			1713			1618					
Approach Delay, s/veh	26.4			27.5			40.2					
Approach LOS	C			C			D					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	50.5			14.6			35.9			41.0		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	35.0			25.0			35.0			35.0		
Max Q Clear Time (g_c+I1), s	33.0			9.3			20.8			36.3		
Green Ext Time (p_c), s	1.5			0.8			9.2			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	31.2											
HCM 6th LOS	C											

Queues

Horizon-No Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon PM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1486	879	774	1612	246	238	228
v/c Ratio	0.64	0.56	0.87	0.70	0.69	0.71	0.63
Control Delay	27.8	3.3	47.2	13.2	45.6	43.1	30.6
Queue Delay	0.0	0.0	2.6	18.0	0.0	0.0	0.0
Total Delay	27.8	3.3	49.7	31.2	45.6	43.1	30.6
Queue Length 50th (ft)	214	0	232	282	147	134	89
Queue Length 95th (ft)	281	32	#361	454	218	207	157
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	2327	1562	890	2301	610	561	572
Starvation Cap Reductn	0	0	50	724	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	0.64	0.56	0.92	1.02	0.40	0.42	0.40

Intersection Summary

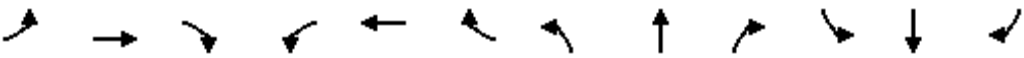
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon-No Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1278	756	666	1386	0	0	0	0	311	4	297
Future Volume (veh/h)	0	1278	756	666	1386	0	0	0	0	311	4	297
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	1870	1856	1870	1826	0				1870	1870	1811
Adj Flow Rate, veh/h	0	1486	879	774	1612	0				471	0	232
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	3	2	5	0				2	2	6
Cap, veh/h	0	2433	1047	868	2357	0				686	0	295
Arrive On Green	0.00	0.38	0.38	0.25	0.68	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	6696	2768	3456	3561	0				3563	0	1535
Grp Volume(v), veh/h	0	1486	879	774	1612	0				471	0	232
Grp Sat Flow(s),veh/h/ln	0	1609	1384	1728	1735	0				1781	0	1535
Q Serve(g_s), s	0.0	16.8	26.0	19.4	25.0	0.0				11.1	0.0	12.9
Cycle Q Clear(g_c), s	0.0	16.8	26.0	19.4	25.0	0.0				11.1	0.0	12.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2433	1047	868	2357	0				686	0	295
V/C Ratio(X)	0.00	0.61	0.84	0.89	0.68	0.00				0.69	0.00	0.79
Avail Cap(c_a), veh/h	0	2507	1078	962	2357	0				1388	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	22.6	25.5	32.4	8.6	0.0				33.7	0.0	34.5
Incr Delay (d2), s/veh	0.0	0.4	5.9	9.8	0.8	0.0				1.2	0.0	4.6
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	6.1	8.9	8.9	7.6	0.0				4.6	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	23.0	31.4	42.3	9.4	0.0				35.0	0.0	39.1
LnGrp LOS	A	C	C	D	A	A				C	A	D
Approach Vol, veh/h		2365			2386						703	
Approach Delay, s/veh		26.1			20.1						36.3	
Approach LOS		C			C						D	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	27.1	40.0		22.8		67.0						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	25.0	35.0		35.0		35.0						
Max Q Clear Time (g_c+I1), s	21.4	28.0		14.9		27.0						
Green Ext Time (p_c), s	1.2	6.0		2.4		6.1						
Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Horizon-No Improvements
Horizon PM



Lane Group	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	350	200	550	583	178
v/c Ratio	0.68	1.19	0.55	0.93	0.16
Control Delay	16.0	158.9	11.6	43.9	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	158.9	11.6	43.9	1.1
Queue Length 50th (ft)	45	~77	98	166	2
Queue Length 95th (ft)	109	#192	204	#371	13
Internal Link Dist (ft)	541		502	590	
Turn Bay Length (ft)		130			125
Base Capacity (vph)	657	168	997	627	1284
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	1.19	0.55	0.93	0.14

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.

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Horizon-No Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	126	0	182	176	484	0	0	513	157
Future Volume (veh/h)	0	0	0	126	0	182	176	484	0	0	513	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1811	1870	1707	1841	1870	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	0	143	0	207	200	550	0	0	583	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	6	2	13	4	2	0	2	6	2
Cap, veh/h	0	4	0	174	0	252	168	988	0	0	626	
Arrive On Green	0.00	0.00	0.00	0.26	0.00	0.26	0.10	0.53	0.00	0.00	0.35	0.00
Sat Flow, veh/h	0	1870	0	678	0	982	1753	1870	0	0	1811	1585
Grp Volume(v), veh/h	0	0	0	350	0	0	200	550	0	0	583	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1660	0	0	1753	1870	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	10.3	0.0	0.0	5.0	10.2	0.0	0.0	16.2	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	10.3	0.0	0.0	5.0	10.2	0.0	0.0	16.2	0.0
Prop In Lane	0.00		0.00	0.41		0.59	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	4	0	426	0	0	168	988	0	0	626	
V/C Ratio(X)	0.00	0.00	0.00	0.82	0.00	0.00	1.19	0.56	0.00	0.00	0.93	
Avail Cap(c_a), veh/h	0	647	0	574	0	0	168	988	0	0	626	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	18.2	0.0	0.0	23.5	8.2	0.0	0.0	16.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	7.0	0.0	0.0	128.9	0.7	0.0	0.0	20.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	4.4	0.0	0.0	7.7	2.4	0.0	0.0	8.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	25.2	0.0	0.0	152.4	8.9	0.0	0.0	37.2	0.0
LnGrp LOS	A	A	A	C	A	A	F	A	A	A	D	
Approach Vol, veh/h	0			350			750			583		
Approach Delay, s/veh	0.0			25.2			47.2			37.2		
Approach LOS				C			D			D		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.5	24.5		0.0		34.0		18.1				
Change Period (Y+Rc), s	4.5	6.5		* 4.7		6.5		4.7				
Max Green Setting (Gmax), s	5.0	18.0		* 18		18.0		18.0				
Max Q Clear Time (g_c+I1), s	7.0	18.2		0.0		12.2		12.3				
Green Ext Time (p_c), s	0.0	0.0		0.0		1.5		1.1				

Intersection Summary

HCM 6th Ctrl Delay 39.1

HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	390	38	1924	1055	1331
v/c Ratio	0.81	0.26	1.02	0.66	0.90
Control Delay	38.7	42.4	44.6	21.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.7	42.4	44.6	21.6	10.2
Queue Length 50th (ft)	179	19	471	226	0
Queue Length 95th (ft)	293	53	#828	384	#62
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	738	574	2885	1609	1482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.53	0.07	0.67	0.66	0.90

Intersection Summary

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

HCM 6th Signalized Intersection Summary

30: SR-74

Horizon-No Improvements

Horizon PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	297	70	36	1809	992	1251
Future Volume (veh/h)	297	70	36	1809	992	1251
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1781	1826	1811	1826	1767
Adj Flow Rate, veh/h	316	74	38	1924	1055	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	15	8	5	6	5	9
Cap, veh/h	355	83	67	1899	1491	
Arrive On Green	0.28	0.28	0.04	0.55	0.43	0.00
Sat Flow, veh/h	1262	296	1739	3532	3561	1497
Grp Volume(v), veh/h	391	0	38	1924	1055	0
Grp Sat Flow(s),veh/h/ln	1561	0	1739	1721	1735	1497
Q Serve(g_s), s	15.2	0.0	1.4	35.0	15.8	0.0
Cycle Q Clear(g_c), s	15.2	0.0	1.4	35.0	15.8	0.0
Prop In Lane	0.81	0.19	1.00			1.00
Lane Grp Cap(c), veh/h	439	0	67	1899	1491	
V/C Ratio(X)	0.89	0.00	0.57	1.01	0.71	
Avail Cap(c_a), veh/h	862	0	686	1899	1915	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	21.9	0.0	30.0	14.2	14.8	0.0
Incr Delay (d2), s/veh	2.6	0.0	2.8	23.9	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	0.6	15.0	4.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.4	0.0	32.8	38.2	15.3	0.0
LnGrp LOS	C	A	C	F	B	
Approach Vol, veh/h	391			1962	1055	
Approach Delay, s/veh	24.4			38.1	15.3	
Approach LOS	C			D	B	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	40.3		23.1		7.7	32.6
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	35.0		35.0		25.0	35.0
Max Q Clear Time (g_c+I1), s	37.0		17.2		3.4	17.8
Green Ext Time (p_c), s	0.0		0.6		0.0	4.2
Intersection Summary						
HCM 6th Ctrl Delay			29.5			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

Queues
32: SR-74 & Trumble Rd

Horizon-No Improvements
Horizon PM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	77	639	523	1742	1892
v/c Ratio	0.20	0.98	1.53	0.79	1.55
Control Delay	29.6	45.6	283.9	15.4	279.1
Queue Delay	0.0	0.0	0.0	0.2	0.0
Total Delay	29.6	45.6	283.9	15.6	279.1
Queue Length 50th (ft)	36	161	~441	361	~853
Queue Length 95th (ft)	74	#400	#637	462	#993
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	410	667	341	2208	1217
Starvation Cap Reductn	0	0	0	78	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.96	1.53	0.82	1.55

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.

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Horizon-No Improvements
Horizon PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	72	594	486	1620	1648	112
Future Volume (veh/h)	72	594	486	1620	1648	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1781	1678	1811	1781	877
Adj Flow Rate, veh/h	77	639	523	1742	1772	120
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	8	15	6	8	69
Cap, veh/h	411	372	342	2199	1206	81
Arrive On Green	0.25	0.25	0.21	0.64	0.37	0.37
Sat Flow, veh/h	1668	1510	1598	3532	3308	216
Grp Volume(v), veh/h	77	639	523	1742	923	969
Grp Sat Flow(s),veh/h/ln	1668	1510	1598	1721	1692	1742
Q Serve(g_s), s	3.4	23.0	20.0	34.6	35.0	35.0
Cycle Q Clear(g_c), s	3.4	23.0	20.0	34.6	35.0	35.0
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	411	372	342	2199	634	653
V/C Ratio(X)	0.19	1.72	1.53	0.79	1.46	1.48
Avail Cap(c_a), veh/h	411	372	342	2199	634	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	35.2	36.7	12.3	29.2	29.2
Incr Delay (d2), s/veh	0.1	334.7	252.2	2.1	213.6	226.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	51.5	31.2	10.5	50.2	54.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.9	369.9	288.9	14.4	242.8	255.3
LnGrp LOS	C	F	F	B	F	F
Approach Vol, veh/h	716			2265	1892	
Approach Delay, s/veh	333.1			77.8	249.2	
Approach LOS	F			E	F	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	65.7		27.7		24.7	41.0
Change Period (Y+Rc), s	6.0		* 4.7		* 4.7	6.0
Max Green Setting (Gmax), s	35.0		* 23		* 20	35.0
Max Q Clear Time (g_c+l1), s	36.6		25.0		22.0	37.0
Green Ext Time (p_c), s	0.0		0.0		0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			181.8			
HCM 6th LOS			F			
Notes						

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Queues

Horizon-No Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	499	460	695	1507	80
v/c Ratio	0.36	0.33	0.86	0.45	1.83	0.05
Control Delay	42.4	0.6	45.7	4.1	397.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	0.6	45.7	4.1	397.7	0.1
Queue Length 50th (ft)	27	0	233	102	~1244	0
Queue Length 95th (ft)	62	0	#432	188	#1556	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	534	1524	534	1551	825	1524
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	0.10	0.33	0.86	0.45	1.83	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon-No Improvements
Horizon PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	459	423	639	1386	74
Future Volume (veh/h)	49	459	423	639	1386	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1826	1870	1811
Adj Flow Rate, veh/h	53	0	460	695	1507	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	6	7	5	2	6
Cap, veh/h	75		496	1465	839	
Arrive On Green	0.04	0.00	0.29	0.80	0.45	0.00
Sat Flow, veh/h	1711	1535	1711	1826	1870	1535
Grp Volume(v), veh/h	53	0	460	695	1507	0
Grp Sat Flow(s),veh/h/ln	1711	1535	1711	1826	1870	1535
Q Serve(g_s), s	2.4	0.0	20.4	9.5	35.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	20.4	9.5	35.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	75		496	1465	839	
V/C Ratio(X)	0.71		0.93	0.47	1.80	
Avail Cap(c_a), veh/h	548		548	1465	839	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	36.8	0.0	26.9	2.5	21.5	0.0
Incr Delay (d2), s/veh	4.5	0.0	20.2	0.1	363.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	10.1	0.6	97.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.3	0.0	47.2	2.5	384.6	0.0
LnGrp LOS	D		D	A	F	
Approach Vol, veh/h	53			1155	1507	
Approach Delay, s/veh	41.3			20.3	384.6	
Approach LOS	D			C	F	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	27.6	41.0		9.4		68.6
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	25.0	35.0		25.0		35.0
Max Q Clear Time (g_c+I1), s	22.4	37.0		4.4		11.5
Green Ext Time (p_c), s	0.2	0.0		0.0		2.6

Intersection Summary

HCM 6th Ctrl Delay	222.9
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX G

SYNCHRO OUTPUTS FOR HORIZON YEAR (2050) WITH IMPROVEMENTS

Queues
5: San Jacinto Ave & Dunlap Dr

Horizon with Improvements
Horizon AM



Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	169	343	701	388
v/c Ratio	0.53	0.20	0.63	0.71
Control Delay	30.1	6.2	17.5	18.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	30.1	6.2	17.5	18.2
Queue Length 50th (ft)	50	22	92	61
Queue Length 95th (ft)	#117	43	144	127
Internal Link Dist (ft)		577	616	608
Turn Bay Length (ft)	300			
Base Capacity (vph)	361	2262	1462	779
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.47	0.15	0.48	0.50

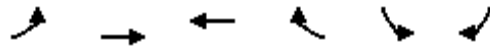
Intersection Summary

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

HCM 6th Signalized Intersection Summary 5: San Jacinto Ave & Dunlap Dr

Horizon with Improvements

Horizon AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	142	288	495	94	110	216
Future Volume (veh/h)	142	288	495	94	110	216
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1767	1752	1796	1811	1811	1870
Adj Flow Rate, veh/h	169	343	589	112	131	257
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	9	10	7	6	6	2
Cap, veh/h	214	1717	832	158	155	303
Arrive On Green	0.13	0.52	0.29	0.29	0.29	0.29
Sat Flow, veh/h	1682	3416	2952	543	537	1054
Grp Volume(v), veh/h	169	343	351	350	389	0
Grp Sat Flow(s), veh/h/ln	1682	1664	1706	1699	1595	0
Q Serve(g_s), s	4.5	2.5	8.4	8.5	10.5	0.0
Cycle Q Clear(g_c), s	4.5	2.5	8.4	8.5	10.5	0.0
Prop In Lane	1.00			0.32	0.34	0.66
Lane Grp Cap(c), veh/h	214	1717	496	494	459	0
V/C Ratio(X)	0.79	0.20	0.71	0.71	0.85	0.00
Avail Cap(c_a), veh/h	349	2397	707	704	626	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.4	6.0	14.5	14.5	15.4	0.0
Incr Delay (d2), s/veh	6.4	0.1	1.9	1.9	7.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.6	3.0	3.0	3.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.8	6.0	16.4	16.4	23.3	0.0
LnGrp LOS	C	A	B	B	C	A
Approach Vol, veh/h		512	701		389	
Approach Delay, s/veh		12.6	16.4		23.3	
Approach LOS		B	B		C	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		28.1		17.7	10.3	17.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	9.5	19.0
Max Q Clear Time (g_c+I1), s		4.5		12.5	6.5	10.5
Green Ext Time (p_c), s		2.4		0.7	0.1	2.9
Intersection Summary						
HCM 6th Ctrl Delay			16.9			
HCM 6th LOS			B			

Notes

User approved volume balancing among the lanes for turning movement.

