

OLEANDER & SANTA ANA WAREHOUSES (PAM22-013)

TRAFFIC ANALYSIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CTR	Commute Trip Reduction
DIF	Development Impact Fee
FAR	Floor-to-Area Ratio
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
NCHRP	National Cooperative Highway Research Program
OPR	Office of Planning and Research
PCE	Passenger Car Equivalent
PHF	Peak Hour Factor
Project	North Fontana Industrial Complex (Acacia)
SBTAM	San Bernardino Transportation Analysis Model
SCAG	Southern California Association of Governments
SED	Socio-economic Data
TA	Traffic Analysis
TAZ	Traffic Analysis Zone
TDM	Transportation Demand Management
TPA	Transit Priority Area
V/C	Volume to Capacity
VMT	Vehicle Miles Traveled

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1 INTRODUCTION

This report presents the results of the Traffic Analysis (TA) for the proposed Oleander & Santa Ana Warehouses development (“Project”), which is located north of Santa Ana Avenue and on either side of Oleander Avenue as well as the northeast corner of Citrus Avenue at Santa Ana Avenue in the City of Fontana, as shown on Exhibit 1-1. Exhibit 1-1 depicts the location of the proposed Project in relation to the existing roadway network and the study area intersections.

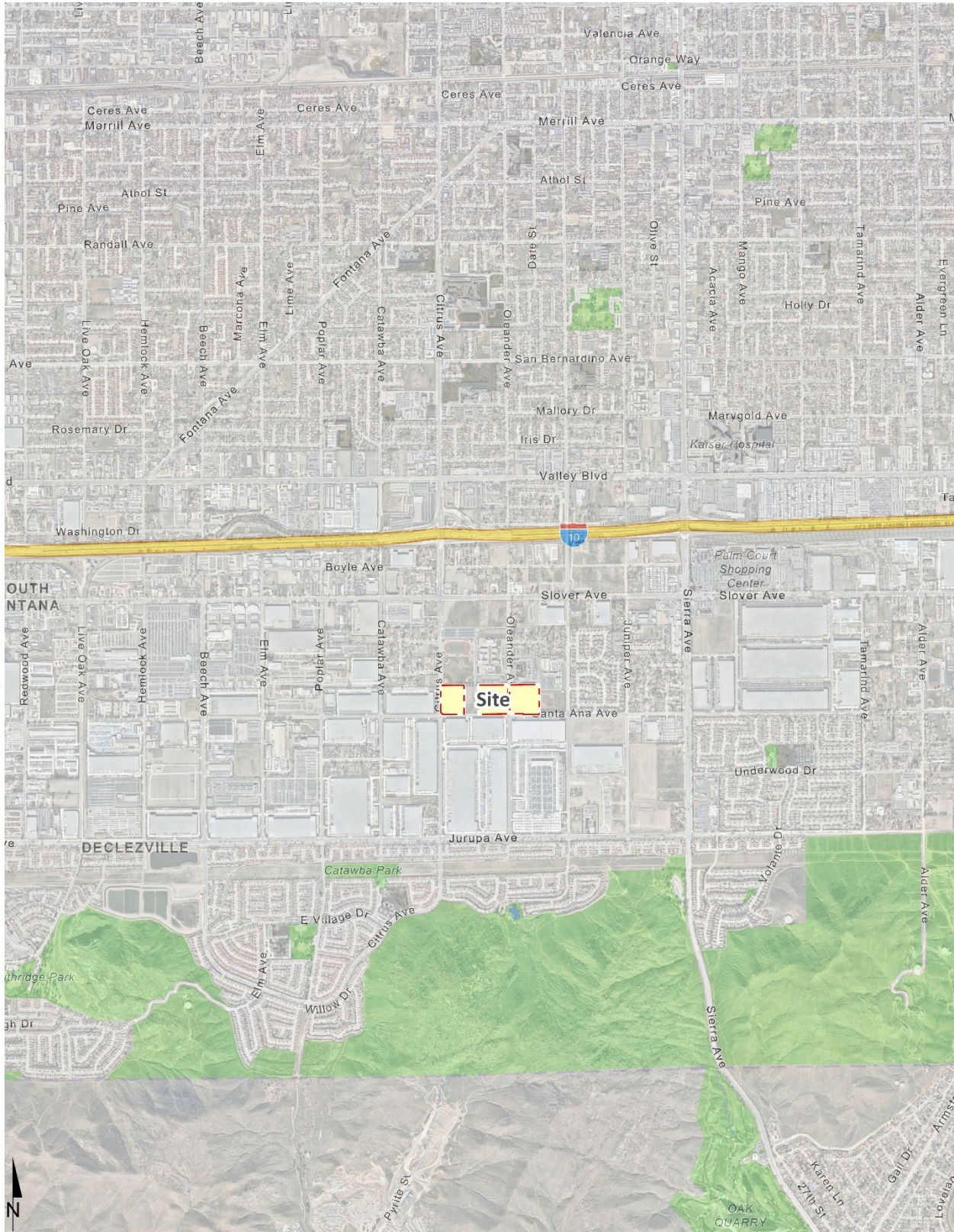
The purpose of this TA is to evaluate the potential deficiencies related to traffic, identify circulation system deficiencies that may result from the development of the proposed Project, and to recommend improvements to resolve identified deficiencies in order to achieve acceptable operational conditions at study area intersections and ensure consistency with the City’s General Plan. This TA has been prepared in accordance with the City of Fontana’s Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (October 21, 2020) and through consultation with City of Fontana staff during the scoping process. (1) The Project traffic study scoping agreement is provided in Appendix 1.1 of this TA, which has been reviewed and approved by City of Fontana staff.

1.1 SUMMARY OF FINDINGS

1.1.1 VEHICLE MILES TRAVELED

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor’s Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**) (2). Based on OPR’s Technical Advisory, specific procedures for complying with the new CEQA requirements for VMT analysis, the City of Fontana adopted Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (City Guidelines) (1). The City Guidelines documents the City’s VMT analysis methodology and adopted VMT impact thresholds. The VMT screening evaluation presented in this report has been developed based on these City Guidelines. The Project was evaluated consistent with the City’s available screening criteria, however, was not found to meet any of the VMT screening criteria. As such, a project-level VMT analysis has been prepared to assess the Project’s potential impact to VMT. For additional details, see Section 8 *Vehicle Miles Traveled*.

EXHIBIT 1-1: LOCATION MAP



1.1.2 LEVEL OF SERVICE (LOS) ANALYSIS

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

- Project to modify the curb and gutter along Citrus Avenue to accommodate site access points (Driveway 1). Existing sidewalks and crosswalks connect the proposed Project with the surrounding pedestrian facilities.
- Project to modify the curb and gutter along Santa Ana Avenue to accommodate site access points (Driveways 2, 3, and 6). Existing sidewalks and crosswalks connect the proposed Project with the surrounding pedestrian facilities. Project to stripe a two-way left-turn lane on Santa Ana Avenue, along the Project's frontage (from Citrus Avenue to the eastern Project boundary).
- Project to construct Oleander Avenue at its ultimate full-width section as a Collector Street (80-foot right-of-way) from the Project's northern boundary to Santa Ana Street consistent with the City of Fontana guidelines. Existing sidewalks and crosswalks should connect the proposed Project with the surrounding pedestrian facilities.

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

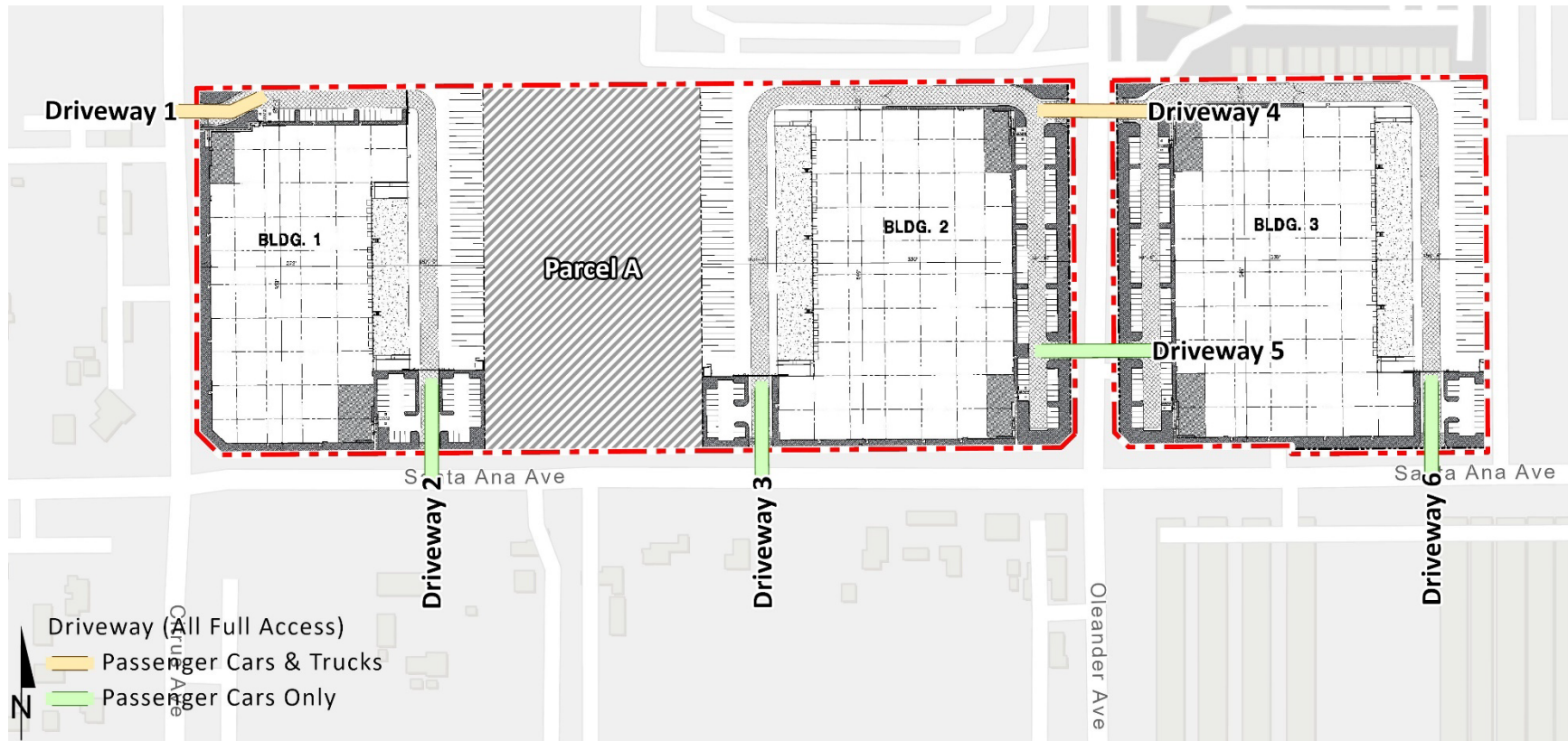
1.2 PROJECT OVERVIEW

The proposed Project is to consist of the development of 540,849 square feet of warehouse use between 3 warehouse buildings:

- Warehouse building 1: 151,618 square feet
- Warehouse building 2: 196,336 square feet
- Warehouse building 3: 192,895 square feet

It is anticipated to have an Opening Year of 2025. The proposed preliminary site plan for the proposed Project is shown on Exhibit 1-2. As indicated on Exhibit 1-2, access to the Project site will be provided to Citrus Avenue via one driveway, Santa Ana Avenue via three driveways, and Oleander Avenue via two driveways. Driveways 1 and 4 will provide access for both passenger cars and trucks, while Driveways 2, 3, 5, and 6 will provide access for passenger cars only. Regional access to the Project site is available from the I-10 Freeway via Citrus Avenue.

EXHIBIT 1-2: PRELIMINARY SITE PLAN



In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) for the Warehousing (ITE Land Use Code 150) land use category. (3) The Project is anticipated to generate a total of 928 two-way trips per day with 88 AM peak hour trips and 99 PM peak hour trips (actual vehicles). The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

Although not part of the Project, the 5.03-acre parcel (Parcel A) located between Building 1 and Building 2 has been evaluated as part of this traffic study with the proposed zoning and land use changes, and assumes the development of up to 131,464 square feet of general light industrial use (based on a maximum 0.60 floor-to-area ratio (FAR) for the 5.03-acre parcel). This underlying land use evaluation has been conducted for Horizon Year (2040) With Project traffic conditions only. Parcel A is shown on Exhibit 1-2.

1.3 ANALYSIS SCENARIOS

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

- Existing (2022) Conditions
- Opening Year Cumulative (2025) Without Project
- Opening Year Cumulative (2025) With Project
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project

1.3.1 EXISTING (2022) CONDITIONS

Information for Existing (2022) traffic conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 OPENING YEAR CUMULATIVE (2025) CONDITIONS

The Opening Year Cumulative (2025) traffic conditions analysis determines the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth from Existing (2022) traffic conditions of 6.12% is included for Opening Year Cumulative (2025) traffic conditions (2 percent per year compounded annually over 3 years). This analysis scenario includes a list of other cumulative development projects which was compiled from information provided by the City of Fontana and is consistent with other recent studies in the study area.

1.3.3 HORIZON YEAR (2040) CONDITIONS

Traffic projections for Horizon Year (2040) with Project conditions were derived from the San Bernardino Transportation Analysis Model (SBTAM). The Horizon Year (2040) conditions analysis will be utilized to determine if improvements funded through regional transportation fee programs, such as the City's Development Impact Fee (DIF) program, or other approved funding mechanisms can accommodate the long-range cumulative traffic at the target LOS identified by the City of Fontana

(lead agency). Other improvements needed beyond the “funded” improvements (such as localized improvements to non-DIF facilities) are identified as such. This analysis scenario also evaluates the proposed land use changes to the 5.03-acre parcel (Parcel A) between Buildings 1 and 2.

1.4 STUDY AREA

The 12 study area intersections listed in Table 1-1 and shown on Exhibit 1-3 were selected for evaluation in this TA based on consultation with City of Fontana staff. The study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the City of Fontana’s traffic study guidelines. (1) The “50 peak hour trip” criteria represent a minimum number of trips at which a typical intersection would have the potential to be substantively affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and widely used within San Bernardino County for estimating a potential area of influence (i.e., study area).

The intent of a Congestion Management Program (CMP) is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. Counties within California have developed CMPs with varying methods and strategies to meet the intent of the CMP legislation.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

#	Intersection	Jurisdiction	CMP Facility?
1	Citrus Av. & I-10 WB Ramps	Fontana	No
2	Citrus Av. & I-10 EB Ramps	Fontana	No
3	Citrus Av. & Slover Av.	Fontana	No
4	Citrus Av. & Driveway 1	Fontana	No
5	Citrus Av. & Santa Ana Av.	Fontana	No
6	Driveway 2 & Santa Ana Av.	Fontana	No
7	Driveway 3 & Santa Ana Av.	Fontana	No
8	Oleander Av. & Slover Av.	Fontana	No
9	Oleander Av. & Driveway 4	Fontana	No
10	Oleander Av. & Driveway 5	Fontana	No
11	Oleander Av. & Santa Ana Av.	Fontana	No
12	Driveway 6 & Santa Ana Av.	Fontana	No

1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *Opening Year Cumulative (2025) Traffic Conditions* and Section 6 *Horizon Year (2040) Traffic Conditions*. A summary of LOS results for all analysis scenarios is presented in Table 1-2.

EXHIBIT 1-3: STUDY AREA

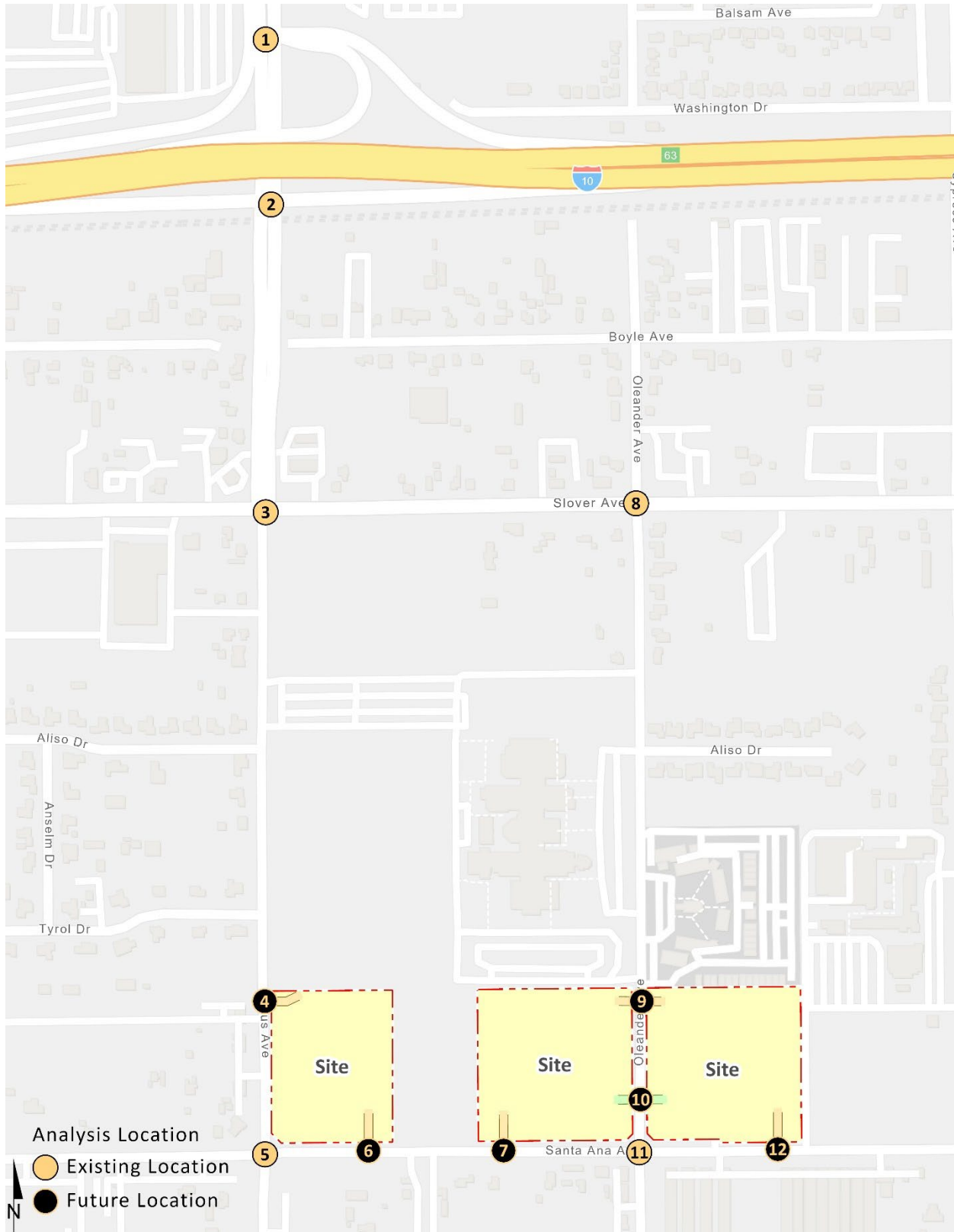


TABLE 1-2: SUMMARY OF LOS

# Intersection	Existing		Opening Year Cumulative (2025) Without Project		Opening Year Cumulative (2025) With Project		Horizon Year (2040) Without Project		Horizon Year (2040) With Project	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1 Citrus Av. & I-10 WB Ramps	●	●	●	●	●	●	●	●	●	●
2 Citrus Av. & I-10 EB Ramps	●	●	●	●	●	●	●	●	●	●
3 Citrus Av. & Slover Av.	●	●	●	●	●	●	●	●	●	●
4 Citrus Av. & Driveway 1	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
5 Citrus Av. & Santa Ana Av.	●	●	●	●	●	●	●	●	●	●
6 Driveway 2 & Santa Ana Av.	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
7 Driveway 3 & Santa Ana Av.	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
8 Oleander Av. & Slover Av.	●	●	●	●	●	●	●	●	●	●
9 Oleander Av. & Driveway 4	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
10 Oleander Av. & Driveway 5	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●
11 Oleander Av. & Santa Ana Av.	●	●	●	●	●	●	●	●	●	●
12 Driveway 6 & Santa Ana Av.	N/A	N/A	N/A	N/A	●	●	N/A	N/A	●	●

● = A - C ● = D - E ● = F

1.5.1 EXISTING (2022) CONDITIONS

All of the study area intersections are currently operating at an acceptable LOS during the weekday AM and PM peak hours.

1.5.2 OPENING YEAR CUMULATIVE (2025) CONDITIONS

The study area intersections are anticipated to continue operate at an acceptable LOS under Opening Year Cumulative (2025) Without Project and With Project traffic conditions, with the exception of the following intersections:

- Citrus Avenue & I-10 Eastbound Ramps (#2) – LOS E AM peak hour only
- Citrus Avenue & Slover Avenue (#3) – LOS E AM and PM peak hours

1.5.3 HORIZON YEAR (2040) CONDITIONS

The study area intersections are anticipated to continue operate at an acceptable LOS under Horizon Year (2040) Without Project traffic conditions, with the exception of the following intersections:

- Citrus Avenue & I-10 Eastbound Ramps (#2) – LOS E AM peak hour only
- Citrus Avenue & Slover Avenue (#3) – LOS F AM and PM peak hours

Although the addition of Project traffic is not anticipated to result in any new deficiencies, the intersection of Citrus Avenue and the I-10 Eastbound Ramps would operate at LOS F in the AM peak hour only.

1.6 RECOMMENDATIONS

1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project. The site adjacent recommendations are shown on Exhibit 1-4. Project to maintain the existing traffic control and lane geometrics at the intersection of Oleander Avenue & Santa Ana Avenue (#11).

Recommendation 1 – Citrus Avenue & Driveway 1 (#4) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the westbound approach (Project driveway).
- Project to construct a westbound shared left-right turn lane (Project driveway).
- Project to restripe to accommodate a southbound left turn lane on Citrus Avenue by restriping the two-way left turn painted median.

Recommendation 2 – Citrus Avenue & Santa Ana Avenue (#5) – The following improvement is necessary to accommodate site access:

- Project to restripe the southbound left turn lane to accommodate a minimum of 200-feet of storage.

Recommendation 3 – Santa Ana Avenue & Driveway 2 (#6) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach (Project driveway).
- Project to construct a southbound shared left-right turn lane (Project driveway).
- Project to restripe to accommodate an eastbound left turn lane on Santa Ana Avenue via a two-way left-turn lane.

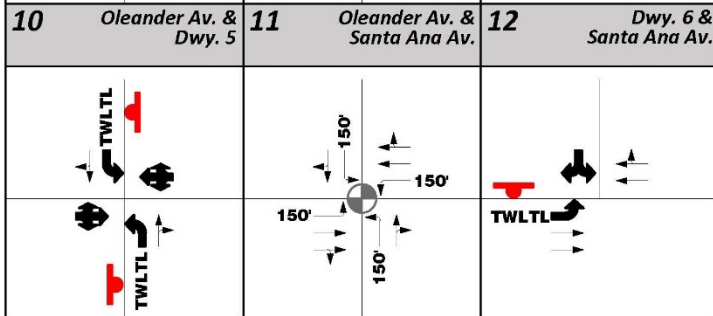
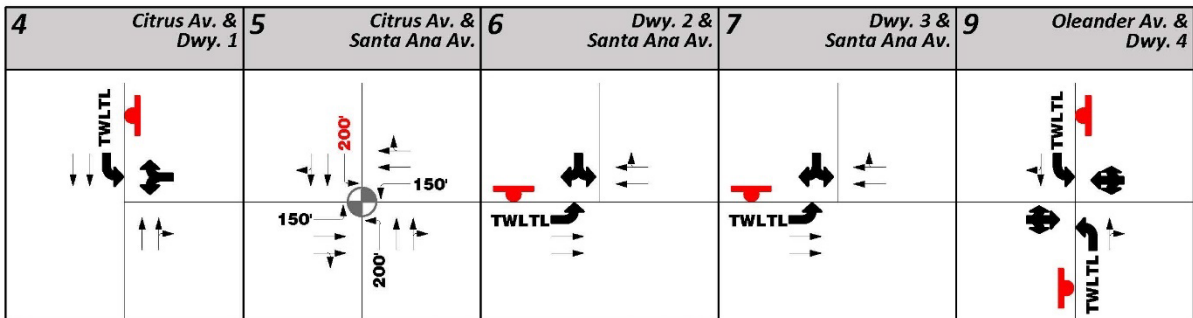
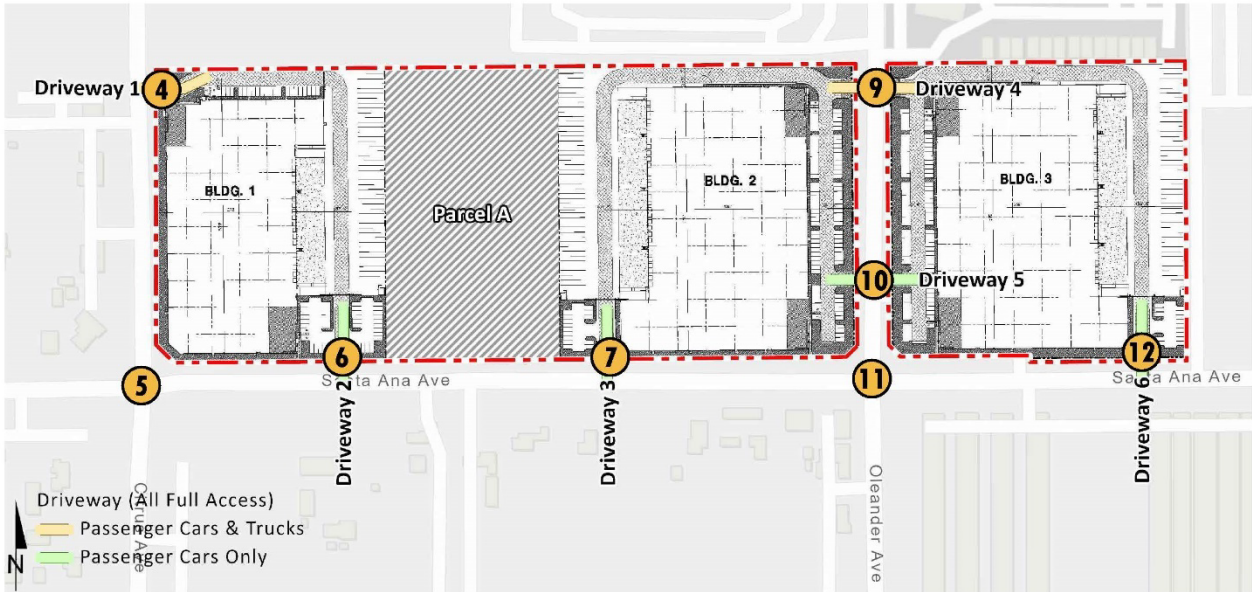
Recommendation 4 – Santa Ana Avenue & Driveway 3 (#7) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach (Project driveway).
- Project to construct a southbound shared left-right turn lane (Project driveway).
- Project to restripe to accommodate an eastbound left turn lane on Santa Ana Avenue via a two-way left-turn lane.

Recommendation 5 – Oleander Avenue & Driveway 4 (#9) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound and westbound approaches (Project driveways).
- Project to construct an eastbound shared left-through-right turn lane (Project driveway).
- Project to construct a westbound shared left-through-right turn lane (Project driveway).
- Project to restripe to accommodate a northbound left turn lane via a two-way left-turn lane.
- Project to restripe to accommodate a southbound left turn lane via a two-way left-turn lane.

EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS



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

Recommendation 6 – Oleander Avenue & Driveway 5 (#10) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the eastbound and westbound approaches (Project driveways).
- Project to construct an eastbound shared left-through-right turn lane (Project driveway).
- Project to construct a westbound shared left-through-right turn lane (Project driveway).
- Project to restripe to accommodate a northbound left turn lane via a two-way left-turn lane.
- Project to restripe to accommodate a southbound left turn lane via a two-way left-turn lane.

Recommendation 7 – Santa Ana Avenue & Driveway 6 (#12) – The following improvements are necessary to accommodate site access:

- Project to install a stop control on the southbound approach (Project driveway).
- Project to construct a southbound shared left-right turn lane (Project driveway).
- Project to restripe to accommodate an eastbound left turn lane on Santa Ana Avenue by restriping the two-way left turn painted median.

Recommendation 8 – Citrus Avenue is a north-south oriented roadway located on the Project's western boundary. The site adjacent roadway of Citrus Avenue is currently constructed to its ultimate cross-section General Plan and City of Fontana guidelines. In addition, sidewalk and curb-and-gutter improvements are in place along all Project fronting roadway. However, the Project will modify the curb and gutter to accommodate site access points (Driveway 1). Existing sidewalks and crosswalks connect the proposed Project with the surrounding pedestrian facilities.

Recommendation 9 – Santa Ana Avenue is an east-west oriented roadway located on the Project's southern boundary. The site adjacent roadway of Santa Ana Avenue is currently constructed to its ultimate cross-section General Plan and City of Fontana guidelines. In addition, sidewalk and curb-and-gutter improvements are in place along all Project fronting roadway. However, the Project will modify the curb and gutter improvements to accommodate site access points (Driveways 2, 3, and 6). Existing sidewalks and crosswalks connect the proposed Project with the surrounding pedestrian facilities. Project to restripe to accommodate a two-way left-turn lane on Santa Ana Avenue, along the Project's frontage (from Citrus Avenue to the eastern Project boundary).

Recommendation 10 – Oleander Avenue is a north-south oriented roadway located on the within the Project boundary. Project to construct Oleander Avenue at its ultimate full-width section as a Collector Street (80-foot right-of-way) from the Project's northern boundary to Santa Ana Street consistent with the City of Fontana guidelines. Existing sidewalks and crosswalks should connect the proposed Project with the surrounding pedestrian facilities.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

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

1.6.2 QUEUING ANALYSIS

A queuing analysis has been performed for the Project driveways under Horizon Year (2040) With Project traffic conditions. Per the request of the City, the adjacent intersection of Citrus Avenue & Tyrol Drive has also been evaluated for peak hour queues to determine if there are potential conflicts with the back-to-back left turns with the adjacent Driveway 1. The traffic modeling and signal timing optimization software package SimTraffic has been utilized to assess the queues. SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro to generate random simulations. These random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each applicable turn lane. A SimTraffic simulation has been recorded up to 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals. Queuing analysis worksheets for the weekday AM and PM peak hours are provided in Appendix 1.2 of this report. No site adjacent queues are anticipated with the proposed improvements.

Based on the results of the queuing analysis, there are no anticipated queues for the northbound left turn at Citrus Avenue & Tyrol Drive and an 86-foot southbound left turn queue at Citrus Avenue & Driveway 1 are anticipated during the peak hours under Horizon Year (2040) With Project traffic conditions. It should be noted, based on the traffic counts collected at the intersection of Citrus Avenue & Tyrol Drive, there was one vehicle observed during the AM peak hour and no vehicles during the PM peak hour utilizing the northbound left turn lane. Additionally, the northbound left turn lane is uncontrolled (in other words, it is not controlled by a stop sign). Therefore, there no anticipated northbound left turn queues at Citrus Avenue & Tyrol Drive based on the 95th percentile queues, as simulated by the SimTraffic software. As such, there are no queuing conflicts anticipated under Horizon Year (2040) With Project traffic conditions for the northbound left turn at Citrus Avenue & Tyrol Drive and for the southbound left turn at Citrus Avenue & Driveway 1.

1.6.3 OFF-SITE RECOMMENDATIONS

The recommended improvements needed to address the cumulative deficiencies identified under Existing (2022), Opening Year Cumulative (2025), and Horizon Year (2040) traffic conditions are summarized in Table 1-3. For those improvements listed in Table 1-3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fair share and/or fees. Table 1-3 also summarizes the applicable cost associated with each of the recommended improvements.

1.7 VEHICLE MILES TRAVELED (VMT) ANALYSIS

The Project was evaluated consistent with the City's available screening criteria. The Project is determined to have a potentially significant transportation impact. Since the future tenants are unknown at this time, implementation of the feasible Transportation Demand Management (TDM) measures discussed above cannot be guaranteed to reduce the Project generated VMT per employee; the Project's VMT impact is considered significant and unavoidable. Detailed discussion can be found in Section 8 *Vehicle Miles Traveled Analysis* of this TA.

TABLE 1-3: SUMMARY OF IMPROVEMENTS AND ROUGH ORDER OF MAGNITUDE COSTS

#	Intersection Location	Jurisdiction	2025 With Project	2040 With Project	Project Responsibility	Improvements in DIF ^{1,2}	Cost ^{3,4}	Project Fair Share	Fair Share Cost ⁵
2	Citrus Av. & I-10 EB Ramps	Caltrans	Add EB right turn lane	Same	Fees	Yes	\$0	--	\$0
							Total:		\$0
3	Citrus Av. & Slover Av.	Fontana	Add SB right turn lane	Same	Fees	Yes	\$0	--	\$0
			Modify the traffic signal to implement overlap phasing for the SB and WB right turn lanes	Same	Fees	Yes	\$0		\$0
							Total:		\$0
							Total Cost for Improvements	\$0	\$0
							Total Project Fair Share Contribution to the City of Ontario (non-DIF/other) ⁶		\$0
							Total Project Fair Share Contribution to Caltrans ⁷		\$0

¹ Improvements included in regional/City DIF programs have been identified as such.

² Program improvements constructed by project may be eligible for fee credit. In lieu fee payment is at the discretion of the City.

³ Costs have been estimated using the data provided in Appendix "G" of the CMP (2003 Update) for preliminary construction costs with an application of 1.77 factor to adjust costs to 2022.

⁴ Total project fair share contribution consists of the improvements which are not already included in a pre-existing fee program.

⁵ Rough order of magnitude cost estimate.

⁶ Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections wholly or partially within the City of Fontana.

⁷ Total project fair share contribution consists of the improvements which are not already included in a fee program for those intersections under the jurisdiction of Caltrans.

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1.8 TRUCK ACCESS

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

EXHIBIT 1-5: TRUCK ACCESS (PAGE 1 OF 3)

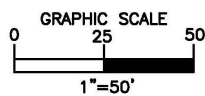
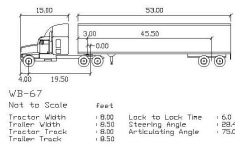
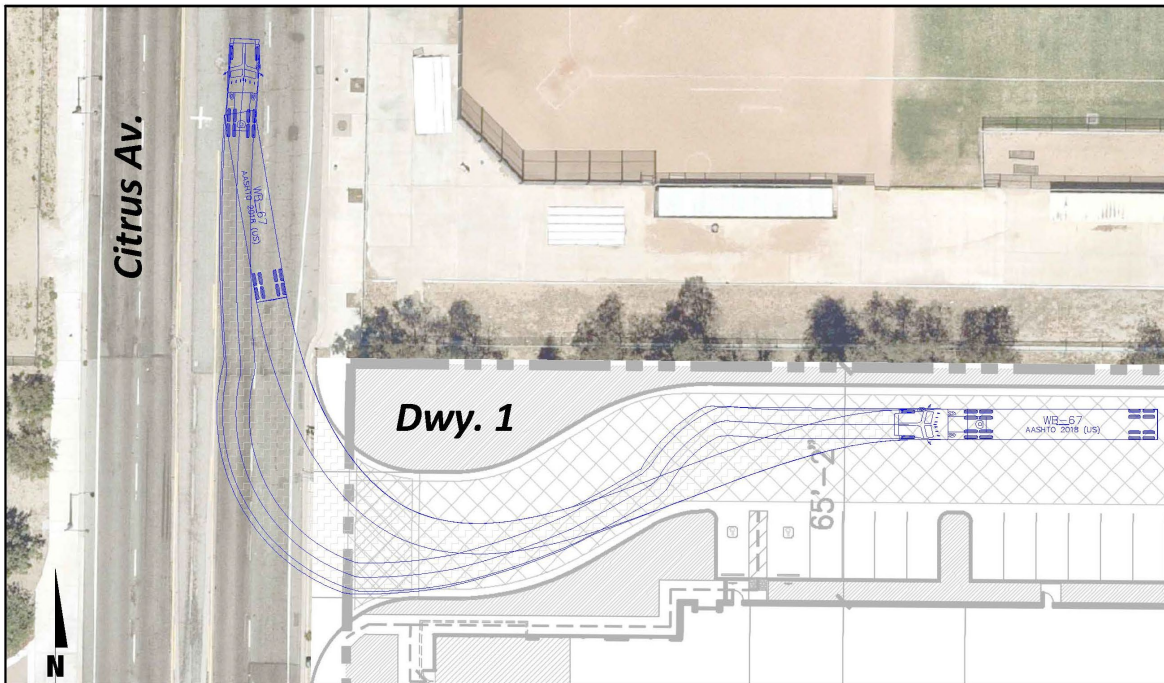
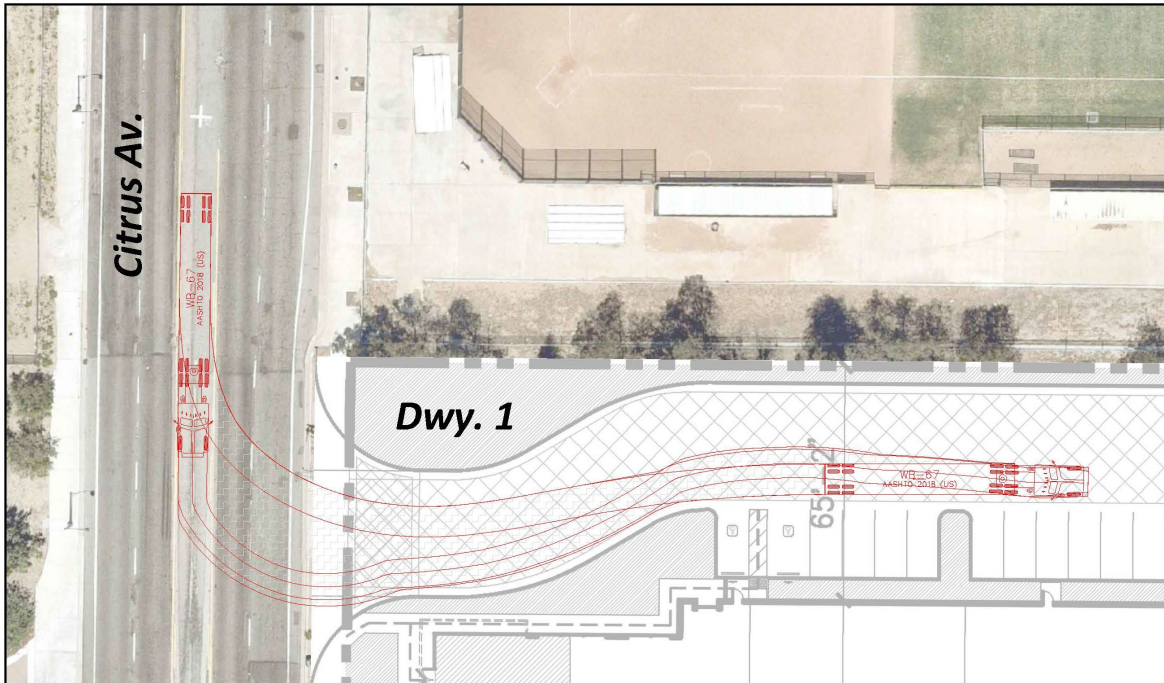
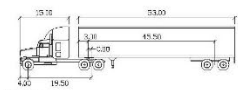
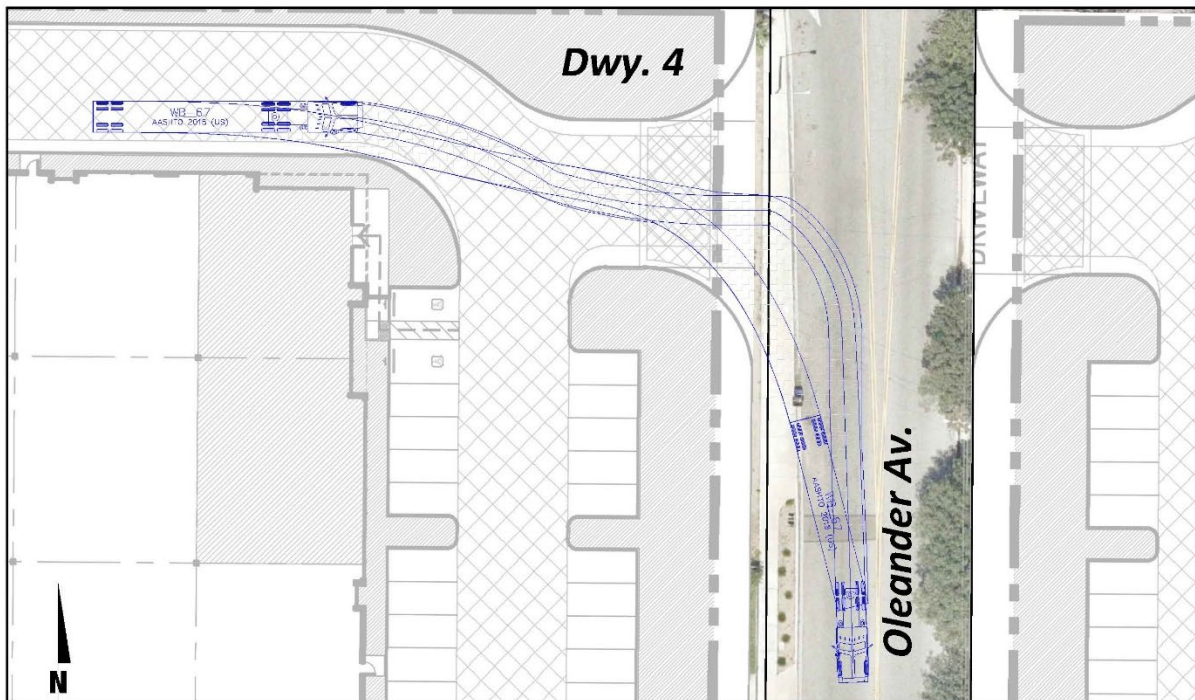
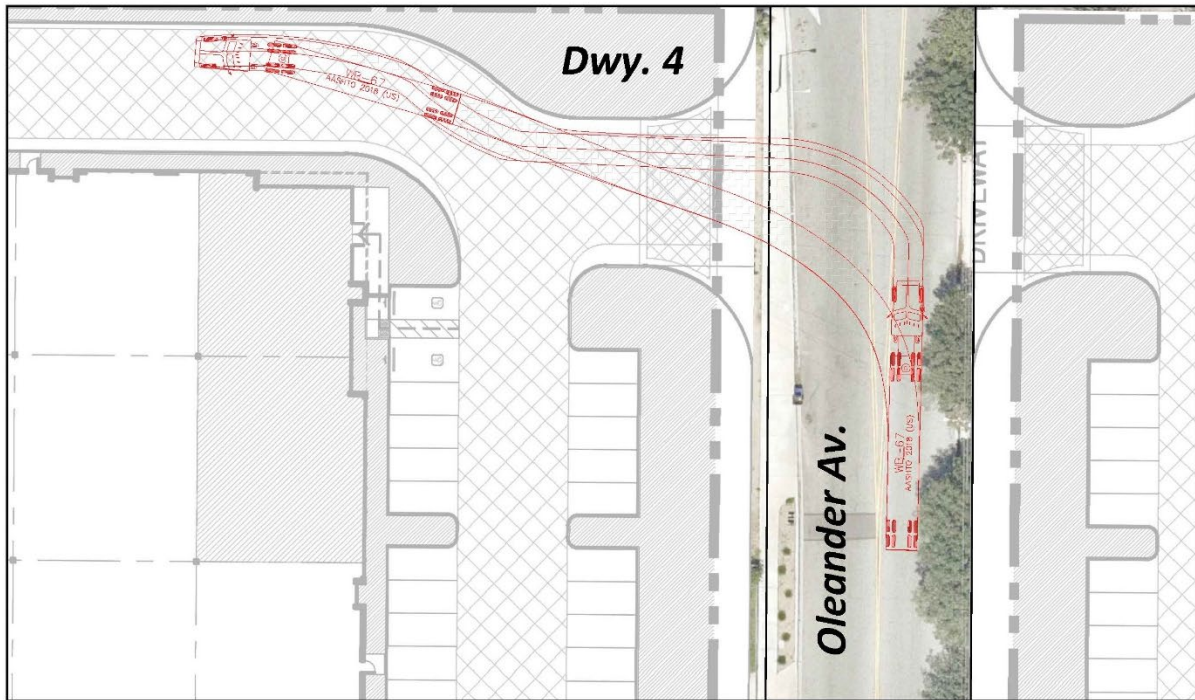