Queues

Horizon with Improvements

7: San Jacinto Ave & Murrieta Rd

Horizon AM



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	346	425	141	653	71	49	103	28	82	499
v/c Ratio	0.76	0.37	0.52	0.74	0.36	0.19	0.28	0.17	0.29	0.60
Control Delay	38.3	18.0	34.3	30.1	34.7	28.7	2.5	32.4	31.4	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	18.0	34.3	30.1	34.7	28.7	2.5	32.4	31.4	13.2
Queue Length 50th (ft)	139	65	57	133	29	19	0	11	33	105
Queue Length 95th (ft)	#281	117	108	200	67	48	6	34	72	201
Internal Link Dist (ft)		670		607		1033			337	
Turn Bay Length (ft)	300		200		100			100		
Base Capacity (vph)	454	1164	377	919	236	494	554	440	732	838
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.76	0.37	0.37	0.71	0.30	0.10	0.19	0.06	0.11	0.60

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

7: San Jacinto Ave & Murrieta Rd

Horizon with Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	308	309	72	130	520	61	65	45	95	25	75	444
Future Volume (veh/h)	308	309	72	130	520	61	65	45	95	25	75	444
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1767	1870	1870	1870	1870	1870	1870	1870	1796	1870	1870
Adj Flow Rate, veh/h	346	347	78	141	584	69	71	49	103	28	82	499
Peak Hour Factor	0.89	0.89	0.92	0.92	0.89	0.89	0.92	0.92	0.92	0.89	0.92	0.89
Percent Heavy Veh, %	2	9	2	2	2	2	2	2	2	7	2	2
Cap, veh/h	387	906	201	179	689	81	92	493	417	113	520	785
Arrive On Green	0.22	0.33	0.33	0.10	0.22	0.22	0.05	0.26	0.26	0.07	0.28	0.28
Sat Flow, veh/h	1781	2730	606	1781	3202	377	1781	1870	1585	1711	1870	1585
Grp Volume(v), veh/h	346	212	213	141	324	329	71	49	103	28	82	499
Grp Sat Flow(s),veh/h/ln	1781	1678	1658	1781	1777	1802	1781	1870	1585	1711	1870	1585
Q Serve(g_s), s	14.3	7.3	7.5	5.8	13.2	13.3	3.0	1.5	3.9	1.2	2.5	17.5
Cycle Q Clear(g_c), s	14.3	7.3	7.5	5.8	13.2	13.3	3.0	1.5	3.9	1.2	2.5	17.5
Prop In Lane	1.00		0.37	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	387	557	550	179	382	388	92	493	417	113	520	785
V/C Ratio(X)	0.89	0.38	0.39	0.79	0.85	0.85	0.77	0.10	0.25	0.25	0.16	0.64
Avail Cap(c_a), veh/h	417	557	550	346	423	429	217	493	417	407	670	913
HCM Platoon Ratio	1.00	1.00	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	28.7	19.3	19.4	33.2	28.5	28.5	35.4	21.1	21.9	33.5	20.6	14.1
Incr Delay (d2), s/veh	20.2	0.4	0.4	7.5	13.7	13.9	12.9	0.1	0.3	1.1	0.1	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	7.7	2.6	2.6	2.7	6.6	6.7	1.6	0.6	1.3	0.5	1.1	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.9	19.7	19.8	40.7	42.1	42.3	48.4	21.1	22.2	34.6	20.7	15.2
LnGrp LOS	D	B	B	D	D	D	D	C	C	C	C	B
Approach Vol, veh/h	771			794			223			609		
Approach Delay, s/veh	32.9			42.0			30.3			16.8		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	24.4	12.1	29.6	8.4	25.5	20.9	20.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	18.3	14.7	21.0	9.2	27.1	17.7	18.0				
Max Q Clear Time (g_c+I1), s	3.2	5.9	7.8	9.5	5.0	19.5	16.3	15.3				
Green Ext Time (p_c), s	0.0	0.4	0.2	1.7	0.0	1.5	0.2	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	31.6											
HCM 6th LOS	C											

Queues

Horizon with Improvements

9: Redlands Ave & San Jacinto Ave

Horizon AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	170	35	165	1180	83	161	220	691	860	154	883
v/c Ratio	0.48	0.24	0.61	1.26	0.18	0.32	1.11	0.57	0.69	0.93	0.76
Control Delay	47.1	47.3	17.4	157.3	30.5	6.6	138.6	28.4	4.3	101.0	34.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.1	47.3	17.4	157.3	30.5	6.6	138.6	28.4	4.3	101.0	34.8
Queue Length 50th (ft)	53	21	1	~482	41	0	~158	181	17	98	255
Queue Length 95th (ft)	80	47	46	#558	74	37	#277	225	39	#201	305
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	397	712	689	938	1015	916	198	1236	1245	165	1167
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.05	0.24	1.26	0.08	0.18	1.11	0.56	0.69	0.93	0.76

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.

HCM 6th Signalized Intersection Summary 9: Redlands Ave & San Jacinto Ave

Horizon with Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 			 				 			 	
Traffic Volume (veh/h)	139	29	135	968	68	132	180	567	705	126	648	76
Future Volume (veh/h)	139	29	135	968	68	132	180	567	705	126	648	76
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1826	1841	1870	1856	1856	1841	1826	1870	1870	1796
Adj Flow Rate, veh/h	170	35	165	1180	83	161	220	691	860	154	790	93
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	5	4	2	3	3	4	5	2	2	7
Cap, veh/h	326	236	195	895	552	463	190	1176	927	157	1016	120
Arrive On Green	0.09	0.13	0.13	0.26	0.29	0.29	0.11	0.34	0.34	0.09	0.32	0.32
Sat Flow, veh/h	3456	1870	1547	3401	1870	1571	1767	3497	1546	1781	3202	377
Grp Volume(v), veh/h	170	35	165	1180	83	161	220	691	860	154	438	445
Grp Sat Flow(s),veh/h/ln	1728	1870	1547	1700	1870	1571	1767	1749	1546	1781	1777	1802
Q Serve(g_s), s	4.9	1.8	11.0	27.7	3.4	8.5	11.3	17.2	35.4	9.1	23.5	23.6
Cycle Q Clear(g_c), s	4.9	1.8	11.0	27.7	3.4	8.5	11.3	17.2	35.4	9.1	23.5	23.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	326	236	195	895	552	463	190	1176	927	157	564	572
V/C Ratio(X)	0.52	0.15	0.85	1.32	0.15	0.35	1.16	0.59	0.93	0.98	0.78	0.78
Avail Cap(c_a), veh/h	377	675	558	895	963	809	190	1176	927	157	564	572
HCM Platoon Ratio	1.00	1.00	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	45.4	41.0	45.0	38.8	27.4	29.2	47.0	28.9	19.0	47.9	32.6	32.6
Incr Delay (d2), s/veh	0.5	0.1	3.8	151.3	0.0	0.2	115.0	0.8	15.2	65.0	7.0	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.8	4.3	29.7	1.5	3.1	10.9	7.2	19.7	6.7	10.6	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	41.1	48.8	190.1	27.4	29.3	162.0	29.8	34.2	112.9	39.6	39.5
LnGrp LOS	D	D	D	F	C	C	F	C	C	F	D	D
Approach Vol, veh/h	370			1424			1771			1037		
Approach Delay, s/veh	46.7			162.5			48.4			50.4		
Approach LOS	D			F			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	40.7	33.0	18.6	15.0	38.7	15.2	36.4				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	9.3	35.4	27.7	38.0	11.3	33.4	11.5	54.2				
Max Q Clear Time (g_c+I1), s	11.1	37.4	29.7	13.0	13.3	25.6	6.9	10.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.3	0.0	3.6	0.1	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	84.0											
HCM 6th LOS	F											

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	200	660	898	131	29	270
Future Vol, veh/h	200	660	898	131	29	270
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	200	660	898	131	29	270
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	1029	0	-	0	1694	515
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	730	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	671	-	-	-	84	505
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	438	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	671	-	-	-	59	505
Mov Cap-2 Maneuver	-	-	-	-	162	-
Stage 1	-	-	-	-	232	-
Stage 2	-	-	-	-	438	-
Approach	EB	WB		SB		
HCM Control Delay, s	2.9	0		32.3		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	671	-	-	-	-	419
HCM Lane V/C Ratio	0.298	-	-	-	-	0.714
HCM Control Delay (s)	12.6	-	-	-	-	32.3
HCM Lane LOS	B	-	-	-	-	D
HCM 95th %tile Q(veh)	1.2	-	-	-	-	5.5

Queues

Horizon with Improvements

14: Redlands Ave & 4th St

Horizon AM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1267	42	38	9	55	33	515	36	78	340	1467
v/c Ratio	0.85	0.04	0.04	0.07	0.22	0.28	0.73	0.08	0.64	0.40	0.60
Control Delay	31.6	13.0	0.1	47.4	26.1	52.9	44.2	0.4	71.5	34.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	31.6	13.0	0.1	47.4	26.1	52.9	44.2	0.4	71.5	34.4	1.6
Queue Length 50th (ft)	369	11	0	6	7	21	165	0	51	103	0
Queue Length 95th (ft)	413	32	0	20	23	48	197	0	#104	131	1
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250	80		270		100	200		320
Base Capacity (vph)	1498	1452	1288	122	1320	116	829	476	122	875	2435
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	307
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.03	0.03	0.07	0.04	0.28	0.62	0.08	0.64	0.39	0.69

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

14: Redlands Ave & 4th St

Horizon with Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1026	34	31	7	18	27	27	417	29	63	275	1188
Future Volume (veh/h)	1026	34	31	7	18	27	27	417	29	63	275	1188
Initial Q (Qb), veh	0	0	0	0	0	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	1796	1826	1870	1870	1870	1811	1796	1826	1870	1870	1796	1841
Adj Flow Rate, veh/h	1267	42	38	9	22	33	33	515	36	78	340	1467
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	7	5	2	2	2	6	7	5	2	2	7	4
Cap, veh/h	1396	873	758	28	130	116	73	812	371	114	871	1856
Arrive On Green	0.42	0.48	0.48	0.02	0.07	0.07	0.04	0.23	0.23	0.06	0.26	0.26
Sat Flow, veh/h	3319	1826	1585	1781	1777	1585	1711	3469	1585	1781	3413	2745
Grp Volume(v), veh/h	1267	42	38	9	22	33	33	515	36	78	340	1467
Grp Sat Flow(s),veh/h/ln	1659	1826	1585	1781	1777	1585	1711	1735	1585	1781	1706	1373
Q Serve(g_s), s	34.3	1.2	1.2	0.5	1.1	1.9	1.8	12.8	1.7	4.1	7.9	24.5
Cycle Q Clear(g_c), s	34.3	1.2	1.2	0.5	1.1	1.9	1.8	12.8	1.7	4.1	7.9	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1396	873	758	28	130	116	73	812	371	114	871	1856
V/C Ratio(X)	0.91	0.05	0.05	0.32	0.17	0.29	0.45	0.63	0.10	0.69	0.39	0.79
Avail Cap(c_a), veh/h	1608	1550	1346	130	778	694	125	886	405	130	871	1856
HCM Platoon Ratio	1.00	1.00	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	26.0	13.4	13.4	46.7	41.8	42.1	44.8	33.1	28.8	44.0	29.6	10.8
Incr Delay (d2), s/veh	7.2	0.0	0.0	6.6	0.6	1.3	4.3	1.3	0.1	11.9	0.3	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	0.5	0.4	0.3	0.5	0.8	0.8	5.3	0.6	2.2	3.2	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	13.4	13.4	53.4	42.4	43.5	49.2	34.4	28.9	55.9	29.8	13.2
LnGrp LOS	C	B	B	D	D	D	D	C	C	E	C	B
Approach Vol, veh/h	1347			64			584			1885		
Approach Delay, s/veh	32.1			44.5			34.9			18.0		
Approach LOS	C			D			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	28.0	6.0	51.4	8.6	30.0	44.9	12.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	7.0	24.5	7.0	81.5	7.0	24.5	46.5	42.0				
Max Q Clear Time (g_c+I1), s	6.1	14.8	2.5	3.2	3.8	26.5	36.3	3.9				
Green Ext Time (p_c), s	0.0	2.3	0.0	0.4	0.0	0.0	4.1	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Horizon with Improvements
Horizon AM

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	246	1107	1763	321	489	479	441
v/c Ratio	0.69	0.64	0.82	0.46	0.85	0.81	0.76
Control Delay	48.6	18.5	30.9	5.2	40.9	32.0	28.4
Queue Delay	0.0	3.2	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	21.6	30.9	5.2	40.9	32.0	28.4
Queue Length 50th (ft)	70	238	270	0	255	210	176
Queue Length 95th (ft)	102	276	288	43	352	309	264
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	373	1751	2152	697	637	647	635
Starvation Cap Reductn	0	523	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	0.66	0.90	0.82	0.46	0.77	0.74	0.69
Intersection Summary							

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Horizon with Improvements

Horizon AM

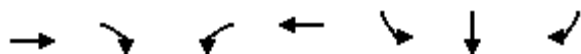
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			  			 				
Traffic Volume (veh/h)	207	930	0	0	1481	270	662	0	522	0	0	0
Future Volume (veh/h)	207	930	0	0	1481	270	662	0	522	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1693	1826	0	0	1870	1722	1811	1870	1841			
Adj Flow Rate, veh/h	246	1107	0	0	1763	321	981	0	414			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	14	5	0	0	2	12	6	2	4			
Cap, veh/h	324	1763	0	0	2240	508	1176	0	532			
Arrive On Green	0.10	0.51	0.00	0.00	0.35	0.35	0.34	0.00	0.34			
Sat Flow, veh/h	3127	3561	0	0	6696	1459	3450	0	1560			
Grp Volume(v), veh/h	246	1107	0	0	1763	321	981	0	414			
Grp Sat Flow(s),veh/h/ln	1564	1735	0	0	1609	1459	1725	0	1560			
Q Serve(g_s), s	6.1	18.4	0.0	0.0	19.6	14.6	20.9	0.0	19.0			
Cycle Q Clear(g_c), s	6.1	18.4	0.0	0.0	19.6	14.6	20.9	0.0	19.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	324	1763	0	0	2240	508	1176	0	532			
V/C Ratio(X)	0.76	0.63	0.00	0.00	0.79	0.63	0.83	0.00	0.78			
Avail Cap(c_a), veh/h	412	1916	0	0	2342	531	1472	0	666			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	34.7	14.1	0.0	0.0	23.3	21.7	24.2	0.0	23.5			
Incr Delay (d2), s/veh	6.1	0.6	0.0	0.0	1.8	2.3	3.5	0.0	4.6			
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	2.5	6.5	0.0	0.0	7.1	5.0	8.1	0.0	6.9			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.8	14.7	0.0	0.0	25.1	24.0	27.7	0.0	28.2			
LnGrp LOS	D	B	A	A	C	C	C	A	C			
Approach Vol, veh/h	1353			2084			1395					
Approach Delay, s/veh	19.5			24.9			27.8					
Approach LOS	B			C			C					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	46.5			12.8			33.7			33.2		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	44.0			10.5			29.0			34.0		
Max Q Clear Time (g_c+I1), s	20.4			8.1			21.6			22.9		
Green Ext Time (p_c), s	8.6			0.2			6.1			4.3		
Intersection Summary												
HCM 6th Ctrl Delay	24.2											
HCM 6th LOS	C											

Queues

Horizon with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon AM



Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1060	649	1005	1487	191	183	175
v/c Ratio	0.77	0.60	0.78	0.65	0.66	0.68	0.73
Control Delay	33.6	5.5	25.3	9.5	41.2	30.1	34.6
Queue Delay	0.0	0.0	0.1	0.3	0.0	0.0	0.0
Total Delay	33.6	5.5	25.5	9.8	41.2	30.1	34.6
Queue Length 50th (ft)	132	0	204	186	85	40	35
Queue Length 95th (ft)	#218	39	269	257	167	120	#130
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	1375	1079	1920	2901	380	324	288
Starvation Cap Reductn	0	0	220	680	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	0.77	0.60	0.59	0.67	0.50	0.56	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

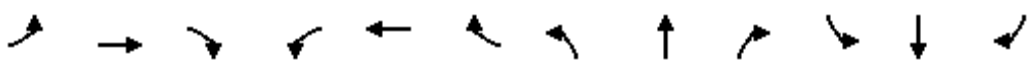
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

Horizon with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	912	558	864	1279	0	0	0	0	225	0	247
Future Volume (veh/h)	0	912	558	864	1279	0	0	0	0	225	0	247
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	1826	1767	1870	1841	0				1767	1870	877
Adj Flow Rate, veh/h	0	1060	649	1005	1487	0				355	0	187
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	5	9	2	4	0				9	2	69
Cap, veh/h	0	1328	557	1196	2158	0				778	0	172
Arrive On Green	0.00	0.21	0.21	0.35	0.62	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	6537	2635	3456	3589	0				3365	0	744
Grp Volume(v), veh/h	0	1060	649	1005	1487	0				355	0	187
Grp Sat Flow(s),veh/h/ln	0	1570	1317	1728	1749	0				1682	0	744
Q Serve(g_s), s	0.0	12.1	16.0	20.3	21.5	0.0				6.9	0.0	17.5
Cycle Q Clear(g_c), s	0.0	12.1	16.0	20.3	21.5	0.0				6.9	0.0	17.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1328	557	1196	2158	0				778	0	172
V/C Ratio(X)	0.00	0.80	1.17	0.84	0.69	0.00				0.46	0.00	1.09
Avail Cap(c_a), veh/h	0	1328	557	1849	2818	0				778	0	172
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	28.3	29.8	22.8	9.7	0.0				25.0	0.0	29.1
Incr Delay (d2), s/veh	0.0	3.5	92.7	2.2	0.5	0.0				0.4	0.0	94.0
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	4.6	11.9	7.9	6.5	0.0				2.5	0.0	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	31.9	122.5	25.0	10.1	0.0				25.4	0.0	123.1
LnGrp LOS	A	C	F	C	B	A				C	A	F
Approach Vol, veh/h		1709			2492						542	
Approach Delay, s/veh		66.3			16.1						59.1	
Approach LOS		E			B						E	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.7	22.0		23.0		52.7						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	40.5	16.0		17.5		61.0						
Max Q Clear Time (g_c+I1), s	22.3	18.0		19.5		23.5						
Green Ext Time (p_c), s	3.9	0.0		0.0		15.4						
Intersection Summary												
HCM 6th Ctrl Delay			39.1									
HCM 6th LOS			D									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Horizon with Improvements
Horizon AM



Lane Group	EBT	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	5	221	273	471	469	142
v/c Ratio	0.01	0.70	0.73	0.41	0.75	0.22
Control Delay	0.0	31.1	43.1	10.2	32.9	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	31.1	43.1	10.2	32.9	7.6
Queue Length 50th (ft)	0	53	110	76	171	6
Queue Length 95th (ft)	0	144	#309	270	#454	51
Internal Link Dist (ft)	435	541		502	590	
Turn Bay Length (ft)			130			125
Base Capacity (vph)	576	436	372	1157	640	642
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	0.01	0.51	0.73	0.41	0.73	0.22

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Horizon with Improvements

Horizon AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	4	61	2	127	235	405	0	0	403	122
Future Volume (veh/h)	0	0	4	61	2	127	235	405	0	0	403	122
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1159	1856	1870	1648	1707	1796	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	5	71	2	148	273	471	0	0	469	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	2	50	3	2	17	13	7	0	2	6	2
Cap, veh/h	0	0	34	89	3	186	319	1016	0	0	543	
Arrive On Green	0.00	0.00	0.02	0.17	0.17	0.17	0.20	0.57	0.00	0.00	0.30	0.00
Sat Flow, veh/h	0	0	1585	529	15	1102	1626	1796	0	0	1811	1585
Grp Volume(v), veh/h	0	0	5	221	0	0	273	471	0	0	469	0
Grp Sat Flow(s),veh/h/ln	0	0	1585	1646	0	0	1626	1796	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.2	8.4	0.0	0.0	10.5	10.0	0.0	0.0	15.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.2	8.4	0.0	0.0	10.5	10.0	0.0	0.0	15.9	0.0
Prop In Lane	0.00		1.00	0.32		0.67	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	0	34	277	0	0	319	1016	0	0	543	
V/C Ratio(X)	0.00	0.00	0.15	0.80	0.00	0.00	0.85	0.46	0.00	0.00	0.86	
Avail Cap(c_a), veh/h	0	0	439	456	0	0	430	1329	0	0	736	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	31.2	26.0	0.0	0.0	25.2	8.3	0.0	0.0	21.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.0	5.2	0.0	0.0	11.9	0.3	0.0	0.0	8.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	3.6	0.0	0.0	4.5	2.6	0.0	0.0	6.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	33.2	31.2	0.0	0.0	37.2	8.6	0.0	0.0	29.5	0.0
LnGrp LOS	A	A	C	C	A	A	D	A	A	A	C	
Approach Vol, veh/h	5			221			744			469		
Approach Delay, s/veh	33.2			31.2			19.1			29.5		
Approach LOS	C			C			B			C		
Timer - Assigned Phs	1	2	4			6	8					
Phs Duration (G+Y+Rc), s	17.3	26.0	6.1			43.3	15.6					
Change Period (Y+Rc), s	4.5	6.5	* 4.7			6.5	4.7					
Max Green Setting (Gmax), s	17.2	26.4	* 18			48.1	18.0					
Max Q Clear Time (g_c+I1), s	12.5	17.9	2.2			12.0	10.4					
Green Ext Time (p_c), s	0.3	1.6	0.0			2.7	0.8					

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	310	30	1360	1183	1546
v/c Ratio	0.70	0.19	0.76	0.71	1.05
Control Delay	32.3	38.6	14.2	16.7	44.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	38.6	14.2	16.7	44.1
Queue Length 50th (ft)	91	10	187	146	~60
Queue Length 95th (ft)	243	45	328	351	#349
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	728	166	2713	2447	1468
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.18	0.50	0.48	1.05
Intersection Summary					
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.					
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.					

HCM 6th Signalized Intersection Summary

30: SR-74

Horizon with Improvements

Horizon AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	238	41	27	1224	1065	1391
Future Volume (veh/h)	238	41	27	1224	1065	1391
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1811	1722	1781	1722	1767	1752
Adj Flow Rate, veh/h	264	46	30	1360	1183	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	12	8	12	9	10
Cap, veh/h	315	55	57	1894	1491	
Arrive On Green	0.22	0.22	0.03	0.58	0.44	0.00
Sat Flow, veh/h	1438	251	1697	3358	3445	1485
Grp Volume(v), veh/h	311	0	30	1360	1183	0
Grp Sat Flow(s),veh/h/ln	1694	0	1697	1636	1678	1485
Q Serve(g_s), s	9.2	0.0	0.9	15.7	15.9	0.0
Cycle Q Clear(g_c), s	9.2	0.0	0.9	15.7	15.9	0.0
Prop In Lane	0.85	0.15	1.00			1.00
Lane Grp Cap(c), veh/h	371	0	57	1894	1491	
V/C Ratio(X)	0.84	0.00	0.52	0.72	0.79	
Avail Cap(c_a), veh/h	797	0	184	3411	2796	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	19.6	0.0	24.9	8.0	12.5	0.0
Incr Delay (d2), s/veh	2.0	0.0	2.7	0.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	0.0	0.4	2.8	4.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.5	0.0	27.7	8.2	12.9	0.0
LnGrp LOS	C	A	C	A	B	
Approach Vol, veh/h	311			1390	1183	
Approach Delay, s/veh	21.5			8.6	12.9	
Approach LOS	C			A	B	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	35.7		16.8		7.1	28.6
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	54.7		24.7		5.7	43.7
Max Q Clear Time (g_c+I1), s	17.7		11.2		2.9	17.9
Green Ext Time (p_c), s	7.1		0.4		0.0	5.4
Intersection Summary						
HCM 6th Ctrl Delay			11.7			
HCM 6th LOS			B			
Notes						
User approved volume balancing among the lanes for turning movement.						
Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.						

Queues
32: SR-74 & Trumble Rd

Horizon with Improvements
Horizon AM



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	123	643	346	1259	2097
v/c Ratio	0.35	1.13	1.42	0.63	1.50
Control Delay	30.7	100.4	242.3	12.4	254.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.7	100.4	242.3	12.4	254.1
Queue Length 50th (ft)	57	~300	~267	212	~888
Queue Length 95th (ft)	107	#511	#435	276	#1030
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	351	567	244	1988	1397
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	1.13	1.42	0.63	1.50

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.

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Horizon with Improvements
Horizon AM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	112	585	315	1146	1872	36
Future Volume (veh/h)	112	585	315	1146	1872	36
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1411	1648	1767	1707	1767	1870
Adj Flow Rate, veh/h	123	643	346	1259	2057	40
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	33	17	9	13	9	2
Cap, veh/h	348	362	249	2018	1422	28
Arrive On Green	0.26	0.26	0.15	0.62	0.42	0.42
Sat Flow, veh/h	1344	1397	1682	3329	3456	65
Grp Volume(v), veh/h	123	643	346	1259	1022	1075
Grp Sat Flow(s),veh/h/ln	1344	1397	1682	1622	1678	1755
Q Serve(g_s), s	6.7	23.3	13.3	21.6	38.0	38.0
Cycle Q Clear(g_c), s	6.7	23.3	13.3	21.6	38.0	38.0
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	348	362	249	2018	709	741
V/C Ratio(X)	0.35	1.78	1.39	0.62	1.44	1.45
Avail Cap(c_a), veh/h	348	362	249	2018	709	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	33.3	38.3	10.5	26.0	26.0
Incr Delay (d2), s/veh	0.2	361.3	199.0	0.6	206.7	210.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	52.0	18.8	6.0	53.8	57.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.4	394.6	237.3	11.1	232.7	236.6
LnGrp LOS	C	F	F	B	F	F
Approach Vol, veh/h	766			1605	2097	
Approach Delay, s/veh	335.7			59.9	234.7	
Approach LOS	F			E	F	
Timer - Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	62.0			28.0	18.0	44.0
Change Period (Y+Rc), s	6.0			* 4.7	* 4.7	6.0
Max Green Setting (Gmax), s	56.0			* 23	* 13	38.0
Max Q Clear Time (g_c+I1), s	23.6			25.3	15.3	40.0
Green Ext Time (p_c), s	10.2			0.0	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			189.2			
HCM 6th LOS			F			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

Queues

Horizon with Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	55	303	394	849	1102	46
v/c Ratio	0.56	0.20	1.15	0.58	1.12	0.03
Control Delay	64.0	0.3	130.1	4.7	88.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.0	0.3	130.1	4.7	88.7	0.0
Queue Length 50th (ft)	31	0	~271	128	~744	0
Queue Length 95th (ft)	#82	0	#440	193	#966	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	99	1524	343	1465	986	1583
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	0.56	0.20	1.15	0.58	1.12	0.03

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon with Improvements

Horizon AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	270	351	756	981	41
Future Volume (veh/h)	49	270	351	756	981	41
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1841	1811	1781	1752	1752	1870
Adj Flow Rate, veh/h	55	0	394	849	1102	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	6	8	10	10	2
Cap, veh/h	73		344	1442	987	
Arrive On Green	0.04	0.00	0.20	0.82	0.56	0.00
Sat Flow, veh/h	1753	1535	1697	1752	1752	1585
Grp Volume(v), veh/h	55	0	394	849	1102	0
Grp Sat Flow(s),veh/h/ln	1753	1535	1697	1752	1752	1585
Q Serve(g_s), s	2.8	0.0	18.0	14.8	50.0	0.0
Cycle Q Clear(g_c), s	2.8	0.0	18.0	14.8	50.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	73		344	1442	987	
V/C Ratio(X)	0.75		1.14	0.59	1.12	
Avail Cap(c_a), veh/h	99		344	1442	987	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	42.0	0.0	35.4	2.7	19.4	0.0
Incr Delay (d2), s/veh	12.3	0.0	93.8	0.4	66.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	15.8	1.1	33.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.3	0.0	129.1	3.1	85.5	0.0
LnGrp LOS	D		F	A	F	
Approach Vol, veh/h	55			1243	1102	
Approach Delay, s/veh	54.3			43.1	85.5	
Approach LOS	D			D	F	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	23.0	56.0		9.7		79.0
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	18.0	50.0		5.0		73.0
Max Q Clear Time (g_c+I1), s	20.0	52.0		4.8		16.8
Green Ext Time (p_c), s	0.0	0.0		0.0		3.7

Intersection Summary

HCM 6th Ctrl Delay	62.8
HCM 6th LOS	E

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Queues
5: San Jacinto Ave & Dunlap Dr

Horizon with Improvements
Horizon PM



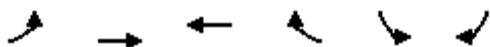
Lane Group	EBL	EBT	WBT	SBL
Lane Group Flow (vph)	332	638	455	298
v/c Ratio	0.83	0.32	0.53	0.64
Control Delay	42.6	6.3	16.1	16.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	42.6	6.3	16.1	16.4
Queue Length 50th (ft)	82	38	46	38
Queue Length 95th (ft)	#275	88	95	111
Internal Link Dist (ft)		577	616	608
Turn Bay Length (ft)	300			
Base Capacity (vph)	401	2546	1348	720
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.83	0.25	0.34	0.41

Intersection Summary

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

HCM 6th Signalized Intersection Summary 5: San Jacinto Ave & Dunlap Dr

Horizon with Improvements
Horizon PM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	319	612	342	95	115	171
Future Volume (veh/h)	319	612	342	95	115	171
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1841	1856	1826	1796	1856	1796
Adj Flow Rate, veh/h	332	638	356	99	120	178
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	4	3	5	7	3	7
Cap, veh/h	397	1946	586	161	154	228
Arrive On Green	0.23	0.55	0.22	0.22	0.23	0.23
Sat Flow, veh/h	1753	3618	2781	738	661	980
Grp Volume(v), veh/h	332	638	228	227	299	0
Grp Sat Flow(s),veh/h/ln	1753	1763	1735	1693	1646	0
Q Serve(g_s), s	7.6	4.1	4.9	5.1	7.1	0.0
Cycle Q Clear(g_c), s	7.6	4.1	4.9	5.1	7.1	0.0
Prop In Lane	1.00			0.44	0.40	0.60
Lane Grp Cap(c), veh/h	397	1946	378	369	383	0
V/C Ratio(X)	0.84	0.33	0.60	0.62	0.78	0.00
Avail Cap(c_a), veh/h	440	2781	746	728	708	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.4	5.1	14.7	14.8	15.0	0.0
Incr Delay (d2), s/veh	12.2	0.1	1.5	1.7	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.9	1.8	1.8	2.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	27.7	5.2	16.3	16.4	18.5	0.0
LnGrp LOS	C	A	B	B	B	A
Approach Vol, veh/h		970	455		299	
Approach Delay, s/veh		12.9	16.4		18.5	
Approach LOS		B	B		B	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		27.6		14.2	14.0	13.6
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		33.0		18.0	10.5	18.0
Max Q Clear Time (g_c+I1), s		6.1		9.1	9.6	7.1
Green Ext Time (p_c), s		4.7		0.6	0.1	2.1
Intersection Summary						
HCM 6th Ctrl Delay			14.8			
HCM 6th LOS			B			

Notes

User approved volume balancing among the lanes for turning movement.