EXHIBIT 1-5: TRUCK ACCESS (PAGE 2 OF 3)



WR-67			
Year to Scale	Year	Lock to Lock Time	6.0
Tractor Width	8.00	Steering angle	26.8
Trailer Width	8.50	Discharging angle	78.0
Tractor Track	8.50		

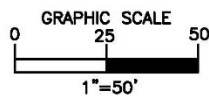
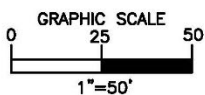
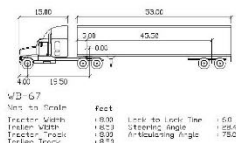
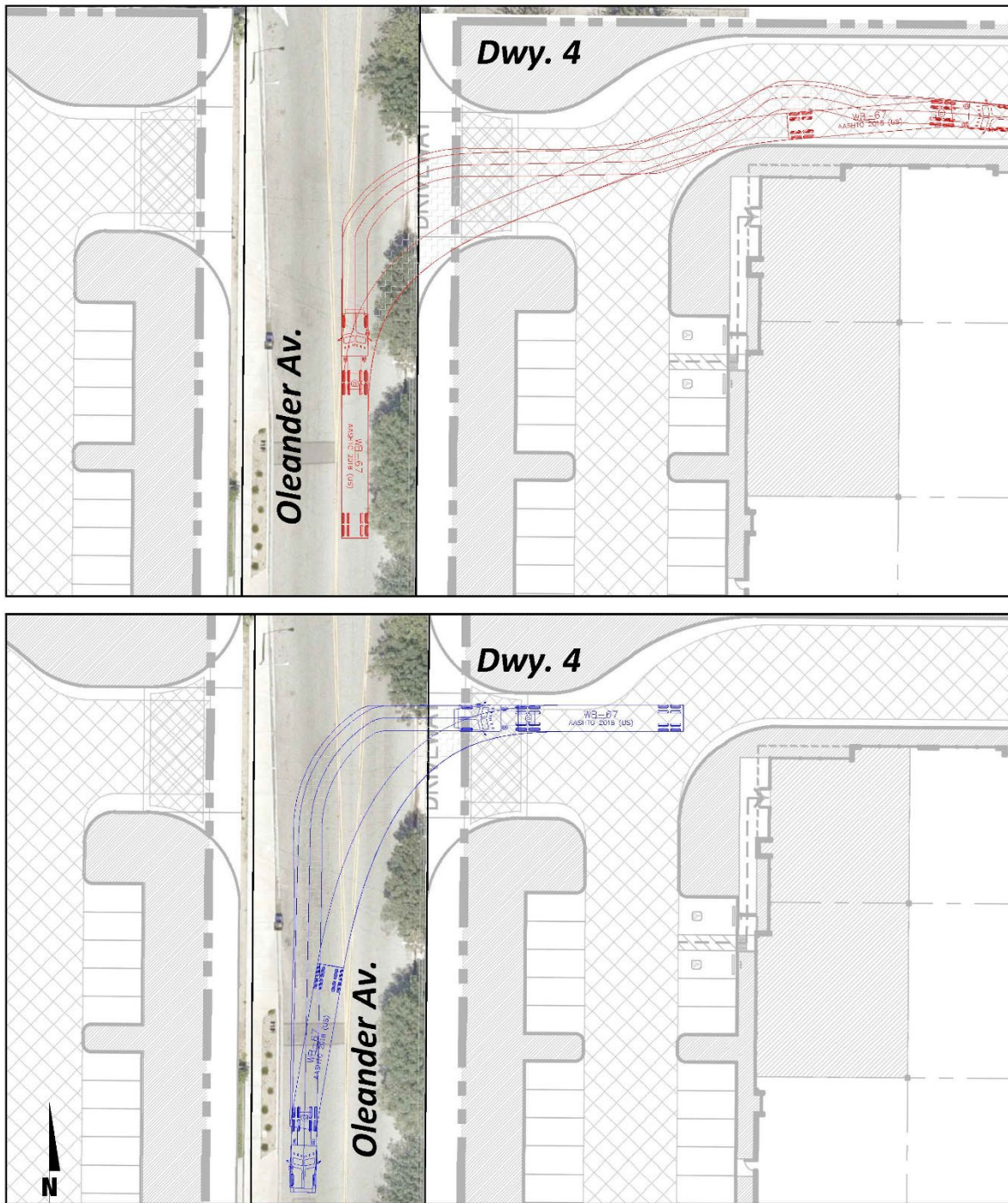


EXHIBIT 1-5: TRUCK ACCESS (PAGE 3 OF 3)



2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with the City of Fontana's traffic study guidelines. (1)

2.1 LEVEL OF SERVICE

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

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition [Highway Capacity Manual](#) (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Fontana requires signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0 ¹
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 6th Edition

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

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

A saturation flow rate of 1900 has been utilized for all study area intersections located within the City of Fontana. The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Customary practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., $PHF = \frac{[Hourly Volume]}{[4 \times Peak\ 15\text{-minute Flow Rate}]}$). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour.

(4)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Fontana requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

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

Source: HCM, 6th Edition

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

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

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

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

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

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

#	Intersection
4	Citrus Av. & Driveway 1
6	Driveway 2 & Santa Ana Av.
7	Driveway 3 & Santa Ana Av.
9	Oleander Av. & Driveway 4
10	Oleander Av. & Driveway 5
12	Driveway 6 & Santa Ana Av.

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *Opening Year Cumulative (2025) Traffic Conditions* and Section 6 *Horizon Year (2040) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 OFF-RAMP QUEUING ANALYSIS

Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing deficiencies at the freeway ramp intersections at the I-10 Freeway at the Citrus Avenue interchange. Specifically, the off-ramp queuing analysis is utilized to identify any potential queuing and “spill back” onto the I-10 Freeway mainline from the off-ramps.

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

2.5 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

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

CITY OF FONTANA

The City’s General Plan recommends a LOS standard of LOS C. Intersections which are forecast to operate at unsatisfactory conditions (i.e., at LOS worse than LOS C for city intersections) shall be identified as cumulatively deficient intersections. Therefore, any intersection operating at LOS D, E, or F will be considered deficient for the purposes of this analysis. (1)

2.6 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. For the intersections that lie within the City of Fontana, determination of direct project-related deficiencies will be based on a comparison of without and with project levels of service for each analysis year. A project-related deficiency occurs if project traffic increases the average delay at an intersection by more than the thresholds identified in Table 2-4. The thresholds for LOS A, B, and C do not apply to projects consistent with the General Plan.

TABLE 2-4: THRESHOLDS OF SIGNIFICANT IMPACT

With Project LOS	Significant Impact Threshold ¹
A/B	10.0 Seconds
C	8.0 Seconds
D	5.0 Seconds
E	3.0 Seconds
F	1.0 Seconds

Source: Fontana Traffic Study Guidelines, October 2020

¹ Increase in delay

Cumulative traffic impacts are deficiencies that are not directly caused by the Project but occur as a result of regional growth combined with that or other nearby cumulative development projects. Cumulative traffic deficiencies utilize the same thresholds as shown in Table 2-4. The Project’s contribution to a particular cumulative transportation deficiency is deemed cumulatively considerable if the Project adds traffic to the forecasted deficiency (per Table 2-4). A Project’s contribution to a cumulatively considerable deficiency can be reduced if the Project is required to implement or fund its fair share of improvements designed to alleviate the potential cumulative deficiency. If full funding of future cumulative improvements is not reasonably assured, a temporary unmitigated cumulative deficiency may occur until the needed improvement is fully funded and constructed.

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3 AREA CONDITIONS

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

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the scoping agreement with City of Fontana staff (Appendix 1.1), the study area includes a total of 12 existing and future intersections as shown previously on Exhibit 1-3. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 GENERAL PLAN CIRCULATION ELEMENTS

Exhibit 3-2 shows the City of Fontana General Plan Circulation Element. The City of Fontana General Plan does not include roadway cross-sections in its General Plan.

Major Highways are four-to-six-lane divided roadways (typically divided by a raised median or painted two-way turn-lane). These roadways serve both regional through-traffic and inter-city traffic and typically direct traffic onto and off-of the freeways. The following study area roadways within the City of Fontana are classified as a Major Highway:

- Citrus Avenue, north of Slover Avenue
- Jurupa Avenue

Primary Highways are four-lane divided roadways (typically divided by a raised median or painted two-way turn-lane). These roadways typically connect Major Highways. The following study area roadway within the City of Fontana is classified as a Primary Highway:

- Slover Avenue

Secondary Highways are four-lane divided roadways. These roadways serve local traffic and are typically used to carry traffic along the perimeters of large developments. The following study area roadways within the City of Fontana are classified as Secondary Highways:

- Santa Ana Avenue
- Citrus Avenue, south of Slover Avenue

Collector Streets are two-lane streets, providing one lane in each direction. The following study area roadway within the study area is classified as a Collector Street:

- Oleander Avenue

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

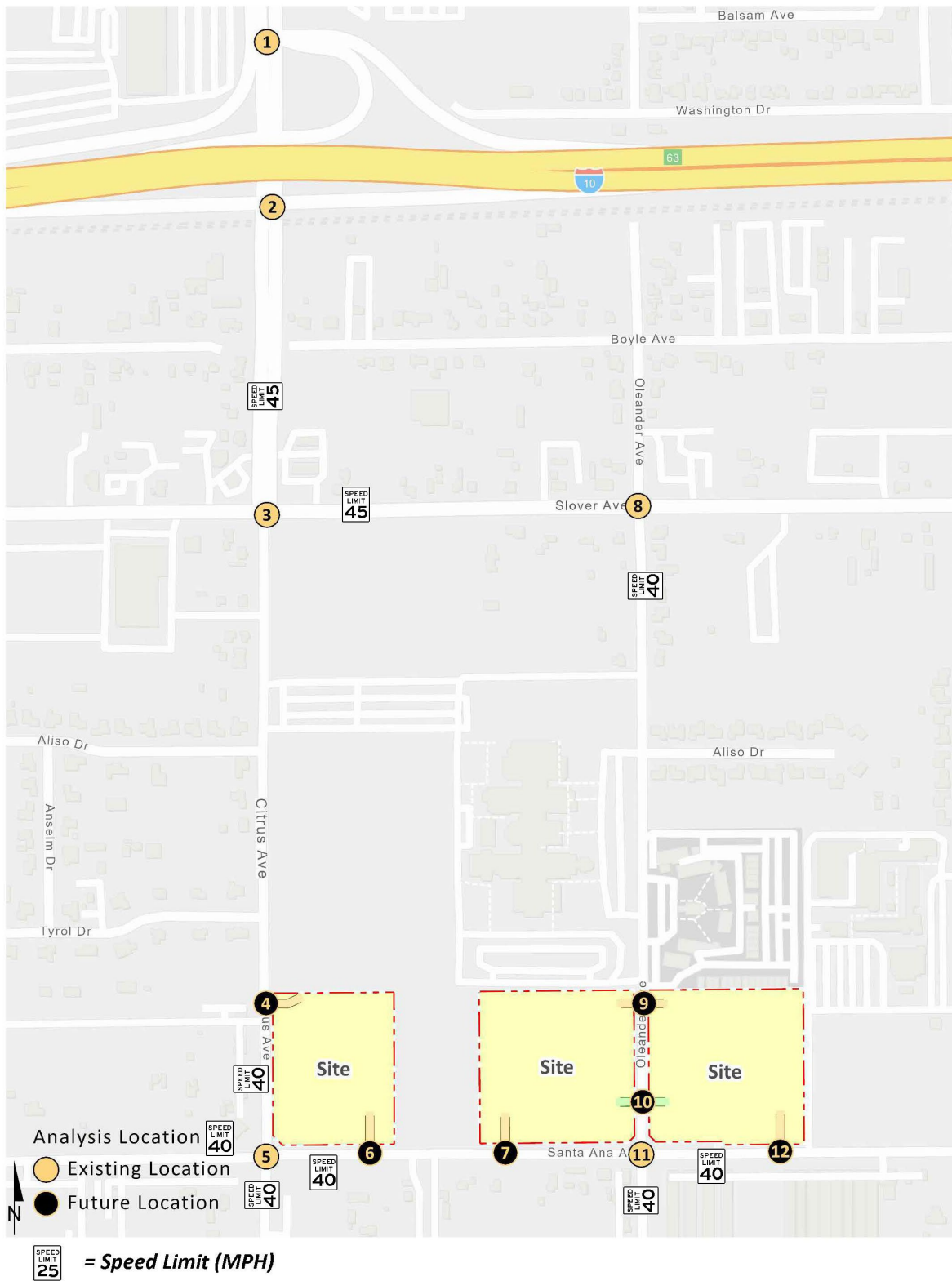
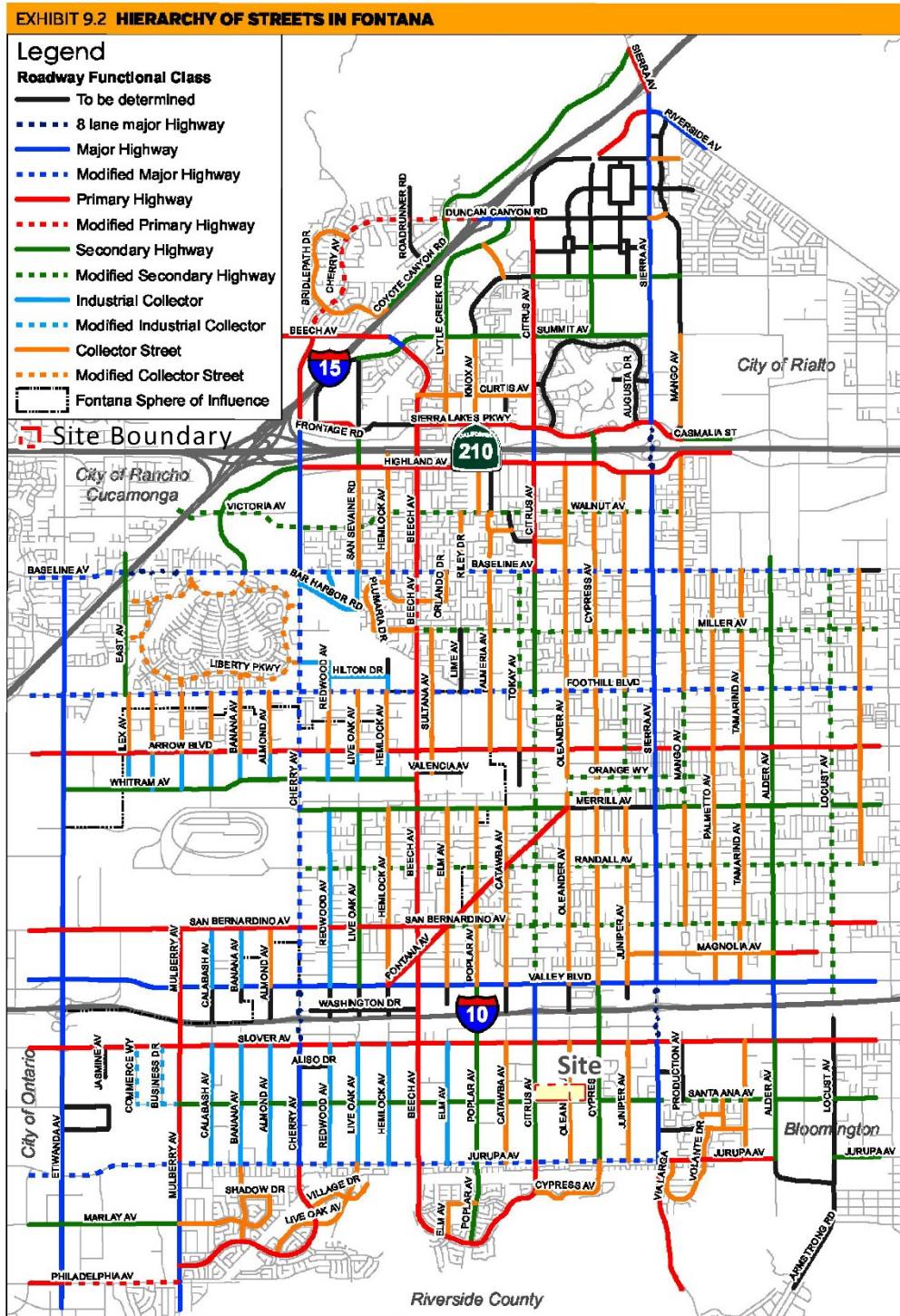


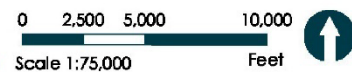
EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS (PAGE 2 OF 2)

<p>1 Citrus Av. & I-10 WB Ramps</p>	<p>2 Citrus Av. & I-10 EB Ramps</p>	<p>3 Citrus Av. & Slover Av.</p>	<p>4 Citrus Av. & Dwy. 1</p> <p>Future Intersection</p>	<p>5 Citrus Av. & Santa Ana Av.</p>
<p>6 Dwy. 2 & Santa Ana Av.</p> <p>Future Intersection</p>	<p>7 Dwy. 3 & Santa Ana Av.</p> <p>Future Intersection</p>	<p>8 Oleander Av. & Slover Av.</p>	<p>9 Oleander Av. & Dwy. 4</p> <p>Future Intersection</p>	<p>10 Oleander Av. & Dwy. 5</p> <p>Future Intersection</p>
<p>11 Oleander Av. & Santa Ana Av.</p>	<p>12 Dwy. 6 & Santa Ana Av.</p> <p>Future Intersection</p>	<p> = Traffic Signal 4 = Number of Lanes D = Divided U = Undivided </p>		

EXHIBIT 3-2: CITY OF FONTANA HIERARCHY OF STREETS



Roadway Functional Classifications
March, 2017
Data source: City of Fontana, 2017



Approved and Adopted by City Council November 13, 2018

City Council Resolution 2018-096
City Council Resolution 2018-097

3.3 BICYCLE & PEDESTRIAN FACILITIES

The City of Fontana bike facilities are shown on Exhibit 3-3. Santa Ana Avenue and Citrus Avenue are proposed as Class II bike facilities (striped, on-street bike lanes). Portions of Santa Ana Avenue (east of Oleander Avenue) and Citrus Avenue (north of Santa Ana Avenue) are currently striped with Class II bike lanes. Existing pedestrian facilities are shown on Exhibit 3-4. As shown on Exhibit 3-4, there are existing pedestrian facilities along Santa Ana Avenue, Citrus Avenue, and Oleander Avenue.

3.4 TRANSIT SERVICE

The study area is currently served by Omnitrans Transit Agency with bus services along parts of Citrus Avenue and Santa Ana Avenue. Routes 82 and 290 are the closest route that provides service along Santa Ana Avenue, north of the Project; however, there are currently no transit routes that provide service along Santa Ana Avenue that could potentially serve the Project site in the future. The transit services are illustrated on Exhibit 3-5. Transit service is reviewed and updated by Omnitrans periodically to address ridership, budget, and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.5 EXISTING TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in 2022. The following peak hours were selected for analysis:

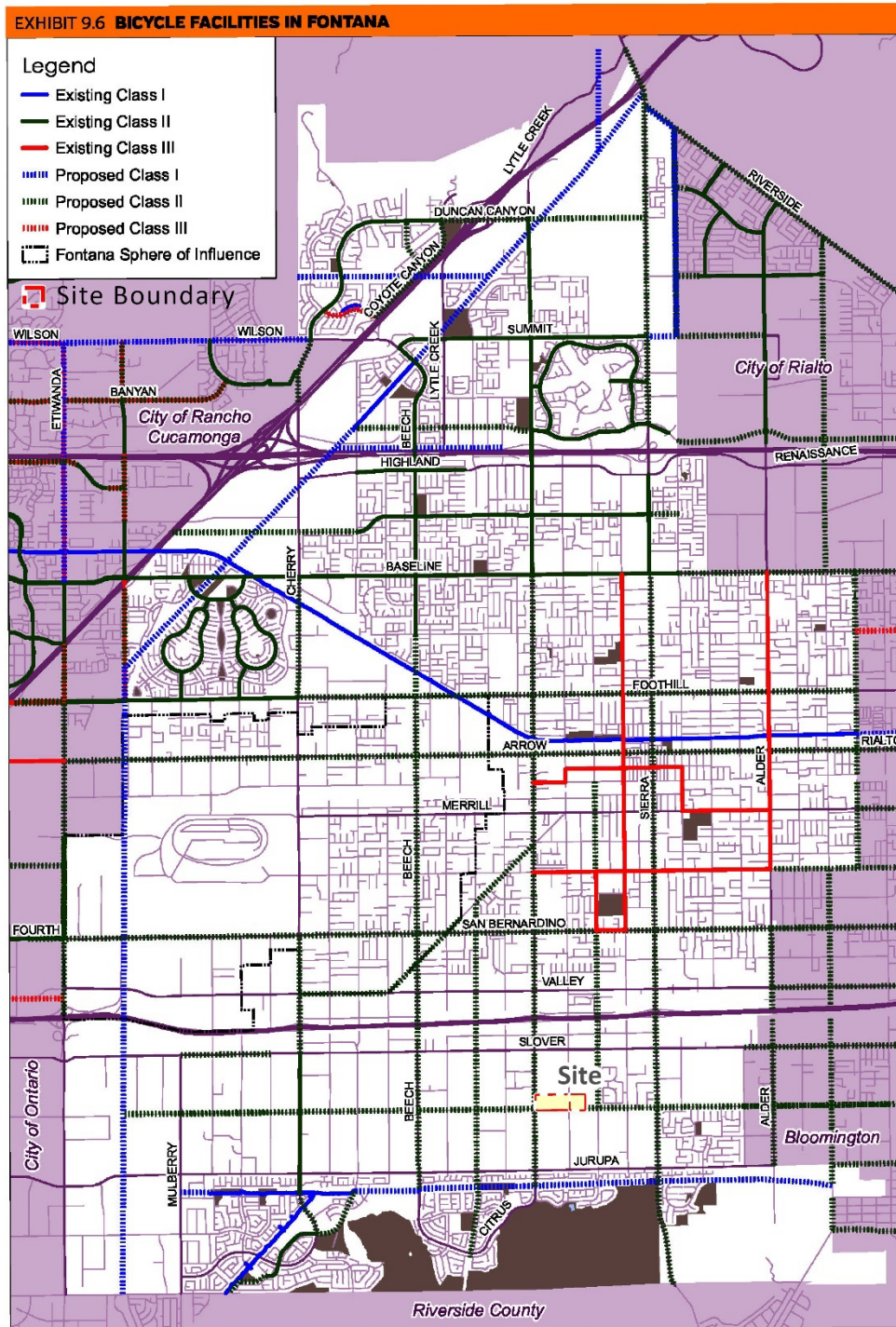
- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1. The traffic counts include the following vehicle classifications: Passenger Cars, 2-Axle Trucks, 3-Axle Trucks, and 4 or More Axle Trucks. To represent the effects large trucks, buses and recreational vehicles have on traffic flow; all trucks were converted into Passenger Car Equivalent (PCE). By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For the purpose of this analysis, a PCE factor of 2.0 has been applied to 2-axle trucks, 2.5 for 3-axle trucks, and 3.0 for 4+-axle trucks to estimate each turning movement. These factors are consistent with the values recommended for use in the City's Traffic Study Guidelines.

Existing ADT volumes are based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg (see Exhibit 3-6):

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 11.32 = \text{Leg Volume}$$

EXHIBIT 3-3: CITY OF FONTANA BICYCLE FACILITIES



Bicycle Facilities
 March, 2017
 Data sources: City of Fontana, 2015;
 SANBAG NMTP, 2014

Fontana Forward
 0 2,500 5,000 10,000
 Scale 1:75,000 Feet

9.14 Fontana General Plan
 Approved and Adopted by City Council November 13, 2018

City Council Resolution 2018-096
 City Council Resolution 2018-097

EXHIBIT 3-4: EXISTING PEDESTRIAN FACILITIES

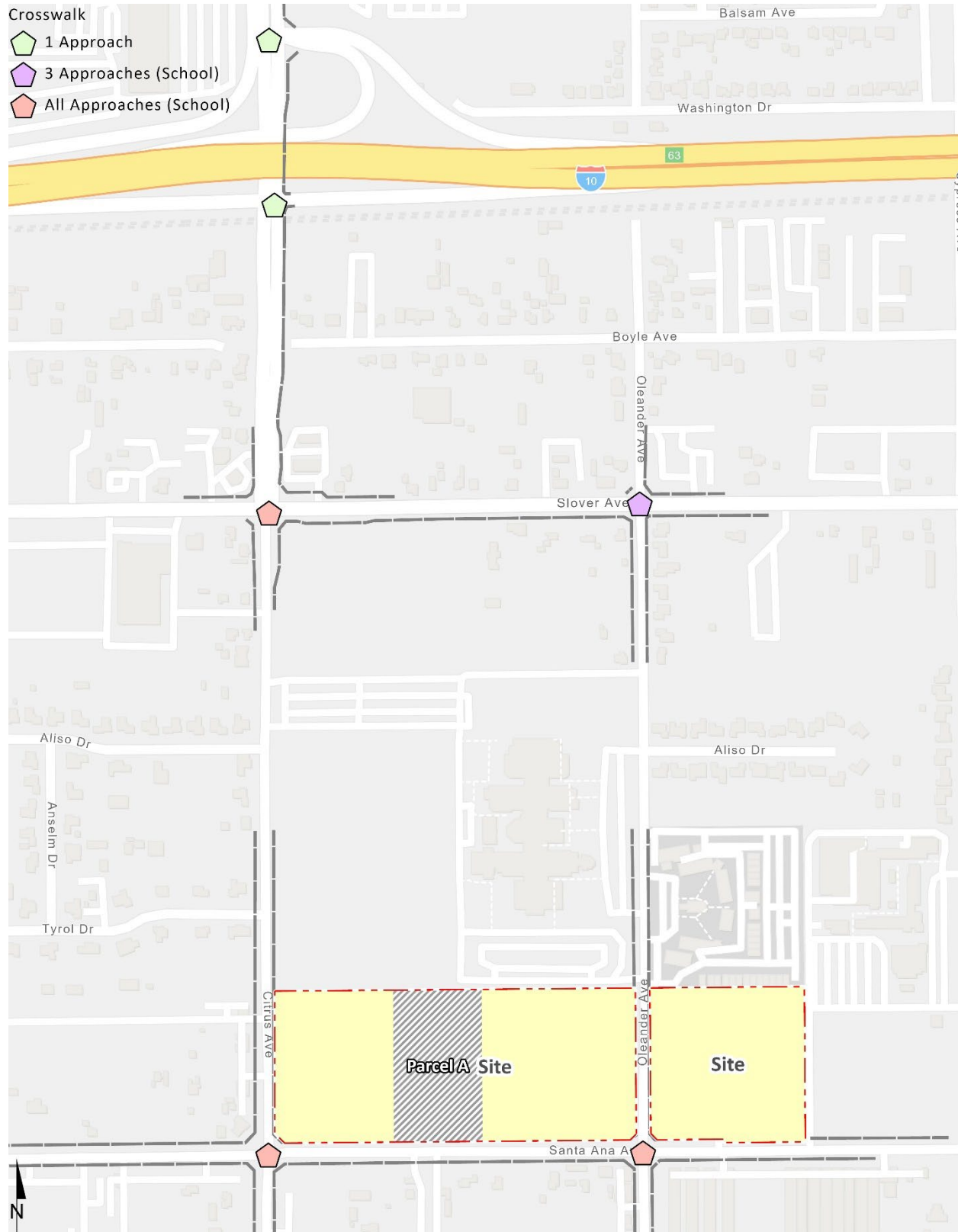


EXHIBIT 3-5: EXISTING TRANSIT ROUTES

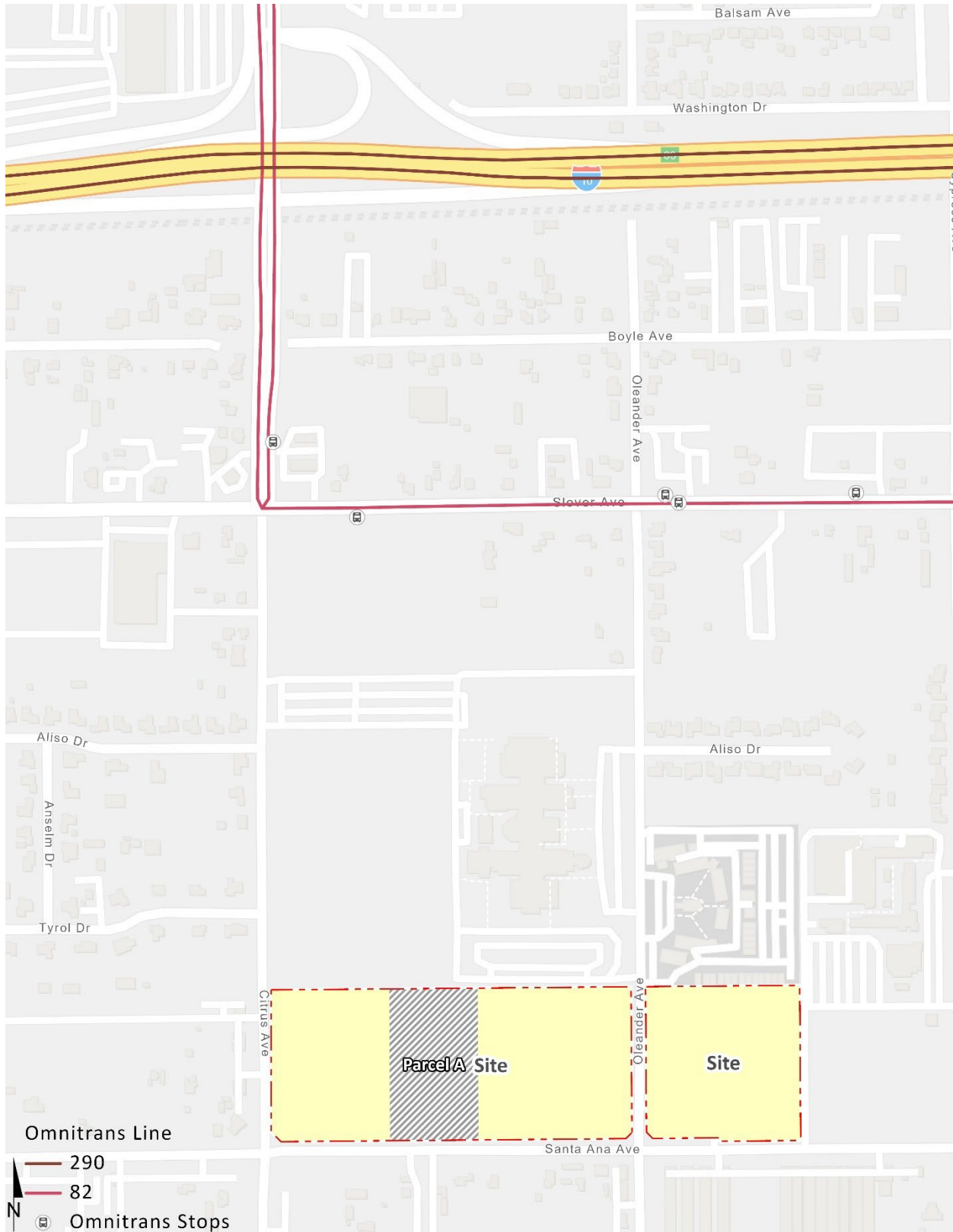
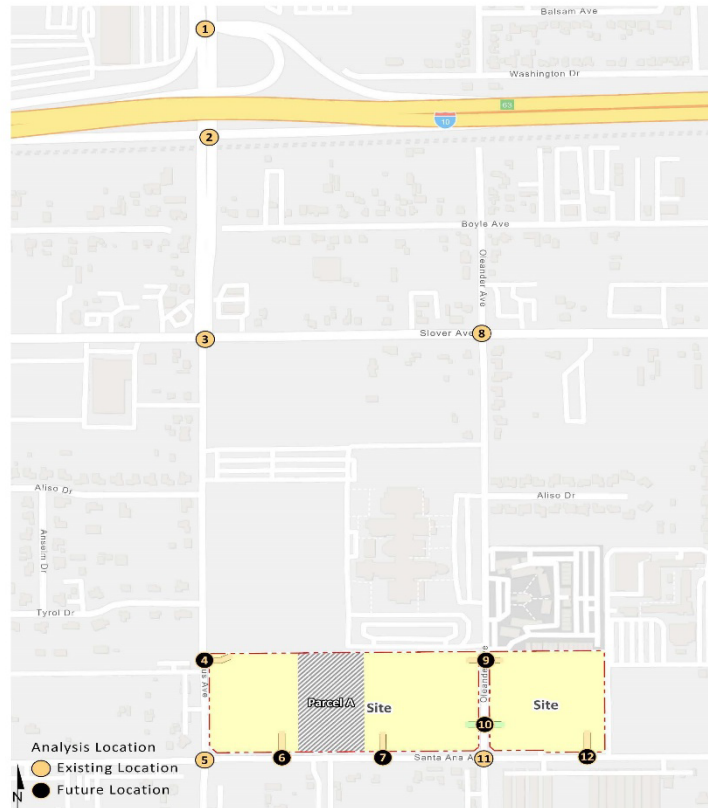


EXHIBIT 3-6: EXISTING (2022) TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	2	3	4
Citrus Av. & I-10 WB Ramps 35,400 ↓ 496(893) ← 843(768) ↑ 495(451) ↑ 367(219) 596(893) ↑ 224(223) 5,250 28,000	Citrus Av. & I-10 EB Ramps 26,000 11,700 ↓ 759(561) ↓ 451(426) 261(409) ↓ 2(8) 277(150) ↓ 559(707) ↑ 286(445) 7,550 24,800	Citrus Av. & Slover Av. 24,800 16,000 ↓ 374(170) ↓ 412(367) ↓ 218(171) 186(520) ↓ ↓ 156(606) ↓ ↓ 16(26) ↓ ↓ 30(14) ↑ ↑ 493(502) ↑ ↑ 47(45) 20,300 13,500	Citrus Av. & Driveway 1 12,050 ↓ 326(852) 497(553) ↑ 12,050
5	6	7	8
Citrus Av. & Santa Ana Av. 13,350 ↓ 58(26) ↓ 214(267) ↓ 54(59) ↑ 62(45) ↑ 84(95) ↑ 25(18) 49(111) ↓ ↓ 45(158) ↓ ↓ 10(15) ↓ ↓ 10(10) ↓ ↓ 386(397) ↑ ↑ 43(35) 5,550 9,900	Driveway 2 & Santa Ana Av. 5,450 ← 171(158) 142(252) → 5,450	Driveway 3 & Santa Ana Av. 5,450 ← 171(158) 142(252) → 5,450	Oleander Av. & Slover Av. 650 ↓ 11(12) ↓ 47(3) ↓ 7(6) ↑ 51(10) ↑ 333(269) ↑ 329(86) 11(14) ↓ ↓ 261(697) ↓ ↓ 149(111) ↓ ↓ 87(79) ↑ ↑ 4(4) ↑ ↑ 312(67) 15,750 4,650
9	10	11	12
Oleander Av. & Driveway 4 3,000 ↓ 229(85) 219(140) ↑ 3,000	Oleander Av. & Driveway 5 3,000 ↓ 229(85) 3,000	Oleander Av. & Santa Ana Av. 3,000 4,750 ↓ 40(10) ↓ 82(66) ↓ 107(9) ↑ 105(17) ↑ 117(112) ↑ 15(27) 31(8) ↓ ↓ 98(139) ↓ ↓ 14(65) ↓ ↓ 5(35) ↑ ↑ 83(115) ↑ ↑ 17(52) 4,900 4,800	Driveway 6 & Santa Ana Av. 4,750 ← 237(156) 222(200) → 4,750

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

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.505 percent. As such, the above equation utilizing a factor of 11.32 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.505 percent (i.e., $1/0.0505 = 11.32$) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are shown on Exhibit 3-6. Note volumes shown on exhibits are represented in actual vehicles. The PCE volumes used for the peak hour operations analyses can be found in the applicable appendix with the intersection operations analysis worksheets.

3.6 EXISTING (2022) INTERSECTION OPERATIONS ANALYSIS

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

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

# Intersection	Traffic Control ²	Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM
1 Citrus Av. & I-10 WB Ramps	TS	16.1	10.0	B	B
2 Citrus Av. & I-10 EB Ramps	TS	19.3	19.0	B	B
3 Citrus Av. & Slover Av.	TS	24.8	24.8	C	C
4 Citrus Av. & Driveway 1		Future Intersection			
5 Citrus Av. & Santa Ana Av.	TS	17.0	17.9	B	B
6 Driveway 2 & Santa Ana Av.		Future Intersection			
7 Driveway 3 & Santa Ana Av.		Future Intersection			
8 Oleander Av. & Slover Av.	TS	21.2	12.2	C	B
9 Oleander Av. & Driveway 4		Future Intersection			
10 Oleander Av. & Driveway 5		Future Intersection			
11 Oleander Av. & Santa Ana Av.	TS	18.0	16.0	B	B
12 Driveway 6 & Santa Ana Av.		Future Intersection			

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

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

² TS = Traffic Signal

3.7 EXISTING (2022) TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no existing unsignalized study area intersections. As such, traffic signal warrants analysis has not been conducted for Existing (2022) traffic conditions.

3.8 EXISTING (2022) OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the Citrus Avenue and I-10 Freeway interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially “spill back” onto the I-10 Freeway mainline. Queuing analysis findings are presented in Table 3-2. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown in Table 3-2, there are no movements that are currently experiencing queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows. Worksheets for Existing (2022) traffic conditions off-ramp queuing analysis are provided in Appendix 3.3.

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

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet) ³		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM
Citrus Av. & I-10 WB Ramps (#1)	WBR	475	142	156	Yes	Yes
	WBL	1,620	347	215	Yes	Yes
Citrus Av. & I-10 EB Ramps (#2)	EBL	1,285	107	168	Yes	Yes
	EBT/R	445	234	59	Yes	Yes

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

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The Project is proposed to consist of 540,849 square feet of warehouse use between 3 warehouse buildings:

- Warehouse building 1: 151,618 square feet
- Warehouse building 2: 193,336 square feet
- Warehouse building 3: 192,895 square feet

Vehicular access will be provided via one driveway on Citrus Avenue, three driveways on Santa Ana Avenue, and two driveways on Oleander Avenue (all driveways are full access). Driveways 1 and 4 will provide access for both passenger cars and trucks, while Driveways 2, 3, 5, and 6 will provide access for passenger cars only. Regional access to the Project site is available from the I-10 Freeway via Citrus Avenue.