Queues

Horizon with Improvements

7: San Jacinto Ave & Murrieta Rd

Horizon PM



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	354	890	103	436	78	82	141	15	49	239
v/c Ratio	0.74	0.63	0.48	0.59	0.36	0.32	0.33	0.10	0.18	0.27
Control Delay	35.2	19.4	36.5	26.1	32.8	30.0	2.6	30.8	29.7	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	19.4	36.5	26.1	32.8	30.0	2.6	30.8	29.7	4.4
Queue Length 50th (ft)	130	156	39	80	29	30	0	6	18	10
Queue Length 95th (ft)	#286	233	90	129	70	71	6	23	49	50
Internal Link Dist (ft)		670		607		1033			337	
Turn Bay Length (ft)	300		200		100			100		
Base Capacity (vph)	478	1507	232	945	260	532	621	448	777	871
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.59	0.44	0.46	0.30	0.15	0.23	0.03	0.06	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary

7: San Jacinto Ave & Murrieta Rd

Horizon with Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	786	65	95	382	36	72	75	130	14	45	229
Future Volume (veh/h)	340	786	65	95	382	36	72	75	130	14	45	229
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1856	1870	1870	1811	1870	1870	1870	1870	1722	1870	1870
Adj Flow Rate, veh/h	354	819	71	103	398	38	78	82	141	15	49	239
Peak Hour Factor	0.96	0.96	0.92	0.92	0.96	0.96	0.92	0.92	0.92	0.96	0.92	0.96
Percent Heavy Veh, %	2	3	2	2	6	2	2	2	2	12	2	2
Cap, veh/h	422	1144	99	133	593	56	116	253	215	157	311	639
Arrive On Green	0.24	0.35	0.35	0.07	0.19	0.19	0.06	0.14	0.14	0.10	0.17	0.17
Sat Flow, veh/h	1781	3283	285	1781	3176	302	1781	1870	1585	1640	1870	1585
Grp Volume(v), veh/h	354	440	450	103	215	221	78	82	141	15	49	239
Grp Sat Flow(s),veh/h/ln	1781	1763	1804	1781	1721	1757	1781	1870	1585	1640	1870	1585
Q Serve(g_s), s	9.9	11.3	11.3	3.0	6.0	6.1	2.2	2.1	4.4	0.4	1.2	5.5
Cycle Q Clear(g_c), s	9.9	11.3	11.3	3.0	6.0	6.1	2.2	2.1	4.4	0.4	1.2	5.5
Prop In Lane	1.00		0.16	1.00		0.17	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	422	614	629	133	321	328	116	253	215	157	311	639
V/C Ratio(X)	0.84	0.72	0.72	0.77	0.67	0.67	0.67	0.32	0.66	0.10	0.16	0.37
Avail Cap(c_a), veh/h	598	913	935	290	594	607	325	664	563	566	969	1196
HCM Platoon Ratio	1.00	1.00	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	19.0	14.7	14.7	23.7	19.7	19.7	23.8	20.4	21.4	21.5	18.6	10.9
Incr Delay (d2), s/veh	7.3	1.6	1.5	9.2	2.4	2.4	6.7	0.7	3.4	0.3	0.2	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	4.2	3.7	3.8	1.4	2.2	2.3	1.1	0.9	1.6	0.2	0.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	16.3	16.3	32.9	22.1	22.2	30.5	21.1	24.8	21.8	18.8	11.3
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		1244			539			301			303	
Approach Delay, s/veh		19.1			24.2			25.3			13.0	
Approach LOS		B			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	11.6	8.4	22.7	7.9	13.2	16.8	14.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	18.5	8.5	27.0	9.5	27.0	17.5	18.0				
Max Q Clear Time (g_c+I1), s	2.4	6.4	5.0	13.3	4.2	7.5	11.9	8.1				
Green Ext Time (p_c), s	0.0	0.7	0.1	4.4	0.1	1.0	0.5	1.6				
Intersection Summary												
HCM 6th Ctrl Delay				20.3								
HCM 6th LOS				C								

Queues

Horizon with Improvements

9: Redlands Ave & San Jacinto Ave

Horizon PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	89	84	193	726	60	126	253	788	1158	164	682
v/c Ratio	0.24	0.43	0.57	0.86	0.11	0.23	0.87	0.76	0.98	0.67	0.73
Control Delay	42.7	47.8	13.4	46.9	29.3	6.9	69.7	35.6	32.2	55.6	36.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	47.8	13.4	46.9	29.3	6.9	69.7	35.6	32.2	55.6	36.1
Queue Length 50th (ft)	25	47	0	211	27	0	147	222	372	93	191
Queue Length 95th (ft)	54	101	64	#375	65	45	#334	303	#880	#211	264
Internal Link Dist (ft)		439			612			723			624
Turn Bay Length (ft)	150			280		500	200		300	275	
Base Capacity (vph)	368	760	760	840	1033	923	290	1360	1182	245	1253
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.11	0.25	0.86	0.06	0.14	0.87	0.58	0.98	0.67	0.54

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 9: Redlands Ave & San Jacinto Ave

Horizon with Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	85	81	185	697	58	121	243	756	1112	157	585	70
Future Volume (veh/h)	85	81	185	697	58	121	243	756	1112	157	585	70
Initial Q (Qb), veh	0	0	0	0	0	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	1870	1870	1870	1811	1870	1870	1870	1870	1856	1870	1870	1870
Adj Flow Rate, veh/h	89	84	193	726	60	126	253	788	1158	164	609	73
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	6	2	2	2	2	3	2	2	2
Cap, veh/h	302	274	232	747	528	447	257	1198	881	194	964	115
Arrive On Green	0.09	0.15	0.15	0.22	0.28	0.28	0.14	0.34	0.34	0.11	0.30	0.30
Sat Flow, veh/h	3456	1870	1585	3346	1870	1583	1781	3554	1572	1781	3195	382
Grp Volume(v), veh/h	89	84	193	726	60	126	253	788	1158	164	338	344
Grp Sat Flow(s),veh/h/ln	1728	1870	1585	1673	1870	1583	1781	1777	1572	1781	1777	1800
Q Serve(g_s), s	2.6	4.3	12.6	22.9	2.5	6.6	15.0	20.1	35.8	9.6	17.4	17.5
Cycle Q Clear(g_c), s	2.6	4.3	12.6	22.9	2.5	6.6	15.0	20.1	35.8	9.6	17.4	17.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	302	274	232	747	528	447	257	1198	881	194	536	543
V/C Ratio(X)	0.29	0.31	0.83	0.97	0.11	0.28	0.99	0.66	1.31	0.85	0.63	0.63
Avail Cap(c_a), veh/h	325	669	567	747	910	771	257	1198	881	216	559	566
HCM Platoon Ratio	1.00	1.00	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	45.4	40.5	44.1	40.9	28.3	29.7	45.3	30.0	23.4	46.5	32.0	32.0
Incr Delay (d2), s/veh	0.5	0.6	7.5	26.1	0.1	0.3	52.1	1.3	149.6	23.6	2.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	1.9	5.2	11.7	1.1	2.5	10.2	8.5	55.4	5.4	7.4	7.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	41.1	51.6	67.0	28.4	30.1	97.4	31.3	172.9	70.1	34.1	34.2
LnGrp LOS	D	D	D	E	C	C	F	C	F	E	C	C
Approach Vol, veh/h		366			912			2199			846	
Approach Delay, s/veh		47.8			59.4			113.5			41.1	
Approach LOS		D			E			F			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	41.1	29.0	20.8	19.0	37.4	14.6	35.3				
Change Period (Y+Rc), s	3.7	5.3	5.3	5.3	3.7	5.3	5.3	5.3				
Max Green Setting (Gmax), s	12.9	35.8	23.7	38.0	15.3	33.4	10.0	51.7				
Max Q Clear Time (g_c+I1), s	11.6	37.8	24.9	14.6	17.0	19.5	4.6	8.6				
Green Ext Time (p_c), s	0.1	0.0	0.0	1.0	0.0	3.2	0.1	0.7				
Intersection Summary												
HCM 6th Ctrl Delay				82.4								
HCM 6th LOS				F								

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	209	1141	643	40	50	232
Future Vol, veh/h	209	1141	643	40	50	232
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	280	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	209	1141	643	40	50	232
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	683	0	-	0	1652	342
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	989	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	906	-	-	-	89	654
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	321	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	906	-	-	-	68	654
Mov Cap-2 Maneuver	-	-	-	-	187	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	321	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		25.2		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	906	-	-	-	453	
HCM Lane V/C Ratio	0.231	-	-	-	0.623	
HCM Control Delay (s)	10.2	-	-	-	25.2	
HCM Lane LOS	B	-	-	-	D	
HCM 95th %tile Q(veh)	0.9	-	-	-	4.1	

Queues

Horizon with Improvements

14: Redlands Ave & 4th St

Horizon PM

											
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	1373	56	84	14	144	76	478	26	56	318	1197
v/c Ratio	0.85	0.05	0.09	0.11	0.42	0.61	0.65	0.06	0.46	0.52	0.53
Control Delay	30.8	12.3	3.2	48.0	18.2	68.2	41.4	0.3	58.6	39.6	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	30.8	12.3	3.2	48.0	18.2	68.2	41.4	0.3	58.6	39.6	1.4
Queue Length 50th (ft)	380	14	0	8	10	47	150	0	35	95	0
Queue Length 95th (ft)	#598	44	24	30	42	#122	209	0	80	141	18
Internal Link Dist (ft)	361			375			311			462	
Turn Bay Length (ft)	250		250		80		270		100		200
Base Capacity (vph)	1610	1531	1301	124	1389	124	874	480	123	833	2264
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	340
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.85	0.04	0.06	0.11	0.10	0.61	0.55	0.05	0.46	0.38	0.62

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary 14: Redlands Ave & 4th St

Horizon with Improvements
Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1332	54	81	14	32	108	74	464	25	54	308	1161
Future Volume (veh/h)	1332	54	81	14	32	108	74	464	25	54	308	1161
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1796	1826
Adj Flow Rate, veh/h	1373	56	84	14	33	111	76	478	26	56	318	1197
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	7	5
Cap, veh/h	1461	927	776	40	169	151	106	847	373	95	794	1785
Arrive On Green	0.42	0.50	0.50	0.02	0.10	0.10	0.06	0.24	0.24	0.05	0.23	0.23
Sat Flow, veh/h	3456	1870	1565	1781	1777	1585	1781	3554	1565	1767	3413	2723
Grp Volume(v), veh/h	1373	56	84	14	33	111	76	478	26	56	318	1197
Grp Sat Flow(s),veh/h/ln	1728	1870	1565	1781	1777	1585	1781	1777	1565	1767	1706	1362
Q Serve(g_s), s	40.1	1.6	3.0	0.8	1.8	7.2	4.4	12.5	1.4	3.3	8.3	24.5
Cycle Q Clear(g_c), s	40.1	1.6	3.0	0.8	1.8	7.2	4.4	12.5	1.4	3.3	8.3	24.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	1461	927	776	40	169	151	106	847	373	95	794	1785
V/C Ratio(X)	0.94	0.06	0.11	0.35	0.20	0.74	0.72	0.56	0.07	0.59	0.40	0.67
Avail Cap(c_a), veh/h	1526	1448	1212	118	709	632	118	847	373	118	794	1785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.1	13.8	14.1	50.7	43.9	46.3	48.7	35.3	31.0	48.7	34.2	11.1
Incr Delay (d2), s/veh	11.4	0.0	0.1	5.2	0.6	6.8	16.9	0.9	0.1	5.8	0.3	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.0	0.7	1.0	0.4	0.8	3.1	2.4	5.3	0.5	1.6	3.4	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	13.8	14.2	55.9	44.5	53.1	65.6	36.1	31.1	54.5	34.5	12.1
LnGrp LOS	D	B	B	E	D	D	E	D	C	D	C	B
Approach Vol, veh/h		1513			158			580			1571	
Approach Delay, s/veh		38.0			51.6			39.8			18.2	
Approach LOS		D			D			D			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	30.6	6.9	57.7	10.7	30.0	49.0	15.5				
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5				
Max Green Setting (Gmax), s	7.0	24.5	7.0	81.5	7.0	24.5	46.5	42.0				
Max Q Clear Time (g_c+I1), s	5.3	14.5	2.8	5.0	6.4	26.5	42.1	9.2				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.6	0.0	0.0	2.5	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Queues
17: SR-215 NB Off-ramp & Redlands Ave

Horizon with Improvements
Horizon PM



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	271	1265	1309	235	573	544	526
v/c Ratio	0.73	0.80	0.74	0.39	0.86	0.89	0.79
Control Delay	50.3	26.0	31.7	5.8	38.2	41.3	28.3
Queue Delay	0.0	27.4	0.0	0.0	0.0	0.0	0.0
Total Delay	50.3	53.4	31.7	5.8	38.2	41.3	28.3
Queue Length 50th (ft)	77	318	196	0	298	291	220
Queue Length 95th (ft)	#130	408	237	53	#501	#510	#376
Internal Link Dist (ft)		298	723			1082	
Turn Bay Length (ft)					800		500
Base Capacity (vph)	386	1622	1833	610	712	653	706
Starvation Cap Reductn	0	414	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	0.70	1.05	0.71	0.39	0.80	0.83	0.75

Intersection Summary

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

HCM 6th Signalized Intersection Summary 17: SR-215 NB Off-ramp & Redlands Ave

Horizon with Improvements
Horizon PM

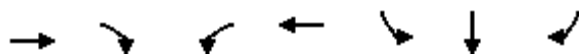
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	1202	0	0	1244	223	648	4	909	0	0	0
Future Volume (veh/h)	257	1202	0	0	1244	223	648	4	909	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
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	1781	1856	0	0	1841	1811	1811	1870	1856			
Adj Flow Rate, veh/h	271	1265	0	0	1309	235	1024	0	594			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	8	3	0	0	4	6	6	2	3			
Cap, veh/h	349	1534	0	0	1741	422	1450	0	661			
Arrive On Green	0.11	0.44	0.00	0.00	0.27	0.27	0.42	0.00	0.42			
Sat Flow, veh/h	3291	3618	0	0	6590	1535	3450	0	1572			
Grp Volume(v), veh/h	271	1265	0	0	1309	235	1024	0	594			
Grp Sat Flow(s),veh/h/ln	1646	1763	0	0	1583	1535	1725	0	1572			
Q Serve(g_s), s	6.7	26.2	0.0	0.0	15.7	10.9	20.3	0.0	29.2			
Cycle Q Clear(g_c), s	6.7	26.2	0.0	0.0	15.7	10.9	20.3	0.0	29.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	349	1534	0	0	1741	422	1450	0	661			
V/C Ratio(X)	0.78	0.82	0.00	0.00	0.75	0.56	0.71	0.00	0.90			
Avail Cap(c_a), veh/h	408	1698	0	0	1922	466	1579	0	720			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.2	20.7	0.0	0.0	27.5	25.8	19.8	0.0	22.4			
Incr Delay (d2), s/veh	7.9	3.2	0.0	0.0	1.5	1.2	1.3	0.0	13.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.0	10.4	0.0	0.0	5.8	3.9	7.4	0.0	11.8			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.0	23.8	0.0	0.0	29.1	27.0	21.2	0.0	36.0			
LnGrp LOS	D	C	A	A	C	C	C	A	D			
Approach Vol, veh/h	1536			1544			1618					
Approach Delay, s/veh	27.4			28.7			26.6					
Approach LOS	C			C			C					
Timer - Assigned Phs	2			5			6			8		
Phs Duration (G+Y+Rc), s	42.1			13.3			28.8			40.9		
Change Period (Y+Rc), s	6.0			4.5			6.0			6.0		
Max Green Setting (Gmax), s	40.0			10.3			25.2			38.0		
Max Q Clear Time (g_c+I1), s	28.2			8.7			17.7			31.2		
Green Ext Time (p_c), s	6.7			0.2			5.1			3.7		
Intersection Summary												
HCM 6th Ctrl Delay	27.6											
HCM 6th LOS	C											

Queues

Horizon with Improvements

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon PM



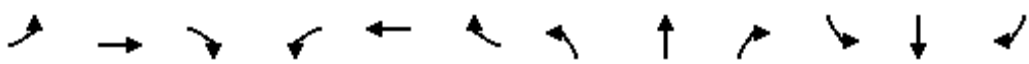
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1335	879	774	1426	246	238	228
v/c Ratio	0.67	0.61	0.80	0.64	0.70	0.67	0.61
Control Delay	27.6	4.4	34.7	10.8	42.0	33.7	25.2
Queue Delay	0.0	0.0	0.2	1.1	0.0	0.0	0.0
Total Delay	27.6	4.4	34.9	11.9	42.0	33.7	25.2
Queue Length 50th (ft)	179	5	190	212	125	97	66
Queue Length 95th (ft)	228	40	251	283	203	176	136
Internal Link Dist (ft)	462			298		782	
Turn Bay Length (ft)		270	270		800		270
Base Capacity (vph)	1994	1448	1175	2440	450	439	453
Starvation Cap Reductn	0	0	69	710	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	0.67	0.61	0.70	0.82	0.55	0.54	0.50
Intersection Summary							

HCM 6th Signalized Intersection Summary

20: SR-215 SB On-ramp/SR-215 SB Off-ramp & Redlands Ave

Horizon with Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	1148	756	666	1226	0	0	0	0	311	4	297
Future Volume (veh/h)	0	1148	756	666	1226	0	0	0	0	311	4	297
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	1870	1856	1870	1826	0				1870	1870	1811
Adj Flow Rate, veh/h	0	1335	879	774	1426	0				471	0	232
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86				0.86	0.86	0.86
Percent Heavy Veh, %	0	2	3	2	5	0				2	2	6
Cap, veh/h	0	2119	911	922	2274	0				688	0	296
Arrive On Green	0.00	0.33	0.33	0.27	0.66	0.00				0.19	0.00	0.19
Sat Flow, veh/h	0	6696	2768	3456	3561	0				3563	0	1535
Grp Volume(v), veh/h	0	1335	879	774	1426	0				471	0	232
Grp Sat Flow(s),veh/h/ln	0	1609	1384	1728	1735	0				1781	0	1535
Q Serve(g_s), s	0.0	13.3	23.7	16.1	18.3	0.0				9.3	0.0	10.9
Cycle Q Clear(g_c), s	0.0	13.3	23.7	16.1	18.3	0.0				9.3	0.0	10.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2119	911	922	2274	0				688	0	296
V/C Ratio(X)	0.00	0.63	0.96	0.84	0.63	0.00				0.68	0.00	0.78
Avail Cap(c_a), veh/h	0	2119	911	1252	2604	0				1009	0	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.5	25.0	26.3	7.7	0.0				28.5	0.0	29.1
Incr Delay (d2), s/veh	0.0	0.6	21.6	3.9	0.4	0.0				1.2	0.0	5.6
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	4.7	9.8	6.7	5.2	0.0				3.8	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	22.2	46.6	30.2	8.0	0.0				29.7	0.0	34.7
LnGrp LOS	A	C	D	C	A	A				C	A	C
Approach Vol, veh/h		2214			2200						703	
Approach Delay, s/veh		31.9			15.8						31.4	
Approach LOS		C			B						C	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	24.8	31.0		20.2		55.8						
Change Period (Y+Rc), s	4.5	6.0		5.5		6.0						
Max Green Setting (Gmax), s	27.5	25.0		21.5		57.0						
Max Q Clear Time (g_c+I1), s	18.1	25.7		12.9		20.3						
Green Ext Time (p_c), s	2.2	0.0		1.7		14.4						
Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												

Queues
25: Case Rd & Ellis Ave

Horizon with Improvements

Horizon PM



Lane Group	WBT	SEL	SET	NWT	NWR
Lane Group Flow (vph)	370	220	550	583	178
v/c Ratio	0.81	0.78	0.47	0.80	0.16
Control Delay	33.0	51.9	9.3	30.7	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	51.9	9.3	30.7	1.7
Queue Length 50th (ft)	105	103	126	241	7
Queue Length 95th (ft)	#232	#204	187	#399	22
Internal Link Dist (ft)	541		502	590	
Turn Bay Length (ft)		130			125
Base Capacity (vph)	470	283	1169	727	1148
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.79	0.78	0.47	0.80	0.16

Intersection Summary

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

HCM 6th Signalized Intersection Summary

25: Case Rd & Ellis Ave

Horizon with Improvements

Horizon PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	126	0	200	194	484	0	0	513	157
Future Volume (veh/h)	0	0	0	126	0	200	194	484	0	0	513	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	0	1870	1870	1811	1870	1707	1841	1870	0	1870	1811	1870
Adj Flow Rate, veh/h	0	0	0	143	0	227	220	550	0	0	583	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	0	2	2	6	2	13	4	2	0	2	6	2
Cap, veh/h	0	3	0	161	0	255	265	1089	0	0	659	
Arrive On Green	0.00	0.00	0.00	0.25	0.00	0.25	0.15	0.58	0.00	0.00	0.36	0.00
Sat Flow, veh/h	0	1870	0	640	0	1016	1753	1870	0	0	1811	1585
Grp Volume(v), veh/h	0	0	0	370	0	0	220	550	0	0	583	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1656	0	0	1753	1870	0	0	1811	1585
Q Serve(g_s), s	0.0	0.0	0.0	14.5	0.0	0.0	8.2	11.7	0.0	0.0	20.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	14.5	0.0	0.0	8.2	11.7	0.0	0.0	20.3	0.0
Prop In Lane	0.00		0.00	0.39		0.61	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	0	3	0	415	0	0	265	1089	0	0	659	
V/C Ratio(X)	0.00	0.00	0.00	0.89	0.00	0.00	0.83	0.51	0.00	0.00	0.88	
Avail Cap(c_a), veh/h	0	502	0	444	0	0	327	1341	0	0	840	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.2	0.0	0.0	27.6	8.3	0.0	0.0	20.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	18.9	0.0	0.0	13.8	0.4	0.0	0.0	9.2	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	0.0	0.0	0.0	7.6	0.0	0.0	4.0	3.1	0.0	0.0	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	43.1	0.0	0.0	41.4	8.7	0.0	0.0	29.2	0.0
LnGrp LOS	A	A	A	D	A	A	D	A	A	A	C	
Approach Vol, veh/h	0			370			770			583		
Approach Delay, s/veh	0.0			43.1			18.0			29.2		
Approach LOS				D			B			C		
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.6	30.9		0.0		45.5		21.5				
Change Period (Y+Rc), s	4.5	6.5		* 4.7		6.5		4.7				
Max Green Setting (Gmax), s	12.5	31.1		* 18		48.1		18.0				
Max Q Clear Time (g_c+I1), s	10.2	22.3		0.0		13.7		16.5				
Green Ext Time (p_c), s	0.1	2.2		0.0		3.2		0.4				

Intersection Summary

HCM 6th Ctrl Delay 27.2

HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.

					
Lane Group	SBL	SEL	SET	NWT	NWR
Lane Group Flow (vph)	390	38	1924	1055	1331
v/c Ratio	0.92	0.32	0.93	0.58	0.90
Control Delay	59.8	47.4	24.7	16.2	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	47.4	24.7	16.2	10.3
Queue Length 50th (ft)	209	21	457	222	0
Queue Length 95th (ft)	#386	53	#624	287	#69
Internal Link Dist (ft)	245		366	655	
Turn Bay Length (ft)		300			350
Base Capacity (vph)	451	129	2260	1877	1482
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.86	0.29	0.85	0.56	0.90

Intersection Summary

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

HCM 6th Signalized Intersection Summary

30: SR-74

Horizon with Improvements

Horizon PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	297	70	36	1809	992	1251
Future Volume (veh/h)	297	70	36	1809	992	1251
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1678	1781	1826	1811	1826	1767
Adj Flow Rate, veh/h	316	74	38	1924	1055	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	15	8	5	6	5	9
Cap, veh/h	339	79	61	2085	1764	
Arrive On Green	0.27	0.27	0.03	0.61	0.51	0.00
Sat Flow, veh/h	1262	296	1739	3532	3561	1497
Grp Volume(v), veh/h	391	0	38	1924	1055	0
Grp Sat Flow(s),veh/h/ln	1561	0	1739	1721	1735	1497
Q Serve(g_s), s	20.7	0.0	1.8	42.3	18.2	0.0
Cycle Q Clear(g_c), s	20.7	0.0	1.8	42.3	18.2	0.0
Prop In Lane	0.81	0.19	1.00			1.00
Lane Grp Cap(c), veh/h	420	0	61	2085	1764	
V/C Ratio(X)	0.93	0.00	0.63	0.92	0.60	
Avail Cap(c_a), veh/h	437	0	129	2262	1806	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	30.2	0.0	40.3	14.9	14.7	0.0
Incr Delay (d2), s/veh	25.6	0.0	3.9	6.3	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	0.8	13.8	6.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	55.8	0.0	44.2	21.2	15.1	0.0
LnGrp LOS	E	A	D	C	B	
Approach Vol, veh/h	391			1962	1055	
Approach Delay, s/veh	55.8			21.7	15.1	
Approach LOS	E			C	B	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	56.6		28.1		8.3	48.4
Change Period (Y+Rc), s	5.3		5.3		5.3	5.3
Max Green Setting (Gmax), s	55.7		23.7		6.3	44.1
Max Q Clear Time (g_c+I1), s	44.3		22.7		3.8	20.2
Green Ext Time (p_c), s	7.0		0.1		0.0	4.5
Intersection Summary						
HCM 6th Ctrl Delay			23.6			
HCM 6th LOS			C			
Notes						
User approved volume balancing among the lanes for turning movement.						
Unsignalized Delay for [NWR] is excluded from calculations of the approach delay and intersection delay.						



Lane Group	SBL	SBR	SEL	SET	NWT
Lane Group Flow (vph)	77	639	523	1742	1892
v/c Ratio	0.18	1.01	1.84	0.82	1.51
Control Delay	27.7	55.1	417.8	17.0	257.4
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	27.7	55.1	417.8	17.1	257.4
Queue Length 50th (ft)	34	~198	~455	361	~802
Queue Length 95th (ft)	70	#435	#649	466	#943
Internal Link Dist (ft)	422			655	524
Turn Bay Length (ft)			350		
Base Capacity (vph)	419	634	284	2130	1256
Starvation Cap Reductn	0	0	0	22	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	1.01	1.84	0.83	1.51

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.

HCM 6th Signalized Intersection Summary 32: SR-74 & Trumble Rd

Horizon with Improvements
Horizon PM

						
Movement	SBL	SBR	SEL	SET	NWT	NWR
Lane Configurations						
Traffic Volume (veh/h)	72	594	486	1620	1648	112
Future Volume (veh/h)	72	594	486	1620	1648	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1752	1781	1678	1811	1781	877
Adj Flow Rate, veh/h	77	639	523	1742	1772	120
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	10	8	15	6	8	69
Cap, veh/h	426	386	289	2153	1263	85
Arrive On Green	0.26	0.26	0.18	0.63	0.39	0.39
Sat Flow, veh/h	1668	1510	1598	3532	3308	216
Grp Volume(v), veh/h	77	639	523	1742	923	969
Grp Sat Flow(s),veh/h/ln	1668	1510	1598	1721	1692	1742
Q Serve(g_s), s	3.2	23.0	16.3	34.6	35.3	35.3
Cycle Q Clear(g_c), s	3.2	23.0	16.3	34.6	35.3	35.3
Prop In Lane	1.00	1.00	1.00			0.12
Lane Grp Cap(c), veh/h	426	386	289	2153	664	683
V/C Ratio(X)	0.18	1.66	1.81	0.81	1.39	1.42
Avail Cap(c_a), veh/h	426	386	289	2153	664	683
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	33.5	36.8	12.8	27.3	27.4
Incr Delay (d2), s/veh	0.1	306.7	376.7	2.4	184.8	196.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	49.7	36.2	10.6	46.5	50.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	26.2	340.2	413.6	15.2	212.2	224.1
LnGrp LOS	C	F	F	B	F	F
Approach Vol, veh/h	716			2265	1892	
Approach Delay, s/veh	306.4			107.2	218.3	
Approach LOS	F			F	F	
Timer - Assigned Phs	2		4		5	6
Phs Duration (G+Y+Rc), s	62.3		27.7		21.0	41.3
Change Period (Y+Rc), s	6.0		* 4.7		* 4.7	6.0
Max Green Setting (Gmax), s	56.3		* 23		* 16	35.3
Max Q Clear Time (g_c+I1), s	36.6		25.0		18.3	37.3
Green Ext Time (p_c), s	12.2		0.0		0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			179.6			
HCM 6th LOS			F			
Notes						

Queues

Horizon with Improvements

36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	53	499	460	695	1507	80
v/c Ratio	0.55	0.33	1.41	0.45	1.39	0.05
Control Delay	64.4	0.6	231.1	3.4	202.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.4	0.6	231.1	3.4	202.7	0.1
Queue Length 50th (ft)	30	0	~359	86	~1170	0
Queue Length 95th (ft)	#83	0	#545	129	#1425	0
Internal Link Dist (ft)	553			416	292	
Turn Bay Length (ft)		150	250			120
Base Capacity (vph)	96	1524	327	1536	1084	1524
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	0.55	0.33	1.41	0.45	1.39	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 6th Signalized Intersection Summary
36: SR-74/SR-215 SB On-Off Ramp & Bonnie Dr

Horizon with Improvements

Horizon PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	49	459	423	639	1386	74
Future Volume (veh/h)	49	459	423	639	1386	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1811	1796	1826	1870	1811
Adj Flow Rate, veh/h	53	0	460	695	1507	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	6	7	5	2	6
Cap, veh/h	70		328	1504	1076	
Arrive On Green	0.04	0.00	0.19	0.82	0.58	0.00
Sat Flow, veh/h	1711	1535	1711	1826	1870	1535
Grp Volume(v), veh/h	53	0	460	695	1507	0
Grp Sat Flow(s),veh/h/ln	1711	1535	1711	1826	1870	1535
Q Serve(g_s), s	2.7	0.0	17.0	9.6	51.0	0.0
Cycle Q Clear(g_c), s	2.7	0.0	17.0	9.6	51.0	0.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	70		328	1504	1076	
V/C Ratio(X)	0.75		1.40	0.46	1.40	
Avail Cap(c_a), veh/h	96		328	1504	1076	
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	42.1	0.0	35.8	2.2	18.8	0.0
Incr Delay (d2), s/veh	12.1	0.0	198.4	0.1	185.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	24.6	0.7	72.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	54.1	0.0	234.2	2.3	204.7	0.0
LnGrp LOS	D		F	A	F	
Approach Vol, veh/h	53			1155	1507	
Approach Delay, s/veh	54.1			94.7	204.7	
Approach LOS	D			F	F	
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	22.0	57.0		9.6		79.0
Change Period (Y+Rc), s	5.0	6.0		6.0		6.0
Max Green Setting (Gmax), s	17.0	51.0		5.0		73.0
Max Q Clear Time (g_c+I1), s	19.0	53.0		4.7		11.6
Green Ext Time (p_c), s	0.0	0.0		0.0		2.7

Intersection Summary

HCM 6th Ctrl Delay	155.0
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX H

HCS OUTPUTS FOR SEGMENT LOS ANALYSIS

HCS7 Multilane Highway Report

Project Information

Analyst		Date	
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	
Project Description		Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	188	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.86	Flow Rate (Vp), pc/h/ln	110
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.06

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	2.4
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	109	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.62
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B

HCS7 Multilane Highway Report

Project Information

Analyst		Date	
Agency		Analysis Year	2023
Jurisdiction		Time Period Analyzed	
Project Description		Unit	United States Customary

Direction 1 Geometric Data

Direction 1	NB		
Number of Lanes (N), ln	2	Terrain Type	Level
Segment Length (L), ft	-	Percent Grade, %	-
Measured or Base Free-Flow Speed	Base	Grade Length, mi	-
Base Free-Flow Speed (BFFS), mi/h	45.0	Access Point Density, pts/mi	0.0
Lane Width, ft	12	Left-Side Lateral Clearance (LCR), ft	6
Median Type	Divided	Total Lateral Clearance (TLC), ft	12
Free-Flow Speed (FFS), mi/h	45.0		

Direction 1 Adjustment Factors

Driver Population	All Familiar	Final Speed Adjustment Factor (SAF)	1.000
Driver Population SAF	1.000	Final Capacity Adjustment Factor (CAF)	1.000
Driver Population CAF	1.000		

Direction 1 Demand and Capacity

Volume(V) veh/h	277	Heavy Vehicle Adjustment Factor (fHV)	1.000
Peak Hour Factor	0.86	Flow Rate (Vp), pc/h/ln	161
Total Trucks, %	0.00	Capacity (c), pc/h/ln	1900
Single-Unit Trucks (SUT), %	-	Adjusted Capacity (cadj), pc/h/ln	1900
Tractor-Trailers (TT), %	-	Volume-to-Capacity Ratio (v/c)	0.08