4.1 PROJECT TRIP GENERATION

4.1.1 PROPOSED PROJECT

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development.

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the ITE [Trip Generation Manual](#) (11th Edition, 2021) was used to estimate the trip generation. For purposes of this analysis, the following land use code and vehicle mix has been utilized for each building:

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for the total square footage of all 3 buildings. A warehouse is primarily devoted to the storage of materials but may also include office and maintenance areas. The vehicle mix has been obtained from the ITE's latest [Trip Generation Manual](#). The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

Refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in City's Guidelines.

The Project trip generation rates are provided in Table 4-1. Trip generation summary for the Project in actual vehicles is shown in Table 4-2. As shown in Table 4-2, the Project is anticipated to generate a total of 928 two-way trips per day with 88 AM peak hour trips and 99 PM peak hour trips (actual vehicles). The trip generation summary for the Project in PCE is shown in Table 4-2. For the purposes of the peak hour intersection operations analyses, the PCE trip generation has been utilized.

TABLE 4-1: PROJECT TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars (AM=88.2%, PM=83.3%, Daily=64.9%)			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (AM=1.97%, PM=2.79%, Daily=5.86%)			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks (AM=2.44%, PM=3.46%, Daily=7.27%)			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks (AM=7.39%, PM=10.45%, Daily=21.97%)			0.007	0.006	0.013	0.010	0.009	0.019	0.376
Passenger Car Equivalent (PCE) Trip Generation Rates⁶									
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (PCE = 2.0)			0.004	0.003	0.007	0.006	0.004	0.010	0.200
3-Axle Trucks (PCE = 2.5)			0.005	0.005	0.010	0.008	0.008	0.016	0.311
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127

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

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type. Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

TABLE 4-2: PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
Building 1: Warehousing	151.618 TSF							
Passenger Cars:		18	5	23	5	18	23	168
2-axle Trucks:		0	0	0	0	0	0	16
3-axle Trucks:		0	0	0	0	0	0	20
4+-axle Trucks:		1	1	2	2	1	3	58
Total Truck Trips (Actual Vehicles):		1	1	2	2	1	3	94
Total Trips (Actual Vehicles) ²		19	6	25	7	19	26	262
Building 2: Warehousing	196.336 TSF							
Passenger Cars:		24	6	30	7	23	30	218
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	24
4+-axle Trucks:		1	1	2	2	2	4	74
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	118
Total Trips (Actual Vehicles) ²		25	7	32	11	26	37	336
Building 3: Warehousing	192.895 TSF							
Passenger Cars:		23	6	29	7	22	29	214
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	24
4+-axle Trucks:		1	1	2	2	2	4	72
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	116
Total Trips (Actual Vehicles) ²		24	7	31	11	25	36	330
Passenger Cars		65	17	82	19	63	82	600
Trucks		3	3	6	10	7	17	328
Total Trips (Actual Vehicles)²		68	20	88	29	70	99	928

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

TABLE 4-3: PROJECT TRIP GENERATION SUMMARY (PCE)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Passenger Car Equivalent (PCE):								
Building 1: Warehousing	151.618 TSF							
Passenger Cars:		18	5	23	5	18	23	168
2-axle Trucks:		1	0	1	1	1	2	30
3-axle Trucks:		1	1	2	1	1	2	48
4+-axle Trucks:		3	3	6	5	4	9	172
Total Truck Trips (PCE):		5	4	9	7	6	13	250
Total Trips (PCE) ²		23	9	32	12	24	36	418
Building 2: Warehousing	196.336 TSF							
Passenger Cars:		24	6	30	7	23	30	218
2-axle Trucks:		1	1	2	1	1	2	40
3-axle Trucks:		1	1	2	1	2	3	62
4+-axle Trucks:		4	3	7	6	5	11	222
Total Truck Trips (PCE):		6	5	11	8	8	16	0
Total Trips (PCE) ²		30	11	41	15	31	46	218
Building 3: Warehousing	192.895 TSF							
Passenger Cars:		23	6	29	7	22	29	214
2-axle Trucks:		1	1	2	1	1	2	40
3-axle Trucks:		1	1	2	1	2	3	60
4+-axle Trucks:		4	3	7	6	5	11	218
Total Truck Trips (PCE):		6	5	11	8	8	16	318
Total Trips (PCE) ²		29	11	40	15	30	45	532
Passenger Cars		65	17	82	19	63	82	600
Trucks		17	14	31	23	22	45	568
Total Trips (PCE)²		82	31	113	42	85	127	1,168

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

4.1.2 PARCEL A

Although not part of the proposed Project, the 5.03-acre parcel (Parcel A) located between Building 1 and Building 2 has been evaluated as part of this traffic study with the proposed zoning and land use changes and assumes the development of up to 131,464 square feet of general light industrial use (assumes the maximum 0.60 floor-to-area ratio for the 5.03-acre parcel). This underlying land use evaluation has been conducted for Horizon Year (2040) With Project traffic conditions only.

In order to develop the traffic characteristics of the future Parcel A, trip-generation statistics published in the ITE Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation. For purposes of this analysis, the following land use code and vehicle mix has been used for Parcel A (see also Table 4-4) in an effort to develop the most conservative trip generation for the parcel:

- ITE land use code 110 (General Light Industrial) has been used to derive site specific trip generation estimates for Parcel A (5.03-acre parcel x 0.6 FAR x 43,560 SF/acre). A light industrial facility is a free-standing facility devoted to a single use that has an emphasis on activities other than manufacturing. Typically, there is minimum office space. The vehicle mix has been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 4-4: PARCEL A TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
General Light Industrial ³	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.645	0.085	0.730	0.086	0.554	0.640	4.620
2-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.042
3-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.052
4+-Axle Trucks			0.004	0.002	0.006	0.003	0.003	0.006	0.157
Passenger Car Equivalent (PCE) Trip Generation Rates⁶									
General Light Industrial ³	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.645	0.085	0.730	0.086	0.554	0.640	4.620
2-Axle Trucks (PCE = 2.0)			0.002	0.001	0.003	0.002	0.001	0.003	0.084
3-Axle Trucks (PCE = 2.5)			0.003	0.003	0.005	0.003	0.003	0.005	0.129
4+-Axle Trucks (PCE = 3.0)			0.012	0.007	0.019	0.009	0.010	0.019	0.470

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

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type. Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Parcel A is anticipated to generate a total of 640 two-way trips per day on a typical weekday with 97 AM peak hour trips and 84 PM peak hour trips as shown in Table 4-5 (in actual vehicles). For the purposes of the operations analysis, the PCE values shown in Table 4-5 will be used consistent with the City's Guidelines. These trip generation calculations have been utilized for Parcel A under Horizon Year (2040) With Project traffic conditions only for the purposes of this traffic study.

TABLE 4-5: PARCEL A TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
General Light Industrial	131.464 TSF							
Passenger Cars:		85	11	96	11	73	84	608
2-axle Trucks:		0	0	0	0	0	0	6
3-axle Trucks:		0	0	0	0	0	0	6
4+-axle Trucks:		1	0	1	0	0	0	20
Total Truck Trips (Actual Vehicles):		1	0	1	0	0	0	32
Total Trips (Actual Vehicles)²		86	11	97	11	73	84	640
Passenger Car Equivalent (PCE):								
General Light Industrial	131.464 TSF							
Passenger Cars:		85	11	96	11	73	84	608
2-axle Trucks:		0	0	0	0	0	0	12
3-axle Trucks:		0	0	1	0	0	1	18
4+-axle Trucks:		2	1	2	1	1	2	62
Total Truck Trips (PCE):		2	1	3	1	1	2	92
Total Trips (PCE)²		87	12	99	12	74	86	700

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. Separate distributions have been developed for passenger cars and trucks. Pursuant to discussions with the City of Fontana, trucks from Buildings 2 and 3 will utilize Oleander Avenue to head south to Jurupa Avenue, then head west to Citrus Avenue and north to access the I-10 Freeway. Exhibits 4-1 and 4-2 illustrate the passenger car and truck trip distribution patterns through the study area intersections, respectively. The trip distribution patterns for Parcel A are shown on Exhibit 4-3 (external trip distribution patterns are similar to those shown on Exhibit 4-1 and Exhibit 4-2 for the Project).

4.3 MODAL SPLIT

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

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

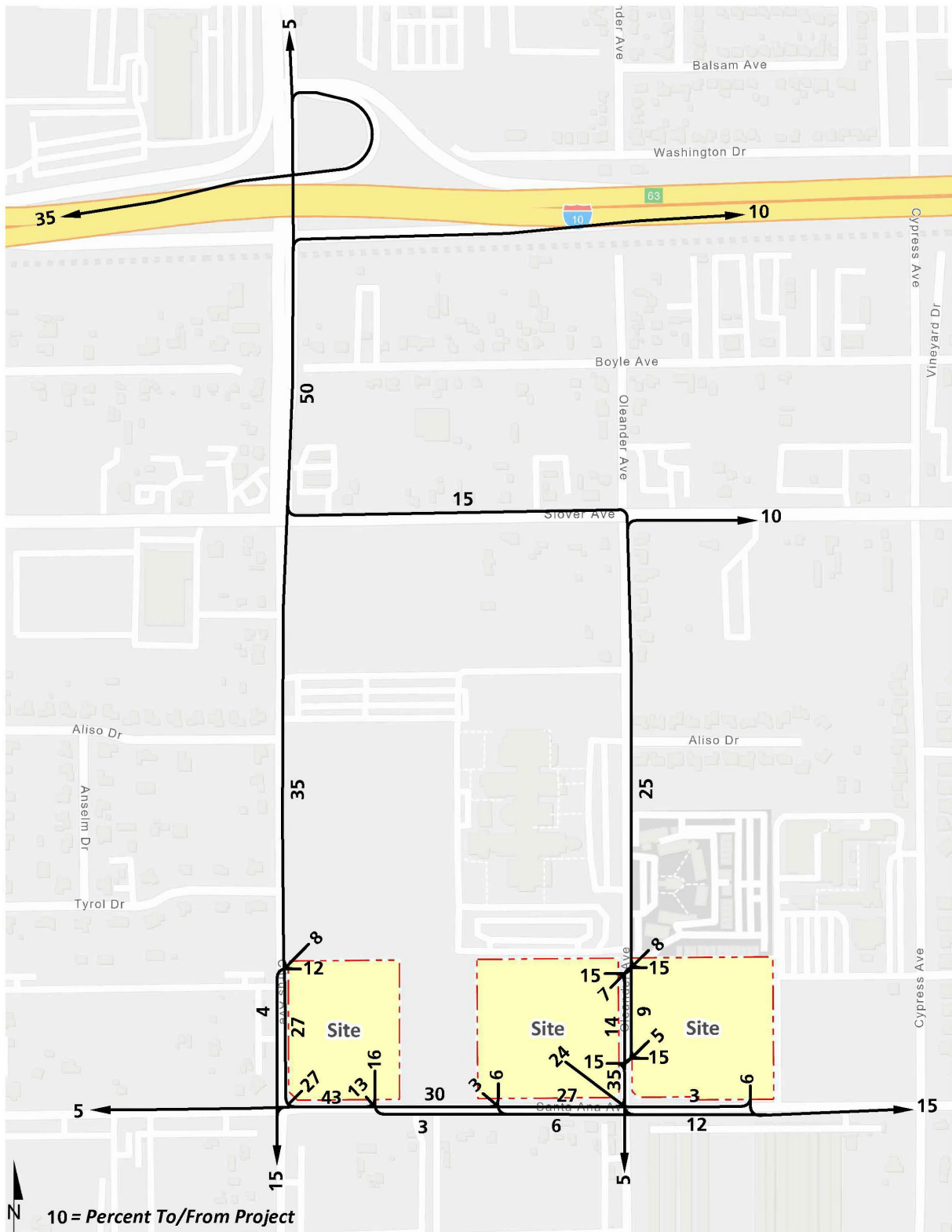


EXHIBIT 4-2: PROJECT (TRUCKS) TRIP DISTRIBUTION

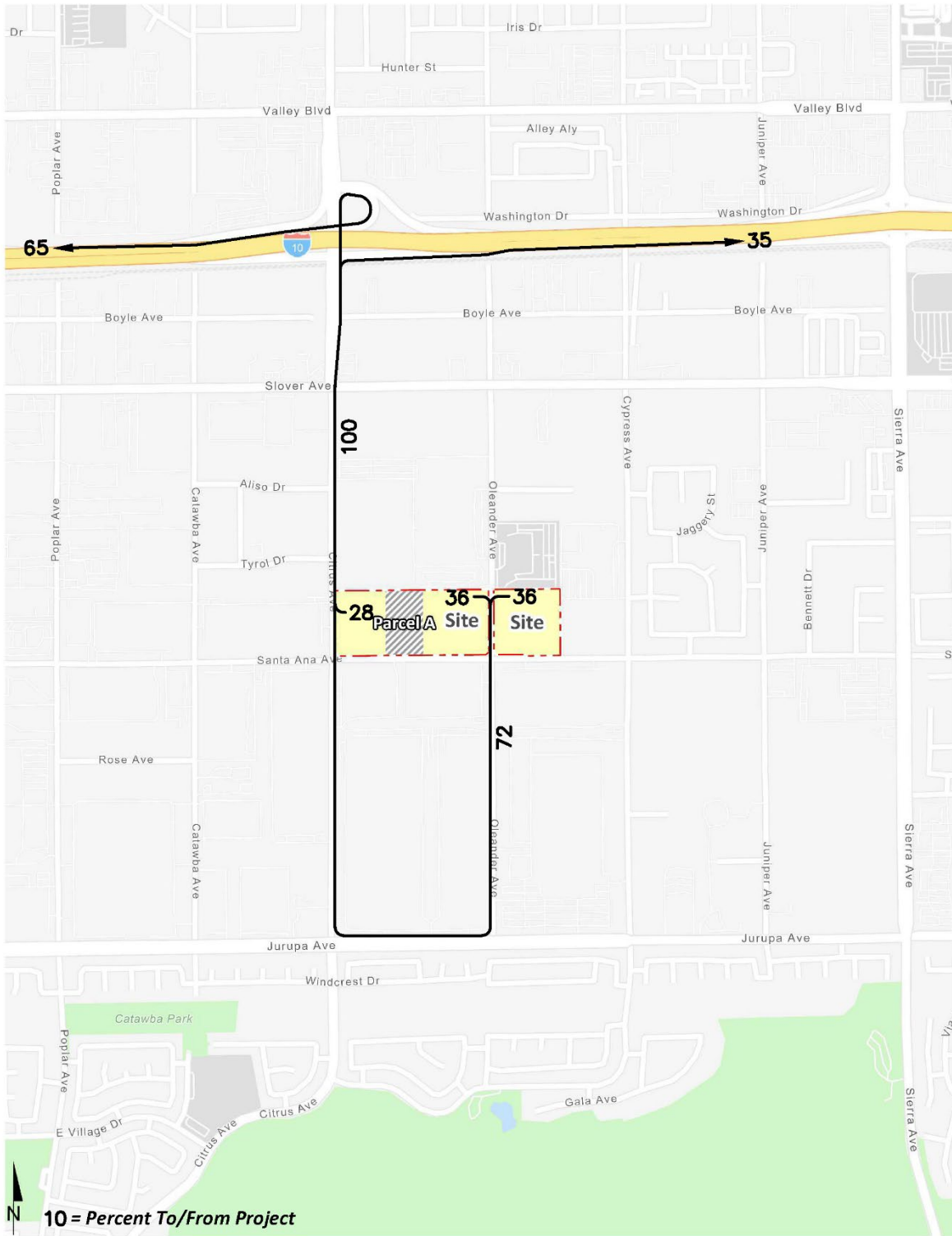
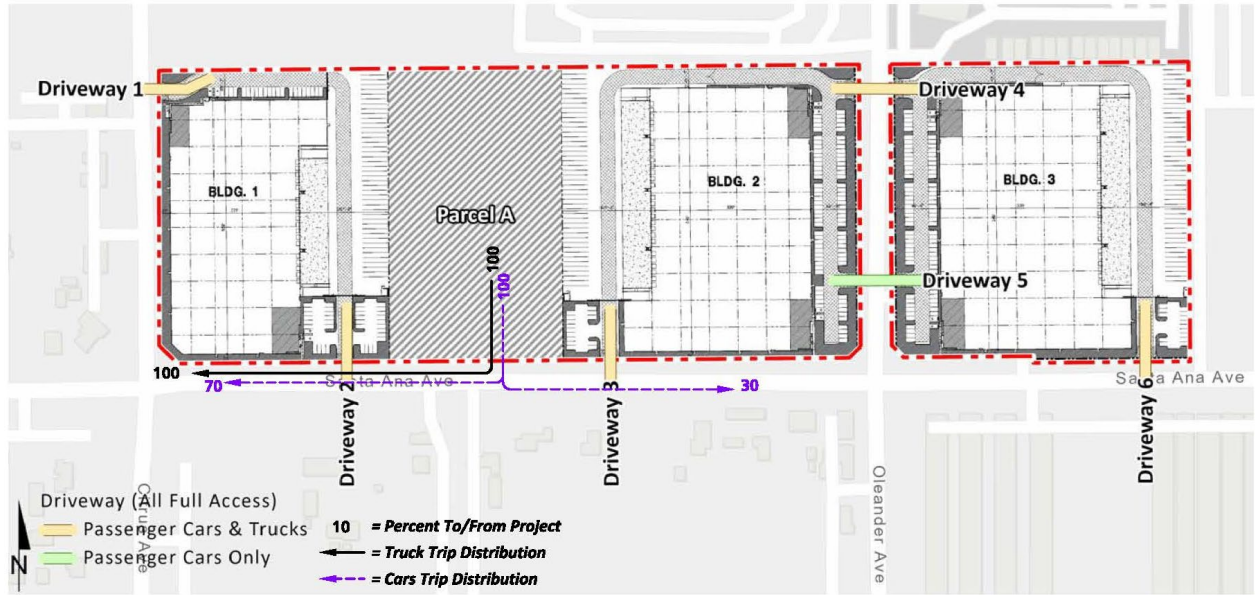


EXHIBIT 4-3: PARCEL A TRIP DISTRIBUTION



4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and weekday peak hour intersection turning movement volumes are shown on Exhibit 4-4 in actual vehicles. Parcel A ADT and weekday peak hour intersection turning movement volumes are shown on Exhibit 4-5 in actual vehicles. For the purposes of the peak hour intersection operations analyses, the PCE volumes have been utilized for the proposed Project and Parcel A.

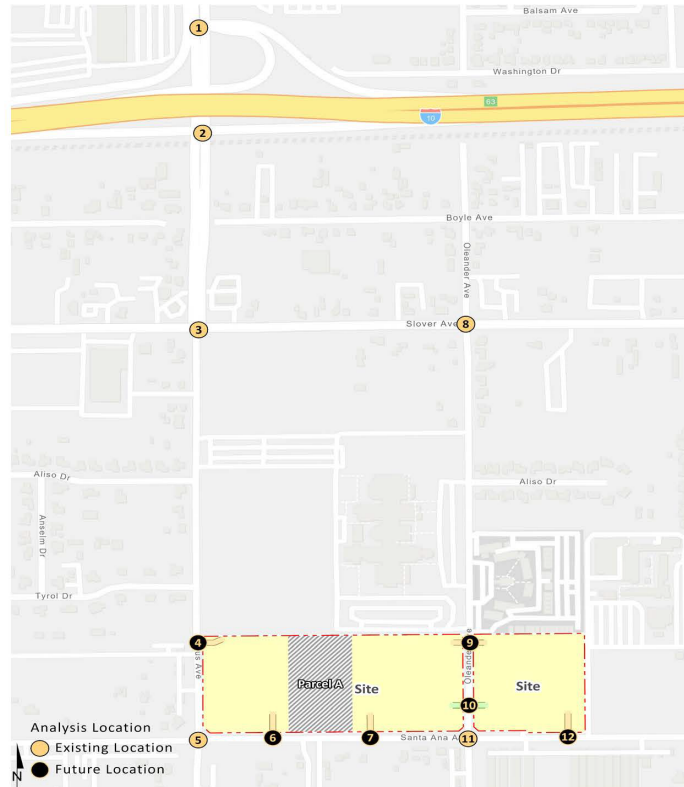
4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 2.0 percent per year, compounded annually, for 2025 traffic conditions, consistent with other recent studies performed in the area. The total ambient growth is 6.12 percent for 2025 traffic conditions (compounded growth of 2.0 percent per year over 3 years or $1.02^{3 \text{ years}}$). The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. Opening Year Cumulative (2025) and Horizon Year (2040) traffic volumes are provided in Sections 5 and 6 of this TA. The traffic generated by the proposed Project was then manually added to the base volume to determine Opening Year Cumulative "With Project" forecasts.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of Fontana. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Exhibit 4-6 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-6. If applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-6 are reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5 *Background Traffic*. Cumulative ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-7 in actual vehicles.

EXHIBIT 4-4: PROJECT ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)

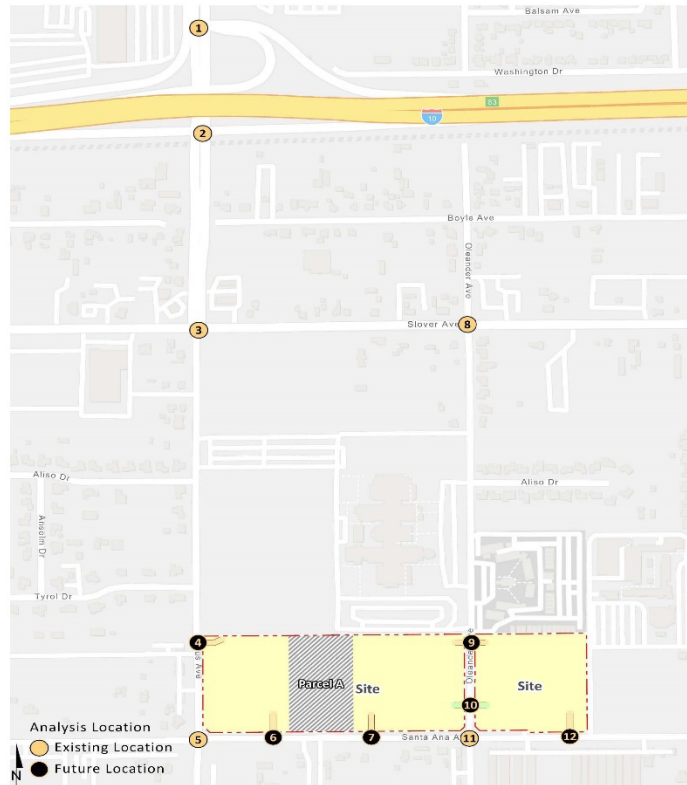


1	Citrus Av. & I-10 WB Ramps	2	Citrus Av. & I-10 EB Ramps	3	Citrus Av. & Slover Av.	4	Citrus Av. & Driveway 1
Nominal	300	350	100	650	100	550	150
← 3(1)	↑ 8(5)	← 11(6)	← 26(17)	↑ 3(9)	← 20(12)	↑ 2(7)	↑ 1(3)
↓ 1(3)	→ 25(13)	→ 9(30)	↓ 10(3)	↓ 9(29)	↓ 6(4)	↓ 7(22)	↓ 3(1)
8(27)	3(9)	9(30)	3(9)	7(22)	3(1)	3(1)	3(1)
350	200	650	550	400			
5	Citrus Av. & Santa Ana Av.	6	Driveway 2 & Santa Ana Av.	7	Driveway 3 & Santa Ana Av.	8	Oleander Av. & Slover Av.
400	250	100	200	Nominal	200	Nominal	
← 3(10)	↑ 5(17)	↓ 2(8)	↑ 2(1)	↓ 1(2)	↑ 2(1)	↑ 7(2)	↑ 7(2)
↓ 18(5)	↓ 1(3)	↓ 1(2)	↑ 5(19)	↓ 1(2)	↓ 7(18)	↓ 3(9)	↓ 2(6)
↑ 2(7)	↑ 2(7)	8(2)	19(6)	2(1)	18(7)	10(3)	
3(1)	5(6)						
7(2)	7(2)						
Nominal	350	250	200	200	100	150	
9	Oleander Av. & Driveway 4	10	Oleander Av. & Driveway 5	11	Oleander Av. & Santa Ana Av.	12	Driveway 6 & Santa Ana Av.
150	200	350	100	450	100	Nominal	100
← 5(2)	↑ 1(5)	← 3(1)	↑ 1(3)	← 4(15)	↑ 4(1)	← 1(2)	↑ 2(1)
↓ 6(2)	↓ 2(7)	↓ 5(14)	↓ 2(6)	↓ 3(8)	↓ 4(3)	↓ 1(2)	↓ 8(2)
↑ 5(2)	↑ 2(7)	↑ 3(1)	↑ 7(2)	↑ 1(4)	↑ 5(8)	↑ 1(2)	
1(5)	6(5)	1(3)	7(2)	16(5)	2(1)	2(1)	
2(7)	2(6)	2(7)	7(2)	3(4)	2(8)	2(8)	
2(7)	6(5)						
200	350	100	450	200	250	100	

##(##) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

EXHIBIT 4-5: PARCEL A ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	2	3	4
Citrus Av. & I-10 WB Ramps	Citrus Av. & I-10 EB Ramps	Citrus Av. & Slover Av.	Citrus Av. & Driveway 1
Nominal 150 ← 4(1) ↑ 9(1) ↓ 1(4) 4(26) 200	200 Nominal 13(2) 30(4) 4(29) 1(7) 350	350 ← 44(6) 6(37) 350	350 ← 44(6) 6(37) 350
5	6	7	8
Citrus Av. & Santa Ana Av.	Driveway 2 & Santa Ana Av.	Driveway 3 & Santa Ana Av.	Oleander Av. & Slover Av.
350 44(6) 6(37) 1(4) 2(11) 4(1) 13(2) 100	450 8(51) 61(8) 450	200 26(3) 3(22) 200	Nominal 9(1) 1(7) Nominal
9	10	11	12
Oleander Av. & Driveway 4	Oleander Av. & Driveway 5	Oleander Av. & Santa Ana Av.	Driveway 6 & Santa Ana Av.
Nominal 9(1) 1(7) Nominal	Nominal 9(1) Nominal	Nominal 9(1) 13(2) 1(7) 2(11) 1(4) 4(1) 200	100 13(2) 2(11) 100

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

EXHIBIT 4-6: CUMULATIVE DEVELOPMENT LOCATION MAP

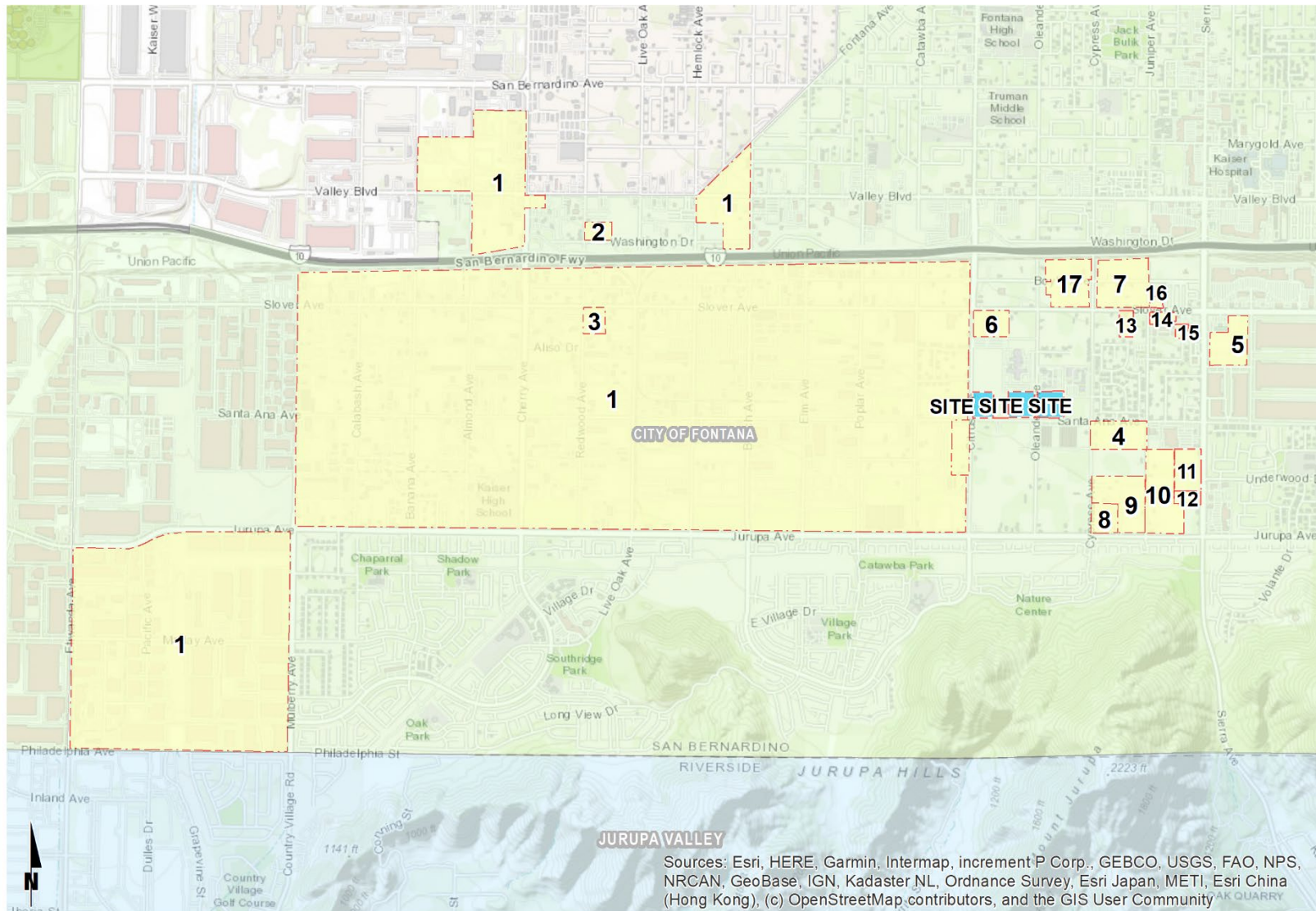
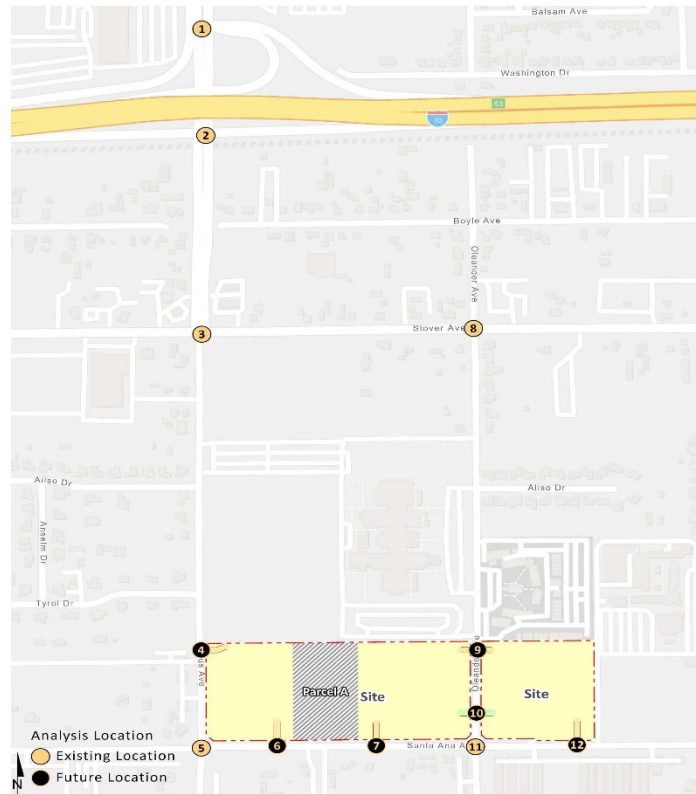


EXHIBIT 4-7: CUMULATIVE ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	2	3	4
Citrus Av. & I-10 WB Ramps	Citrus Av. & I-10 EB Ramps	Citrus Av. & Slover Av.	Citrus Av. & Driveway 1
1,950 0(1) 94(32) 0(1) 23(57) 119(281) 4,700	3,500 0(1) 257(74) 23(57) 119(281) 4,700	8,150 200(33) 621(208) 259(157) 27(33) 45(50) 42(14) 8,350	4,150 63(260) 25(60) 13(35) 11(41) 157(334) 34(21) 7,350
250	4,150	950	7,250
5 Citrus Av. & Santa Ana Av.	6 Driveway 2 & Santa Ana Av.	7 Driveway 3 & Santa Ana Av.	8 Oleander Av. & Slover Av.
7,250 215(86) 247(86) 215(86) 64(149) 52(26) 59(20) 3,600	3,600 64(149) 75(40) 6(23) 16(23) 74(98) 152(50) 3,500	3,600 145(212) 419(162)	3,600 145(212) 419(162)
3,600	3,600	3,600	3,250
9 Oleander Av. & Driveway 4	10 Oleander Av. & Driveway 5	11 Oleander Av. & Santa Ana Av.	12 Driveway 6 & Santa Ana Av.
0(1) 1(0)	0(1)	3,600 0(1) 419(162) 1(0)	3,600 145(212) 419(162)
3,600	3,600	3,600	3,600

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

TABLE 4-6: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

TAZ Project	Land Use	Quantity ²
1 Southwest Industrial Park (SWIP) ¹	Freeway Industrial Commercial (Central)	
	Warehousing	761.067 TSF
	Office	147.786 TSF
	Office Park	152.213 TSF
	Commercial Retail	456.640 TSF
	Freeway Industrial Commercial (East)	
	Warehousing	886.410 TSF
	Office	172.125 TSF
	Office Park	177.282 TSF
	Commercial Retail	531.846 TSF
	Freeway Industrial Commercial (North)	
	Warehousing	335.885 TSF
	Office	65.223 TSF
	Office Park	67.177 TSF
	Commercial Retail	201.531 TSF
	Freeway Industrial Commercial (West)	
	Warehousing	747.959 TSF
	Office	145.241 TSF
	Office Park	149.592 TSF
	Commercial Retail	448.776 TSF
Jurupa North Research & Development (West)		
Light Industrial	1344.901 TSF	
Office	478.407 TSF	
Office Park	847.485 TSF	
Research & Development	677.988 TSF	
Jurupa North Research & Development (Central)		
Light Industrial	964.045 TSF	
Office	342.930 TSF	
Office Park	607.490 TSF	
Research & Development	485.992 TSF	
Jurupa North Research & Development (East)		
Light Industrial	917.459 TSF	
Office	326.358 TSF	
Office Park	578.134 TSF	
Research & Development	462.506 TSF	
Jurupa South Industrial		
Light Industrial	70.985 TSF	
Warehousing	1799.899 TSF	
Slover Central Manufacturing/Industrial		
Manufacturing	1113.002 TSF	
Warehousing	2597.004 TSF	

TAZ Project	Land Use	Quantity ²
1 Southwest Industrial Park (SWIP) ¹	Slover East Industrial	
	Light Industrial	719.464 TSF
	Warehousing	1006.149 TSF
	Office Park	503.074 TSF
	Slover West Industrial	
	Light Industrial	1384.886 TSF
	Warehousing	3518.167 TSF
	Speedway Industrial	
	Light Industrial	930.121 TSF
	Warehousing	762.191 TSF
	Office Park	13.264 TSF
	SWIP Residential Trucking (1,3 and 4)	
	Single Family Detached Residential	84 DU
2 10131 Redwood Av.	High-Cube Warehouse / Distribution Center	250.160 TSF
3 14801 Slover Avenue Warehouse	High-Cube Warehouse (Cold Storage)	77.053 TSF
	Warehousing	231.158 TSF
4 Southwest Fontana Logistics Center Project	City Park	17.45 AC
5 Walmart Shopping Center	Free-Standing Discount Superstore	200.000 TSF
	Specialty Retail Center	9.490 TSF
	Fast Food w/o Drive-Thru	9.490 TSF
6 SEC of Citrus Av. & Slover Av.	Warehousing	194.212 TSF
7 Sierra Business Center	High-Cube Fulfillment Center (Sort)	705.735 TSF
8 St. Mary's Catholic Church	Church	19.508 TSF
9 GLC Fontana III	Warehousing	362.416 TSF
	High-Cube Cold Storage Warehouse	90.604 TSF
10 Fontana Foothills	High-Cube Warehouse / Distribution Center	754.408 TSF
11 Chaffey Community College - Fontana	Community College	4,495 Students
12 Affordable Housing Project	Affordable Homes	130 DU
13 Slover Industrial Center	High-Cube Warehouse (Cold Storage)	20.421 TSF
	Warehousing	115.719 TSF
14 La Quinta Inn	Hotel	104 Rooms
15 Townplace Suites	Hotel	116 Rooms
16 Slover Avenue Office/Warehouse	Warehouse	41.000 TSF
17 Slover & Cypress Warehouse	High-Cube Warehouse (Cold Storage)	156.365 TSF
	High-Cube Fulfillment Center	469.095 TSF
18 Oleander & Slover Warehous	Warehousing	123.593 TSF

¹ Source: Southwest Industrial Park (SWIP) Project TIA, RBF Consulting, September 29, 2011.

² TSF = Thousand Square Feet; AC = Acres; DU = Dwelling Units

4.7 NEAR-TERM TRAFFIC CONDITIONS

The “buildup” approach combines existing traffic counts with a background ambient growth factor to forecast the near-term Opening Year Cumulative (2025) traffic conditions. An ambient growth factor of 2.0 percent per year, compounded annually, accounts for background (area-wide) traffic increases that occur over time up to the year 2025 from the year 2022. Traffic volumes generated by cumulative development projects are then added to assess the Opening Year Cumulative (2025) traffic conditions. Lastly, Project traffic is added to assess “With Project” traffic conditions. The 2025 roadway network are similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project. The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2025) Without Project
 - Existing 2022 volumes
 - Ambient growth traffic (6.12%)
 - Cumulative Development Traffic
- Opening Year Cumulative (2025) With Project
 - Existing 2022 volumes
 - Ambient growth traffic (6.12%)
 - Cumulative Development Traffic
 - Project Traffic

4.8 HORIZON YEAR (2040) VOLUME DEVELOPMENT

Traffic projections for Horizon Year (2040) without Project conditions were derived from SBTAM using accepted procedures for model forecast refinement and smoothing for study area intersections located within the County of San Bernardino, including the City of Fontana. The current version of the SBTAM (Version 2.20, March 2019) reflects the local input in the adopted 2016 SCAG RTP within the County of San Bernardino. The post processing volume worksheets are provided in Appendix 4.1 of this TA.

The traffic forecasts reflect the area-wide growth anticipated between Existing (2022) conditions and Horizon Year (2040) traffic conditions. In most instances the traffic model zone structure is not designed to provide accurate turning movements along arterial roadways unless refinement and reasonableness checking is performed. Therefore, the Horizon Year (2040) peak hour forecasts were refined using the model derived long range forecasts, base (validation) year model forecasts, along with existing peak hour traffic count data collected at each analysis location. The SBTAM has a base (validation) year of 2016 and a horizon (future forecast) year of 2040. The difference in model volumes (2040-2016) defines the growth in traffic over the 24-year period.

The refined future peak hour approach and departure volumes obtained from the model output data are then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program (NCHRP Report 765), along with initial estimates of turning movement proportions. A linear programming algorithm is used to calculate individual turning movements which match the known directional roadway segment forecast volumes computed in the previous step. This program

computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The SBTAM uses an AM peak period-to-peak hour factor of 0.35 and a PM peak period-to-peak hour factor of 0.27. These factors represent the relationship of the highest single AM peak hour to the modeled 3-hour AM peak period (an even distribution would result in a factor of 0.33) and the highest single PM peak hour to the modeled 4-hour PM peak period (an even distribution would result in a factor of 0.25).

Typically, the model growth is prorated and is subsequently added to the existing (base validation) traffic volumes to represent Horizon Year traffic conditions. In an effort to conduct a conservative analysis, reductions to traffic forecasts from either Existing or Opening Year Cumulative traffic conditions were not assumed as part of this analysis. As such, in conjunction with the addition of cumulative projects that are not consistent with the General Plan, additional growth has also been applied on a movement-by-movement basis, where applicable, to estimate reasonable Horizon Year (2040) forecasts. Horizon Year (2040) turning volumes were compared to Opening Year Cumulative (2025) volumes in order to ensure a minimum growth as a part of the refinement process. The minimum growth includes any additional growth between Opening Year Cumulative (2025) and Horizon Year (2040) traffic conditions that is not accounted for by the traffic generated by cumulative development projects and ambient growth rates assumed between Existing (2022) and Opening Year Cumulative (2025) conditions. Future estimated peak hour traffic data was used for new intersections and intersections with an anticipated change in travel patterns to further refine the Horizon Year (2040) peak hour forecasts.