Direction 1 Speed and Density

Lane Width Adjustment (fLW)	0.0	Average Speed (S), mi/h	45.0
Total Lateral Clearance Adj. (fLLC)	0.0	Density (D), pc/mi/ln	3.6
Median Type Adjustment (fM)	0.0	Level of Service (LOS)	A
Access Point Density Adjustment (fA)	0.0		

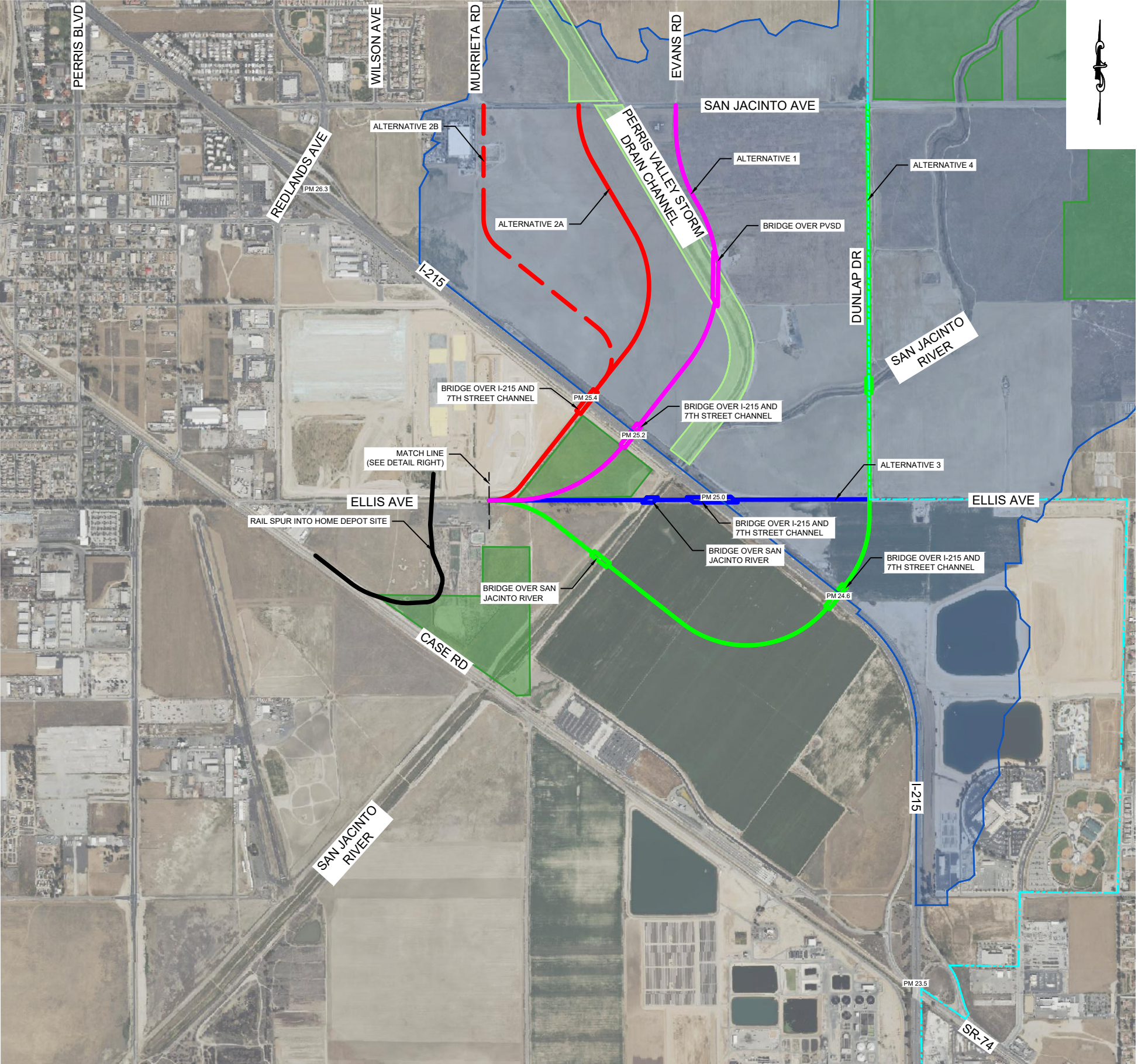
Direction 1 Bicycle LOS

Flow Rate in Outside Lane (vOL),veh/h	161	Effective Speed Factor (St)	4.62
Effective Width of Volume (Wv), ft	18	Bicycle LOS Score (BLOS)	1.82
Average Effective Width (We), ft	24	Bicycle Level of Service (LOS)	B



Appendix C

Interchange Alternatives

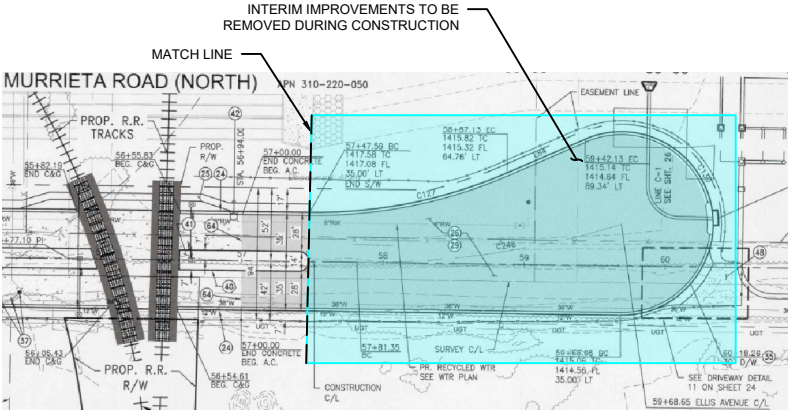


PROJECT ALTERNATIVES

- ALTERNATIVE 1**
- ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.1 MILES FROM REDLANDS AVE & 1.7 MILES FROM SR-74)
 - 55 MPH DESIGN SPEED
 - PERPENDICULAR CROSSING AT I-215, 7TH STREET CHANNEL; SKEWED CROSSING AT PVSD
 - CROSSES DEDICATED CONSERVATION LAND
- ALTERNATIVE 2A**
- ELIGIBLE FOR OVERCROSSING ONLY (0.9 MILES FROM REDLANDS AVE & 1.9 MILES FROM SR-74)
 - 30 MPH DESIGN SPEED AT ELLIS AVENUE (TO AVOID CONSERVATION LAND); 50 MPH ELSEWHERE
 - PERPENDICULAR CROSSING AT I-215 AND 7TH STREET CHANNEL
- ALTERNATIVE 2B**
- ELIGIBLE FOR OVERCROSSING ONLY (0.9 MILES FROM REDLANDS AVE & 1.9 MILES FROM SR-74)
 - 30 MPH DESIGN SPEED AT ELLIS AVENUE (TO AVOID CONSERVATION LAND); 50 MPH ELSEWHERE
 - PERPENDICULAR CROSSING AT I-215 AND 7TH STREET CHANNEL
 - INTERSECTS SAN JACINTO ROAD ACROSS FROM MURRIETA ROAD
- ALTERNATIVE 3**
- ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.3 MILES FROM REDLANDS AVE & 1.5 MILES FROM SR-74)
 - DESIGN SPEED AT CITY'S DISCRETION (TANGENT ALIGNMENT)
 - SKEWED CROSSING AT I-215, 7TH STREET CHANNEL, AND SAN JACINTO RIVER
- ALTERNATIVE 4**
- ELIGIBLE FOR INTERCHANGE OR OVERCROSSING (1.7 MILES FROM REDLANDS AVE & 1.1 MILES FROM SR-74)
 - 50 MPH DESIGN SPEED
 - PERPENDICULAR CROSSING AT I-215, 7TH STREET CHANNEL, AND SAN JACINTO RIVER

LEGEND

- CITY OF PERRIS BOUNDARY
- SHALLOW POND AREA
- RCA CONSERVED ADDITIONAL RESERVE LANDS
- RCA CONSERVED QUASI-PUBLIC LANDS

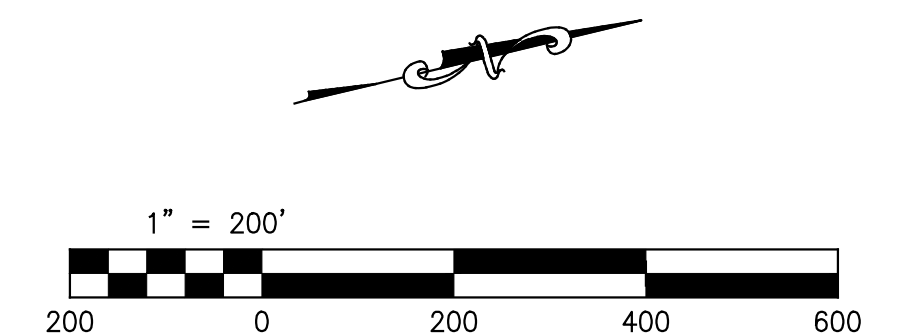
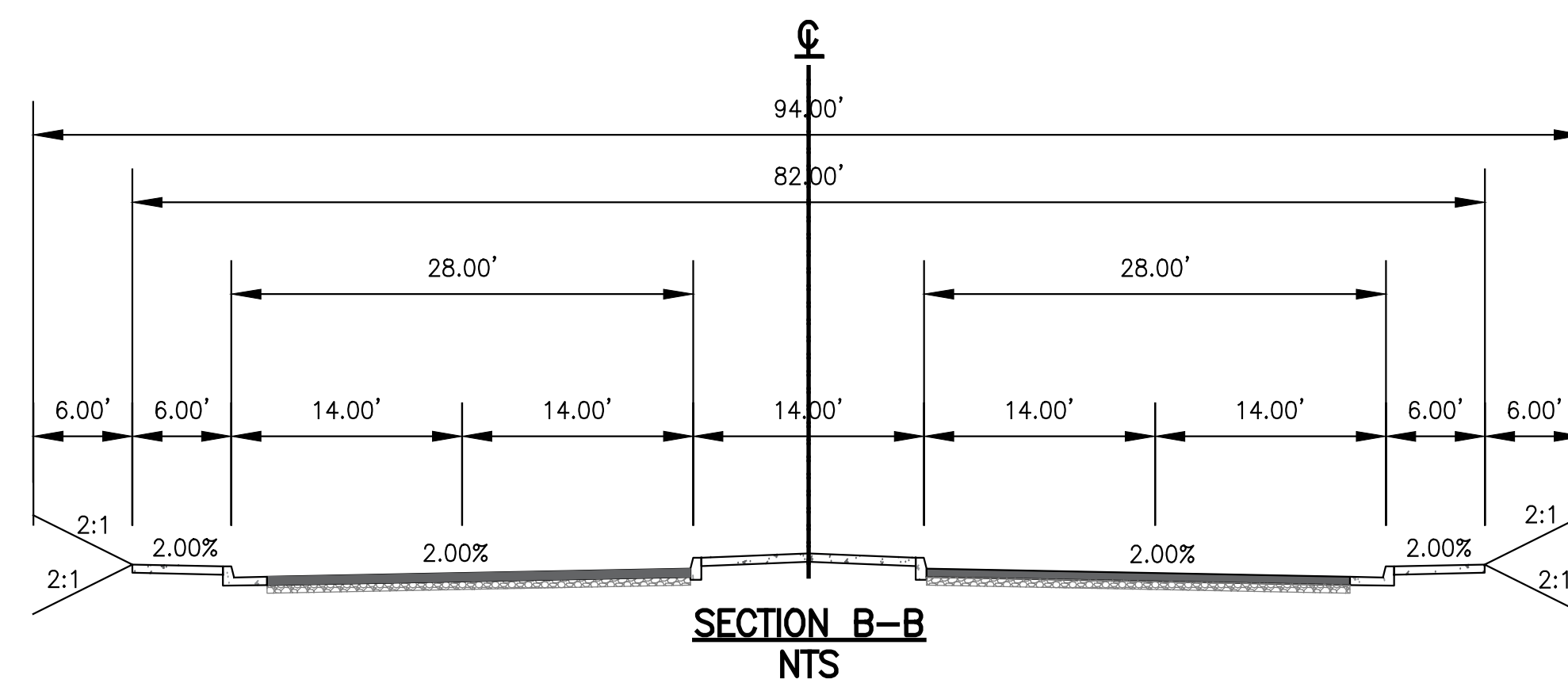
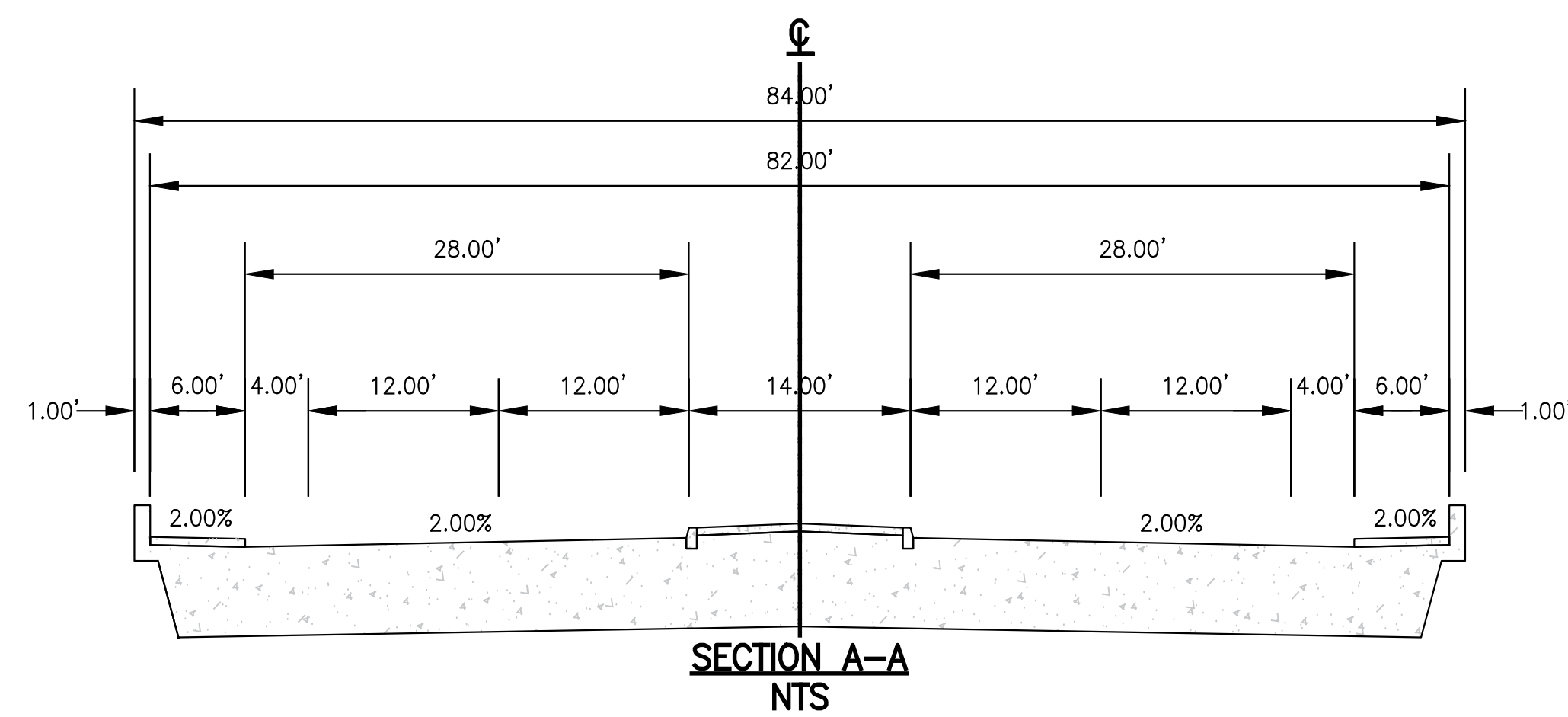
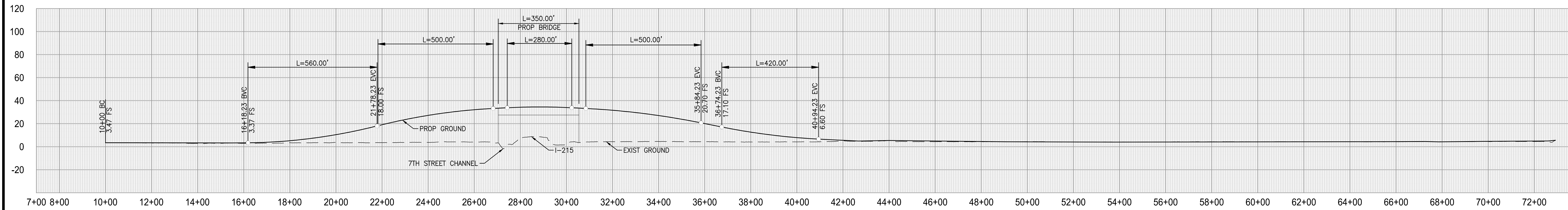


MATCH LINE DETAIL
DESIGN PROVIDED BY ALBERT. A WEBB ASSOCIATES



Appendix D

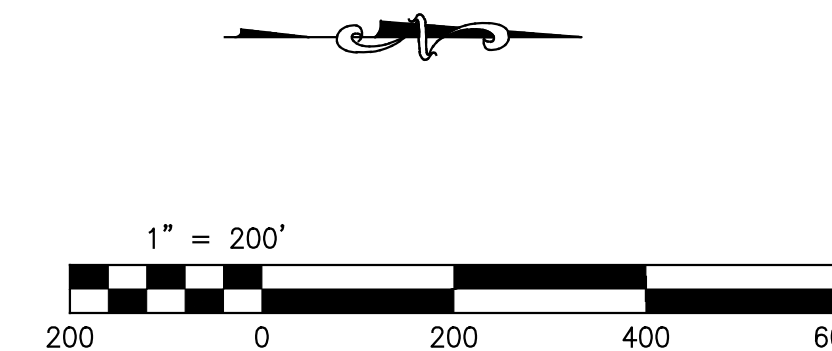
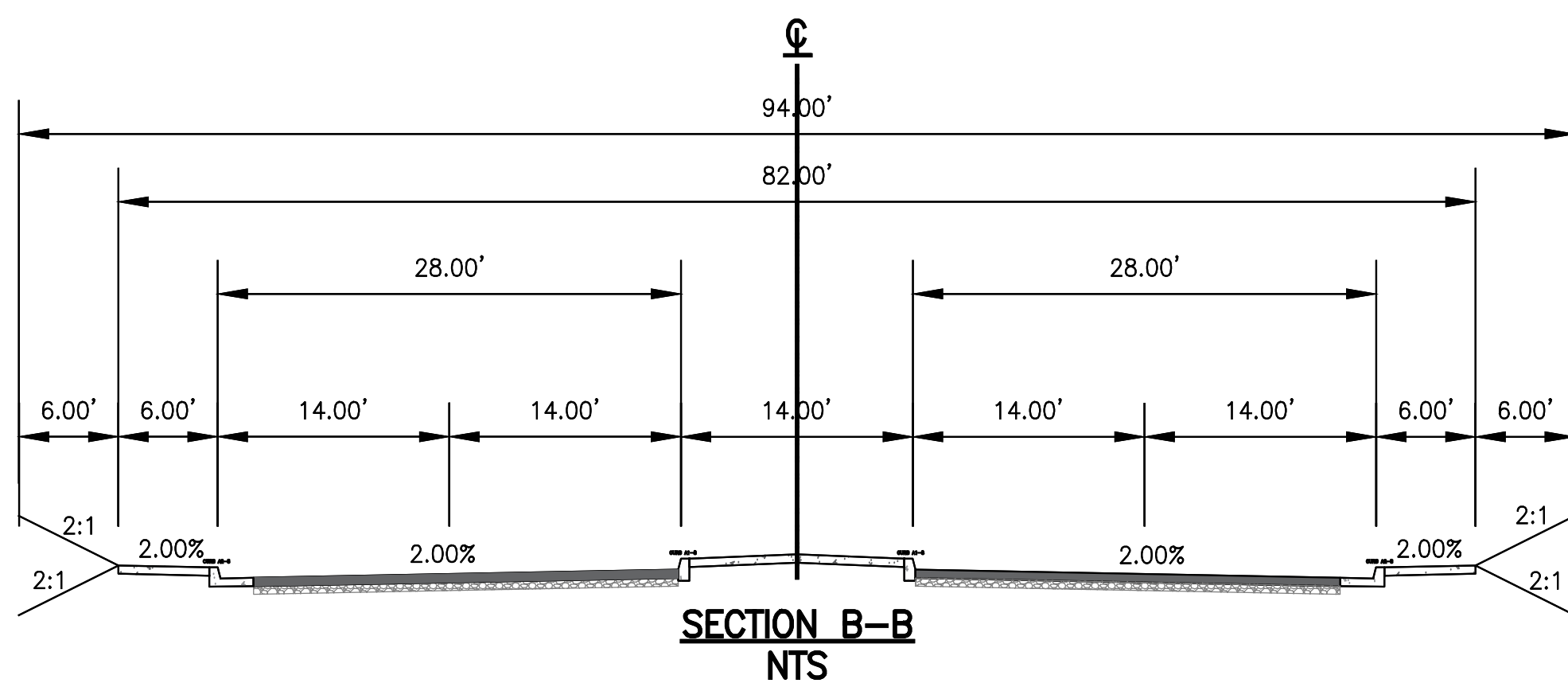
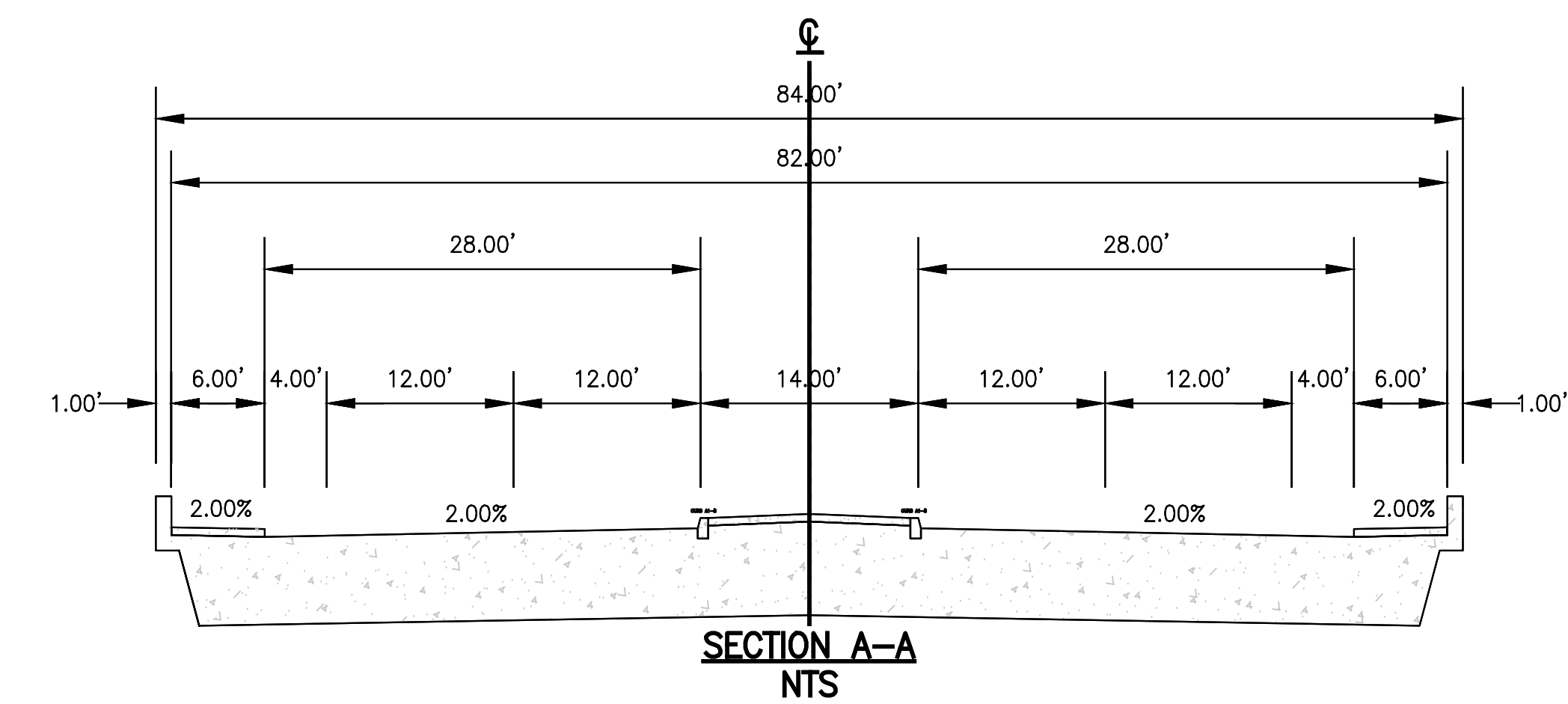
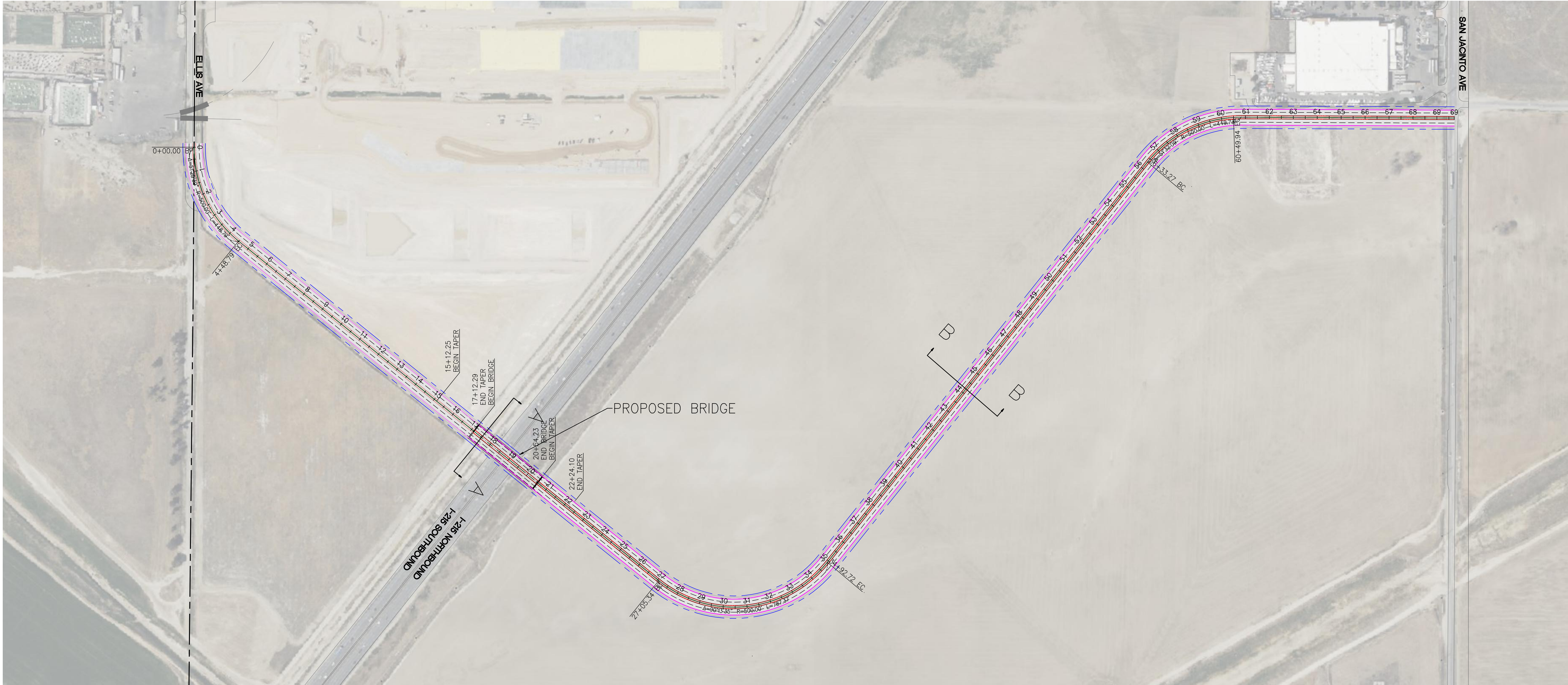
Plan & Profile Exhibit



ROADWAY RE-ALIGNMENT ALTERNATIVE 2A			
ELLIS AVENUE			
SCALE: 1"=200'		451 EAST VANDERBILT WAY SAN BERNARDINO, CA 92408, SUITE 375 FAX (909) 751-3250	W.O. WO
DATE: 11/14/23			SHEET 1
DESIGNED: JLS			OF 1 SHEETS
CHECKED:			DWG. NO.
PLN CK REF: -			
F.B.			

PRELIMINARY

\\EXP\DATA\SEB\LOCALDATA\CITY OF PERRIS - I-215, ELLIS AVENUE OVERCROSSING\0400 CAD\0440 EXHIBITS\ROAD RE-ALIGNMENT-ELLIS AVE (ALTERNATIVE 2A).DWG 11/27/2023 5:40:14 PM



ROADWAY RE-ALIGNMENT ALTERNATIVE 2B

ELLIS AVENUE

SCALE: 1"=200'	exp.	451 EAST VANDERBILT WAY SAN BERNARDINO, CA 92408, SUITE 375 FAX (909) 751-3250	W.O. WO
DATE: 10/23/23			SHEET 1
DESIGNED: JLS			OF 1 SHEETS
CHECKED:			DWG. NO.
PLN CK REF:			
F.B.			