The future Horizon Year (2040) Without Project peak hour turning movements were then reviewed by Urban Crossroads, Inc. for reasonableness, and in some cases, were adjusted to achieve flow conservation, reasonable growth, and reasonable diversion between parallel routes. Flow conservation checks ensure that traffic flow between two closely spaced intersections, such as two adjacent driveway locations, is verified in order to make certain that vehicles leaving one intersection are entering the adjacent intersection and that there is no unexplained loss of vehicles. The result of this traffic forecasting procedure is a series of traffic volumes which are suitable for traffic operations analysis.

5 OPENING YEAR CUMULATIVE (2025) TRAFFIC CONDITIONS

This section discusses the methods used to develop Opening Year Cumulative (2025) Without and With Project traffic forecasts, and the resulting intersection operations, traffic signal warrant, and off-ramp queuing analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2025) traffic conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

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

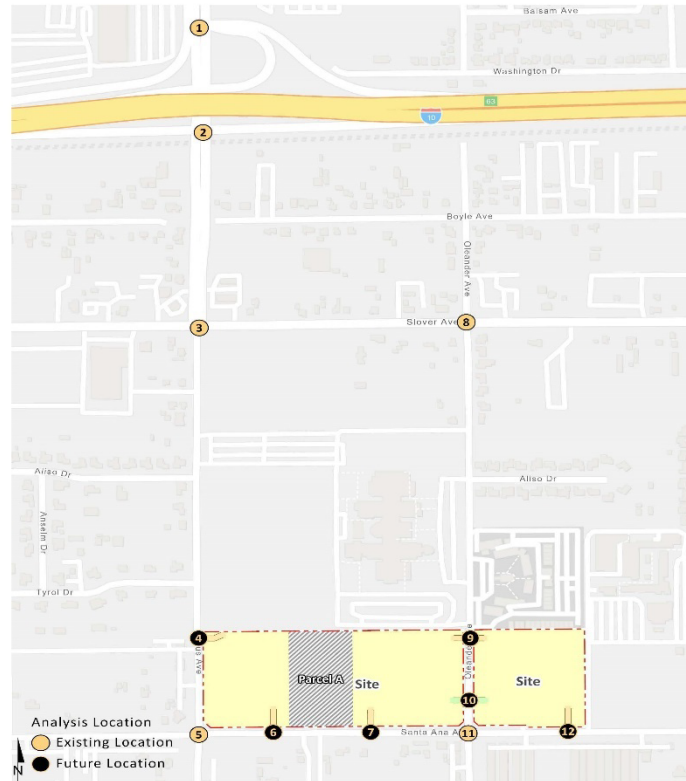
5.2 OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 6.12% plus traffic from pending and approved but not yet constructed known development projects in the area. The ADT and peak hour intersection turning movement volumes, in actual vehicles, which can be expected for Opening Year Cumulative (2025) Without Project conditions are shown on Exhibit 5-1.

5.3 OPENING YEAR CUMULATIVE (2025) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes, an ambient growth factor of 6.12%, traffic from pending and approved but not yet constructed known development projects in the area and the addition of Project traffic. The ADT and peak hour intersection turning movement volumes, in actual vehicles, which can be expected for Opening Year Cumulative (2025) With Project traffic conditions are shown on Exhibit 5-2.

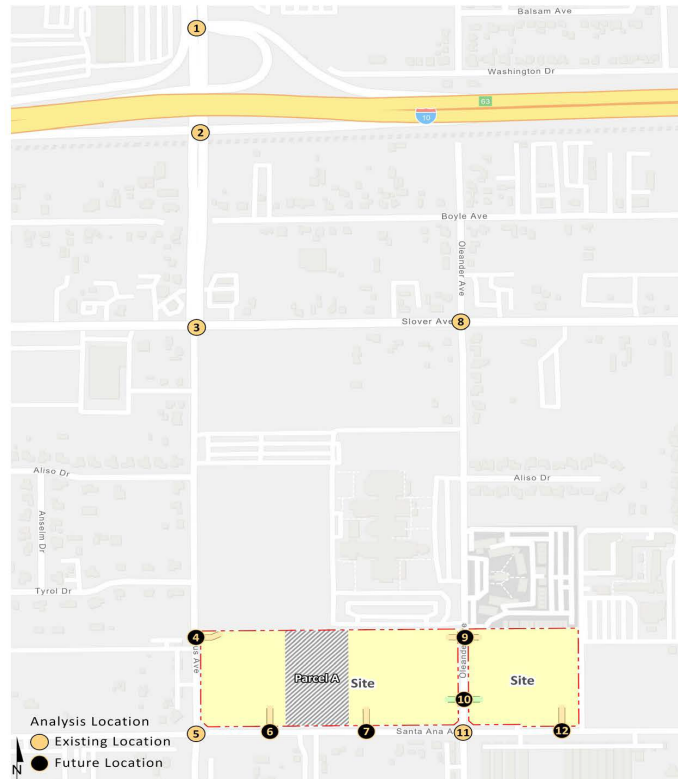
EXHIBIT 5-1: OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	2	3	4
Citrus Av. & I-10 WB Ramps 37,350 528(418) 989(847) 16,150 525(480) 646(306) 655(1,005) 357(518) 34,450 5,800	Citrus Av. & I-10 EB Ramps 33,850 1191(703) 480(453) 13,350 277(435) 2(8) 808(315) 736(1,083) 362(547) 11,950 34,700	Citrus Av. & Slover Av. 34,450 597(213) 1058(597) 490(338) 21,100 224(585) 211(693) 59(42) 43(56) 680(867) 84(69) 25,800 21,650	Citrus Av. & Driveway 1 20,000 1022(631) 729(983) 20,000
5	6	7	8
Citrus Av. & Santa Ana Av. 21,400 276(113) 474(369) 272(148) 130(197) 164(141) 33(42) 116(267) 100(194) 70(36) 27(34) 484(519) 198(87) 14,400 9,450	Driveway 2 & Santa Ana Av. 9,400 326(380) 569(429) 9,400	Driveway 3 & Santa Ana Av. 9,400 326(380) 569(429) 9,400	Oleander Av. & Slover Av. 1,950 13(45) 50(3) 7(40) 56(23) 456(564) 349(91) 12(28) 556(928) 158(119) 93(84) 4(4) 331(71) 19,250 4,950
9	10	11	12
Oleander Av. & Driveway 4 3,200 243(91) 233(149) 3,200	Oleander Av. & Driveway 5 3,200 243(91) 3,200	Oleander Av. & Santa Ana Av. 8,650 42(11) 87(71) 114(10) 111(18) 269(331) 16(29) 33(8) 522(309) 15(69) 5(37) 89(122) 18(55) 8,800 5,100	Driveway 6 & Santa Ana Av. 8,650 397(378) 654(374) 8,650

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

EXHIBIT 5-2: OPENING YEAR CUMULATIVE (2025) WITH PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	2	3	4
Citrus Av. & I-10 WB Ramps 37,400 528(418) 922(848) 16,450 525(480) 654(311) 656(1008) 365(545) 5,800 34,750	Citrus Av. & I-10 EB Ramps 34,200 1202(709) 480(453) 13,450 277(435) 2(8) 833(328) 745(1113) 365(556) 12,150 35,500	Citrus Av. & Slover Av. 35,100 597(213) 1084(614) 500(341) 21,200 223(409) 302(258) 67(97) 224(585) 211(693) 59(42) 43(56) 689(896) 84(66) 25,800 22,200	Citrus Av. & Driveway 1 22,200 1059(719) 6(4) 150 2(7) 1(3) 781(1050) 3(1) 22,050
5	6	7	8
Citrus Av. & Santa Ana Av. 21,850 276(113) 477(379) 290(153) 9,150 135(214) 165(144) 35(49) 116(267) 103(195) 70(36) 27(34) 489(525) 205(89) 9,500 14,750	Driveway 2 & Santa Ana Av. 100 2(8) 1(2) 9,600 2(1) 331(399) 8(2) 588(435) 9,650	Driveway 3 & Santa Ana Av. 9,600 Nominal 1(2) 1(2) 2(1) 333(398) 2(1) 587(436) 9,600	Oleander Av. & Slover Av. 1,950 13(45) 50(3) 7(40) 19,300 56(23) 456(564) 356(93) 12(28) 556(928) 168(122) 96(93) 4(4) 333(77) 20,050 5,100
9	10	11	12
Oleander Av. & Driveway 4 3,350 5(2) 249(93) 5(2) 200 1(5) 2(7) 6(5) 235(155) 6(5) 3,550 200	Oleander Av. & Driveway 5 3,550 3(1) 248(105) 3(1) 100 1(3) 2(6) 7(2) 7(2) 7(2) 3,650 9,000	Oleander Av. & Santa Ana Av. 3,650 46(26) 90(79) 115(14) 8,750 115(19) 273(334) 16(29) 49(13) 525(313) 15(69) 5(37) 94(130) 18(55) 5,350	Driveway 6 & Santa Ana Av. 8,750 Nominal 1(2) 1(2) 2(1) 405(380) 2(1) 656(382) 8,750

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

5.4 INTERSECTION OPERATIONS ANALYSIS

5.4.1 OPENING YEAR CUMULATIVE (2025) WITHOUT PROJECT TRAFFIC CONDITIONS

Opening Year Cumulative (2025) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection analysis results are summarized in Table 5-1, which indicate that all of study area intersections are anticipated to continue to operate at an acceptable LOS during the peak hours under Opening Year Cumulative (2025) Without Project traffic conditions, with the exception of the following locations:

- Citrus Avenue & I-10 Eastbound Ramps (#2) – LOS E AM peak hour only
- Citrus Avenue & Slover Avenue (#3) – LOS E AM and PM peak hours

The intersection operations analysis worksheets for Opening Year Cumulative (2025) Without Project traffic conditions are included in Appendix 5.1.

5.4.2 OPENING YEAR CUMULATIVE (2025) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 5-1, there are no additional study area intersections anticipated to operate at an unacceptable LOS with the addition of Project traffic under Opening Year Cumulative (2025) With Project traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2025) With Project traffic conditions are included in Appendix 5.2.

TABLE 5-1: INTERSECTION ANALYSIS FOR OPENING YEAR CUMULATIVE (2025) CONDITIONS

# Intersection	Traffic Control ²	2025 Without Project				2025 With Project				Project-Related Increase in Delay	
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service		AM	PM
		AM	PM	AM	PM	AM	PM	AM	PM		
1 Citrus Av. & I-10 WB Ramps	TS	20.3	10.1	C	B	20.6	10.4	C	B	0.3	0.3
2 Citrus Av. & I-10 EB Ramps	TS	55.6	20.2	E	C	60.7	20.6	E	C	5.1	0.4
3 Citrus Av. & Slover Av.	TS	64.3	64.6	E	E	68.6	68.4	E	E	4.3	3.8
4 Citrus Av. & Driveway 1	CSS	Future Intersection				13.0	15.1	B	C	--	--
5 Citrus Av. & Santa Ana Av.	TS	24.4	24.5	C	C	25.5	25.4	C	C	1.1	0.9
6 Driveway 2 & Santa Ana Av.	CSS	Future Intersection				10.1	10.0	B	B	--	--
7 Driveway 3 & Santa Ana Av.	CSS	Future Intersection				10.4	10.6	B	B	--	--
8 Oleander Av. & Slover Av.	TS	33.0	12.8	C	B	33.5	12.9	C	B	0.5	0.1
9 Oleander Av. & Driveway 4	CSS	Future Intersection				10.6	9.6	B	A	--	--
10 Oleander Av. & Driveway 5	CSS	Future Intersection				10.6	9.7	B	A	--	--
11 Oleander Av. & Santa Ana Av.	TS	19.7	17.0	B	B	20.1	17.4	C	B	0.4	0.4
12 Driveway 6 & Santa Ana Av.	CSS	Future Intersection				10.8	10.4	B	B	--	--

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

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

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

5.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed (based on CA MUTCD) for Opening Year Cumulative (2025) traffic conditions based on peak hour intersection turning movements volumes. All existing study area intersections are currently signalized. As such, no traffic signal warrants have been evaluated for Opening Year Cumulative (2025) Without Project traffic conditions. There are no future unsignalized study area intersections that are anticipated to meet a traffic signal warrant under Opening Year Cumulative (2025) With Project traffic conditions (see Appendix 5.3)

5.6 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for Opening Year Cumulative (2025) are presented in Table 5-3. As shown in Table 5-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows under Opening Year Cumulative (2025) Without Project and With Project traffic conditions. Worksheets for Opening Year Cumulative (2025) Without Project and With Project traffic conditions off-ramp queuing analyses are provided Appendices 5.4 and 5.5, respectively.

TABLE 5-2: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR OPENING YEAR CUMULATIVE (2025) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	2025 Without Project				2025 With Project			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
Citrus Av. & I-10 WB Ramps (#1)	WBR	475	123	131	Yes	Yes	123	142	Yes	Yes
	WBL	1,620	623 ²	241	Yes	Yes	636 ²	241	Yes	Yes
Citrus Av. & I-10 EB Ramps (#2)	EBL	1,285	102	166	Yes	Yes	102	166	Yes	Yes
	EBT/R	445	953 ^{2,3}	115	Yes	Yes	992 ^{2,3}	128	Yes	Yes

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

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

³ Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

5.7 DEFICIENCIES AND IMPROVEMENTS

This section provides a summary of deficiencies, based on the City of Fontana’s deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, and improvements needed to improve operations back to acceptable levels.

5.7.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended at intersections that have been identified as deficient under Opening Year Cumulative (2025) traffic conditions in an effort to achieve pre-project LOS. The effectiveness of the recommended improvement strategies to address Opening Year Cumulative (2025) traffic deficiencies are presented in Table 5-3. Worksheets for Opening Year Cumulative (2025) conditions, with improvements, HCM calculation worksheets are provided in Appendix 5.5.

TABLE 5-3: OPENING YEAR CUMULATIVE (2025) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WITH IMPROVEMENTS

	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service		
		Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM	
		L	T	R	L	T	R	L	T	R	L	T	R					
2 Citrus Av. & I-10 EB Ramps																		
	Without Improvements:	TS	0	3	0	2	2	0	2	1	0	0	0	0	60.7	20.6	E	C
	With Improvements ⁴ :	TS	0	3	0	2	2	0	2	1	1	0	0	0	21.0	19.3	C	B
3 Citrus Av. & Slover Av.																		
	Without Improvements:	TS	2	2	1	2	2	0	2	2	0	1	2	1	68.6	68.4	E	E
	With Improvements ⁵ :	TS	2	2	1	2	2	1 ≥	2	2	0	1	2	1 ≥	28.4	60.3	C	E

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

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

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

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

³ TS = Traffic Signal

⁴ Improvements might require additional right-of-way/ramp widening.

⁵ Improvement requires restrictions to the SB U-turns.

5.7.2 IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

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

6 HORIZON YEAR (2040) TRAFFIC CONDITIONS

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

6.1 ROADWAY IMPROVEMENTS

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

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Horizon Year conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages and driveways).
- Other parallel facilities, that although not evaluated for the purposes of this analysis, are anticipated to be in place for Horizon Year traffic conditions and would affect the travel patterns within the study area.

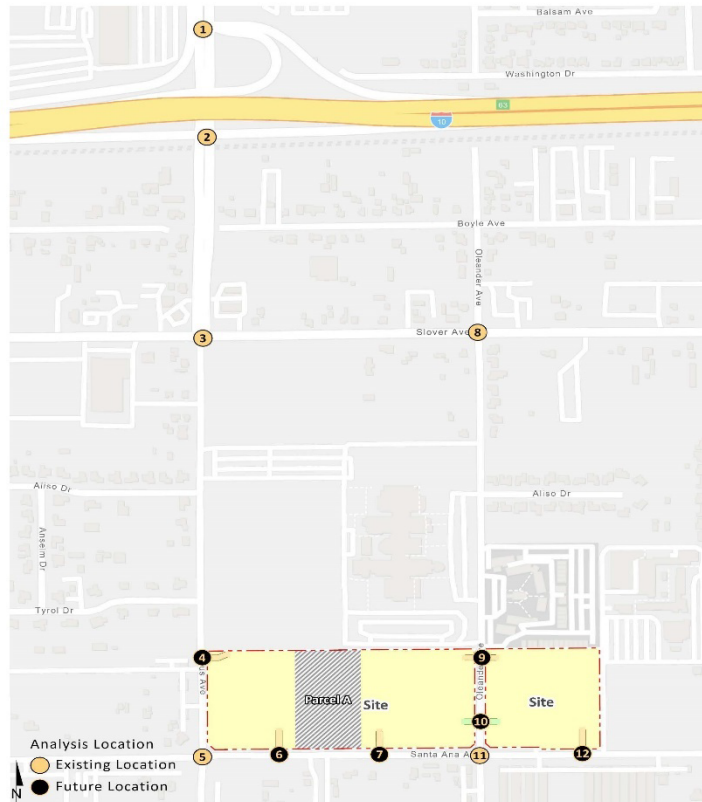
6.2 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-process volumes obtained from the SBTAM (see Section 4.8 *Horizon Year (2040) Volume Development* of this TA for a detailed discussion on the post-processing methodology). The weekday ADT and weekday AM and PM peak hour volumes, in actual vehicles, which can be expected for Horizon Year (2040) Without Project traffic conditions are shown on Exhibit 6-1.

6.3 HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes the refined post-process volumes obtained from the SBTAM, plus the traffic generated by the proposed Project and Parcel A. The weekday ADT and weekday AM and PM peak hour volumes, in actual vehicles, which can be expected for Horizon Year (2040) With Project traffic conditions are shown on Exhibit 6-2.

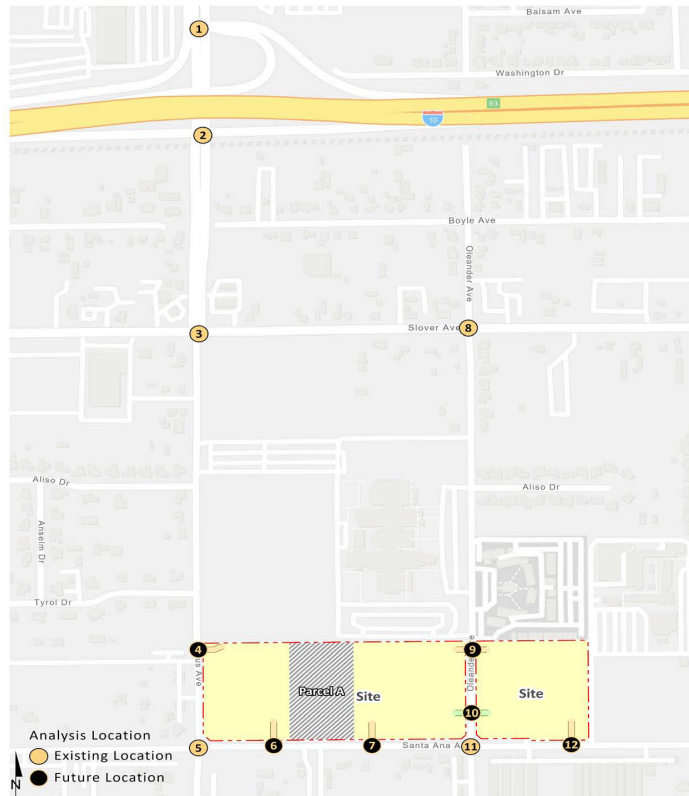
EXHIBIT 6-1: HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	Citrus Av. & I-10 WB Ramps	2	Citrus Av. & I-10 EB Ramps	3	Citrus Av. & Slover Av.	4	Citrus Av. & Driveway 1
44,100	17,750	37,250	14,700	37,900	25,100	22,050	
540(420) ← 1087(832)	↑ 578(528) ↑ 711(477)	← 1311(774) ↓ 650(563)		657(255) ↓ 1164(657) ↑ 538(372)	↑ 242(440) ← 506(418) ↑ 73(106)	← 1125(693)	
	721(1105) → 392(569)	305(479) → 3(19) → 889(347) ↓	810(1192) → 511(860)	408(549) → 616(1191) ↓ 84(55) ↓	84(61) → 748(953) → 92(93) ↓		803(1067) →
6,700	37,900	13,100	38,150	29,000	23,800		22,050
5	Citrus Av. & Santa Ana Av.	6	Driveway 2 & Santa Ana Av.	7	Driveway 3 & Santa Ana Av.	8	Oleander Av. & Slover Av.
23,550	9,750		10,350		10,350	2,300	25,100
304(124) ↓ 522(406) ↓ 299(163)	↑ 143(216) ← 181(155) ↑ 33(46)		← 357(417)		← 357(417)	↑ 19(49) ↓ 56(4) ↓ 15(44)	↑ 74(25) ← 520(621) ↑ 354(103)
128(280) ↓ 110(420) → 77(40) ↓	29(37) → 532(571) → 217(96) ↓		626(679) →		626(679) →	24(31) ↓ 693(1266) → 195(135) ↓	↑ 103(118) 5(5) ↓ 351(106)
10,400	15,850	10,350		10,350		25,650	5,450
9	Oleander Av. & Driveway 4	10	Oleander Av. & Driveway 5	11	Oleander Av. & Santa Ana Av.	12	Driveway 6 & Santa Ana Av.
3,500		3,500		3,500	9,500		9,500
← 250(130)		← 250(130)		45(15) ↓ 91(91) ↓ 114(24)	↑ 127(32) ← 296(364) ↑ 24(34)		← 447(430)
	285(185) →			36(18) → 575(392) → 25(92) ↓	16(41) → 122(135) → 42(78) ↓	731(494) →	
	3,500			3,500	5,600		9,500

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

EXHIBIT 6-2: HORIZON YEAR (2040) WITH PROJECT TRAFFIC VOLUMES (ACTUAL VEHICLES)



1	Citrus Av. & I-10 WB Ramps	2	Citrus Av. & I-10 EB Ramps	3	Citrus Av. & Slover Av.	4	Citrus Av. & Driveway 1
41,150 540(420) 1094(934) 728(483) 723(1112) 404(622) 6,700	18,200 578(528) 38,400	37,750 1335(782) 650(563) 305(479) 3(19) 944(364) 13,450	14,800 823(1251) 515(876) 99,400	38,850 657(255) 1234(680) 408(649) 616(1191) 84(55) 29,000	25,200 245(449) 506(418) 73(106) 84(61) 763(1019) 92(93) 24,700	24,700 1189(711) 6(4) 2(7) 1(3) 816(1126) 3(1) 24,550	150
5	Citrus Av. & Santa Ana Av.	6	Driveway 2 & Santa Ana Av.	7	Driveway 3 & Santa Ana Av.	8	Oleander Av. & Slover Av.
24,300 304(124) 525(416) 361(174) 128(280) 117(422) 77(40) 10,500	10,500 154(270) 183(162) 37(64) 29(37) 537(577) 237(100) 16,250	100 2(8) 8(2) 706(693) 11,050	11,000 2(1) 370(487) 2(1) 370(487) 10,700	Nominal 1(2) 1(2) 2(1) 647(708) 10,700	10,700 2(1) 390(438) 25,750	2,300 19(49) 56(4) 15(44) 24(31) 693(1266) 205(138) 106(127) 5(5) 354(119) 15,650	25,250
9	Oleander Av. & Driveway 4	10	Oleander Av. & Driveway 5	11	Oleander Av. & Santa Ana Av.	12	Driveway 6 & Santa Ana Av.
3,700 5(2) 265(133) 1(5) 2(7) 2(7) 200	200 1(5) 2(7) 288(198) 6(5) 3,950	3,950 3(1) 264(145) 3(1) 7(2) 7(2) 7(2) 100	100 1(3) 2(6) 7(2) 7(2) 7(2) 4,000	4,000 58(31) 94(99) 115(28) 53(30) 580(407) 26(96) 10,100	9,700 131(33) 313(369) 24(34) 20(42) 127(143) 42(78) 5,900	Nominal 1(2) 1(2) 2(1) 735(513) 2(1) 9,700	9,700

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

6.4 INTERSECTION OPERATIONS ANALYSIS

6.4.1 HORIZON YEAR (2040) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Horizon Year (2040) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1 *Roadway Improvements*. As shown in Table 6-1, the following study area intersections are anticipated to operate at an unacceptable LOS under Horizon Year (2040) Without Project traffic conditions:

- Citrus Avenue & I-10 Eastbound Ramps (#2) – LOS E AM peak hour only
- Citrus Avenue & Slover Avenue (#3) – LOS F AM and PM peak hours

The intersection operations analysis worksheets for Horizon Year (2040) Without Project traffic conditions are included in Appendix 6.1 of this TA.

6.4.2 HORIZON YEAR (2040) WITH PROJECT TRAFFIC CONDITIONS

As shown in Table 6-1, there are no additional study area intersections anticipated to operate at a deficient LOS during one or both peak hours for Horizon Year (2040) With Project traffic conditions, in addition to the locations identified above for Horizon Year (2040) Without Project traffic conditions. Although not a new deficiency, the addition of Project traffic is anticipated to cause LOS F operations at the intersection of Citrus Avenue and the I-10 Eastbound Ramps during the AM peak hour only. The intersection operations analysis worksheets for Horizon Year (2040) With Project traffic conditions are included in Appendix 6.2.

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed (based on CA MUTCD) for Horizon Year (2040) traffic conditions based on peak hour intersection turning movements volumes or planning level (ADT) volumes. All existing study area intersections are currently signalized. As such, no traffic signal warrants have been evaluated for Horizon Year (2040) Without Project traffic conditions. There are no future unsignalized study area intersections that are anticipated to meet a traffic signal warrant under Horizon Year (2040) With Project traffic conditions (see Appendix 6.3)

TABLE 6-1: INTERSECTION ANALYSIS FOR HORIZON YEAR (2040) CONDITIONS

# Intersection	Traffic Control ²	2040 Without Project				2040 With Project				Project-Related Increase in Delay	
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service		AM	PM
		AM	PM	AM	PM	AM	PM	AM	PM		
1 Citrus Av. & I-10 WB Ramps	TS	22.3	16.0	C	B	23.1	16.2	C	B	0.8	0.2
2 Citrus Av. & I-10 EB Ramps	TS	69.8	24.3	E	C	81.4	25.6	F	C	11.6	1.3
3 Citrus Av. & Slover Av.	TS	106.6	92.6	F	F	116.0	98.2	F	F	9.4	5.6
4 Citrus Av. & Driveway 1	CSS	Future Intersection				13.4	15.9	B	C	--	--
5 Citrus Av. & Santa Ana Av.	TS	27.2	26.7	C	C	34.1	30.1	C	C	6.9	3.4
6 Driveway 2 & Santa Ana Av.	CSS	Future Intersection				10.3	10.5	B	B	--	--
7 Driveway 3 & Santa Ana Av.	CSS	Future Intersection				10.7	11.1	B	B	--	--
8 Oleander Av. & Slover Av.	TS	24.1	18.1	C	B	25.8	19.0	C	B	1.7	0.9
9 Oleander Av. & Driveway 4	CSS	Future Intersection				11.0	10.0	B	B	--	--
10 Oleander Av. & Driveway 5	CSS	Future Intersection				11.0	10.0	B	B	--	--
11 Oleander Av. & Santa Ana Av.	TS	18.1	16.2	B	B	18.4	16.6	B	B	0.3	0.4
12 Driveway 6 & Santa Ana Av.	CSS	Future Intersection				11.3	10.8	B	B	--	--

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

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

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

6.7 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for Horizon Year (2040) are presented in Table 6-3. No movements are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for Horizon Year (2040) traffic conditions. Worksheets for Horizon Year (2040) Without Project and With Project traffic conditions off-ramp queuing analyses are provided Appendices 6.4 and 6.5, respectively.

TABLE 6-2: PEAK HOUR FREEWAY OFF-RAMP QUEUING SUMMARY FOR HORIZON YEAR (2040) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	2040 Without Project				2040 With Project			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
Citrus Av. & I-10 WB Ramps (#1)	WBR	475	153	146	Yes	Yes	153	146	Yes	Yes
	WBL	1,620	715 ²	365	Yes	Yes	742 ²	369	Yes	Yes
Citrus Av. & I-10 EB Ramps (#2)	EBL	1,285	111	184	Yes	Yes	111	184	Yes	Yes
	EBT/R	445	1,088 ^{2,3}	179	Yes	Yes	1,172 ^{2,3}	203 ²	Yes	Yes

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

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

³ Although 95th percentile queue is anticipated to exceed the available storage for the turn lane, the adjacent through lane has sufficient storage to accommodate any spillover without spilling back and affecting the I-10 Freeway mainline.

6.8 DEFICIENCIES AND IMPROVEMENTS

This section provides a summary of deficiencies, based on the City of Fontana’s deficiency criteria discussed in Section 2.6 *Deficiency Criteria*, and improvements needed to improve operations back to acceptable levels.

6.8.1 IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

Improvement strategies have been recommended at intersections that have been identified as deficient under Horizon Year (2040) traffic conditions in an effort to achieve pre-project LOS. The effectiveness of the recommended improvement strategies to address Horizon Year (2040) traffic deficiencies are presented in Table 6-3. Worksheets for Horizon Year (2040) conditions, with improvements, HCM calculation worksheets are provided in Appendix 6.5.

TABLE 6-3: HORIZON YEAR (2040) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WITH IMPROVEMENTS

	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
		Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
		L	T	R	L	T	R	L	T	R	L	T	R				
2 Citrus Av. & I-10 EB Ramps																	
Without Improvements:	TS	0	3	0	2	2	0	2	1	0	0	0	0	81.4	25.6	F	C
With Improvements ⁴ :	TS	0	3	0	2	2	0	2	1	1	0	0	0	24.4	22.7	C	C
3 Citrus Av. & Slover Av.																	
Without Improvements:	TS	2	2	1	2	2	0	2	2	0	1	2	1	116.0	98.2	F	F
With Improvements ⁵ :	TS	2	2	1	2	2	1	2	2	0	1	2	1	51.8	79.2	D	E

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

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

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

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

³ TS = Traffic Signal

⁴ Improvements might require additional right-of-way/ramp widening.

⁵ Improvement requires restrictions to the SB U-turns.

6.8.2 IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously in Table 6-2, there are no movements that are anticipated to experience queuing issues during the weekday AM or weekday PM peak 95th percentile traffic flows for Horizon Year (2040) traffic conditions. As such, no improvements have been identified.

7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Fontana are funded through a combination of direct project mitigation, development impact fee programs or fair share contributions, such as the City of Fontana DIF program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

7.1 MEASURE "I" FUNDS

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs in order to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in May 2018. Revenues collected through these programs are used in tandem with Measure "I" funds to deliver projects identified in the Nexus Study.

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

7.2 CITY OF FONTANA DEVELOPMENT IMPACT FEE (DIF)

The City of Fontana adopted the latest update to their DIF program in September 2021 (per Resolution No. 2021-094). Fees from new residential, commercial, and industrial development are collected to fund Measure "I" compliant regional facilities as well as local facilities. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

After the City's DIF fees are collected, they are placed in a separate restricted use account pursuant to the requirements of Government Code sections 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Engineering Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds. The City's DIF program establishes a timeline to fund, design, and build the improvements.

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8 VEHICLE MILES TRAVELED

Changes to CEQA Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based LOS as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's OPR released a [Technical Advisory on Evaluating Transportation Impacts in CEQA](#) (December of 2018) (**Technical Advisory**) (2). Based on OPR's Technical Advisory, specific procedures for complying with the new CEQA requirements for VMT analysis, the City of Fontana adopted [Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment](#) (**City Guidelines**) (1). The City Guidelines documents the City's VMT analysis methodology and adopted VMT impact thresholds. The VMT screening evaluation presented in this report has been developed based on these City Guidelines. Appendix 8.1 contains the full VMT memo.

8.1 PROJECT SCREENING

The City Guidelines describe specific screening criteria that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed project level VMT analysis. For the purposes of this analysis, the initial VMT screening process has been conducted with the SBCTA VMT Screening Tool (**Screening Tool**), which uses screening criteria consistent with the screening thresholds recommended in the City Guidelines. Screening thresholds are described in the following four steps:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening
- Step 4: Project net daily trips less than 500 ADT

Consistent with City Guidelines, a land use project needs to only satisfy one of the above screening thresholds to result in a less than significant impact.

8.1.1 STEP 1: TPA SCREENING

Consistent with City Guidelines, projects located within a TPA (i.e., within ½ mile of an existing "major transit stop"¹ or an existing stop along a "high-quality transit corridor"²) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or

¹ Pub. Resources Code, § 21064.3 ("Major transit stop" means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.).

² Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.).

- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool results, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

TPA screening criteria is not met.

8.1.2 STEP 2: LOW VMT AREA SCREENING

As noted in the City Guidelines, “Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.”³ The Screening Tool uses the sub-regional San Bernardino County Transportation Analysis Model (SBTAM) to measure VMT performance within San Bernardino County for individual traffic analysis zones (TAZ’s) within each city. The Project’s physical location based on APN is input into the Screening Tool to determine the VMT generated within the respective TAZ as compared to the jurisdictional average inclusive of a particular threshold (i.e., 15% below baseline County of San Bernardino VMT per employee). Based on the Screening Tool results, the Project is not located within a low VMT generating zone as compared to the City’s adopted threshold of 15% below baseline County of San Bernardino VMT per employee (see Appendix 8.1).

Low VMT Area screening criteria is not met.

8.1.3 STEP 3: PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail with buildings less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, medical/dental office buildings, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The proposed Project is not considered a local serving use based on the examples provided in the City Guidelines.⁴

Low Project Type screening criteria is not met.

8.1.4 STEP 4: PROJECT NET DAILY TRIPS LESS THAN 500 ADT SCREENING

Projects that generate fewer than 500 net ADT (stated in actual vehicles) are deemed to not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT. Substantial evidence in support of this daily trip threshold is documented in the City Guidelines.⁵ The trip generation rates used for this analysis are based on the trip generation statistics published in the ITE Trip Generation Manual (11th Edition, 2021). (3) The proposed Project is estimated to generate 928 vehicle trip-ends per day with an additional 640 vehicle trip-ends per day for Parcel A, which would exceed the City’s screening threshold of 500 ADT.

Project net daily trips less than 500 ADT screening criteria is not met.

As the Project was not found to meet any of the aforementioned VMT screening criteria, a project level VMT analysis is prepared to assess the Project’s potential impact to VMT.

³ City Guidelines; Page 12.

⁴ City Guidelines; Page 13.

⁵ City Guidelines; Appendix B.

8.2 VMT ANALYSIS

8.2.1 VMT MODELING

City Guidelines identify SBTAM as the appropriate tool for conducting VMT analysis for land use projects in San Bernardino County. SBTAM is a useful tool to estimate VMT as it considers interactions between different land uses based on socio-economic data such as population, households, and employment. The calculation of VMT for land use projects is based on the total number of trips generated and the average trip length of each vehicle. SBTAM is also consistent with the model used to develop the City's VMT impact thresholds listed by the City Guidelines. Therefore, the vehicle trips and average daily trip length for project-related vehicle trips are model derived from SBTAM.

Production/Attraction Method

The Production/Attraction (PA) method for calculating VMT sums all weekday VMT generated by home-based (HB) and home-based-work (HBW) trips with at least one trip-end in the study area (i.e., City Boundary or Project Traffic Analysis Zone) by trip purpose. Productions are land use types that generate trips (residences), and attractions are land use types that attract trips (employment). The PA method allows project VMT to be evaluated based on trip purpose, which is consistent with the Office of Planning and Research's (OPR's) Technical Advisory. It should be noted that the PA matrices do not include external trips that have one trip outside of the model boundary or truck trips.

Boundary VMT Method

The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (i.e., City boundary or other designated geographic area). The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Consistent with City VMT Guidelines, the City of Fontana was used as the boundary for this assessment.

8.2.2 CITY OF FONTANA VMT IMPACT CRITERIA

Based on consultation with City Staff, industrial land development projects in the City of Fontana should use VMT per employee as the appropriate metric for VMT impact analysis. City Guidelines identifies the following recommended thresholds:

- The baseline project generated VMT per employee exceeds 15% below the baseline County of San Bernardino VMT per employee, or
- The cumulative project generated VMT per employee exceeds 15% below the baseline County of San Bernardino VMT per employee.

Additionally, the project's effect on VMT would be considered significant if it results in either of the following conditions to be satisfied:

- The baseline link-level boundary VMT per service population (City boundary) to increase under the plus project condition compared to the no project condition), or
- The cumulative link-level boundary VMT per service population (City boundary) to increase under the plus project condition compared to the no project condition).

SBCTA provides VMT calculations for each of its member agencies and for the County of San Bernardino region. Urban Crossroads has obtained this published data from SBCTA, which for the

County of San Bernardino is 17.1 VMT per employee. As outlined in the City Guidelines, a threshold of 15 percent below the regional baseline is 14.54 VMT per employee ($17.1 \times 0.85 = 14.54$).

8.2.3 PROJECT VMT ESTIMATES

To estimate Project generated VMT, standard land use information must first be converted into a SBTAM compatible dataset. The SBTAM model utilizes socio-economic data (SED) (e.g., employment information) instead of land use information to estimate vehicle trips. Project building square footage has been converted to employment data for input into the SBTAM model and has been isolated within the Project TAZ (TAZ 53724101). For purposes of this analysis, employment estimates were calculated using average employment density factors from Southern California Association of Governments (SCAG) Employment Density Study (October 2001) (4). SCAG reports that commerce center buildings in San Bernardino County employ an average of 1 worker for every 1,195 SF of building area, which would yield 453 jobs ($540,849 \text{ SF} \div 1,195 \text{ SF/employee} = 453 \text{ employees}$) for proposed Buildings 1, 2, and 3. (SCAG, 2001, p. 15). Although no development is currently proposed on 5.0 acres of the Project Site (Parcel A), should those 5.0 acres be developed in the future with up to 131,464 SF of building space, an additional 110 jobs could be generated ($131,464 \text{ SF} \div 1,195 \text{ SF/employee} = 110 \text{ employees}$). Table 8-1 presents the estimated number of Project employees by land use type used to populate the SBTAM model for the proposed Project.

TABLE 8-1: EMPLOYMENT ESTIMATES

Land Use	Quantity (SF)	Employment Density Factor ⁶	Estimated Employees
Warehouse	682,572	1,195 SF per employee	563

The VMT estimates calculated for the Project are presented in Table 8-2 and Table 8-3. As shown in Table 8-2, the proposed Project is forecast to generate HBW VMT per employee above the City's adopted impact threshold for both baseline and cumulative traffic conditions and is considered to have a potentially significant Project generated VMT impact.

TABLE 8-2: PROJECT VMT PER EMPLOYEE

	Baseline (2022)	Cumulative Year (2040)
Employees	563	563
HBW VMT	9,444	9,088
HBW VMT Per Employee	16.77	16.14
City Threshold	14.54	14.54
Percent Above Threshold	15.34%	11.00%
Potentially Significant?	Yes	Yes

Table 8-3 presents boundary VMT and boundary VMT per service population estimates for baseline and cumulative conditions. The boundary VMT per service population remains unchanged under the With Project scenario for both baseline and cumulative conditions. The Project's cumulative effect on VMT is considered less than significant.

⁶ Table II-B of the SCAG Employment Density Study.

TABLE 8-3: BOUNDARY VMT

Scenario	Baseline		Cumulative	
	No Project	With Project	No Project	With Project
Service Population	290,488	291,051	352,559	353,122
Boundary VMT	3,753,385	3,756,829	4,643,981	4,650,713
VMT per SP ⁷	12.92	12.91	13.17	13.17
Change in VMT per SP ⁷		-0.01		0.0
Potentially Significant?		No		No

8.3 VMT REDUCTION STRATEGIES

Trip reduction measures that have the potential to reduce project generated VMT are described in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA, 2021) (**2021 Handbook**). Locational context is a major factor relevant to the potential application and effectiveness of VMT reduction measures. The three locational contexts identified by the 2021 Handbook are suburban, urban, and rural.⁸ The locational context of the Project is characteristically suburban, which further limits the effectiveness of a particular trip reduction measure as compared to an urban/city center with high accessibility to transit and other modes of transportation beyond the single occupancy automobile. In addition to limitations related to locational context, as future building tenants are not known for the Project, the ultimate effectiveness of certain trip reduction measures cannot be guaranteed.

Potential trip reduction measures that may be relevant to the proposed Project as described within the 2021 Handbook are listed below.

- Provide pedestrian and bicycle network improvements within the development connecting to existing off-site facilities.
- Commute trip reduction (CTR) programs offered to encourage the use of vanpools, carpooling, public transit, and biking.
- CTR programs may also provide for alternative work or compressed work schedules to reduce the number of days an employee commutes to work.
- Provision of on-site facilities to provide end of trip services for bicycling such as secure bike parking and storage lockers.
- Provide reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles.

8.4 CONCLUSION

Based on the results of this analysis the following findings are made:

⁷ SP refers to Service Population

⁸ 2021 Handbook; Page 43

- The Project was evaluated against VMT screening criteria as outlined in the City Guidelines. The Project was not found to screen from the need to perform a VMT analysis, and a model based VMT analysis was performed.
- The Project was found to exceed the City's VMT per employee threshold by 15.34% in baseline conditions and 11.00% in cumulative conditions. The Project is determined to have a potentially significant transportation impact.
- The Project's effect on VMT was found to remain unchanged or reduce in the With Project scenario as compared to the No Project scenario for both the Baseline and Cumulative conditions. In other words, the Project's effect on VMT was found to be less than significant.
- Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be guaranteed to reduce Project generated HBW VMT to a level of less than significant; the Project's VMT impact is therefore considered significant and unavoidable.