PRELIMINARY



Appendix E
Cost Estimate

Alternative 2A
Ellis Avenue Overcrossing

08-RIV-215-25.2

Preliminary Project Estimate

ITEM No.	DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
1	LEAD COMPLIANCE PLAN	LS	1	\$ 4,000.00	\$ 4,000.00
2	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	1	\$ 20,000.00	\$ 20,000.00
3	DEVELOP WATER SUPPLY	LS	1	\$ 5,000.00	\$ 5,000.00
4	CONSTRUCTION AREA SIGNS	LS	1	\$ 10,000.00	\$ 10,000.00
5	CL II AGGREGATE BASE	CY	19041	\$40.00	\$ 761,640.00
6	IMPORT BORROW	CY	159334	\$20.00	\$ 3,186,680.00
7	ROADWAY EXCAVATION	CY	510122	\$25.00	\$ 12,753,056.25
8	CLEARING AND GRUBBING (miscellaneous clean-up items)	LS	1	\$ 50,000.00	\$ 50,000.00
9	ROW ACQUISITION	SF	1020602	\$5.00	\$ 5,103,011.80
10	TRAFFIC SIGNAL (San Jacinto Intersection)	LS	1	\$450,000	\$ 450,000.00
11	TRAFFIC CONTROL SYSTEM	LS	1	\$ 65,000.00	\$ 65,000.00
12	TYPE III BARRICADE	EA	2	\$ 85.00	\$ 170.00
13	TEMPORARY PAVEMENT MARKING (PAINT)	SQFT	780	\$ 3.00	\$ 2,340.00
14	TEMPORARY TRAFFIC STRIPE (PAINT)	LF	1,560	\$ 0.60	\$ 936.00
15	CHANNELIZER (SURFACE MOUNTED)	EA	63	\$ 65.00	\$ 4,089.74
16	TEMPORARY PAVEMENT MARKER	EA	131	\$ 6.00	\$ 786.49
17	TEMPORARY RAILING (TYPE K)	LF	1560	\$ 50.00	\$ 78,000.00
18	PORTABLE CHANGEABLE MESSAGE SIGN (EA)	EA	2	\$ 10,000.00	\$ 20,000.00
19	ALTERNATIVE TEMPORARY CRASH CUSHION	EA	2	\$ 6,500.00	\$ 13,000.00
20	JOB SITE MANAGEMENT	LS	1	\$ 10,000.00	\$ 10,000.00
21	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	1	\$ 5,000.00	\$ 5,000.00
22	TEMPORARY CONSTRUCTION ENTRANCE/EXIT	EA	2	\$ 4,200.00	\$ 8,400.00
23	STREET SWEEPING	LS	1	\$ 10,000.00	\$ 10,000.00
24	TEMPORARY CONCRETE WASHOUT	LS	1	\$ 15,000.00	\$ 15,000.00
25	PALEO MITIGATION PLAN	LS	1	\$ 10,000.00	\$ 10,000.00
26	REMOVE YELLOW PAINTED TRAFFIC STRIPE (HAZARDOUS WASTE)	LF	1,560	\$ 2.00	\$ 3,120.00
27	NOISE MONITORING	LS	1	\$ 5,000.00	\$ 5,000.00
28	ROADSIDE CLEARING	LS	1	\$ 40,000.00	\$ 40,000.00
29	PAVEMENT MARKER (RETROREFLECTIVE)	EA	35	\$ 3.00	\$ 105.00
30	THERMOPLASTIC PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)	SQFT	780	\$ 4.50	\$ 3,510.00
31	6" THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)	LF	1,560	\$ 0.90	\$ 1,404.00
32	REMOVE PAINTED TRAFFIC STRIPE	LF	1,560	\$ 0.60	\$ 936.00
33	REMOVE PAINTED PAVEMENT MARKING	SQFT	780	\$ 1.60	\$ 1,248.00
34	CURB	CY	388	\$1,800.00	\$ 698,229.94
35	CURB AND GUTTER	CY	802	\$1,000.00	\$ 802,286.83
36	SIDEWALK	CY	856	\$1,600.00	\$ 1,370,350.62
37	ASHPHALT CONCRETE PAVEMENT	TONS	12856	\$165.00	\$ 2,121,240.00
38	BRIDGE STRUCTURE	SQFT	28,701	\$ 450.00	\$ 12,915,450.00
39	MOBILIZATION (10%)	LS	1	\$ 4,054,900.00	\$ 4,054,900.00
SUBTOTAL					\$ 44,603,891

SUPPLEMENTAL WORK					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
1	MAINTAIN TRAFFIC	LS	1	\$ 10,000.00	\$ 10,000.00
2	WATER POLLUTION CONTROL MAINTENANCE SHARING	LS	1	\$ 5,000.00	\$ 5,000.00
3	ADDITIONAL WATER POLLUTION CONTROL	LS	1	\$ 3,000.00	\$ 3,000.00
4	DISBUTE RESOLUTION BOARD	LS	1	\$ 10,000.00	\$ 10,000.00
5	CALTRANS ENCROACHMENT PERMIT FEE INSPECTION	LS	1	\$ 38,000.00	\$ 38,000.00
SUBTOTAL SUPPLEMENTAL WORK					\$ 66,000

AGENCY FURNISHED MATERIALS					
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	PRICE	AMOUNT
1	COZEEP CONTRACT	LS	1	\$ 30,000.00	\$ 30,000.00
2	TRAFFIC MANAGEMENT PLAN - PUBLIC INFORMATION	LS	1	\$ 30,000.00	\$ 30,000.00
3	ANNUAL CONSTRUCTION GENERAL PERMIT FEE	LS	1	\$ 2,743.00	\$ 2,743.00
SUBTOTAL STATE FURNISHED MATERIALS					\$ 62,743

SUBTOTAL ALL ITEMS:					\$ 44,732,634
CONTINGENCY				25%	\$ 11,183,158
TOTAL CONSTRUCTION COST:					\$ 55,915,792
TOTAL CONSTRUCTION COST (NOT ESCALATED):					\$ 55,920,000



Appendix F

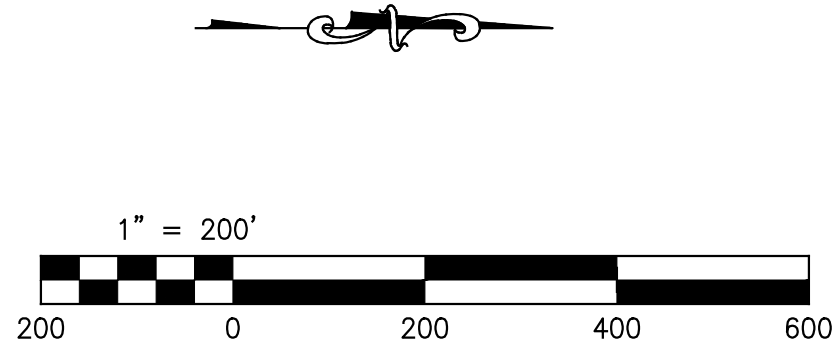
Right-of-Way Exhibit



LEGEND

- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY

APN	RIGHT-OF-WAY DEDICATION (SF)
330090012	4,801.21
310220058	302,256.01
310220047	279,485.19
310200014	432,203.03



ROADWAY RE-ALIGNMENT ALTERNATIVE 2A

ELLIS AVENUE

SCALE: 1"=200'	 451 EAST VANDERBILT WAY SAN BERNARDINO, CA 92408, SUITE 375 FAX (909) 751-3250	W.O.	WO
DATE: 11/14/23		SHEET	1
DESIGNED: JLS		OF 1	SHEETS
CHECKED:		DWG. NO.	
PLN CK REF: -			
F.B.			

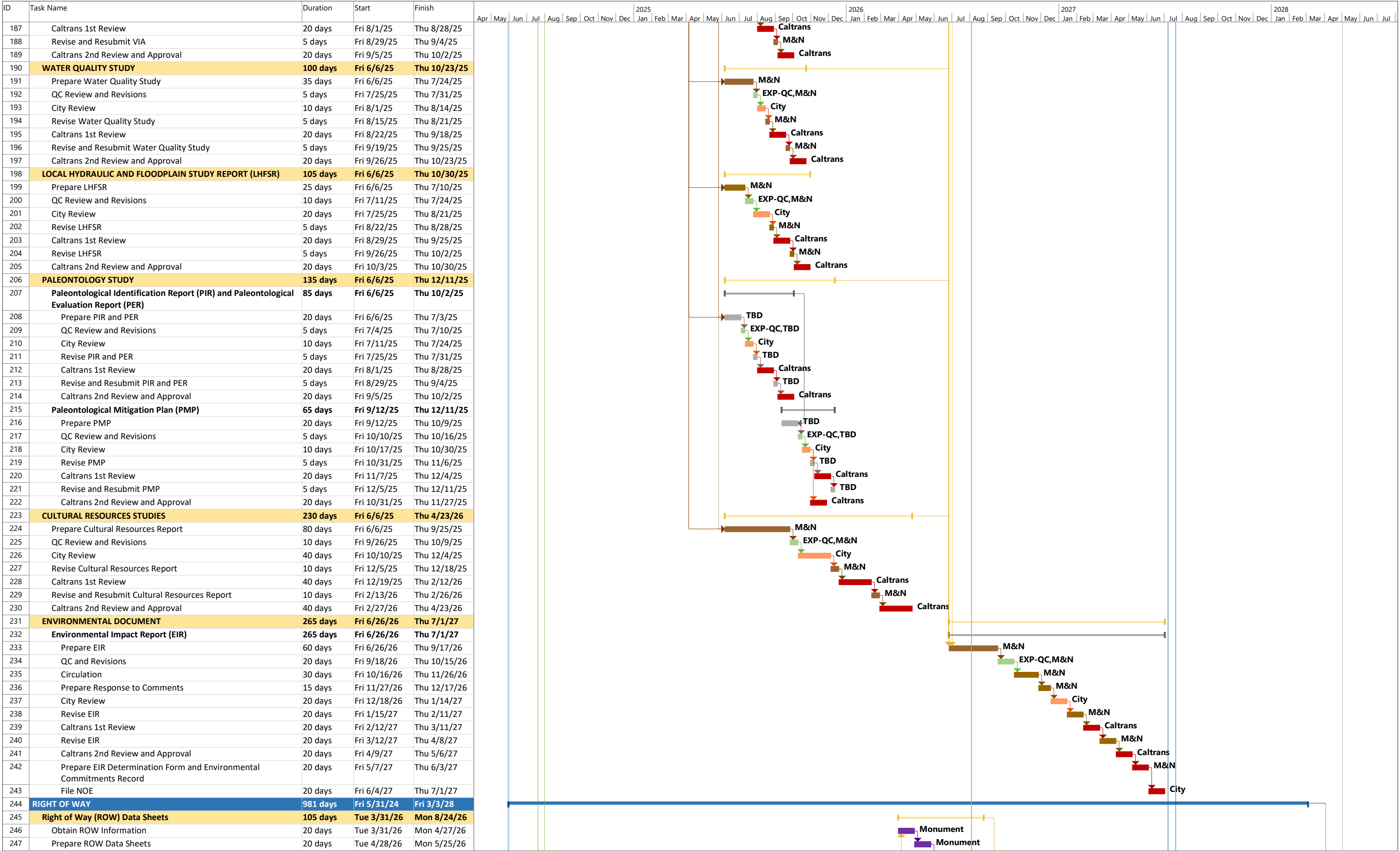
PRELIMINARY

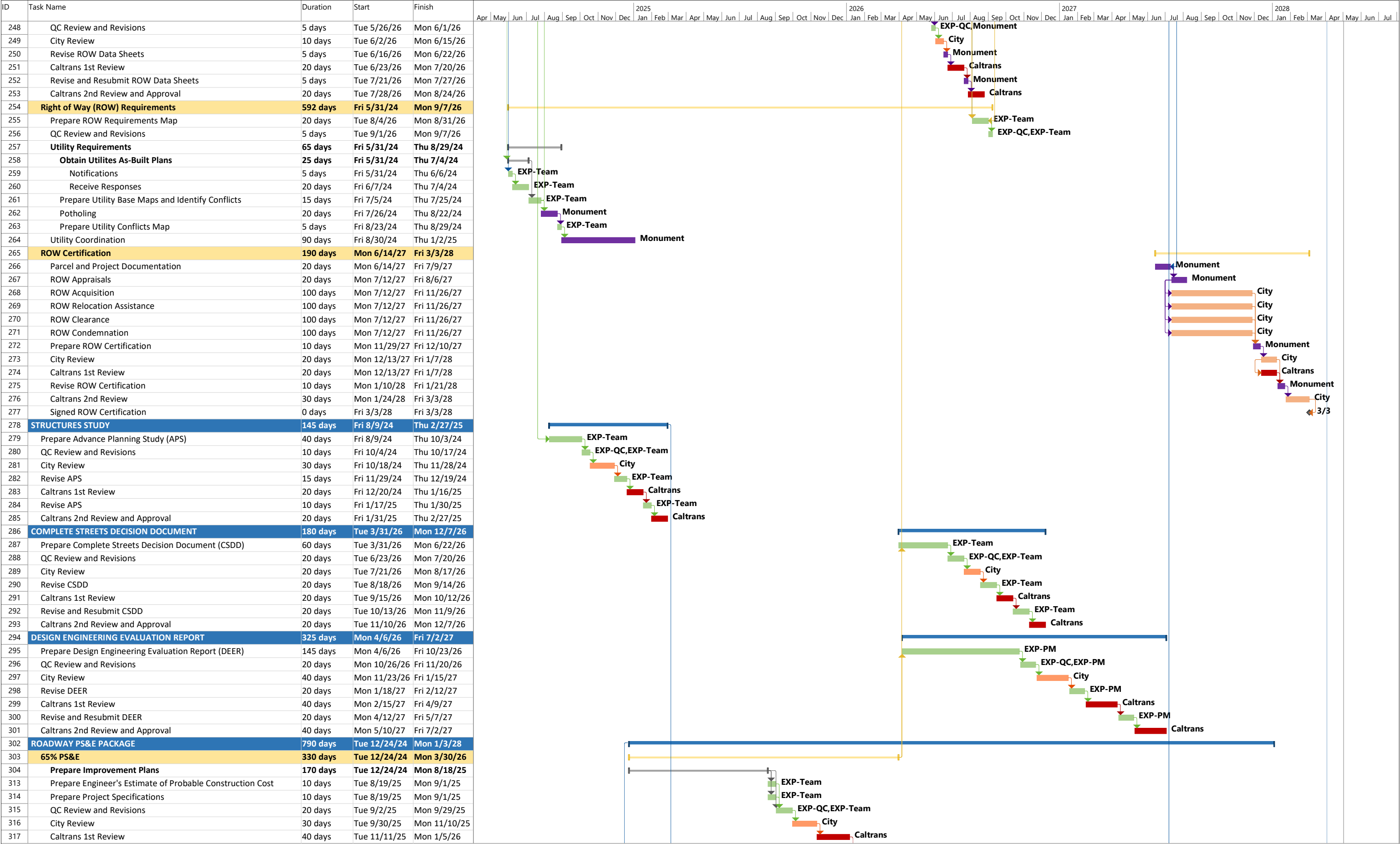
\\EXP\DATA\SEB\LOCALDATA\CITY OF PERRIS - I-215, ELLIS AVENUE OVERCROSSING\0400 CAD\0440 EXHIBITS\ROAD RE-ALIGNMENT-ELLIS AVE (ALTERNATIVE 2A).DWG 11/27/2023 5:40:14 PM



Appendix G

Schedule





ID	Task Name	Duration	Start	Finish	2025												2026												2027												2028											
					Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul								
396	Clean Water Act (CWA) Section 401	120 days	Fri 7/2/27	Thu 12/16/27																																																
397	Prepare Clean Water Act (CWA) Section 401	40 days	Fri 7/2/27	Thu 8/26/27																																																
398	QC Review and Revisions	10 days	Fri 8/27/27	Thu 9/9/27																																																
399	Caltrans 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
400	Revise and Resubmit CWA Section 401	10 days	Fri 10/22/27	Thu 11/4/27																																																
401	Caltrans 2nd Review and Approval	30 days	Fri 11/5/27	Thu 12/16/27																																																
402	Regional Water Quality Control Board 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
403	Revise and Resubmit CWA Section 401	10 days	Fri 10/22/27	Thu 11/4/27																																																
404	Regional Water Quality Control Board 2nd Review	30 days	Fri 11/5/27	Thu 12/16/27																																																
405	Clean Water Act (CWA) Section 404	120 days	Fri 7/2/27	Thu 12/16/27																																																
406	Prepare Clean Water Act (CWA) Section 404	40 days	Fri 7/2/27	Thu 8/26/27																																																
407	QC Review and Revisions	10 days	Fri 8/27/27	Thu 9/9/27																																																
408	Caltrans 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
409	Revise and Resubmit CWA Section 404	10 days	Fri 10/22/27	Thu 11/4/27																																																
410	Caltrans 2nd Review and Approval	30 days	Fri 11/5/27	Thu 12/16/27																																																
411	US Army Corp of Engineers 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
412	Revise and Resubmit CWA Section 404	10 days	Fri 10/22/27	Thu 11/4/27																																																
413	US Army Corp of Engineers 2nd Review	30 days	Fri 11/5/27	Thu 12/16/27																																																
414	California Fish and Game Code (CFGC) 1602 Permits	120 days	Fri 7/2/27	Thu 12/16/27																																																
415	Prepare California Fish and Game Code (CFGC) 1602 Permit, Streambed Alteration Agreement	40 days	Fri 7/2/27	Thu 8/26/27																																																
416	QC Review and Revisions	10 days	Fri 8/27/27	Thu 9/9/27																																																
417	Caltrans 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
418	Revise and Resubmit CFGC 1602 Permit	10 days	Fri 10/22/27	Thu 11/4/27																																																
419	Caltrans 2nd Review and Approval	30 days	Fri 11/5/27	Thu 12/16/27																																																
420	California Department of Fish and Wildlife 1st Review	30 days	Fri 9/10/27	Thu 10/21/27																																																
421	Revise and Resubmit CWA Section 404	10 days	Fri 10/22/27	Thu 11/4/27																																																
422	California Department of Fish and Wildlife 2nd Review	30 days	Fri 11/5/27	Thu 12/16/27																																																
423	CONSTRUCTION SUPPORT	1 day	Mon 4/3/28	Mon 4/3/28																																																
424	Ready to List	1 day	Mon 4/3/28	Mon 4/3/28																																																