9 REFERENCES

1. **City of Fontana Public Works Department.** *Traffic Impact Analysis (TIA) Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment.* Fontana : s.n., October 21, 2020.
2. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD).* 2014, Updated March 30, 2021 (Revision 6).
6. **Southern California Association of Governments.** *Employment Density Study.* October 2001.

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APPENDIX 1.1: APPROVED TRAFFIC STUDY SCOPING AGREEMENT

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Exhibit B

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Fontana Engineering Department requirements for traffic impact analysis of the following project. The analysis must follow the SBCTA Congestion Management Plan (CMP) Guidelines Updated 2016.

Case No. _____
Related Cases - _____
 SP No. _____
 EIR No. _____
 GPA No. _____
 CZ No. _____
Project Name: _____
Project Address: _____
Project Description: _____

	<u>Consultant</u>	<u>Developer</u>
Name:	_____	_____
Address:	_____	_____
Telephone:	_____	_____
Fax:	_____	_____

A. Trip Generation Source: _____

Current GP Land Use _____	Proposed Land Use _____
Current Zoning _____	Proposed Zoning _____
Current Trip Generation	Proposed Trip Generation
In Out Total	In Out Total
AM Trips _____	_____
PM Trips _____	_____
Internal Trip Allowance <input type="checkbox"/> Yes <input type="checkbox"/> No (_____ % Trip Discount)	
Pass-By Trip Allowance <input type="checkbox"/> Yes <input type="checkbox"/> No (_____ % Trip Discount)	

A pass-by trip discount is allowed for appropriate land uses per ITE trip generation handbook 3rd edition. The pass-by trips at adjacent study area intersections and project driveways shall be indicated on a report figure. (Attach table for detailed trip generation)

B. Trip Geographic Distribution: N % S % E % W %
(attach exhibit for detailed assignment)

C. Background Traffic

Project Opening & Future Build-Out Year: _____ Annual Ambient Growth Rate: _____ %
Phase Year(s) _____
Other area projects to be analyzed: _____
Model/Forecast methodology _____

Exhibit B – Scoping Agreement – Page 2

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

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

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

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

E. Other Jurisdictional Impacts

Is this project within a City’s Sphere of Influence or one-mile radius of City boundaries? Yes No

If so, name of City Jurisdiction: _____

F. Site Plan (please attach reduced copy)

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

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

H. Existing Conditions

Traffic count data must be new or recent. Provide traffic count dates if using other than new counts.
Date of counts Traffic counts conducted in May 2022 before schools are out for Summer Break

I. VMT Assessment

Provide VMT screening/assessment per the latest TIA & VMT Guidelines.

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

Recommended by:

Approved Scoping Agreement:

Consultant’s Representative Date

City of Fontana Traffic Engineer Date

Scoping Agreement Submitted on _____

Revised on _____

August 17, 2022

Ms. Gia Kim
City of Fontana
8353 Sierra Avenue
Fontana, CA 92335

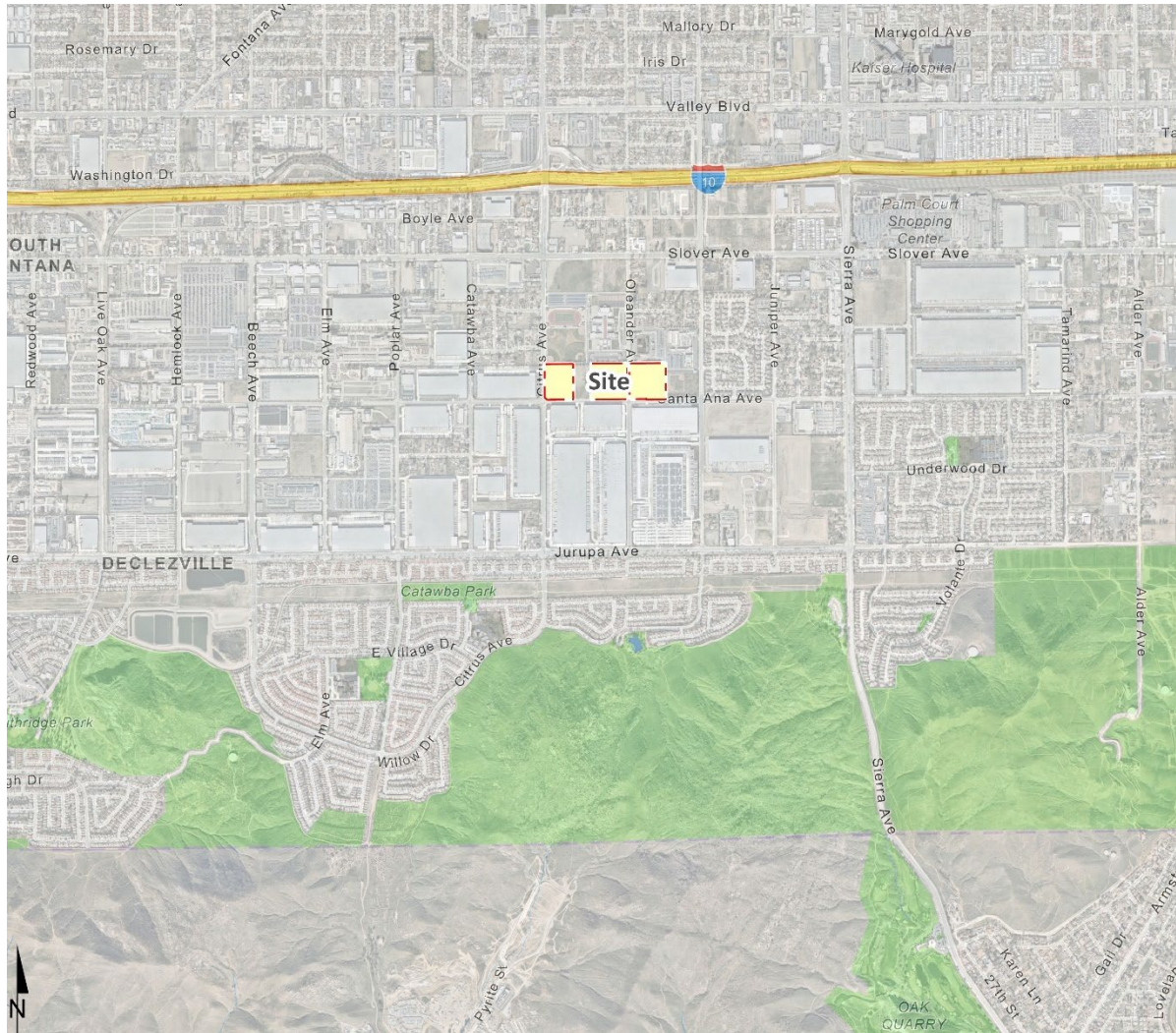
OLEANDER & SANTA ANA WAREHOUSES (PAM22-013) SCOPING AGREEMENT

Ms. Gia Kim,

The firm of Urban Crossroads, Inc. is pleased to submit this letter documenting the recommended Scope of Work for the traffic assessment in support of the proposed Oleander & Santa Ana Warehouses development (**Project**), which is located north of Santa Ana Avenue and on either side of Oleander Avenue as well as the northeast corner of Citrus Avenue at Santa Ana Avenue in the City of Fontana. Exhibit 1 depicts the location of the proposed Project in relation to the existing roadway network.

Our goal is to obtain comments from City of Fontana staff, to ensure that the traffic assessment fully addresses the potential effects of the proposed Project. The remainder of this letter describes the draft proposed analysis methodology, project trip generation, trip distribution, and project traffic assignment/project trips on the surrounding roadway network, which have been used to establish the draft proposed project study area and analysis locations. The following scoping agreement has been prepared consistent with the City's Traffic Impact Analysis Guidelines for VMT and LOS Assessment (October 2020, referred to as **City's Guidelines**).

EXHIBIT 1: LOCATION MAP



It is our understanding that the Project is to consist of 3 warehouse buildings:

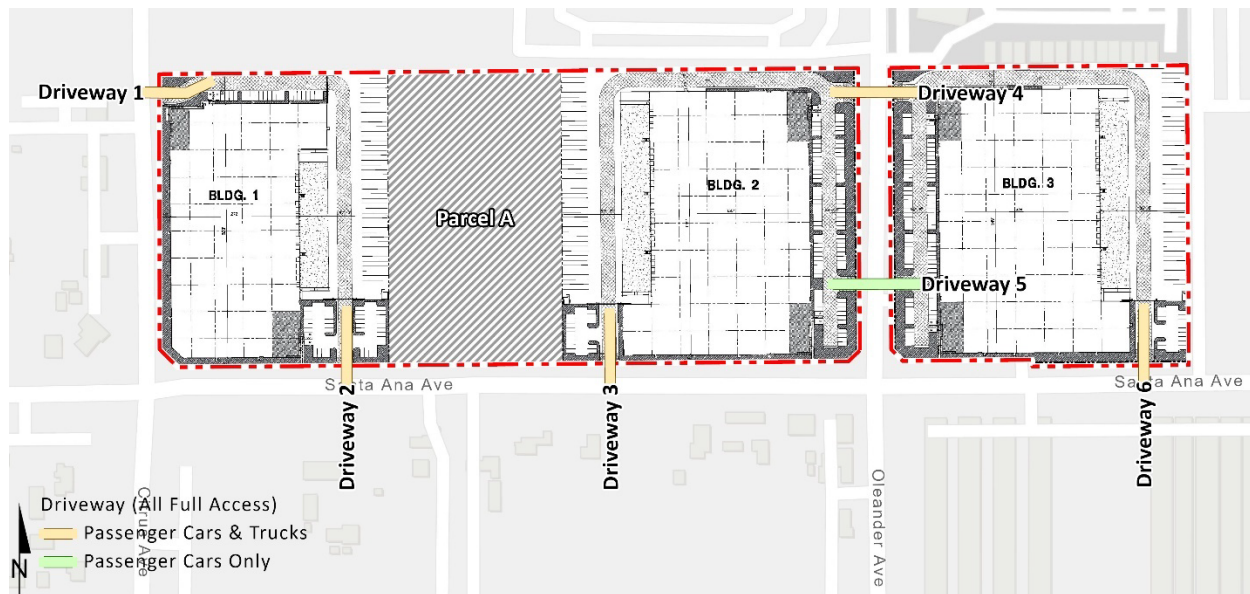
- Building 1 = 153,129 square feet
- Building 2 = 198,166 square feet
- Building 3 = 199,813 square feet
- Total = 551,108 square feet

Although not part of the Project, the 5.03-acre parcel located between Building 1 and Building 2 will be evaluated as part of this traffic study with the proposed zoning and land use changes, which would include the development of up to 131,464 square feet of general light industrial use (assumes the maximum 0.6 floor-to-area ratio or FAR for the 5.03-acre parcel). This underlying land use evaluation will be conducted for Horizon Year With Project traffic conditions only.

The Project is anticipated to be constructed in one phase by the year 2025. A preliminary site plan of which the traffic study will be based on, is shown on Exhibit 2. The following describes the access proposed for the site (all driveways will allow for full access):

- Driveway 1 on Citrus Avenue – passenger car and truck access
- Driveway 2 on Santa Ana Avenue – passenger car and truck access
- Driveway 3 on Santa Ana Avenue – passenger car and truck access
- Driveway 4 on Oleander Avenue – passenger car and truck access
- Driveway 5 on Oleander Avenue – passenger car access only
- Driveway 6 on Santa Ana Avenue – passenger car and truck access

EXHIBIT 2: PRELIMINARY SITE PLAN



STUDY AREA

Consistent with City's Guidelines, the study area limits have been set based upon a threshold of 50 peak hour project trips. In other words, the study area includes any intersection of Collector roadway or higher classification street with another Collector roadway or higher classification street, at which the proposed Project will add 50 or more peak hour trips. The proposed intersection analysis locations have been identified on Exhibit 3. The study area intersections will be evaluated using the HCM 6th Edition methodology.

EXHIBIT 3: STUDY AREA

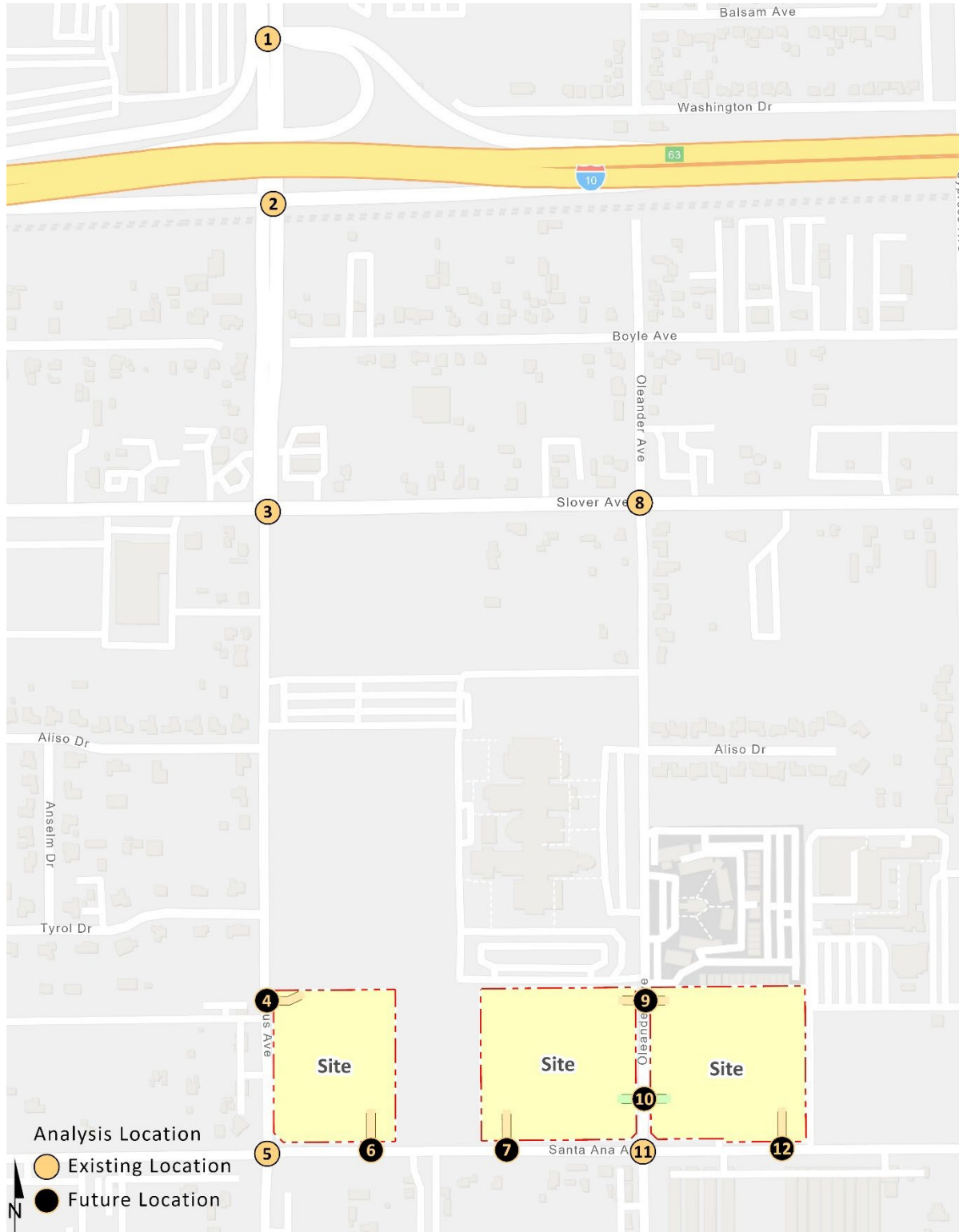


TABLE 1: LIST OF STUDY INTERSECTIONS

#	Intersections
1	Citrus Av. & I-10 WB Ramps
2	Citrus Av. & I-10 EB Ramps
3	Citrus Av. & Slover Av.
4	Citrus Av. & Driveway 1
5	Citrus Av. & Santa Ana Av.
6	Driveway 2 & Santa Ana Av.
7	Driveway 3 & Santa Ana Av.
8	Oleander Av. & Slover Av.
9	Oleander Av. & Driveway 4
10	Oleander Av. & Driveway 5
11	Oleander Av. & Santa Ana Av.
12	Driveway 6 & Santa Ana Av.

ANALYSIS SCENARIOS

The following analysis scenarios will be analyzed for this traffic study:

- Existing (2022) Conditions
- Opening Year Cumulative (2025) Without Project Conditions
- Opening Year Cumulative (2025) With Project Conditions
- Horizon Year (2040) Without Project
- Horizon Year (2040) With Project (this analysis scenario will also include the proposed land use changes to the 5.03-acre parcel between Buildings 1 and 2)

Horizon Year (2040) traffic forecasts will be derived from the SBTAM traffic model for Without Project traffic conditions. Project traffic will then be manually added for Horizon Year (2040) With Project traffic conditions.

LEVEL OF SERVICE (LOS) CRITERIA

The City of Fontana has set the goal for acceptable LOS as LOS C or better, wherever feasible (see Goal #1, Policy #12 of the City of Fontana General Plan Circulation Element). However, in some instances maintaining the LOS C threshold within a built environment may require extensive roadway widening that could affect existing uses, property rights and substantial costs associated with implementing these improvements. In the event that the improvements required to maintain LOS C is determined to be infeasible, the City of Fontana recognizes that LOS D may be considered the worst acceptable level of service in urbanized areas of the City.

DEFICIENCY CRITERIA

For the intersections that lie within the City of Fontana, determination of whether the Project has an adverse effect on intersection operations will be based on a comparison of without and with project levels of service. A deficiency occurs if project traffic increases the average delay at an intersection by more than the thresholds identified on Table 2. The thresholds for LOS A, B, and C do not apply to projects consistent with the General Plan. The deficiency criteria will be applied to Opening Year Cumulative traffic conditions to determine off-site construct obligations and will recommend improvements needed to reduce delays to pre-project conditions (as applicable).

TABLE 2: INTERSECTION DEFICIENCY CRITERIA

Pre-Project LOS	Deficiency Criteria ¹
LOS A/B	10.0 seconds
LOS C	8.0 seconds
LOS D	5.0 seconds
LOS E	2.0 seconds
LOS F	1.0 seconds

¹ Increase in delay.

PROJECT TRIP GENERATION

In order to develop the traffic characteristics of the proposed Project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation. For purposes of this analysis, the following land use code and vehicle mix has been utilized for each building:

- ITE land use code 150 (Warehousing) has been used to derive site specific trip generation estimates for up to 552,950 square feet (total square footage of all 3 buildings). A warehouse is primarily devoted to the storage of materials but may also include office and maintenance areas. The vehicle mix has been obtained from the ITE's latest Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

As noted in Table 3, refinements to the raw trip generation estimates have been made to provide a more detailed breakdown of trips between passenger cars and trucks. Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. Passenger Car Equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axes, 3-axes, 4+-axes). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and level of service analyses. The PCE factors are consistent with the recommended PCE factors in City's Guidelines.

TABLE 3: PROJECT TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars (AM=88.2%, PM=83.3%, Daily=64.9%)			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (AM=1.97%, PM=2.79%, Daily=5.86%)			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks (AM=2.44%, PM=3.46%, Daily=7.27%)			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks (AM=7.39%, PM=10.45%, Daily=21.97%)			0.007	0.006	0.013	0.010	0.009	0.019	0.376
Passenger Car Equivalent (PCE) Trip Generation									
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (PCE = 2.0)			0.003	0.002	0.005	0.005	0.003	0.008	0.150
3-Axle Trucks (PCE = 2.5)			0.004	0.004	0.008	0.006	0.006	0.012	0.248
4+-Axle Trucks (PCE = 3.0)			0.021	0.017	0.038	0.030	0.026	0.056	1.127

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

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

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

The Project is estimated to generate a total of 948 two-way trips per day on a typical weekday with approximately 89 AM peak hour trips and 100 PM peak hour trips as shown in Table 4 (actual vehicles). For the purposes of the operations analysis, the PCE values shown in Table 5 will be used consistent with the City's Guidelines.

TABLE 4: PROJECT TRIP GENERATION SUMMARY (ACTUAL VEHICLES)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
Building 1: Warehousing	153.129 TSF							
Passenger Cars:		18	5	23	5	18	23	170
2-axle Trucks:		0	0	0	0	0	0	16
3-axle Trucks:		0	0	0	0	0	0	20
4+-axle Trucks:		1	1	2	2	1	3	58
Total Truck Trips (Actual Vehicles):		1	1	2	2	1	3	94
Total Trips (Actual Vehicles) ²		19	6	25	7	19	26	264
Building 2: Warehousing	198.166 TSF							
Passenger Cars:		24	6	30	7	23	30	220
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	26
4+-axle Trucks:		1	1	2	2	2	4	74
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	120
Total Trips (Actual Vehicles) ²		25	7	32	11	26	37	340
Building 3: Warehousing	199.813 TSF							
Passenger Cars:		24	6	30	7	23	30	222
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	26
4+-axle Trucks:		1	1	2	2	2	4	76
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	122
Total Trips (Actual Vehicles) ²		25	7	32	11	26	37	344
Passenger Cars		66	17	83	19	64	83	612
Trucks		3	3	6	10	7	17	336
Total Trips (Actual Vehicles)²		69	20	89	29	71	100	948

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

TABLE 5: PROJECT TRIP GENERATION SUMMARY (PCE)

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Passenger Car Equivalent (PCE):								
Building 1: Warehousing	153.129 TSF							
Passenger Cars:		18	5	23	5	18	23	170
2-axle Trucks:		0	0	0	1	0	1	24
3-axle Trucks:		1	1	2	1	1	2	38
4+-axle Trucks:		3	3	6	5	4	9	174
Total Truck Trips (PCE):		4	4	8	7	5	12	236
Total Trips (PCE) ²		22	9	31	12	23	35	406
Building 2: Warehousing	198.166 TSF							
Passenger Cars:		24	6	30	7	23	30	220
2-axle Trucks:		1	0	1	1	1	2	30
3-axle Trucks:		1	1	2	1	1	2	50
4+-axle Trucks:		4	3	7	6	5	11	224
Total Truck Trips (PCE):		6	4	10	8	7	15	0
Total Trips (PCE) ²		30	10	40	15	30	45	220
Building 3: Warehousing	199.813 TSF							
Passenger Cars:		24	6	30	7	23	30	222
2-axle Trucks:		1	0	1	1	1	2	30
3-axle Trucks:		1	1	2	1	1	2	50
4+-axle Trucks:		4	3	7	6	5	11	226
Total Truck Trips (PCE):		6	4	10	8	7	15	306
Total Trips (PCE) ²		30	10	40	15	30	45	528
Passenger Cars		66	17	83	19	64	83	612
Trucks		16	12	28	23	19	42	542
Total Trips (PCE)²		82	29	111	42	83	125	1,154

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

PARCEL A TRIP GENERATION

Parcel A will be evaluated for Horizon Year With Project traffic conditions only. In order to develop the traffic characteristics of the future Parcel A, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) was used to estimate the trip generation. For purposes of this analysis, the following land use code and vehicle mix has been used for Parcel A (see also Table 6):

- ITE land use code 110 (General Light Industrial) has been used to derive site specific trip generation estimates for up to 131,464 square feet for Parcel A (5.03-acre parcel x 0.6 FAR x 43,560 SF/acre). A light industrial facility is a free-standing facility devoted to a single use that has an emphasis on activities other than manufacturing. Typically, there is minimum office space. The vehicle mix has been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following SCAQMD recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 6: TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
General Light Industrial ³	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.645	0.085	0.730	0.086	0.554	0.640	4.620
2-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.042
3-Axle Trucks			0.001	0.001	0.002	0.001	0.001	0.002	0.052
4+-Axle Trucks			0.004	0.002	0.006	0.003	0.003	0.006	0.157
Passenger Car Equivalent (PCE) Trip Generation									
General Light Industrial ³	TSF	110	0.651	0.089	0.740	0.091	0.559	0.650	4.870
Passenger Cars			0.645	0.085	0.730	0.086	0.554	0.640	4.620
2-Axle Trucks (PCE = 2.0)			0.002	0.001	0.003	0.002	0.001	0.003	0.084
3-Axle Trucks (PCE = 2.5)			0.003	0.003	0.005	0.003	0.003	0.005	0.129
4+-Axle Trucks (PCE = 3.0)			0.012	0.007	0.019	0.009	0.010	0.019	0.470

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

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

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

Parcel A is estimated to generate a total of 640 two-way trips per day on a typical weekday with approximately 97 AM peak hour trips and 84 PM peak hour trips as shown in Table 7 (actual vehicles). For the purposes of the operations analysis, the PCE values shown in Table 7 will be used consistent with the City's Guidelines. This trip generation will be evaluated for Parcel A for Horizon Year With Project traffic conditions only.

TABLE 7: PARCEL A TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
General Light Industrial	131.464 TSF							
Passenger Cars:		85	11	96	11	73	84	608
2-axle Trucks:		0	0	0	0	0	0	6
3-axle Trucks:		0	0	0	0	0	0	6
4+-axle Trucks:		1	0	1	0	0	0	20
Total Truck Trips (Actual Vehicles):		1	0	1	0	0	0	32
Total Trips (Actual Vehicles)²		86	11	97	11	73	84	640
Passenger Car Equivalent (PCE):								
General Light Industrial	131.464 TSF							
Passenger Cars:		85	11	96	11	73	84	608
2-axle Trucks:		0	0	0	0	0	0	12
3-axle Trucks:		0	0	1	0	0	1	18
4+-axle Trucks:		2	1	2	1	1	2	62
Total Truck Trips (PCE):		2	1	3	1	1	2	92
Total Trips (PCE)²		87	12	99	12	74	86	700

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

PROJECT TRIP DISTRIBUTIONS

The project trip distribution patterns for both passenger cars and trucks have been developed based on recent experience on other studies for similar land uses in the vicinity. Passenger car distribution patterns will be based on existing and planned land uses and roadway infrastructure in the area. Truck distribution patterns will be based on City truck routes, proximity to the freeway system, and the Project Applicant's input on percentage of traffic oriented to the Port of Long Beach or other destination. As such, Project truck traffic is directed to Citrus Avenue to the I-10 Freeway as Santa Ana Avenue is not identified as an existing City truck route. The industrial passenger car and truck trip distributions are illustrated on Exhibits 3 and 4, respectively.

Exhibit 5 illustrates the passenger car and truck trip distribution patterns for Parcel A which will be used for Horizon Year With Project traffic conditions only. The off-site or regional distribution will follow the proposed Project trip distribution patterns.

EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

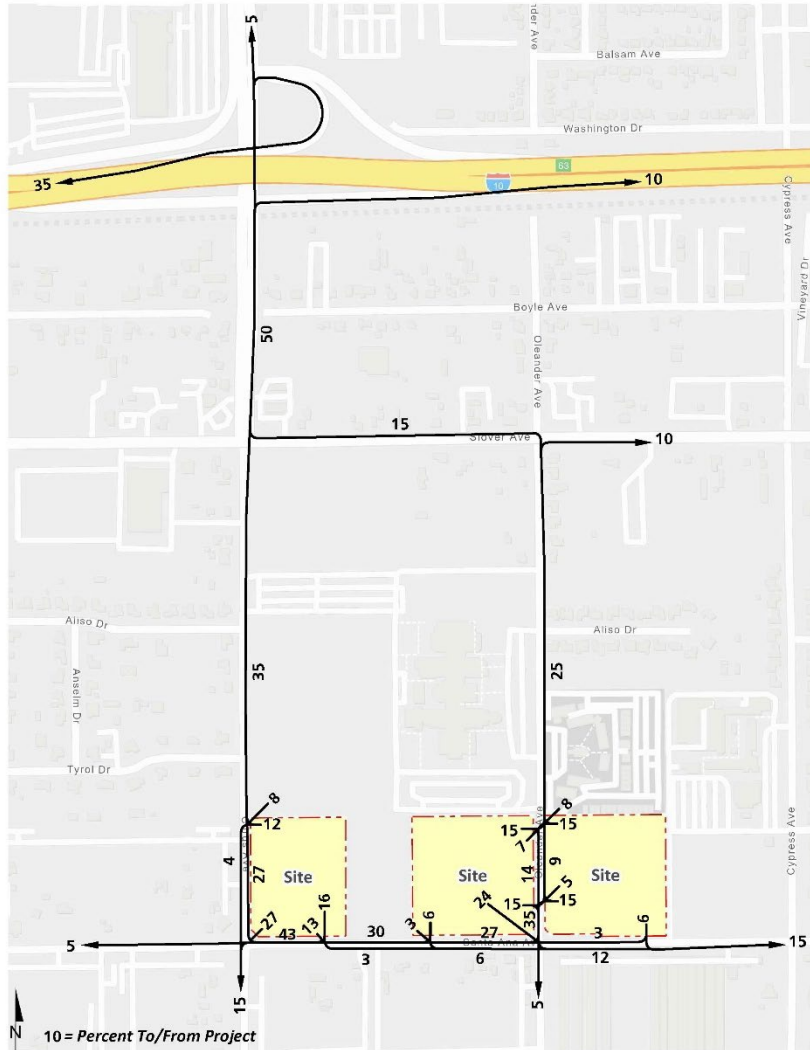


EXHIBIT 4: PROJECT (TRUCK) TRIP DISTRIBUTION

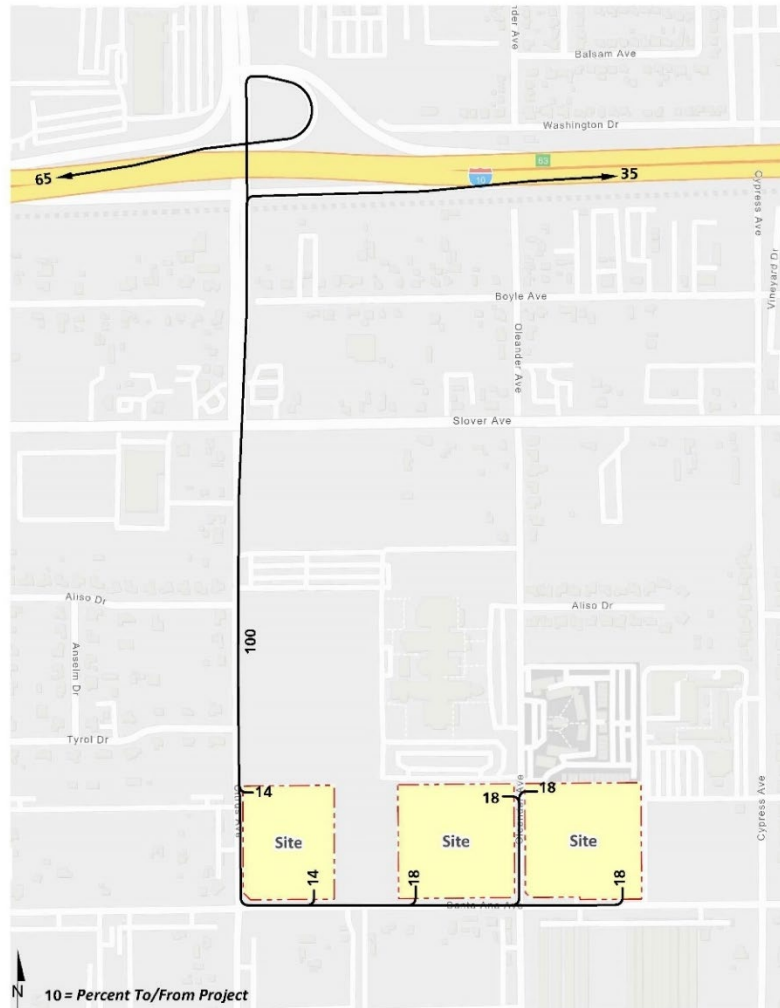
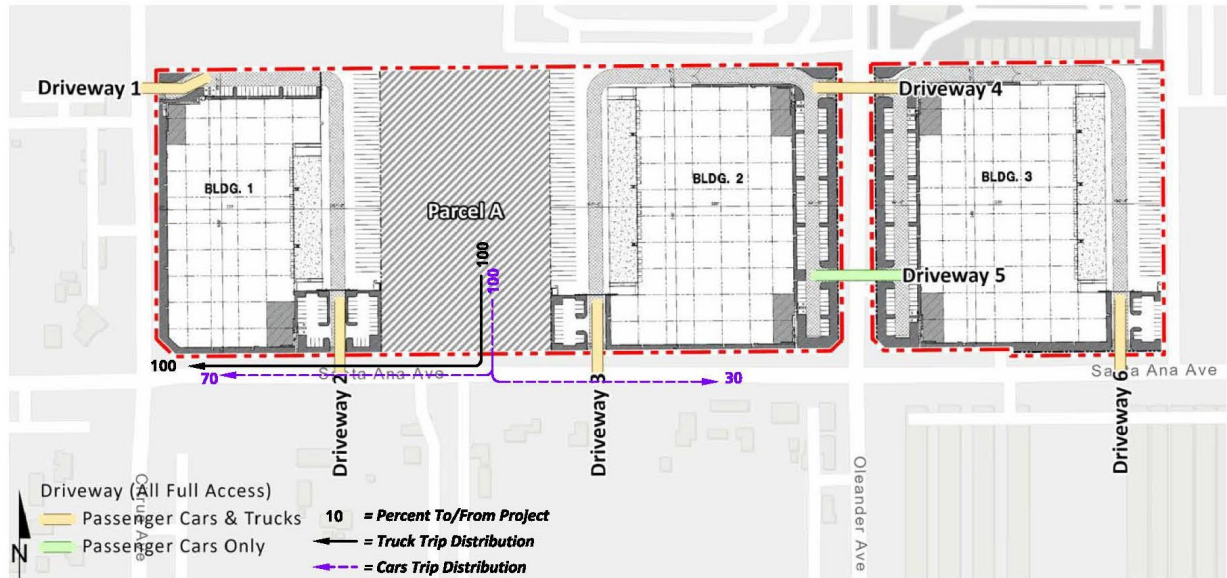


EXHIBIT 5: PARCEL A TRIP DISTRIBUTION



EXISTING COUNT DATA

Traffic counts (classified by vehicle type) have already been scheduled to be collected while local schools are in session and operating on a typical bell schedule (on Tuesday May 24, 2022). Time periods to be counted will be from 7:00-9:00 AM and 4:00-6:00 PM and will include pedestrian and bicycle counts at each analysis location. No adjustments are proposed to the new traffic counts for the baseline traffic condition as traffic counts will be conducted while local schools are in session.

AMBIENT GROWTH RATE

Consistent with other studies performed in the area, an ambient growth rate of 2.0% per year is proposed for the study area intersections to approximate background traffic growth not identified by nearby cumulative development projects. The rate will be compounded over a five-year period (i.e., $1.02^{3\text{years}} = 1.0612$ or 6.12% for 2025).

SPECIAL ISSUES

The following special issues will be addressed as part of the TA:

- A truck turning template will be overlaid on the driveways anticipated to serve trucks.
- Traffic signal warrant analyses will be conducted for all unsignalized study area intersections for all applicable analysis scenarios.

- Evaluate the peak hour queuing at the Project driveways located along the Project frontages of Citrus Avenue, Oleander Avenue, and Santa Ana Avenue.

CUMULATIVE DEVELOPMENT PROJECTS

A list of cumulative development projects and their proposed land uses are shown in Table 8. Exhibit 6 illustrates the locations of these cumulative development projects. Please provide any updated projects for inclusion on the list.

EXHIBIT 6: CUMULATIVE DEVELOPMENT PROJECT LOCATION MAP

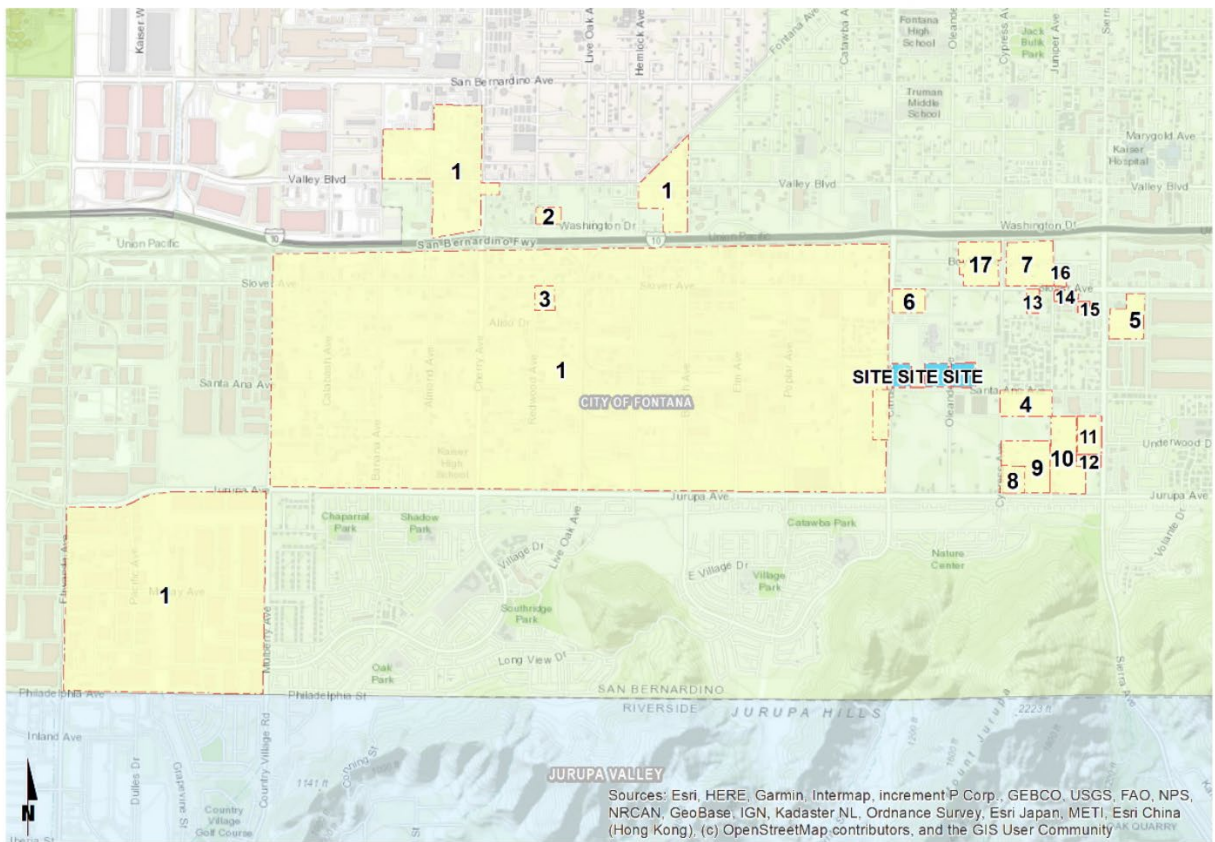


TABLE 8: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

TAZ Project	Land Use	Quantity ²
1 Southwest Industrial Park (SWIP) ¹	Freeway Industrial Commercial (Central)	
	Warehousing	761.067 TSF
	Office	147.786 TSF
	Office Park	152.213 TSF
	Commercial Retail	456.640 TSF
	Freeway Industrial Commercial (East)	
	Warehousing	886.410 TSF
	Office	172.125 TSF
	Office Park	177.282 TSF
	Commercial Retail	531.846 TSF
	Freeway Industrial Commercial (North)	
	Warehousing	335.885 TSF
	Office	65.223 TSF
	Office Park	67.177 TSF
	Commercial Retail	201.531 TSF
	Freeway Industrial Commercial (West)	
	Warehousing	747.959 TSF
	Office	145.241 TSF
	Office Park	149.592 TSF
	Commercial Retail	448.776 TSF
	Jurupa North Research & Development	
	Light Industrial	1344.901 TSF
	Office	478.407 TSF
	Office Park	847.485 TSF
	Research & Development	677.988 TSF
	Jurupa North Research & Development	
	Light Industrial	964.045 TSF
	Office	342.930 TSF
Office Park	607.490 TSF	
Research & Development	485.992 TSF	
Jurupa North Research & Development (East)		
Light Industrial	917.459 TSF	
Office	326.358 TSF	
Office Park	578.134 TSF	
Research & Development	462.506 TSF	
Jurupa South Industrial		
Light Industrial	70.985 TSF	
Warehousing	1799.899 TSF	
Slover Central Manufacturing/Industrial		
Manufacturing	1113.002 TSF	
Warehousing	2597.004 TSF	

TAZ Project	Land Use	Quantity ²
1 Southwest Industrial Park (SWIP) ¹	Slover East Industrial	
	Light Industrial	719.464 TSF
	Warehousing	1006.149 TSF
	Office Park	503.074 TSF
	Slover West Industrial	
	Light Industrial	1384.886 TSF
	Warehousing	3518.167 TSF
	Speedway Industrial	
	Light Industrial	930.121 TSF
	Warehousing	762.191 TSF
	Office Park	13.264 TSF
	SWIP Residential Trucking (1,3 and 4)	
	Single Family Detached Residential	84 DU
2 10131 Redwood Av.	High-Cube Warehouse / Distribution Center	250.160 TSF
3 14801 Slover Avenue Warehouse	High-Cube Warehouse (Cold Storage)	77.053 TSF
	Warehousing	231.158 TSF
4 Southwest Fontana Logistics Center Project	City Park	17.45 AC
5 Walmart Shopping Center	Free-Standing Discount Superstore	200.000 TSF
	Specialty Retail Center	9.490 TSF
	Fast Food w/o Drive-Thru	9.490 TSF
6 SEC of Citrus Av. & Slover Av.	Warehousing	194.212 TSF
7 Sierra Business Center	High-Cube Fulfillment Center (Sort)	705.735 TSF
8 St. Mary's Catholic Church	Church	19.508 TSF
9 GLC Fontana III	Warehousing	362.416 TSF
	High-Cube Cold Storage Warehouse	90.604 TSF
10 Fontana Foothills	High-Cube Warehouse / Distribution Center	754.408 TSF
11 Chaffey Community College - Fontana	Community College	4,495 Students
12 Affordable Housing Project	Affordable Homes	130 DU
13 Slover Industrial Center	High-Cube Warehouse (Cold Storage)	20.421 TSF
	Warehousing	115.719 TSF
14 La Quinta Inn	Hotel	104 Rooms
15 Townplace Suites	Hotel	116 Rooms
16 Slover Avenue Office/Warehouse	Warehouse	41.000 TSF
17 Slover & Cypress Warehouse	High-Cube Warehouse (Cold Storage)	156.365 TSF
	High-Cube Fulfillment Center	469.095 TSF

¹ Source: Southwest Industrial Park (SWIP) Project TIA, RBF Consulting, September 29, 2011.

² TSF = Thousand Square Feet; AC = Acres; DU = Dwelling Units

If you have any questions or comments, I can be reached at cso@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.

A handwritten signature in cursive script that reads "Charlene So".

Charlene So, PE

Principal

APPENDIX 1.2: SITE ADJACENT QUEUING WORKSHEETS

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Intersection: 4: Citrus Av. & Driveway 1

Movement	WB	SB	SB	SB
Directions Served	LR	L	T	T
Maximum Queue (ft)	31	149	315	285
Average Queue (ft)	3	15	243	197
95th Queue (ft)	18	86	292	272
Link Distance (ft)	450		338	338
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			0	0
Storage Bay Dist (ft)		100		
Storage Blk Time (%)			88	
Queuing Penalty (veh)			5	

Intersection: 5: Citrus Av. & Santa Ana Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	163	119	98	101	141	205	112	248	278	200	532	521
Average Queue (ft)	94	49	46	32	64	100	30	142	161	199	526	272
95th Queue (ft)	144	94	84	75	114	169	79	214	246	200	532	507
Link Distance (ft)		1273	1273		331	331		2551	2551		515	515
Upstream Blk Time (%)											67	0
Queuing Penalty (veh)											399	3
Storage Bay Dist (ft)	150			150			200			150		
Storage Blk Time (%)	1			0	0			1		87	1	
Queuing Penalty (veh)	0			0	0			0		227	2	

Intersection: 6: Santa Ana Av. & Driveway 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	23	31
Average Queue (ft)	2	4
95th Queue (ft)	14	21
Link Distance (ft)	331	422
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Santa Ana Av. & Driveway 3

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	14	23
Average Queue (ft)	0	1
95th Queue (ft)	7	10
Link Distance (ft)	514	490
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Oleander Av. & Driveway 4

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	30	24	15	30
Average Queue (ft)	2	2	0	2
95th Queue (ft)	16	14	7	13
Link Distance (ft)	425	312		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 10: Oleander Av. & Driveway 5

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	L	L
Maximum Queue (ft)	31	31	31	8
Average Queue (ft)	4	3	3	0
95th Queue (ft)	19	17	16	7
Link Distance (ft)	378	292		
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			100	100
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 11: Oleander Av. & Santa Ana Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	86	152	166	51	115	147	58	137	121	105
Average Queue (ft)	35	78	96	19	61	81	18	64	66	46
95th Queue (ft)	71	132	149	46	104	132	45	113	111	85
Link Distance (ft)		502	502		514	514		2032		240
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			150			150		150	
Storage Blk Time (%)		0			0			0	0	
Queuing Penalty (veh)		0			0			0	0	

Intersection: 12: Santa Ana Av. & Driveway 6

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	15	23
Average Queue (ft)	0	3
95th Queue (ft)	7	17
Link Distance (ft)	514	382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Citrus Av. & Tyrol Drive

Movement	EB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	2
95th Queue (ft)	14
Link Distance (ft)	534
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 637

Intersection: 4: Citrus Av. & Driveway 1

Movement	WB	SB
Directions Served	LR	L
Maximum Queue (ft)	31	23
Average Queue (ft)	8	2
95th Queue (ft)	30	13
Link Distance (ft)	450	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 5: Citrus Av. & Santa Ana Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	200	375	336	148	166	258	116	255	268	199	254	207
Average Queue (ft)	157	156	116	58	70	126	32	156	163	116	108	92
95th Queue (ft)	223	329	246	121	132	210	81	237	248	181	193	160
Link Distance (ft)	1273		1273	331		331	2551		2551	515		515
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	150			150			200			150		
Storage Blk Time (%)	18	1		0	0			2		4	2	
Queuing Penalty (veh)	39	2		0	0			1		9	3	

Intersection: 6: Santa Ana Av. & Driveway 2

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	26	31
Average Queue (ft)	2	9
95th Queue (ft)	17	31
Link Distance (ft)	331	422
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 7: Santa Ana Av. & Driveway 3

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	15	31
Average Queue (ft)	0	3
95th Queue (ft)	7	18
Link Distance (ft)	514	490
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: Oleander Av. & Driveway 4

Movement	EB	WB	NB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	31	31	8
Average Queue (ft)	9	11	0
95th Queue (ft)	32	35	5
Link Distance (ft)	425	312	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 10: Oleander Av. & Driveway 5

Movement	EB	WB	SB
Directions Served	LTR	LTR	L
Maximum Queue (ft)	31	31	7
Average Queue (ft)	8	8	0
95th Queue (ft)	30	29	5
Link Distance (ft)	378	292	
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			100
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: Oleander Av. & Santa Ana Av.

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	TR	L	TR	L	TR
Maximum Queue (ft)	62	150	172	73	128	126	89	164	67	105
Average Queue (ft)	25	63	83	25	57	66	33	67	20	45
95th Queue (ft)	56	113	139	58	102	109	68	124	53	86
Link Distance (ft)		502	502		514	514		2032		240
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	150			150			150		150	
Storage Blk Time (%)		0			0			0		
Queuing Penalty (veh)		0			0			0		

Intersection: 12: Santa Ana Av. & Driveway 6

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	7	30
Average Queue (ft)	0	3
95th Queue (ft)	4	17
Link Distance (ft)	514	382
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 13: Citrus Av. & Tyrol Drive

Movement	EB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	7
95th Queue (ft)	28
Link Distance (ft)	534
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 54

APPENDIX 3.1: EXISTING TRAFFIC COUNTS

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City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

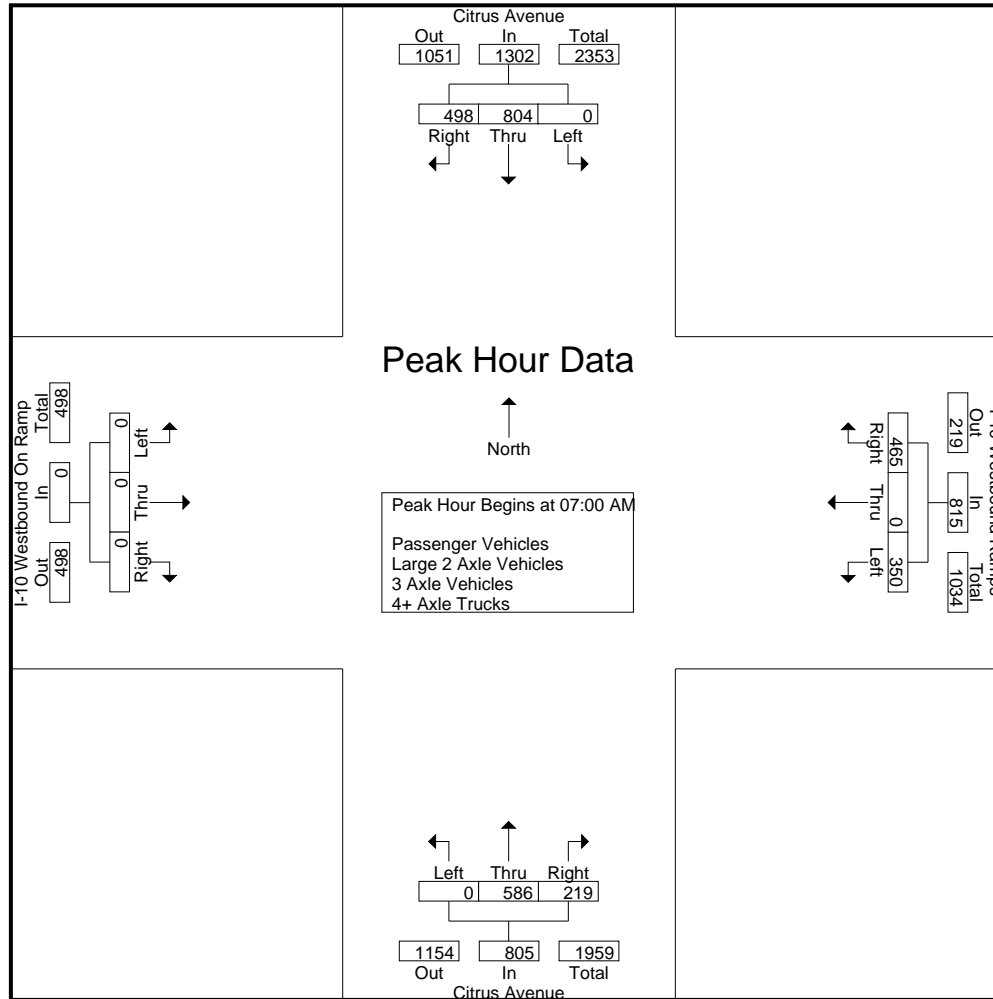
File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

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

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	170	128	0	298	76	0	96	52	172	0	133	56	1	189	0	0	0	0	0	53	659	712
07:15 AM	0	191	143	0	334	83	0	107	59	190	0	145	45	2	190	0	0	0	0	0	61	714	775
07:30 AM	0	220	92	0	312	76	0	137	72	213	0	155	59	1	214	0	0	0	0	0	73	739	812
07:45 AM	0	223	135	0	358	115	0	125	58	240	0	153	59	4	212	0	0	0	0	0	62	810	872
Total	0	804	498	0	1302	350	0	465	241	815	0	586	219	8	805	0	0	0	0	0	249	2922	3171
08:00 AM	0	214	93	0	307	61	0	81	31	142	0	120	56	2	176	0	0	0	0	0	33	625	658
08:15 AM	0	213	86	0	299	94	0	80	38	174	0	171	52	3	223	0	0	0	0	0	41	696	737
08:30 AM	0	179	105	0	284	81	0	78	37	159	0	136	46	2	182	0	0	0	0	0	39	625	664
08:45 AM	0	143	75	0	218	77	0	80	32	157	0	148	44	1	192	0	0	0	0	0	33	567	600
Total	0	749	359	0	1108	313	0	319	138	632	0	575	198	8	773	0	0	0	0	0	146	2513	2659
Grand Total	0	1553	857	0	2410	663	0	784	379	1447	0	1161	417	16	1578	0	0	0	0	0	395	5435	5830
Apprch %	0	64.4	35.6			45.8	0	54.2			0	73.6	26.4			0	0	0					
Total %	0	28.6	15.8		44.3	12.2	0	14.4		26.6	0	21.4	7.7		29	0	0	0		0	6.8	93.2	
Passenger Vehicles	0	1446	792		2238	574	0	713		1645	0	1075	341		1422	0	0	0		0	0	0	5305
% Passenger Vehicles	0	93.1	92.4	0	92.9	86.6	0	90.9	94.5	90.1	0	92.6	81.8	37.5	89.2	0	0	0	0	0	0	0	91
Large 2 Axle Vehicles	0	45	18		63	23	0	32		66	0	37	12		50	0	0	0		0	0	0	179
% Large 2 Axle Vehicles	0	2.9	2.1	0	2.6	3.5	0	4.1	2.9	3.6	0	3.2	2.9	6.2	3.1	0	0	0	0	0	0	0	3.1
3 Axle Vehicles	0	19	12		31	18	0	15		36	0	21	9		34	0	0	0		0	0	0	101
% 3 Axle Vehicles	0	1.2	1.4	0	1.3	2.7	0	1.9	0.8	2	0	1.8	2.2	25	2.1	0	0	0	0	0	0	0	1.7
4+ Axle Trucks	0	43	35		78	48	0	24		79	0	28	55		88	0	0	0		0	0	0	245
% 4+ Axle Trucks	0	2.8	4.1	0	3.2	7.2	0	3.1	1.8	4.3	0	2.4	13.2	31.2	5.5	0	0	0	0	0	0	0	4.2

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	170	128	298	76	0	96	172	0	133	56	189	0	0	0	0	659
07:15 AM	0	191	143	334	83	0	107	190	0	145	45	190	0	0	0	0	714
07:30 AM	0	220	92	312	76	0	137	213	0	155	59	214	0	0	0	0	739
07:45 AM	0	223	135	358	115	0	125	240	0	153	59	212	0	0	0	0	810
Total Volume	0	804	498	1302	350	0	465	815	0	586	219	805	0	0	0	0	2922
% App. Total	0	61.8	38.2		42.9	0	57.1		0	72.8	27.2		0	0	0		
PHF	.000	.901	.871	.909	.761	.000	.849	.849	.000	.945	.928	.940	.000	.000	.000	.000	.902

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



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:15 AM				07:00 AM				07:30 AM				07:00 AM				
+0 mins.	0	191	143	334	76	0	96	172	0	155	59	214	0	0	0	0	
+15 mins.	0	220	92	312	83	0	107	190	0	153	59	212	0	0	0	0	
+30 mins.	0	223	135	358	76	0	137	213	0	120	56	176	0	0	0	0	
+45 mins.	0	214	93	307	115	0	125	240	0	171	52	223	0	0	0	0	
Total Volume	0	848	463	1311	350	0	465	815	0	599	226	825	0	0	0	0	
% App. Total	0	64.7	35.3		42.9	0	57.1		0	72.6	27.4		0	0	0		
PHF	.000	.951	.809	.916	.761	.000	.849	.849	.000	.876	.958	.925	.000	.000	.000	.000	

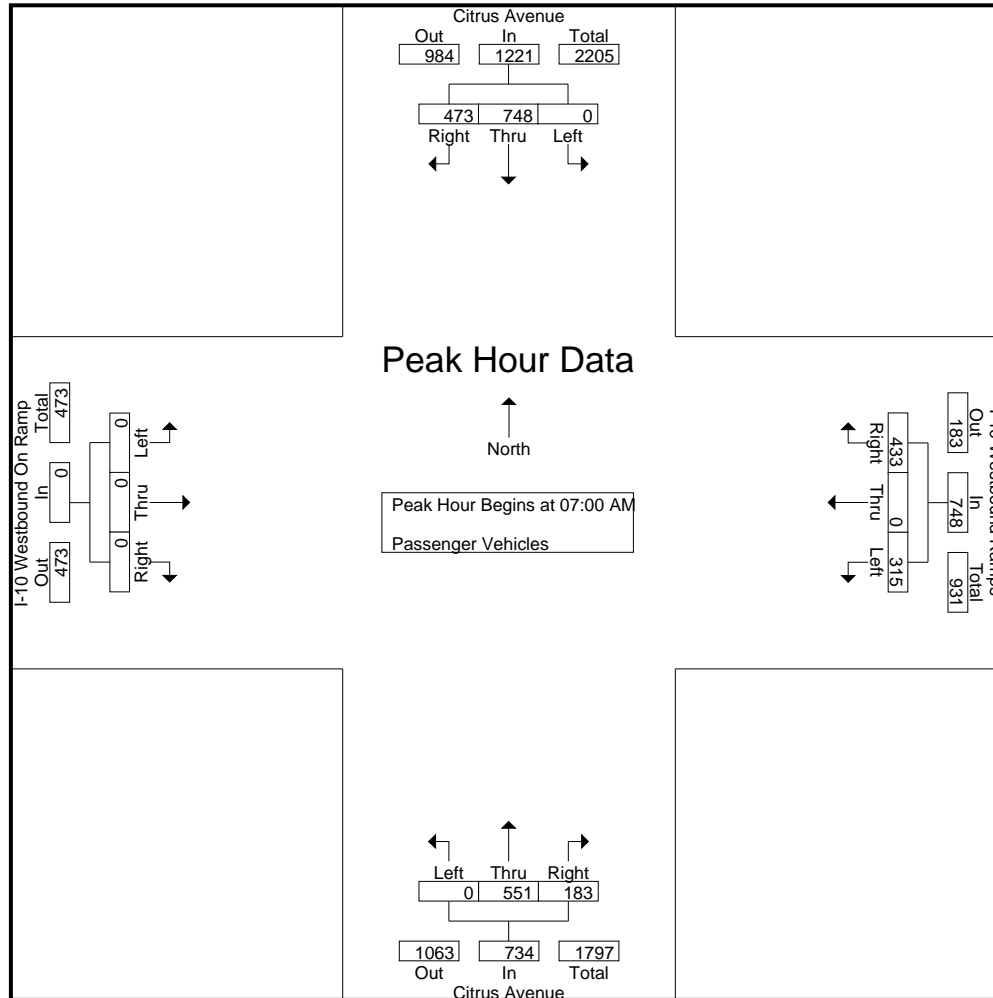
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	158	126	0	284	71	0	88	50	159	0	125	46	0	171	0	0	0	0	0	50	614	664
07:15 AM	0	176	136	0	312	75	0	100	56	175	0	138	34	0	172	0	0	0	0	0	56	659	715
07:30 AM	0	204	87	0	291	64	0	128	69	192	0	147	55	1	202	0	0	0	0	0	70	685	755
07:45 AM	0	210	124	0	334	105	0	117	55	222	0	141	48	0	189	0	0	0	0	0	55	745	800
Total	0	748	473	0	1221	315	0	433	230	748	0	551	183	1	734	0	0	0	0	0	231	2703	2934
08:00 AM	0	204	85	0	289	51	0	70	29	121	0	103	49	2	152	0	0	0	0	0	31	562	593
08:15 AM	0	197	76	0	273	79	0	73	36	152	0	164	42	1	206	0	0	0	0	0	37	631	668
08:30 AM	0	165	89	0	254	67	0	67	32	134	0	125	33	2	158	0	0	0	0	0	34	546	580
08:45 AM	0	132	69	0	201	62	0	70	31	132	0	132	34	0	166	0	0	0	0	0	31	499	530
Total	0	698	319	0	1017	259	0	280	128	539	0	524	158	5	682	0	0	0	0	0	133	2238	2371
Grand Total	0	1446	792	0	2238	574	0	713	358	1287	0	1075	341	6	1416	0	0	0	0	0	364	4941	5305
Apprch %	0	64.6	35.4			44.6	0	55.4			0	75.9	24.1			0	0	0					
Total %	0	29.3	16		45.3	11.6	0	14.4		26	0	21.8	6.9		28.7	0	0	0		0	6.9	93.1	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	158	126	284	71	0	88	159	0	125	46	171	0	0	0	0	614
07:15 AM	0	176	136	312	75	0	100	175	0	138	34	172	0	0	0	0	659
07:30 AM	0	204	87	291	64	0	128	192	0	147	55	202	0	0	0	0	685
07:45 AM	0	210	124	334	105	0	117	222	0	141	48	189	0	0	0	0	745
Total Volume	0	748	473	1221	315	0	433	748	0	551	183	734	0	0	0	0	2703
% App. Total	0	61.3	38.7		42.1	0	57.9		0	75.1	24.9		0	0	0		
PHF	.000	.890	.869	.914	.750	.000	.846	.842	.000	.937	.832	.908	.000	.000	.000	.000	.907



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	158	126	284	71	0	88	159	0	125	46	171	0	0	0	0	
+15 mins.	0	176	136	312	75	0	100	175	0	138	34	172	0	0	0	0	
+30 mins.	0	204	87	291	64	0	128	192	0	147	55	202	0	0	0	0	
+45 mins.	0	210	124	334	105	0	117	222	0	141	48	189	0	0	0	0	
Total Volume	0	748	473	1221	315	0	433	748	0	551	183	734	0	0	0	0	
% App. Total	0	61.3	38.7		42.1	0	57.9		0	75.1	24.9		0	0	0		
PHF	.000	.890	.869	.914	.750	.000	.846	.842	.000	.937	.832	.908	.000	.000	.000	.000	

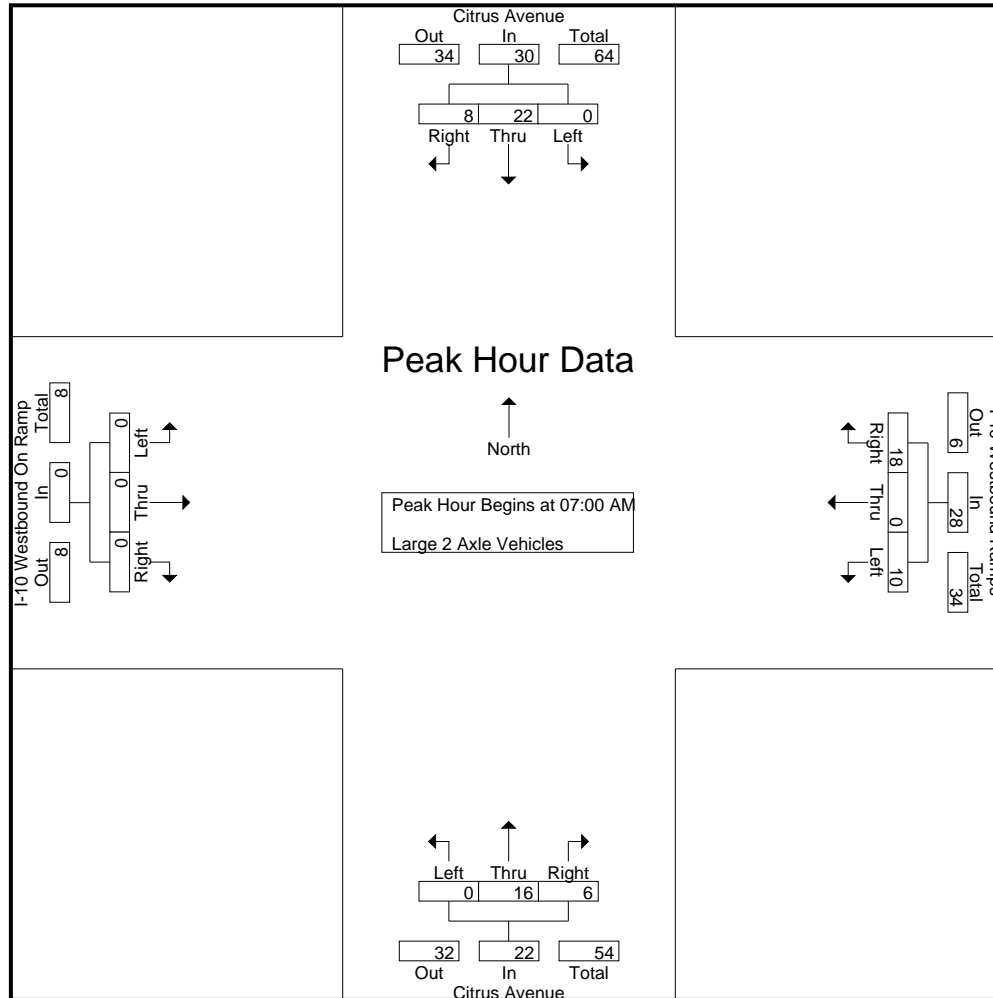
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	9	0	0	9	4	0	6	2	10	0	5	1	0	6	0	0	0	0	0	2	25	27
07:15 AM	0	5	2	0	7	2	0	3	0	5	0	2	3	1	5	0	0	0	0	0	1	17	18
07:30 AM	0	5	1	0	6	1	0	5	2	6	0	3	0	0	3	0	0	0	0	0	2	15	17
07:45 AM	0	3	5	0	8	3	0	4	3	7	0	6	2	0	8	0	0	0	0	0	3	23	26
Total	0	22	8	0	30	10	0	18	7	28	0	16	6	1	22	0	0	0	0	0	8	80	88
08:00 AM	0	3	4	0	7	1	0	2	1	3	0	6	3	0	9	0	0	0	0	0	1	19	20
08:15 AM	0	9	2	0	11	3	0	4	1	7	0	3	2	0	5	0	0	0	0	0	1	23	24
08:30 AM	0	5	3	0	8	5	0	4	2	9	0	8	0	0	8	0	0	0	0	0	2	25	27
08:45 AM	0	6	1	0	7	4	0	4	0	8	0	4	1	0	5	0	0	0	0	0	0	20	20
Total	0	23	10	0	33	13	0	14	4	27	0	21	6	0	27	0	0	0	0	0	4	87	91
Grand Total	0	45	18	0	63	23	0	32	11	55	0	37	12	1	49	0	0	0	0	0	12	167	179
Apprch %	0	71.4	28.6			41.8	0	58.2			0	75.5	24.5			0	0	0					
Total %	0	26.9	10.8		37.7	13.8	0	19.2		32.9	0	22.2	7.2		29.3	0	0	0		0	6.7	93.3	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	9	0	9	4	0	6	10	0	5	1	6	0	0	0	0	25
07:15 AM	0	5	2	7	2	0	3	5	0	2	3	5	0	0	0	0	17
07:30 AM	0	5	1	6	1	0	5	6	0	3	0	3	0	0	0	0	15
07:45 AM	0	3	5	8	3	0	4	7	0	6	2	8	0	0	0	0	23
Total Volume	0	22	8	30	10	0	18	28	0	16	6	22	0	0	0	0	80
% App. Total	0	73.3	26.7		35.7	0	64.3		0	72.7	27.3		0	0	0		
PHF	.000	.611	.400	.833	.625	.000	.750	.700	.000	.667	.500	.688	.000	.000	.000	.000	.800



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	9	0	9	4	0	6	10	0	5	1	6	0	0	0	0	
+15 mins.	0	5	2	7	2	0	3	5	0	2	3	5	0	0	0	0	
+30 mins.	0	5	1	6	1	0	5	6	0	3	0	3	0	0	0	0	
+45 mins.	0	3	5	8	3	0	4	7	0	6	2	8	0	0	0	0	
Total Volume	0	22	8	30	10	0	18	28	0	16	6	22	0	0	0	0	
% App. Total	0	73.3	26.7		35.7	0	64.3		0	72.7	27.3		0	0	0		
PHF	.000	.611	.400	.833	.625	.000	.750	.700	.000	.667	.500	.688	.000	.000	.000	.000	

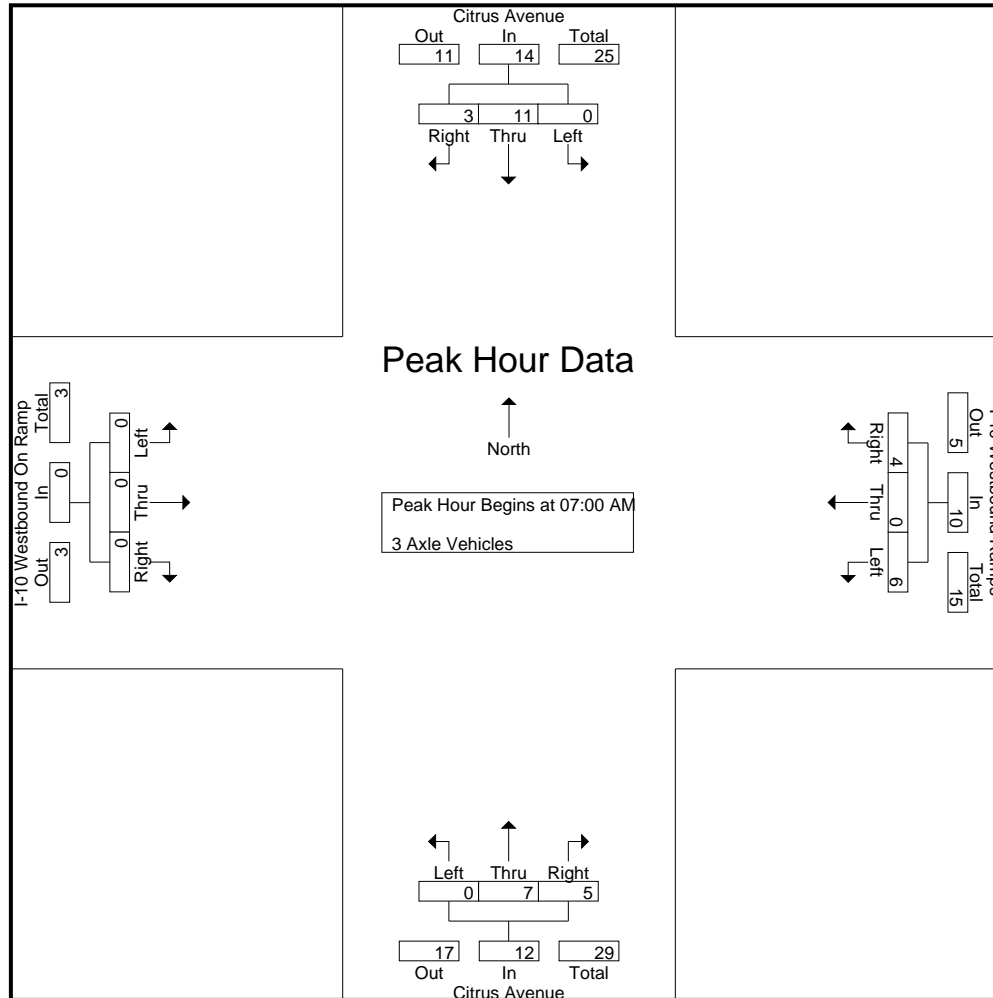
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	2	0	0	2	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	5	5
07:15 AM	0	1	1	0	2	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0	4	4
07:30 AM	0	6	2	0	8	5	0	2	1	7	0	2	0	0	2	0	0	0	0	0	1	17	18	18
07:45 AM	0	2	0	0	2	1	0	1	0	2	0	3	3	3	6	0	0	0	0	0	3	10	13	13
Total	0	11	3	0	14	6	0	4	1	10	0	7	5	3	12	0	0	0	0	0	4	36	40	40
08:00 AM	0	3	2	0	5	3	0	5	1	8	0	5	1	0	6	0	0	0	0	0	1	19	20	20
08:15 AM	0	1	1	0	2	5	0	1	0	6	0	2	1	0	3	0	0	0	0	0	0	11	11	11
08:30 AM	0	3	4	0	7	3	0	1	0	4	0	2	0	0	2	0	0	0	0	0	0	13	13	13
08:45 AM	0	1	2	0	3	1	0	4	1	5	0	5	2	1	7	0	0	0	0	0	2	15	17	17
Total	0	8	9	0	17	12	0	11	2	23	0	14	4	1	18	0	0	0	0	0	3	58	61	61
Grand Total	0	19	12	0	31	18	0	15	3	33	0	21	9	4	30	0	0	0	0	0	7	94	101	101
Apprch %	0	61.3	38.7			54.5	0	45.5			0	70	30			0	0	0						
Total %	0	20.2	12.8		33	19.1	0	16		35.1	0	22.3	9.6		31.9	0	0	0		0	6.9	93.1		

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	5
07:15 AM	0	1	1	2	0	0	1	1	0	0	1	1	0	0	0	0	4
07:30 AM	0	6	2	8	5	0	2	7	0	2	0	2	0	0	0	0	17
07:45 AM	0	2	0	2	1	0	1	2	0	3	3	6	0	0	0	0	10
Total Volume	0	11	3	14	6	0	4	10	0	7	5	12	0	0	0	0	36
% App. Total	0	78.6	21.4		60	0	40		0	58.3	41.7		0	0	0		
PHF	.000	.458	.375	.438	.300	.000	.500	.357	.000	.583	.417	.500	.000	.000	.000	.000	.529



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	2	0	2	0	0	0	0	0	2	1	3	0	0	0	0	
+15 mins.	0	1	1	2	0	0	1	1	0	0	1	1	0	0	0	0	
+30 mins.	0	6	2	8	5	0	2	7	0	2	0	2	0	0	0	0	
+45 mins.	0	2	0	2	1	0	1	2	0	3	3	6	0	0	0	0	
Total Volume	0	11	3	14	6	0	4	10	0	7	5	12	0	0	0	0	
% App. Total	0	78.6	21.4		60	0	40		0	58.3	41.7		0	0	0		
PHF	.000	.458	.375	.438	.300	.000	.500	.357	.000	.583	.417	.500	.000	.000	.000	.000	

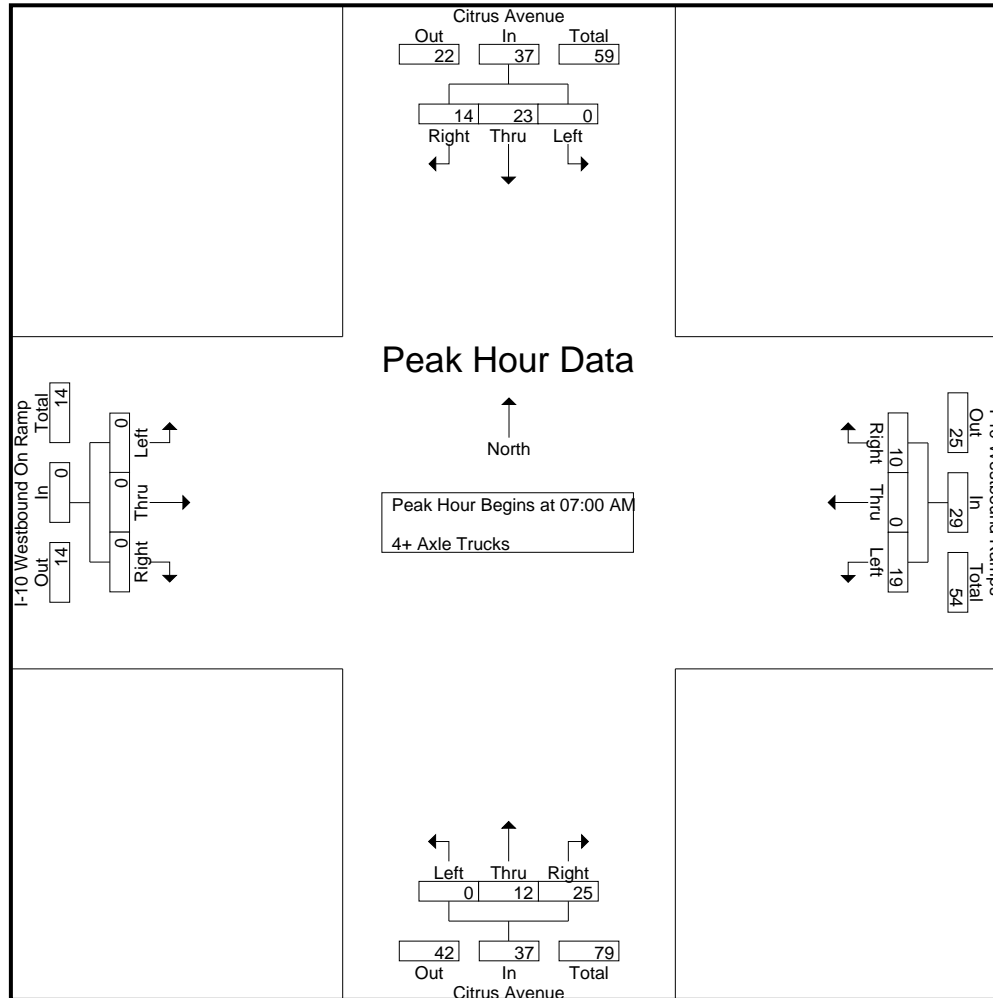
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	2	0	3	1	0	2	0	3	0	1	8	1	9	0	0	0	0	0	1	15	16
07:15 AM	0	9	4	0	13	6	0	3	3	9	0	5	7	1	12	0	0	0	0	0	4	34	38
07:30 AM	0	5	2	0	7	6	0	2	0	8	0	3	4	0	7	0	0	0	0	0	0	22	22
07:45 AM	0	8	6	0	14	6	0	3	0	9	0	3	6	1	9	0	0	0	0	0	1	32	33
Total	0	23	14	0	37	19	0	10	3	29	0	12	25	3	37	0	0	0	0	0	6	103	109
08:00 AM	0	4	2	0	6	6	0	4	0	10	0	6	3	0	9	0	0	0	0	0	0	25	25
08:15 AM	0	6	7	0	13	7	0	2	1	9	0	2	7	2	9	0	0	0	0	0	3	31	34
08:30 AM	0	6	9	0	15	6	0	6	3	12	0	1	13	0	14	0	0	0	0	0	3	41	44
08:45 AM	0	4	3	0	7	10	0	2	0	12	0	7	7	0	14	0	0	0	0	0	0	33	33
Total	0	20	21	0	41	29	0	14	4	43	0	16	30	2	46	0	0	0	0	0	6	130	136
Grand Total	0	43	35	0	78	48	0	24	7	72	0	28	55	5	83	0	0	0	0	0	12	233	245
Apprch %	0	55.1	44.9			66.7	0	33.3			0	33.7	66.3			0	0	0					
Total %	0	18.5	15		33.5	20.6	0	10.3		30.9	0	12	23.6		35.6	0	0	0		0	4.9	95.1	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	1	2	3	1	0	2	3	0	1	8	9	0	0	0	0	15
07:15 AM	0	9	4	13	6	0	3	9	0	5	7	12	0	0	0	0	34
07:30 AM	0	5	2	7	6	0	2	8	0	3	4	7	0	0	0	0	22
07:45 AM	0	8	6	14	6	0	3	9	0	3	6	9	0	0	0	0	32
Total Volume	0	23	14	37	19	0	10	29	0	12	25	37	0	0	0	0	103
% App. Total	0	62.2	37.8		65.5	0	34.5		0	32.4	67.6		0	0	0		
PHF	.000	.639	.583	.661	.792	.000	.833	.806	.000	.600	.781	.771	.000	.000	.000	.000	.757



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 07:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:00 AM				07:00 AM				07:00 AM				07:00 AM				
+0 mins.	0	1	2	3	1	0	2	3	0	1	8	9	0	0	0	0	
+15 mins.	0	9	4	13	6	0	3	9	0	5	7	12	0	0	0	0	
+30 mins.	0	5	2	7	6	0	2	8	0	3	4	7	0	0	0	0	
+45 mins.	0	8	6	14	6	0	3	9	0	3	6	9	0	0	0	0	
Total Volume	0	23	14	37	19	0	10	29	0	12	25	37	0	0	0	0	
% App. Total	0	62.2	37.8		65.5	0	34.5		0	32.4	67.6		0	0	0		
PHF	.000	.639	.583	.661	.792	.000	.833	.806	.000	.600	.781	.771	.000	.000	.000	.000	

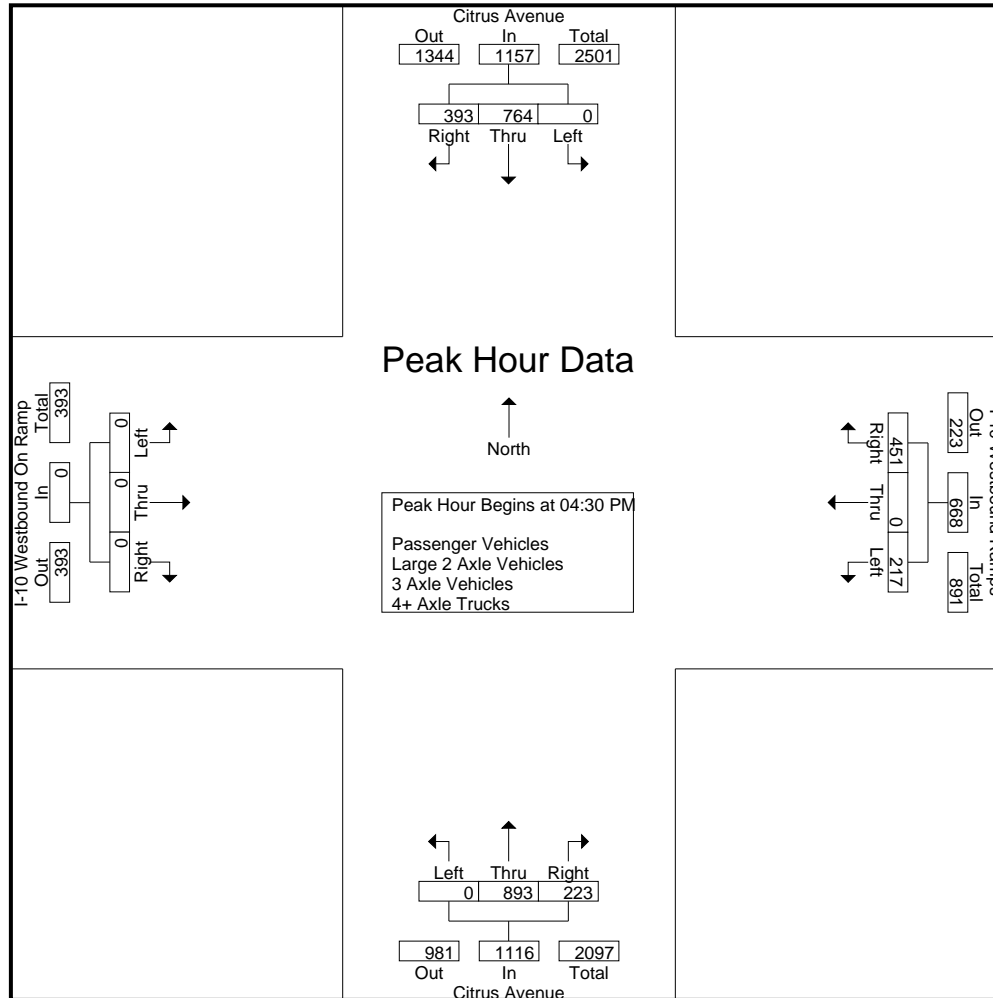
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

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

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	213	80	0	293	49	0	121	46	170	0	237	47	5	284	0	0	0	0	0	51	747	798
04:15 PM	0	190	94	0	284	39	0	106	64	145	0	205	42	4	247	0	0	0	0	0	68	676	744
04:30 PM	0	200	123	0	323	54	0	102	49	156	0	240	57	3	297	0	0	0	0	0	52	776	828
04:45 PM	0	178	87	0	265	44	0	105	32	149	0	219	57	15	276	0	0	0	0	0	47	690	737
Total	0	781	384	0	1165	186	0	434	191	620	0	901	203	27	1104	0	0	0	0	0	218	2889	3107
05:00 PM	0	210	96	0	306	65	0	101	35	166	0	231	54	6	285	0	0	0	0	0	41	757	798
05:15 PM	0	176	87	0	263	54	0	143	41	197	0	203	55	13	258	0	0	0	0	0	54	718	772
05:30 PM	0	192	98	0	290	49	0	119	43	168	0	245	47	3	292	0	0	0	0	0	46	750	796
05:45 PM	0	194	65	0	259	48	0	101	56	149	0	185	95	14	280	0	0	0	0	0	70	688	758
Total	0	772	346	0	1118	216	0	464	175	680	0	864	251	36	1115	0	0	0	0	0	211	2913	3124
Grand Total	0	1553	730	0	2283	402	0	898	366	1300	0	1765	454	63	2219	0	0	0	0	0	429	5802	6231
Apprch %	0	68	32			30.9	0	69.1			0	79.5	20.5			0	0	0					
Total %	0	26.8	12.6		39.3	6.9	0	15.5		22.4	0	30.4	7.8		38.2	0	0	0		0	6.9	93.1	
Passenger Vehicles	0	1466	691		2157	341	0	843		1535	0	1698	399		2146	0	0	0		0	0	0	5838
% Passenger Vehicles	0	94.4	94.7	0	94.5	84.8	0	93.9	95.9	92.1	0	96.2	87.9	77.8	94	0	0	0	0	0	0	0	93.7
Large 2 Axle Vehicles	0	30	14		44	11	0	19		36	0	18	6		24	0	0	0		0	0	0	104
% Large 2 Axle Vehicles	0	1.9	1.9	0	1.9	2.7	0	2.1	1.6	2.2	0	1	1.3	0	1.1	0	0	0	0	0	0	0	1.7
3 Axle Vehicles	0	28	4		32	9	0	15		27	0	23	17		47	0	0	0		0	0	0	106
% 3 Axle Vehicles	0	1.8	0.5	0	1.4	2.2	0	1.7	0.8	1.6	0	1.3	3.7	11.1	2.1	0	0	0	0	0	0	0	1.7
4+ Axle Trucks	0	29	21		50	41	0	21		68	0	26	32		65	0	0	0		0	0	0	183
% 4+ Axle Trucks	0	1.9	2.9	0	2.2	10.2	0	2.3	1.6	4.1	0	1.5	7	11.1	2.8	0	0	0	0	0	0	0	2.9

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	200	123	323	54	0	102	156	0	240	57	297	0	0	0	0	776
04:45 PM	0	178	87	265	44	0	105	149	0	219	57	276	0	0	0	0	690
05:00 PM	0	210	96	306	65	0	101	166	0	231	54	285	0	0	0	0	757
05:15 PM	0	176	87	263	54	0	143	197	0	203	55	258	0	0	0	0	718
Total Volume	0	764	393	1157	217	0	451	668	0	893	223	1116	0	0	0	0	2941
% App. Total	0	66	34		32.5	0	67.5		0	80	20		0	0	0		
PHF	.000	.910	.799	.896	.835	.000	.788	.848	.000	.930	.978	.939	.000	.000	.000	.000	.947



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:15 PM				04:45 PM				04:30 PM				04:00 PM				
+0 mins.	0	190	94	284	44	0	105	149	0	240	57	297	0	0	0	0	
+15 mins.	0	200	123	323	65	0	101	166	0	219	57	276	0	0	0	0	
+30 mins.	0	178	87	265	54	0	143	197	0	231	54	285	0	0	0	0	
+45 mins.	0	210	96	306	49	0	119	168	0	203	55	258	0	0	0	0	
Total Volume	0	778	400	1178	212	0	468	680	0	893	223	1116	0	0	0	0	
% App. Total	0	66	34		31.2	0	68.8		0	80	20		0	0	0		
PHF	.000	.926	.813	.912	.815	.000	.818	.863	.000	.930	.978	.939	.000	.000	.000	.000	

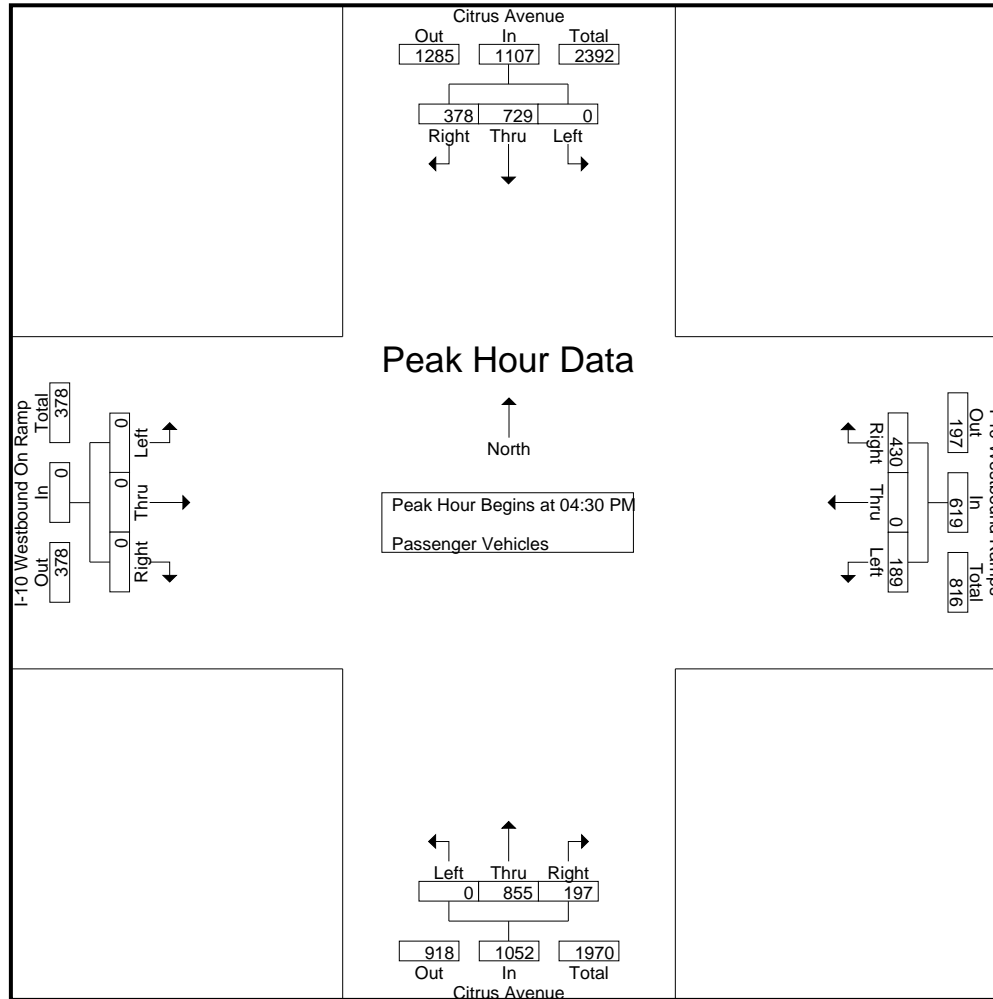
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	193	70	0	263	35	0	103	38	138	0	230	38	3	268	0	0	0	0	0	41	669	710
04:15 PM	0	179	88	0	267	30	0	105	63	135	0	194	40	3	234	0	0	0	0	0	66	636	702
04:30 PM	0	186	114	0	300	42	0	97	49	139	0	228	47	2	275	0	0	0	0	0	51	714	765
04:45 PM	0	172	86	0	258	39	0	101	31	140	0	208	50	12	258	0	0	0	0	0	43	656	699
Total	0	730	358	0	1088	146	0	406	181	552	0	860	175	20	1035	0	0	0	0	0	201	2675	2876
05:00 PM	0	199	91	0	290	57	0	95	33	152	0	226	50	5	276	0	0	0	0	0	38	718	756
05:15 PM	0	172	87	0	259	51	0	137	39	188	0	193	50	12	243	0	0	0	0	0	51	690	741
05:30 PM	0	180	92	0	272	43	0	105	42	148	0	239	40	1	279	0	0	0	0	0	43	699	742
05:45 PM	0	185	63	0	248	44	0	100	56	144	0	180	84	11	264	0	0	0	0	0	67	656	723
Total	0	736	333	0	1069	195	0	437	170	632	0	838	224	29	1062	0	0	0	0	0	199	2763	2962
Grand Total	0	1466	691	0	2157	341	0	843	351	1184	0	1698	399	49	2097	0	0	0	0	0	400	5438	5838
Apprch %	0	68	32			28.8	0	71.2			0	81	19			0	0	0					
Total %	0	27	12.7		39.7	6.3	0	15.5		21.8	0	31.2	7.3		38.6	0	0	0		0	6.9	93.1	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	186	114	300	42	0	97	139	0	228	47	275	0	0	0	0	714
04:45 PM	0	172	86	258	39	0	101	140	0	208	50	258	0	0	0	0	656
05:00 PM	0	199	91	290	57	0	95	152	0	226	50	276	0	0	0	0	718
05:15 PM	0	172	87	259	51	0	137	188	0	193	50	243	0	0	0	0	690
Total Volume	0	729	378	1107	189	0	430	619	0	855	197	1052	0	0	0	0	2778
% App. Total	0	65.9	34.1		30.5	0	69.5		0	81.3	18.7		0	0	0		
PHF	.000	.916	.829	.923	.829	.000	.785	.823	.000	.938	.985	.953	.000	.000	.000	.000	.967



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	186	114	300	42	0	97	139	0	228	47	275	0	0	0	0	
+15 mins.	0	172	86	258	39	0	101	140	0	208	50	258	0	0	0	0	
+30 mins.	0	199	91	290	57	0	95	152	0	226	50	276	0	0	0	0	
+45 mins.	0	172	87	259	51	0	137	188	0	193	50	243	0	0	0	0	
Total Volume	0	729	378	1107	189	0	430	619	0	855	197	1052	0	0	0	0	
% App. Total	0	65.9	34.1		30.5	0	69.5		0	81.3	18.7		0	0	0		
PHF	.000	.916	.829	.923	.829	.000	.785	.823	.000	.938	.985	.953	.000	.000	.000	.000	

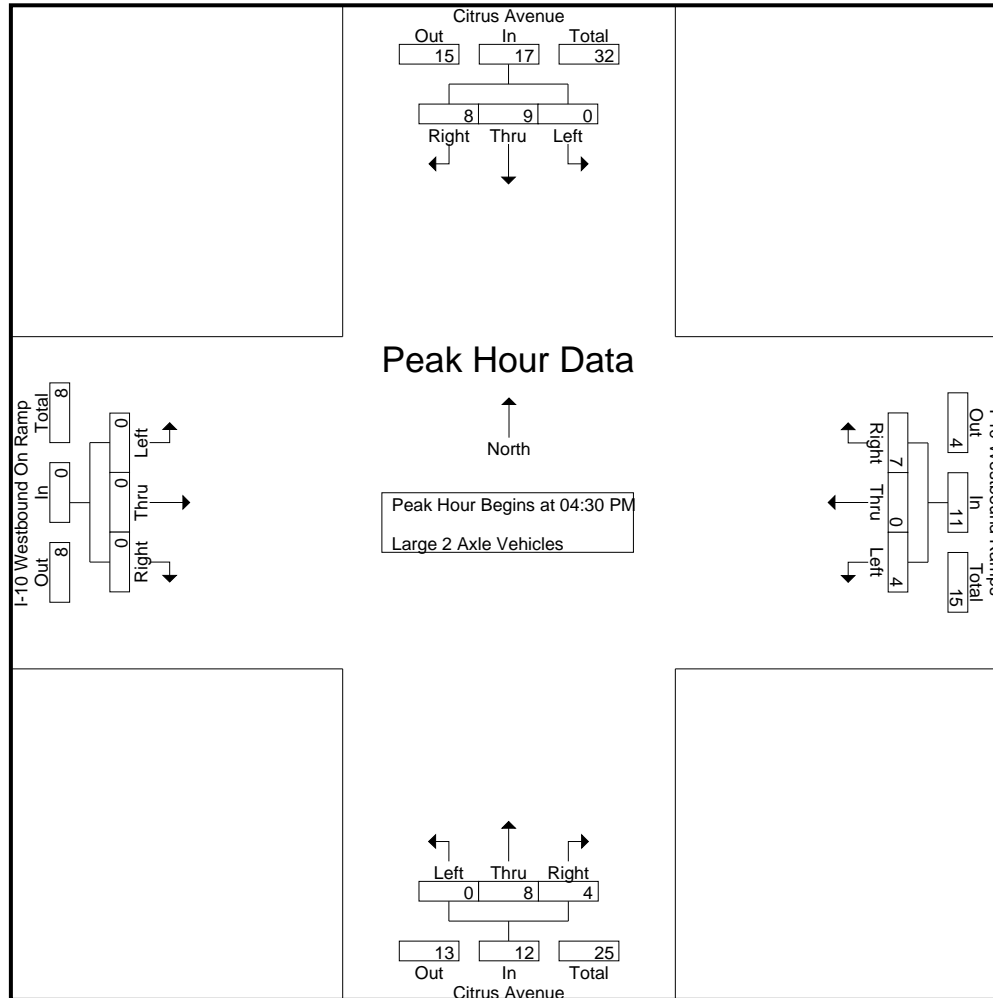
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	12	3	0	15	2	0	8	2	10	0	2	1	0	3	0	0	0	0	0	2	28	30
04:15 PM	0	3	0	0	3	5	0	1	1	6	0	3	0	0	3	0	0	0	0	0	1	12	13
04:30 PM	0	5	5	0	10	2	0	2	0	4	0	1	2	0	3	0	0	0	0	0	0	17	17
04:45 PM	0	2	1	0	3	0	0	2	1	2	0	4	1	0	5	0	0	0	0	0	1	10	11
Total	0	22	9	0	31	9	0	13	4	22	0	10	4	0	14	0	0	0	0	0	4	67	71
05:00 PM	0	1	2	0	3	2	0	2	1	4	0	3	0	0	3	0	0	0	0	0	1	10	11
05:15 PM	0	1	0	0	1	0	0	1	1	1	0	0	1	0	1	0	0	0	0	0	1	3	4
05:30 PM	0	4	2	0	6	0	0	3	0	3	0	2	0	0	2	0	0	0	0	0	0	11	11
05:45 PM	0	2	1	0	3	0	0	0	0	0	0	3	1	0	4	0	0	0	0	0	0	7	7
Total	0	8	5	0	13	2	0	6	2	8	0	8	2	0	10	0	0	0	0	0	2	31	33
Grand Total	0	30	14	0	44	11	0	19	6	30	0	18	6	0	24	0	0	0	0	0	6	98	104
Apprch %	0	68.2	31.8			36.7	0	63.3			0	75	25			0	0	0					
Total %	0	30.6	14.3		44.9	11.2	0	19.4		30.6	0	18.4	6.1		24.5	0	0	0		0	5.8	94.2	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:30 PM	0	5	5	10	2	0	2	4	0	1	2	3	0	0	0	0	17
04:45 PM	0	2	1	3	0	0	2	2	0	4	1	5	0	0	0	0	10
05:00 PM	0	1	2	3	2	0	2	4	0	3	0	3	0	0	0	0	10
05:15 PM	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	3
Total Volume	0	9	8	17	4	0	7	11	0	8	4	12	0	0	0	0	40
% App. Total	0	52.9	47.1		36.4	0	63.6		0	66.7	33.3		0	0	0		
PHF	.000	.450	.400	.425	.500	.000	.875	.688	.000	.500	.500	.600	.000	.000	.000	.000	.588



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	5	5	10	2	0	2	4	0	1	2	3	0	0	0	0	
+15 mins.	0	2	1	3	0	0	2	2	0	4	1	5	0	0	0	0	
+30 mins.	0	1	2	3	2	0	2	4	0	3	0	3	0	0	0	0	
+45 mins.	0	1	0	1	0	0	1	1	0	0	1	1	0	0	0	0	
Total Volume	0	9	8	17	4	0	7	11	0	8	4	12	0	0	0	0	
% App. Total	0	52.9	47.1		36.4	0	63.6		0	66.7	33.3		0	0	0		
PHF	.000	.450	.400	.425	.500	.000	.875	.688	.000	.500	.500	.600	.000	.000	.000	.000	

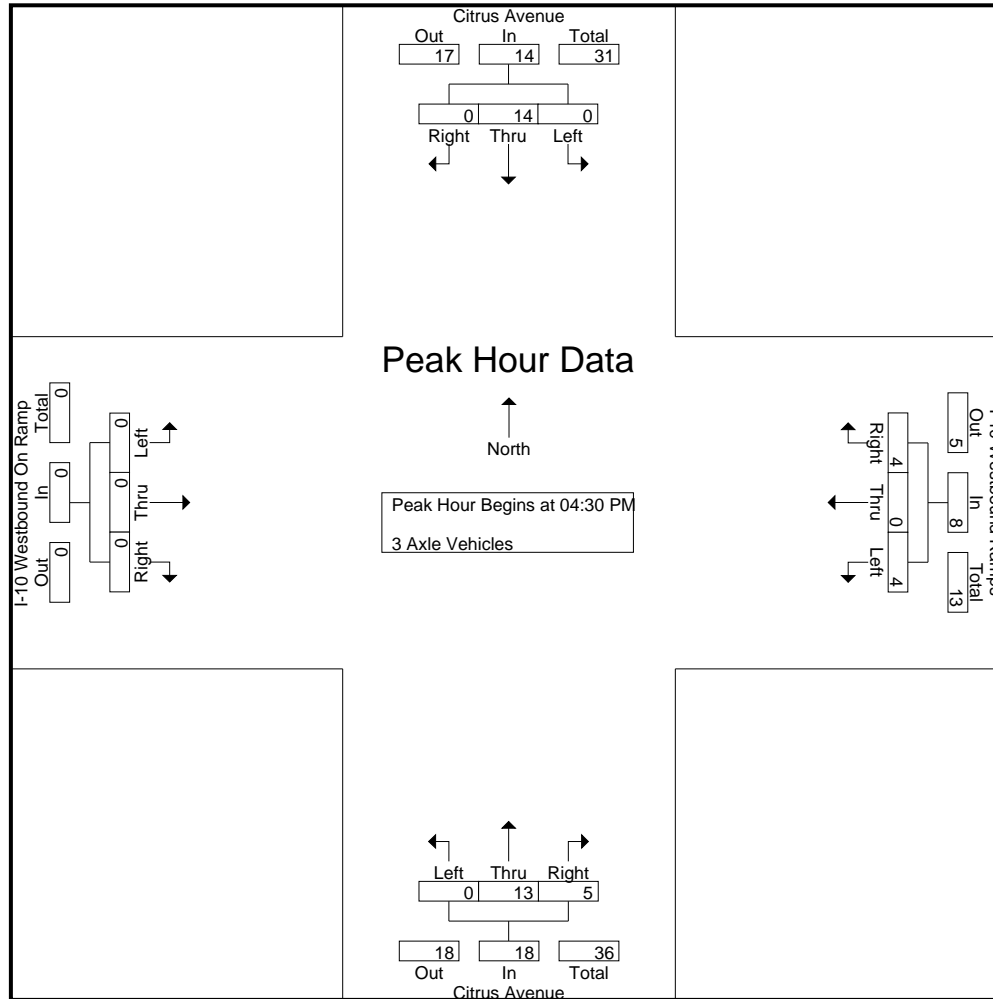
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	4	2	0	6	3	0	3	2	6	0	2	4	2	6	0	0	0	0	0	4	18	22
04:15 PM	0	4	1	0	5	0	0	0	0	0	0	5	1	1	6	0	0	0	0	0	1	11	12
04:30 PM	0	4	0	0	4	2	0	1	0	3	0	6	3	1	9	0	0	0	0	0	1	16	17
04:45 PM	0	3	0	0	3	0	0	1	0	1	0	2	1	1	3	0	0	0	0	0	1	7	8
Total	0	15	3	0	18	5	0	5	2	10	0	15	9	5	24	0	0	0	0	0	7	52	59
05:00 PM	0	6	0	0	6	1	0	1	0	2	0	1	1	1	2	0	0	0	0	0	1	10	11
05:15 PM	0	1	0	0	1	1	0	1	0	2	0	4	0	0	4	0	0	0	0	0	0	7	7
05:30 PM	0	3	1	0	4	2	0	7	1	9	0	1	3	0	4	0	0	0	0	0	1	17	18
05:45 PM	0	3	0	0	3	0	0	1	0	1	0	2	4	1	6	0	0	0	0	0	1	10	11
Total	0	13	1	0	14	4	0	10	1	14	0	8	8	2	16	0	0	0	0	0	3	44	47
Grand Total	0	28	4	0	32	9	0	15	3	24	0	23	17	7	40	0	0	0	0	0	10	96	106
Apprch %	0	87.5	12.5			37.5	0	62.5			0	57.5	42.5			0	0	0					
Total %	0	29.2	4.2		33.3	9.4	0	15.6		25	0	24	17.7		41.7	0	0	0		0	9.4	90.6	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	4	0	4	2	0	1	3	0	6	3	9	0	0	0	0	16
04:45 PM	0	3	0	3	0	0	1	1	0	2	1	3	0	0	0	0	7
05:00 PM	0	6	0	6	1	0	1	2	0	1	1	2	0	0	0	0	10
05:15 PM	0	1	0	1	1	0	1	2	0	4	0	4	0	0	0	0	7
Total Volume	0	14	0	14	4	0	4	8	0	13	5	18	0	0	0	0	40
% App. Total	0	100	0		50	0	50		0	72.2	27.8		0	0	0		
PHF	.000	.583	.000	.583	.500	.000	1.00	.667	.000	.542	.417	.500	.000	.000	.000	.000	.625



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	4	0	4	2	0	1	3	0	6	3	9	0	0	0	0	
+15 mins.	0	3	0	3	0	0	1	1	0	2	1	3	0	0	0	0	
+30 mins.	0	6	0	6	1	0	1	2	0	1	1	2	0	0	0	0	
+45 mins.	0	1	0	1	1	0	1	2	0	4	0	4	0	0	0	0	
Total Volume	0	14	0	14	4	0	4	8	0	13	5	18	0	0	0	0	
% App. Total	0	100	0		50	0	50		0	72.2	27.8		0	0	0		
PHF	.000	.583	.000	.583	.500	.000	1.000	.667	.000	.542	.417	.500	.000	.000	.000	.000	

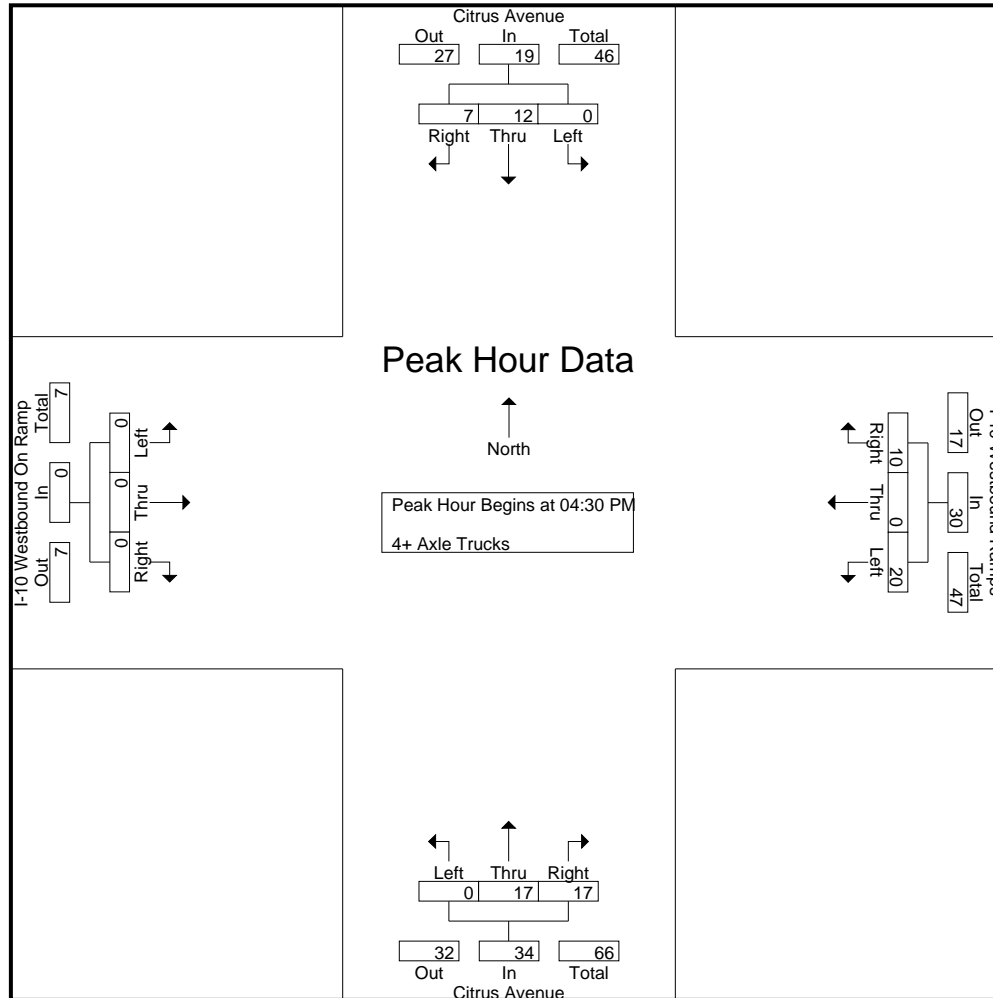
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					I-10 Westbound Ramps Westbound					Citrus Avenue Northbound					I-10 Westbound On Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	4	5	0	9	9	0	7	4	16	0	3	4	0	7	0	0	0	0	0	4	32	36
04:15 PM	0	4	5	0	9	4	0	0	0	4	0	3	1	0	4	0	0	0	0	0	0	17	17
04:30 PM	0	5	4	0	9	8	0	2	0	10	0	5	5	0	10	0	0	0	0	0	0	29	29
04:45 PM	0	1	0	0	1	5	0	1	0	6	0	5	5	2	10	0	0	0	0	0	2	17	19
Total	0	14	14	0	28	26	0	10	4	36	0	16	15	2	31	0	0	0	0	0	6	95	101
05:00 PM	0	4	3	0	7	5	0	3	1	8	0	1	3	0	4	0	0	0	0	0	1	19	20
05:15 PM	0	2	0	0	2	2	0	4	1	6	0	6	4	1	10	0	0	0	0	0	2	18	20
05:30 PM	0	5	3	0	8	4	0	4	0	8	0	3	4	2	7	0	0	0	0	0	2	23	25
05:45 PM	0	4	1	0	5	4	0	0	0	4	0	0	6	2	6	0	0	0	0	0	2	15	17
Total	0	15	7	0	22	15	0	11	2	26	0	10	17	5	27	0	0	0	0	0	7	75	82
Grand Total	0	29	21	0	50	41	0	21	6	62	0	26	32	7	58	0	0	0	0	0	13	170	183
Apprch %	0	58	42			66.1	0	33.9			0	44.8	55.2			0	0	0					
Total %	0	17.1	12.4		29.4	24.1	0	12.4		36.5	0	15.3	18.8		34.1	0	0	0		0	7.1	92.9	

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	5	4	9	8	0	2	10	0	5	5	10	0	0	0	0	29
04:45 PM	0	1	0	1	5	0	1	6	0	5	5	10	0	0	0	0	17
05:00 PM	0	4	3	7	5	0	3	8	0	1	3	4	0	0	0	0	19
05:15 PM	0	2	0	2	2	0	4	6	0	6	4	10	0	0	0	0	18
Total Volume	0	12	7	19	20	0	10	30	0	17	17	34	0	0	0	0	83
% App. Total	0	63.2	36.8		66.7	0	33.3		0	50	50		0	0	0		
PHF	.000	.600	.438	.528	.625	.000	.625	.750	.000	.708	.850	.850	.000	.000	.000	.000	.716



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Westbound Ramps
 Weather: Clear

File Name : 01_FON_Citrus_10W PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Westbound Ramps Westbound				Citrus Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	5	4	9	8	0	2	10	0	5	5	10	0	0	0	0	
+15 mins.	0	1	0	1	5	0	1	6	0	5	5	10	0	0	0	0	
+30 mins.	0	4	3	7	5	0	3	8	0	1	3	4	0	0	0	0	
+45 mins.	0	2	0	2	2	0	4	6	0	6	4	10	0	0	0	0	
Total Volume	0	12	7	19	20	0	10	30	0	17	17	34	0	0	0	0	
% App. Total	0	63.2	36.8		66.7	0	33.3		0	50	50		0	0	0		
PHF	.000	.600	.438	.528	.625	.000	.625	.750	.000	.708	.850	.850	.000	.000	.000	.000	

Location: Fontana
 N/S: Citrus Avenue
 E/W: I-10 WB Ramps



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Citrus Avenue	East Leg I-10 WB Ramps	South Leg Citrus Avenue	West Leg I-10 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	1	0	0	1
8:00 AM	0	2	0	0	2
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	5	0	0	5

	North Leg Citrus Avenue	East Leg I-10 WB Ramps	South Leg Citrus Avenue	West Leg I-10 WB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Fontana
 N/S: Citrus Avenue
 E/W: I-10 WB Ramps



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Citrus Avenue			Westbound I-10 WB Ramps			Northbound Citrus Avenue			Eastbound I-10 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
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	2	1	0	0	0	0	2	0	0	0	0	5

	Southbound Citrus Avenue			Westbound I-10 WB Ramps			Northbound Citrus Avenue			Eastbound I-10 WB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	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
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

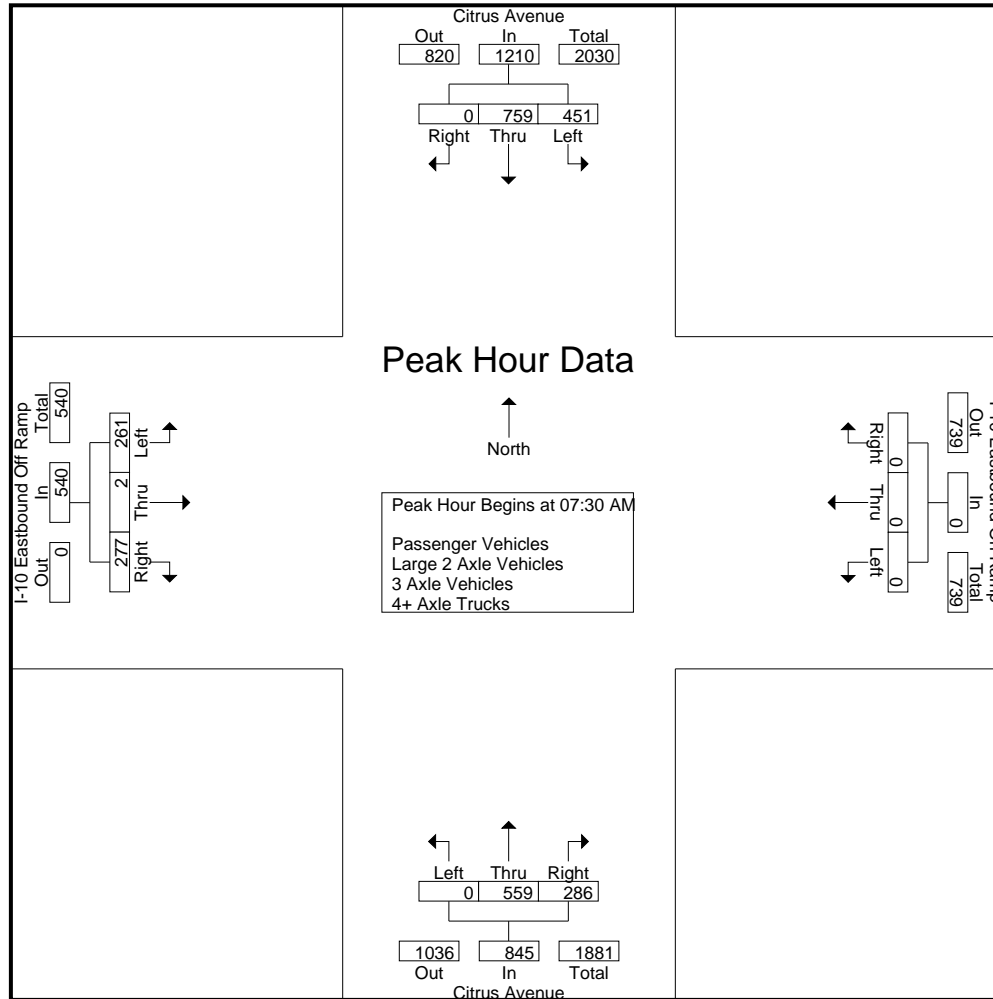
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

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

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	105	128	0	0	233	0	0	0	0	0	0	102	66	23	168	87	1	60	26	148	49	549	598
07:15 AM	129	130	0	0	259	0	0	0	0	0	0	109	61	20	170	81	0	61	38	142	58	571	629
07:30 AM	131	165	0	0	296	0	0	0	0	0	0	139	77	33	216	76	0	57	32	133	65	645	710
07:45 AM	127	198	0	0	325	0	0	0	0	0	0	134	57	22	191	65	2	66	25	133	47	649	696
Total	492	621	0	0	1113	0	0	0	0	0	0	484	261	98	745	309	3	244	121	556	219	2414	2633
08:00 AM	103	191	0	0	294	0	0	0	0	0	0	133	83	34	216	62	0	62	34	124	68	634	702
08:15 AM	90	205	0	0	295	0	0	0	0	0	0	153	69	22	222	58	0	92	27	150	49	667	716
08:30 AM	109	152	0	0	261	0	0	0	0	0	0	125	82	21	207	64	1	57	32	122	53	590	643
08:45 AM	94	132	0	0	226	0	0	0	0	0	0	110	76	19	186	89	0	69	26	158	45	570	615
Total	396	680	0	0	1076	0	0	0	0	0	0	521	310	96	831	273	1	280	119	554	215	2461	2676
Grand Total	888	1301	0	0	2189	0	0	0	0	0	0	1005	571	194	1576	582	4	524	240	1110	434	4875	5309
Apprch %	40.6	59.4	0	0		0	0	0	0	0	0	63.8	36.2			52.4	0.4	47.2					
Total %	18.2	26.7	0	0	44.9	0	0	0	0	0	0	20.6	11.7	32.3	11.9	0.1	10.7		22.8	8.2	91.8		
Passenger Vehicles	815	1167	0	0	1982	0	0	0	0	0	0	871	462	1498	539	3	427		1175	0	0	4655	
% Passenger Vehicles	91.8	89.7	0	0	90.5	0	0	0	0	0	0	86.7	80.9	85.1	84.6	92.6	75	81.5	85.8	87	0	0	87.7
Large 2 Axle Vehicles	31	41	0	0	72	0	0	0	0	0	0	41	32	83	17	1	17		41	0	0	196	
% Large 2 Axle Vehicles	3.5	3.2	0	0	3.3	0	0	0	0	0	0	4.1	5.6	5.2	4.7	2.9	25	3.2	2.5	3	0	0	3.7
3 Axle Vehicles	11	27	0	0	38	0	0	0	0	0	0	20	17	41	10	0	21		38	0	0	117	
% 3 Axle Vehicles	1.2	2.1	0	0	1.7	0	0	0	0	0	0	2	3	2.1	2.3	1.7	0	4	2.9	2.8	0	0	2.2
4+ Axle Trucks	31	66	0	0	97	0	0	0	0	0	0	73	60	148	16	0	59		96	0	0	341	
% 4+ Axle Trucks	3.5	5.1	0	0	4.4	0	0	0	0	0	0	7.3	10.5	7.7	8.4	2.7	0	11.3	8.8	7.1	0	0	6.4

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	131	165	0	296	0	0	0	0	0	139	77	216	76	0	57	133	645
07:45 AM	127	198	0	325	0	0	0	0	0	134	57	191	65	2	66	133	649
08:00 AM	103	191	0	294	0	0	0	0	0	133	83	216	62	0	62	124	634
08:15 AM	90	205	0	295	0	0	0	0	0	153	69	222	58	0	92	150	667
Total Volume	451	759	0	1210	0	0	0	0	0	559	286	845	261	2	277	540	2595
% App. Total	37.3	62.7	0		0	0	0		0	66.2	33.8		48.3	0.4	51.3		
PHF	.861	.926	.000	.931	.000	.000	.000	.000	.000	.913	.861	.952	.859	.250	.753	.900	.973



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:00 AM				07:30 AM				07:00 AM				
+0 mins.	131	165	0	296	0	0	0	0	0	139	77	216	87	1	60	148	
+15 mins.	127	198	0	325	0	0	0	0	0	134	57	191	81	0	61	142	
+30 mins.	103	191	0	294	0	0	0	0	0	133	83	216	76	0	57	133	
+45 mins.	90	205	0	295	0	0	0	0	0	153	69	222	65	2	66	133	
Total Volume	451	759	0	1210	0	0	0	0	0	559	286	845	309	3	244	556	
% App. Total	37.3	62.7	0		0	0	0		0	66.2	33.8		55.6	0.5	43.9		
PHF	.861	.926	.000	.931	.000	.000	.000	.000	.000	.913	.861	.952	.888	.375	.924	.939	

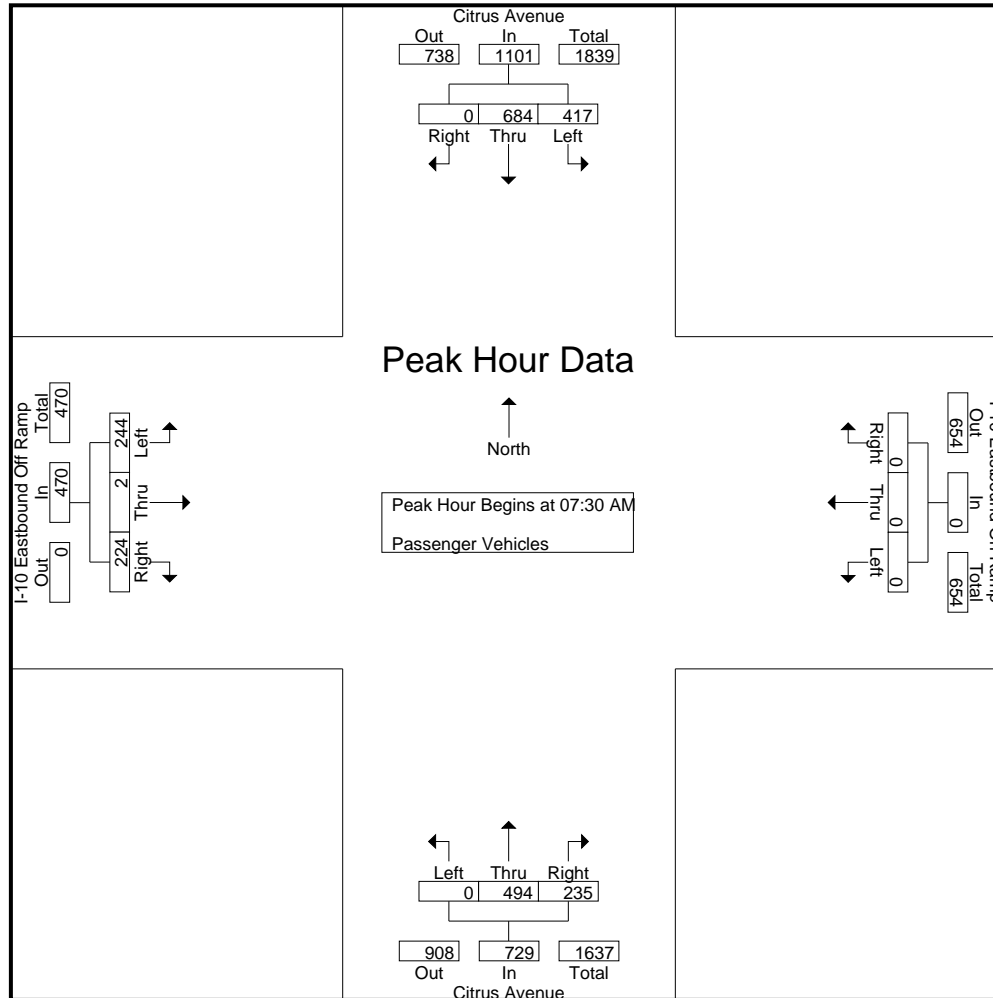
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	100	119	0	0	219	0	0	0	0	0	0	88	55	19	143	81	0	50	23	131	42	493	535
07:15 AM	118	116	0	0	234	0	0	0	0	0	0	93	50	16	143	77	0	51	31	128	47	505	552
07:30 AM	120	146	0	0	266	0	0	0	0	0	0	128	61	26	189	73	0	44	25	117	51	572	623
07:45 AM	122	182	0	0	304	0	0	0	0	0	0	118	45	20	163	61	2	54	23	117	43	584	627
Total	460	563	0	0	1023	0	0	0	0	0	0	427	211	81	638	292	2	199	102	493	183	2154	2337
08:00 AM	93	173	0	0	266	0	0	0	0	0	0	110	71	32	181	56	0	53	33	109	65	556	621
08:15 AM	82	183	0	0	265	0	0	0	0	0	0	138	58	18	196	54	0	73	23	127	41	588	629
08:30 AM	95	134	0	0	229	0	0	0	0	0	0	106	66	18	172	57	1	49	29	107	47	508	555
08:45 AM	85	114	0	0	199	0	0	0	0	0	0	90	56	16	146	80	0	53	19	133	35	478	513
Total	355	604	0	0	959	0	0	0	0	0	0	444	251	84	695	247	1	228	104	476	188	2130	2318
Grand Total	815	1167	0	0	1982	0	0	0	0	0	0	871	462	165	1333	539	3	427	206	969	371	4284	4655
Apprch %	41.1	58.9	0			0	0	0			0	65.3	34.7			55.6	0.3	44.1					
Total %	19	27.2	0		46.3	0	0	0			0	20.3	10.8		31.1	12.6	0.1	10		22.6	8	92	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	120	146	0	266	0	0	0	0	0	128	61	189	73	0	44	117	572
07:45 AM	122	182	0	304	0	0	0	0	0	118	45	163	61	2	54	117	584
08:00 AM	93	173	0	266	0	0	0	0	0	110	71	181	56	0	53	109	556
08:15 AM	82	183	0	265	0	0	0	0	0	138	58	196	54	0	73	127	588
Total Volume	417	684	0	1101	0	0	0	0	0	494	235	729	244	2	224	470	2300
% App. Total	37.9	62.1	0		0	0	0		0	67.8	32.2		51.9	0.4	47.7		
PHF	.855	.934	.000	.905	.000	.000	.000	.000	.000	.895	.827	.930	.836	.250	.767	.925	.978



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	120	146	0	266	0	0	0	0	0	128	61	189	73	0	44	117	
+15 mins.	122	182	0	304	0	0	0	0	0	118	45	163	61	2	54	117	
+30 mins.	93	173	0	266	0	0	0	0	0	110	71	181	56	0	53	109	
+45 mins.	82	183	0	265	0	0	0	0	0	138	58	196	54	0	73	127	
Total Volume	417	684	0	1101	0	0	0	0	0	494	235	729	244	2	224	470	
% App. Total	37.9	62.1	0		0	0	0		0	67.8	32.2		51.9	0.4	47.7		
PHF	.855	.934	.000	.905	.000	.000	.000	.000	.000	.895	.827	.930	.836	.250	.767	.925	

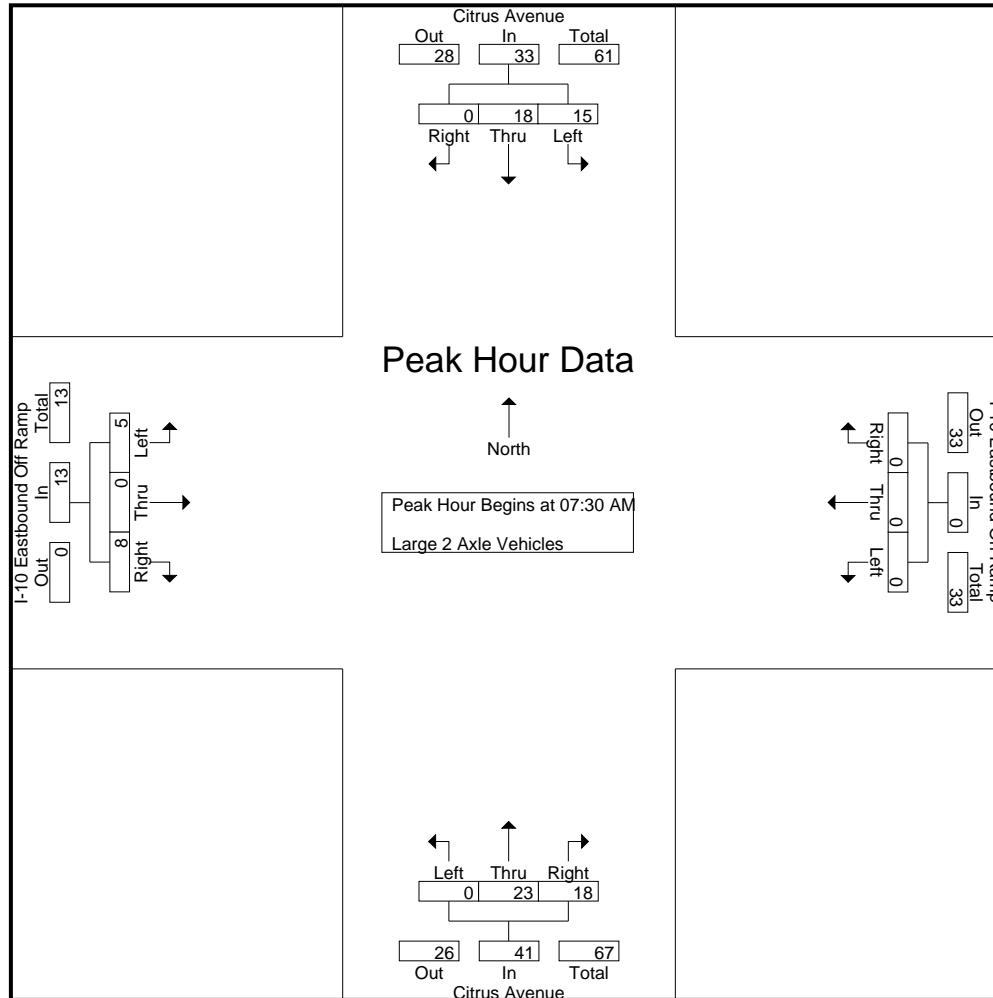
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	3	6	0	0	9	0	0	0	0	0	0	4	4	2	8	3	1	2	0	6	2	23	25
07:15 AM	2	6	0	0	8	0	0	0	0	0	0	6	3	1	9	1	0	2	1	3	2	20	22
07:30 AM	3	4	0	0	7	0	0	0	0	0	0	6	6	2	12	0	0	3	1	3	3	22	25
07:45 AM	3	4	0	0	7	0	0	0	0	0	0	5	3	1	8	0	0	1	1	1	2	16	18
Total	11	20	0	0	31	0	0	0	0	0	0	21	16	6	37	4	1	8	3	13	9	81	90
08:00 AM	2	3	0	0	5	0	0	0	0	0	0	9	5	1	14	2	0	0	0	2	1	21	22
08:15 AM	7	7	0	0	14	0	0	0	0	0	0	3	4	1	7	3	0	4	1	7	2	28	30
08:30 AM	7	5	0	0	12	0	0	0	0	0	0	4	2	0	6	5	0	2	1	7	1	25	26
08:45 AM	4	6	0	0	10	0	0	0	0	0	0	4	5	2	9	3	0	3	1	6	3	25	28
Total	20	21	0	0	41	0	0	0	0	0	0	20	16	4	36	13	0	9	3	22	7	99	106
Grand Total	31	41	0	0	72	0	0	0	0	0	0	41	32	10	73	17	1	17	6	35	16	180	196
Apprch %	43.1	56.9	0			0	0	0			0	56.2	43.8			48.6	2.9	48.6					
Total %	17.2	22.8	0		40	0	0	0		0	0	22.8	17.8		40.6	9.4	0.6	9.4		19.4	8.2	91.8	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	4	0	7	0	0	0	0	0	6	6	12	0	0	3	3	22
07:45 AM	3	4	0	7	0	0	0	0	0	5	3	8	0	0	1	1	16
08:00 AM	2	3	0	5	0	0	0	0	0	9	5	14	2	0	0	2	21
08:15 AM	7	7	0	14	0	0	0	0	0	3	4	7	3	0	4	7	28
Total Volume	15	18	0	33	0	0	0	0	0	23	18	41	5	0	8	13	87
% App. Total	45.5	54.5	0		0	0	0		0	56.1	43.9		38.5	0	61.5		
PHF	.536	.643	.000	.589	.000	.000	.000	.000	.000	.639	.750	.732	.417	.000	.500	.464	.777



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	3	4	0	7	0	0	0	0	0	6	6	12	0	0	3	3	
+15 mins.	3	4	0	7	0	0	0	0	0	5	3	8	0	0	1	1	
+30 mins.	2	3	0	5	0	0	0	0	0	9	5	14	2	0	0	2	
+45 mins.	7	7	0	14	0	0	0	0	0	3	4	7	3	0	4	7	
Total Volume	15	18	0	33	0	0	0	0	0	23	18	41	5	0	8	13	
% App. Total	45.5	54.5	0		0	0	0		0	56.1	43.9		38.5	0	61.5		
PHF	.536	.643	.000	.589	.000	.000	.000	.000	.000	.639	.750	.732	.417	.000	.500	.464	

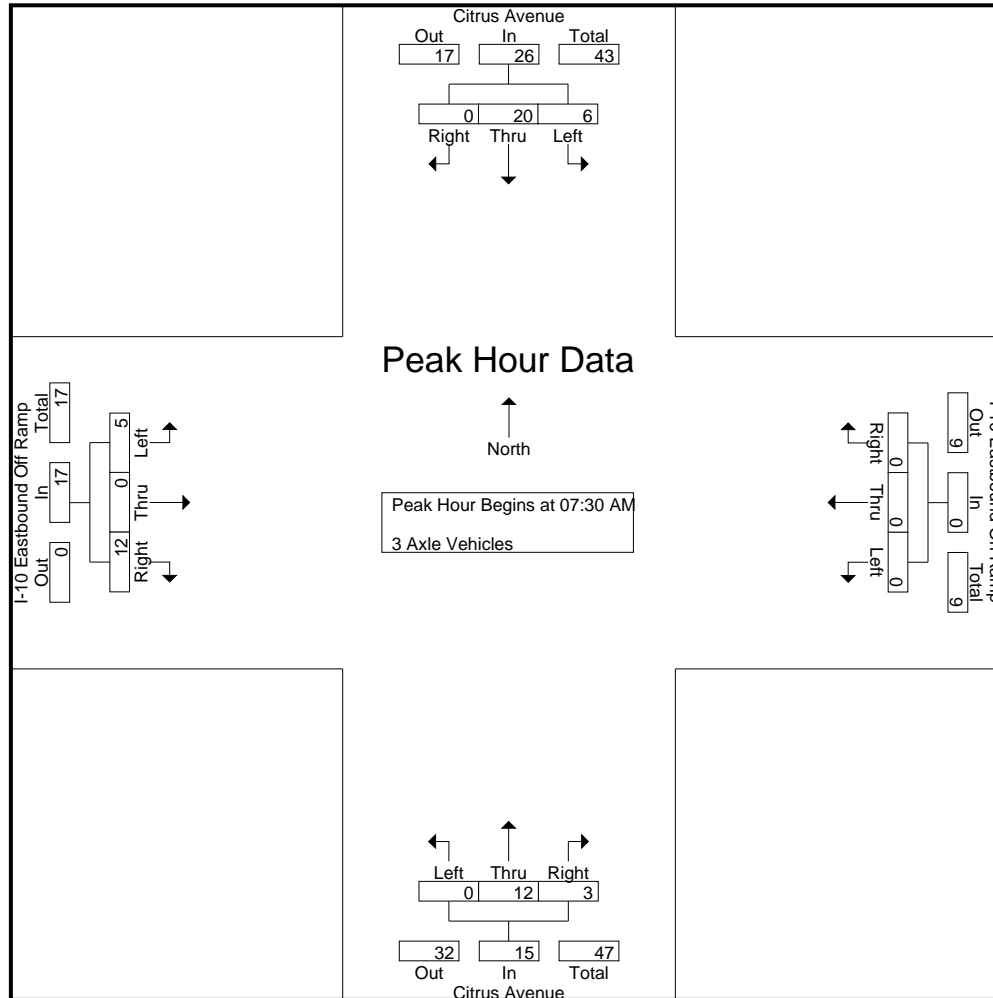
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	1	0	0	2	0	0	0	0	0	0	1	3	1	4	2	0	3	1	5	2	11	13
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	2	5	2	7	0	0	2	1	2	3	10	13
07:30 AM	3	7	0	0	10	0	0	0	0	0	0	2	0	0	2	0	0	4	2	4	2	16	18
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	5	1	0	6	2	0	3	0	5	0	13	13
Total	5	10	0	0	15	0	0	0	0	0	0	10	9	3	19	4	0	12	4	16	7	50	57
08:00 AM	3	5	0	0	8	0	0	0	0	0	0	3	1	0	4	2	0	0	0	2	0	14	14
08:15 AM	0	6	0	0	6	0	0	0	0	0	0	2	1	0	3	1	0	5	1	6	1	15	16
08:30 AM	3	3	0	0	6	0	0	0	0	0	0	2	4	1	6	0	0	0	0	0	1	12	13
08:45 AM	0	3	0	0	3	0	0	0	0	0	0	3	2	0	5	3	0	4	2	7	2	15	17
Total	6	17	0	0	23	0	0	0	0	0	0	10	8	1	18	6	0	9	3	15	4	56	60
Grand Total	11	27	0	0	38	0	0	0	0	0	0	20	17	4	37	10	0	21	7	31	11	106	117
Apprch %	28.9	71.1	0			0	0	0			0	54.1	45.9			32.3	0	67.7					
Total %	10.4	25.5	0		35.8	0	0	0		0	0	18.9	16		34.9	9.4	0	19.8		29.2	9.4	90.6	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	7	0	10	0	0	0	0	0	2	0	2	0	0	4	4	16
07:45 AM	0	2	0	2	0	0	0	0	0	5	1	6	2	0	3	5	13
08:00 AM	3	5	0	8	0	0	0	0	0	3	1	4	2	0	0	2	14
08:15 AM	0	6	0	6	0	0	0	0	0	2	1	3	1	0	5	6	15
Total Volume	6	20	0	26	0	0	0	0	0	12	3	15	5	0	12	17	58
% App. Total	23.1	76.9	0		0	0	0		0	80	20		29.4	0	70.6		
PHF	.500	.714	.000	.650	.000	.000	.000	.000	.000	.600	.750	.625	.625	.000	.600	.708	.906



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

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Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	3	7	0	10	0	0	0	0	0	2	0	2	0	0	4	4	
+15 mins.	0	2	0	2	0	0	0	0	0	5	1	6	2	0	3	5	
+30 mins.	3	5	0	8	0	0	0	0	0	3	1	4	2	0	0	2	
+45 mins.	0	6	0	6	0	0	0	0	0	2	1	3	1	0	5	6	
Total Volume	6	20	0	26	0	0	0	0	0	12	3	15	5	0	12	17	
% App. Total	23.1	76.9	0		0	0	0		0	80	20		29.4	0	70.6		
PHF	.500	.714	.000	.650	.000	.000	.000	.000	.000	.600	.750	.625	.625	.000	.600	.708	

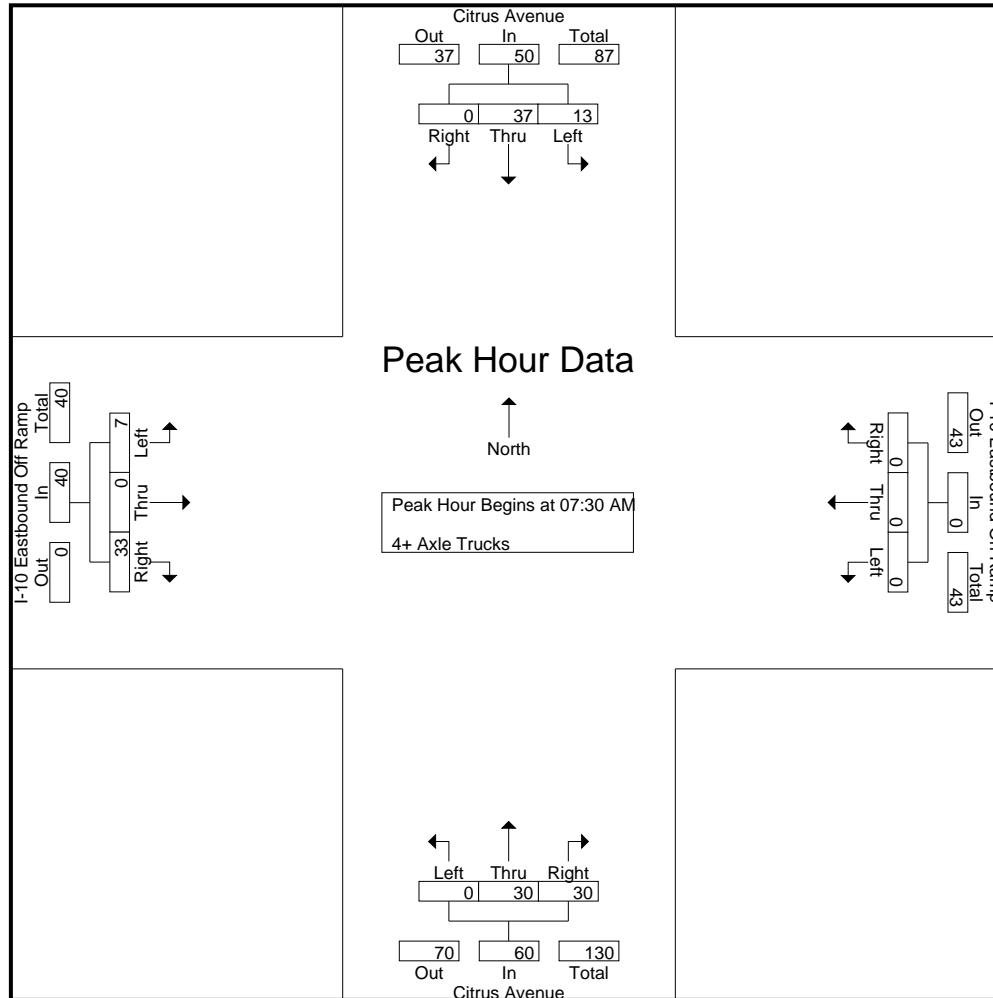
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E AM
 Site Code : 05122471
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Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	2	0	0	3	0	0	0	0	0	0	9	4	1	13	1	0	5	2	6	3	22	25
07:15 AM	8	8	0	0	16	0	0	0	0	0	0	8	3	1	11	3	0	6	5	9	6	36	42
07:30 AM	5	8	0	0	13	0	0	0	0	0	0	3	10	5	13	3	0	6	4	9	9	35	44
07:45 AM	2	10	0	0	12	0	0	0	0	0	0	6	8	1	14	2	0	8	1	10	2	36	38
Total	16	28	0	0	44	0	0	0	0	0	0	26	25	8	51	9	0	25	12	34	20	129	149
08:00 AM	5	10	0	0	15	0	0	0	0	0	0	11	6	1	17	2	0	9	1	11	2	43	45
08:15 AM	1	9	0	0	10	0	0	0	0	0	0	10	6	3	16	0	0	10	2	10	5	36	41
08:30 AM	4	10	0	0	14	0	0	0	0	0	0	13	10	2	23	2	0	6	2	8	4	45	49
08:45 AM	5	9	0	0	14	0	0	0	0	0	0	13	13	1	26	3	0	9	4	12	5	52	57
Total	15	38	0	0	53	0	0	0	0	0	0	47	35	7	82	7	0	34	9	41	16	176	192
Grand Total	31	66	0	0	97	0	0	0	0	0	0	73	60	15	133	16	0	59	21	75	36	305	341
Apprch %	32	68	0			0	0	0			0	54.9	45.1			21.3	0	78.7					
Total %	10.2	21.6	0		31.8	0	0	0			0	23.9	19.7		43.6	5.2	0	19.3		24.6	10.6	89.4	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	5	8	0	13	0	0	0	0	0	3	10	13	3	0	6	9	35
07:45 AM	2	10	0	12	0	0	0	0	0	6	8	14	2	0	8	10	36
08:00 AM	5	10	0	15	0	0	0	0	0	11	6	17	2	0	9	11	43
08:15 AM	1	9	0	10	0	0	0	0	0	10	6	16	0	0	10	10	36
Total Volume	13	37	0	50	0	0	0	0	0	30	30	60	7	0	33	40	150
% App. Total	26	74	0		0	0	0		0	50	50		17.5	0	82.5		
PHF	.650	.925	.000	.833	.000	.000	.000	.000	.000	.682	.750	.882	.583	.000	.825	.909	.872



City of Fontana
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Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	5	8	0	13	0	0	0	0	0	3	10	13	3	0	6	9	
+15 mins.	2	10	0	12	0	0	0	0	0	6	8	14	2	0	8	10	
+30 mins.	5	10	0	15	0	0	0	0	0	11	6	17	2	0	9	11	
+45 mins.	1	9	0	10	0	0	0	0	0	10	6	16	0	0	10	10	
Total Volume	13	37	0	50	0	0	0	0	0	30	30	60	7	0	33	40	
% App. Total	26	74	0		0	0	0		0	50	50		17.5	0	82.5		
PHF	.650	.925	.000	.833	.000	.000	.000	.000	.000	.682	.750	.882	.583	.000	.825	.909	

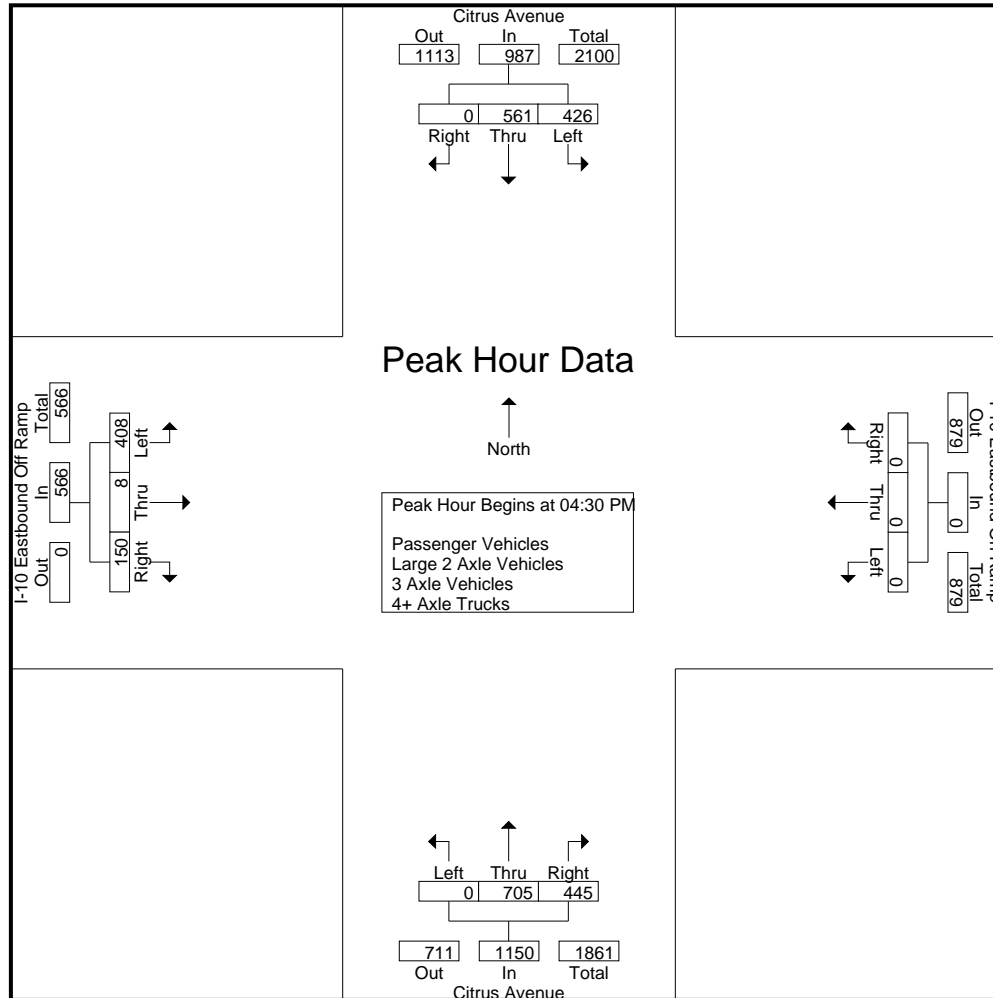
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

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

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	129	122	0	0	251	0	0	0	0	0	0	198	110	43	308	78	1	36	18	115	61	674	735
04:15 PM	100	139	0	0	239	0	0	0	0	0	0	165	99	46	264	92	0	33	21	125	67	628	695
04:30 PM	108	138	0	0	246	0	0	0	0	0	0	171	114	45	285	113	1	30	18	144	63	675	738
04:45 PM	106	134	0	0	240	0	0	0	0	0	0	191	118	50	309	94	2	33	23	129	73	678	751
Total	443	533	0	0	976	0	0	0	0	0	0	725	441	184	1166	377	4	132	80	513	264	2655	2919
05:00 PM	111	150	0	0	261	0	0	0	0	0	0	186	103	53	289	103	5	38	18	146	71	696	767
05:15 PM	101	139	0	0	240	0	0	0	0	0	0	157	110	53	267	98	0	49	17	147	70	654	724
05:30 PM	102	133	0	0	235	0	0	0	0	0	0	183	104	46	287	98	0	51	28	149	74	671	745
05:45 PM	98	136	0	0	234	0	0	0	0	0	0	213	73	35	286	74	1	77	37	152	72	672	744
Total	412	558	0	0	970	0	0	0	0	0	0	739	390	187	1129	373	6	215	100	594	287	2693	2980
Grand Total	855	1091	0	0	1946	0	0	0	0	0	0	1464	831	371	2295	750	10	347	180	1107	551	5348	5899
Apprch %	43.9	56.1	0			0	0	0			0	63.8	36.2			67.8	0.9	31.3					
Total %	16	20.4	0		36.4	0	0	0			0	27.4	15.5		42.9	14	0.2	6.5		20.7	9.3	90.7	
Passenger Vehicles	807	995	0		1802	0	0	0			0	1359	777		2490	718	9	308		1196	0	0	5488
% Passenger Vehicles	94.4	91.2	0	0	92.6	0	0	0	0	0	0	92.8	93.5	95.4	93.4	95.7	90	88.8	89.4	92.9	0	0	93
Large 2 Axle Vehicles	22	25	0		47	0	0	0			0	27	14		48	10	0	9		27	0	0	122
% Large 2 Axle Vehicles	2.6	2.3	0	0	2.4	0	0	0	0	0	0	1.8	1.7	1.9	1.8	1.3	0	2.6	4.4	2.1	0	0	2.1
3 Axle Vehicles	11	27	0		38	0	0	0			0	35	22		62	8	0	4		12	0	0	112
% 3 Axle Vehicles	1.3	2.5	0	0	2	0	0	0	0	0	0	2.4	2.6	1.3	2.3	1.1	0	1.2	0	0.9	0	0	1.9
4+ Axle Trucks	15	44	0		59	0	0	0			0	43	18		66	14	1	26		52	0	0	177
% 4+ Axle Trucks	1.8	4	0	0	3	0	0	0	0	0	0	2.9	2.2	1.3	2.5	1.9	10	7.5	6.1	4	0	0	3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	108	138	0	246	0	0	0	0	0	171	114	285	113	1	30	144	675
04:45 PM	106	134	0	240	0	0	0	0	0	191	118	309	94	2	33	129	678
05:00 PM	111	150	0	261	0	0	0	0	0	186	103	289	103	5	38	146	696
05:15 PM	101	139	0	240	0	0	0	0	0	157	110	267	98	0	49	147	654
Total Volume	426	561	0	987	0	0	0	0	0	705	445	1150	408	8	150	566	2703
% App. Total	43.2	56.8	0		0	0	0			61.3	38.7		72.1	1.4	26.5		
PHF	.959	.935	.000	.945	.000	.000	.000	.000	.000	.923	.943	.930	.903	.400	.765	.963	.971



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

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Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:00 PM				04:00 PM				05:00 PM				
+0 mins.	108	138	0	246	0	0	0	0	0	198	110	308	103	5	38	146	
+15 mins.	106	134	0	240	0	0	0	0	0	165	99	264	98	0	49	147	
+30 mins.	111	150	0	261	0	0	0	0	0	171	114	285	98	0	51	149	
+45 mins.	101	139	0	240	0	0	0	0	0	191	118	309	74	1	77	152	
Total Volume	426	561	0	987	0	0	0	0	0	725	441	1166	373	6	215	594	
% App. Total	43.2	56.8	0		0	0	0		0	62.2	37.8		62.8	1	36.2		
PHF	.959	.935	.000	.945	.000	.000	.000	.000	.000	.915	.934	.943	.905	.300	.698	.977	

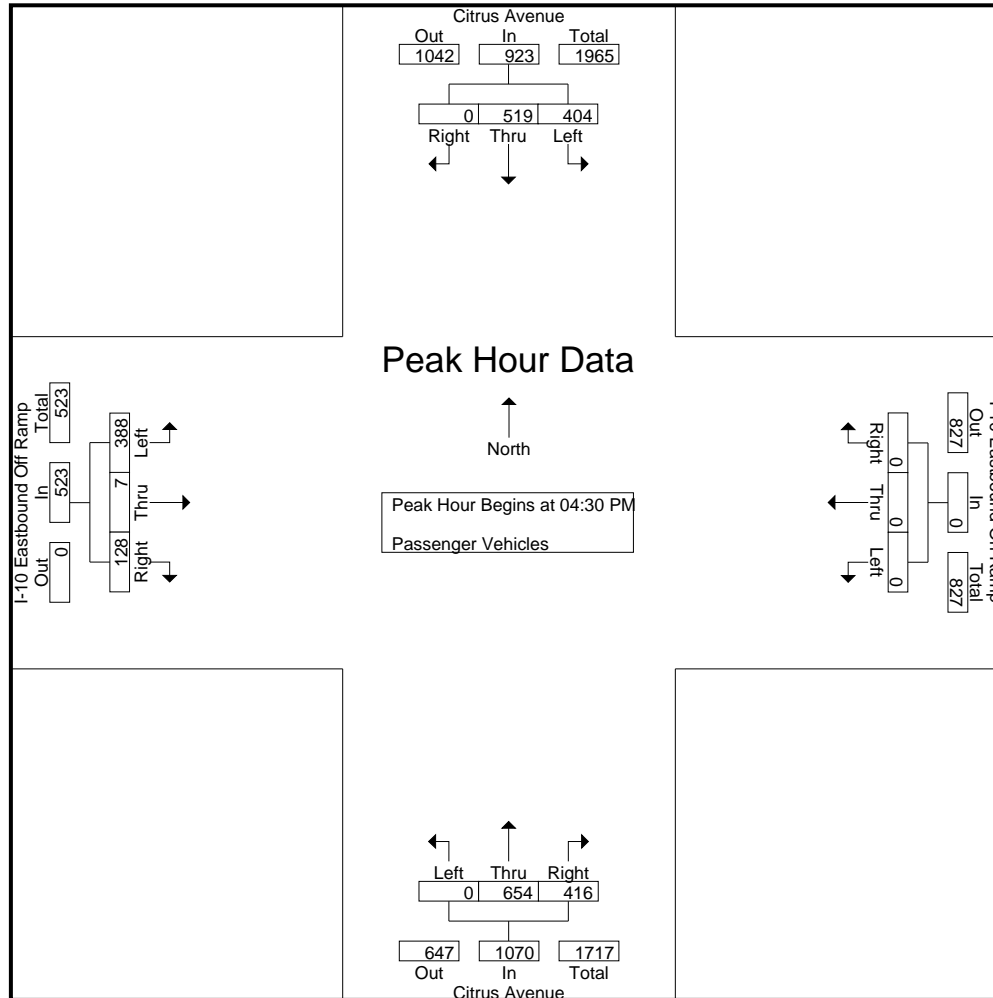
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
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Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	119	104	0	0	223	0	0	0	0	0	0	183	103	41	286	76	1	31	15	108	56	617	673
04:15 PM	96	121	0	0	217	0	0	0	0	0	0	155	89	43	244	86	0	29	20	115	63	576	639
04:30 PM	101	124	0	0	225	0	0	0	0	0	0	155	105	42	260	106	0	24	13	130	55	615	670
04:45 PM	98	124	0	0	222	0	0	0	0	0	0	176	111	48	287	89	2	29	20	120	68	629	697
Total	414	473	0	0	887	0	0	0	0	0	0	669	408	174	1077	357	3	113	68	473	242	2437	2679
05:00 PM	104	138	0	0	242	0	0	0	0	0	0	176	96	50	272	102	5	34	15	141	65	655	720
05:15 PM	101	133	0	0	234	0	0	0	0	0	0	147	104	52	251	91	0	41	16	132	68	617	685
05:30 PM	96	122	0	0	218	0	0	0	0	0	0	171	101	44	272	96	0	46	27	142	71	632	703
05:45 PM	92	129	0	0	221	0	0	0	0	0	0	196	68	34	264	72	1	74	35	147	69	632	701
Total	393	522	0	0	915	0	0	0	0	0	0	690	369	180	1059	361	6	195	93	562	273	2536	2809
Grand Total	807	995	0	0	1802	0	0	0	0	0	0	1359	777	354	2136	718	9	308	161	1035	515	4973	5488
Apprch %	44.8	55.2	0			0	0	0			0	63.6	36.4			69.4	0.9	29.8					
Total %	16.2	20	0		36.2	0	0	0			0	27.3	15.6		43	14.4	0.2	6.2		20.8	9.4	90.6	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:30 PM																		
04:30 PM	101	124	0	225	0	0	0	0	0	155	105	260	106	0	24	130	615	
04:45 PM	98	124	0	222	0	0	0	0	0	176	111	287	89	2	29	120	629	
05:00 PM	104	138	0	242	0	0	0	0	0	176	96	272	102	5	34	141	655	
05:15 PM	101	133	0	234	0	0	0	0	0	147	104	251	91	0	41	132	617	
Total Volume	404	519	0	923	0	0	0	0	0	654	416	1070	388	7	128	523	2516	
% App. Total	43.8	56.2	0		0	0	0		0	61.1	38.9		74.2	1.3	24.5			
PHF	.971	.940	.000	.954	.000	.000	.000	.000	.000	.000	.929	.937	.932	.915	.350	.780	.927	.960



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
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Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	101	124	0	225	0	0	0	0	0	155	105	260	106	0	24	130	
+15 mins.	98	124	0	222	0	0	0	0	0	176	111	287	89	2	29	120	
+30 mins.	104	138	0	242	0	0	0	0	0	176	96	272	102	5	34	141	
+45 mins.	101	133	0	234	0	0	0	0	0	147	104	251	91	0	41	132	
Total Volume	404	519	0	923	0	0	0	0	0	654	416	1070	388	7	128	523	
% App. Total	43.8	56.2	0		0	0	0		0	61.1	38.9		74.2	1.3	24.5		
PHF	.971	.940	.000	.954	.000	.000	.000	.000	.000	.929	.937	.932	.915	.350	.780	.927	

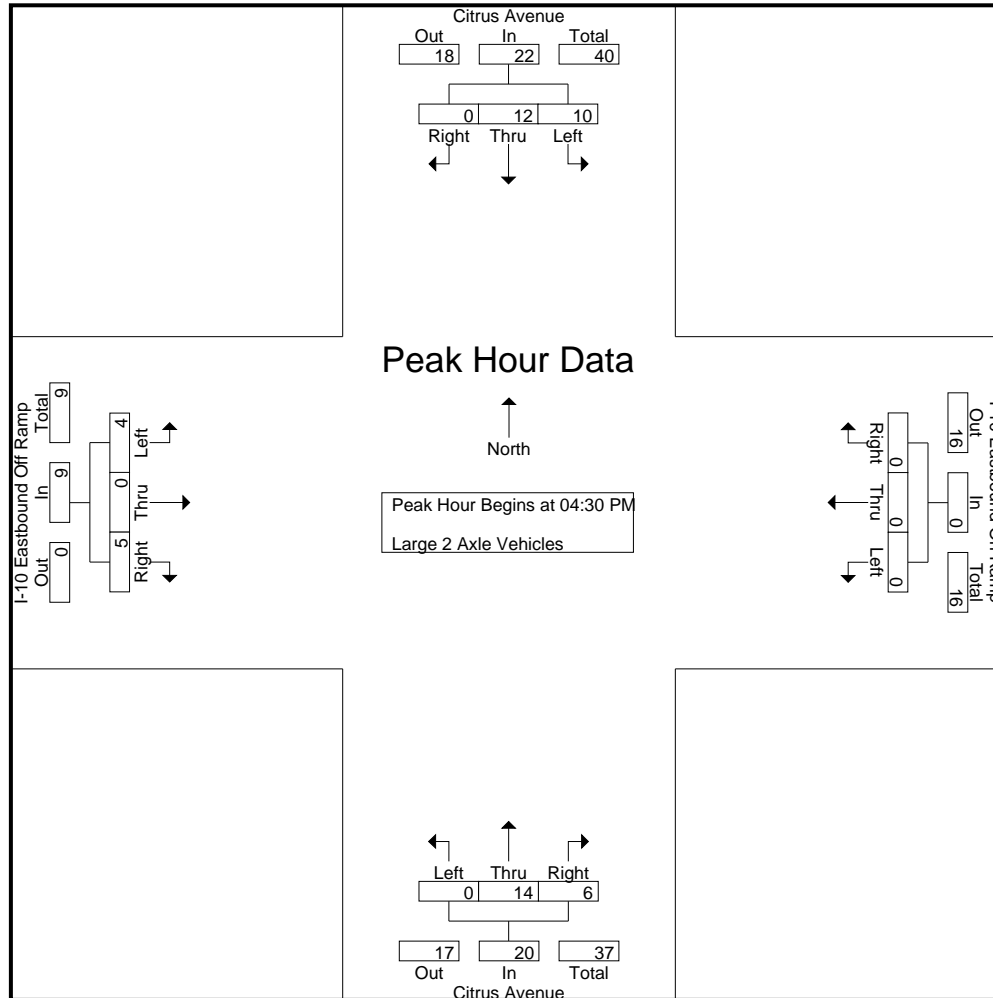
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	4	0	0	9	0	0	0	0	0	0	4	3	1	7	1	0	3	3	4	4	20	24
04:15 PM	2	7	0	0	9	0	0	0	0	0	0	2	3	1	5	3	0	0	0	3	1	17	18
04:30 PM	3	4	0	0	7	0	0	0	0	0	0	4	2	1	6	1	0	1	1	2	2	15	17
04:45 PM	6	1	0	0	7	0	0	0	0	0	0	6	0	0	6	1	0	2	2	3	2	16	18
Total	16	16	0	0	32	0	0	0	0	0	0	16	8	3	24	6	0	6	6	12	9	68	77
05:00 PM	1	5	0	0	6	0	0	0	0	0	0	4	2	2	6	1	0	1	1	2	3	14	17
05:15 PM	0	2	0	0	2	0	0	0	0	0	0	0	2	1	2	1	0	1	0	2	1	6	7
05:30 PM	3	1	0	0	4	0	0	0	0	0	0	2	1	1	3	1	0	0	0	1	1	8	9
05:45 PM	2	1	0	0	3	0	0	0	0	0	0	5	1	0	6	1	0	1	1	2	1	11	12
Total	6	9	0	0	15	0	0	0	0	0	0	11	6	4	17	4	0	3	2	7	6	39	45
Grand Total	22	25	0	0	47	0	0	0	0	0	0	27	14	7	41	10	0	9	8	19	15	107	122
Apprch %	46.8	53.2	0			0	0	0			0	65.9	34.1			52.6	0	47.4					
Total %	20.6	23.4	0		43.9	0	0	0		0	0	25.2	13.1		38.3	9.3	0	8.4		17.8	12.3	87.7	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	4	0	7	0	0	0	0	0	4	2	6	1	0	1	2	15
04:45 PM	6	1	0	7	0	0	0	0	0	6	0	6	1	0	2	3	16
05:00 PM	1	5	0	6	0	0	0	0	0	4	2	6	1	0	1	2	14
05:15 PM	0	2	0	2	0	0	0	0	0	0	2	2	1	0	1	2	6
Total Volume	10	12	0	22	0	0	0	0	0	14	6	20	4	0	5	9	51
% App. Total	45.5	54.5	0		0	0	0		0	70	30		44.4	0	55.6		
PHF	.417	.600	.000	.786	.000	.000	.000	.000	.000	.583	.750	.833	1.00	.000	.625	.750	.797



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	3	4	0	7	0	0	0	0	0	4	2	6	1	0	1	2	
+15 mins.	6	1	0	7	0	0	0	0	0	6	0	6	1	0	2	3	
+30 mins.	1	5	0	6	0	0	0	0	0	4	2	6	1	0	1	2	
+45 mins.	0	2	0	2	0	0	0	0	0	0	2	2	1	0	1	2	
Total Volume	10	12	0	22	0	0	0	0	0	14	6	20	4	0	5	9	
% App. Total	45.5	54.5	0		0	0	0		0	70	30		44.4	0	55.6		
PHF	.417	.600	.000	.786	.000	.000	.000	.000	.000	.583	.750	.833	1.000	.000	.625	.750	

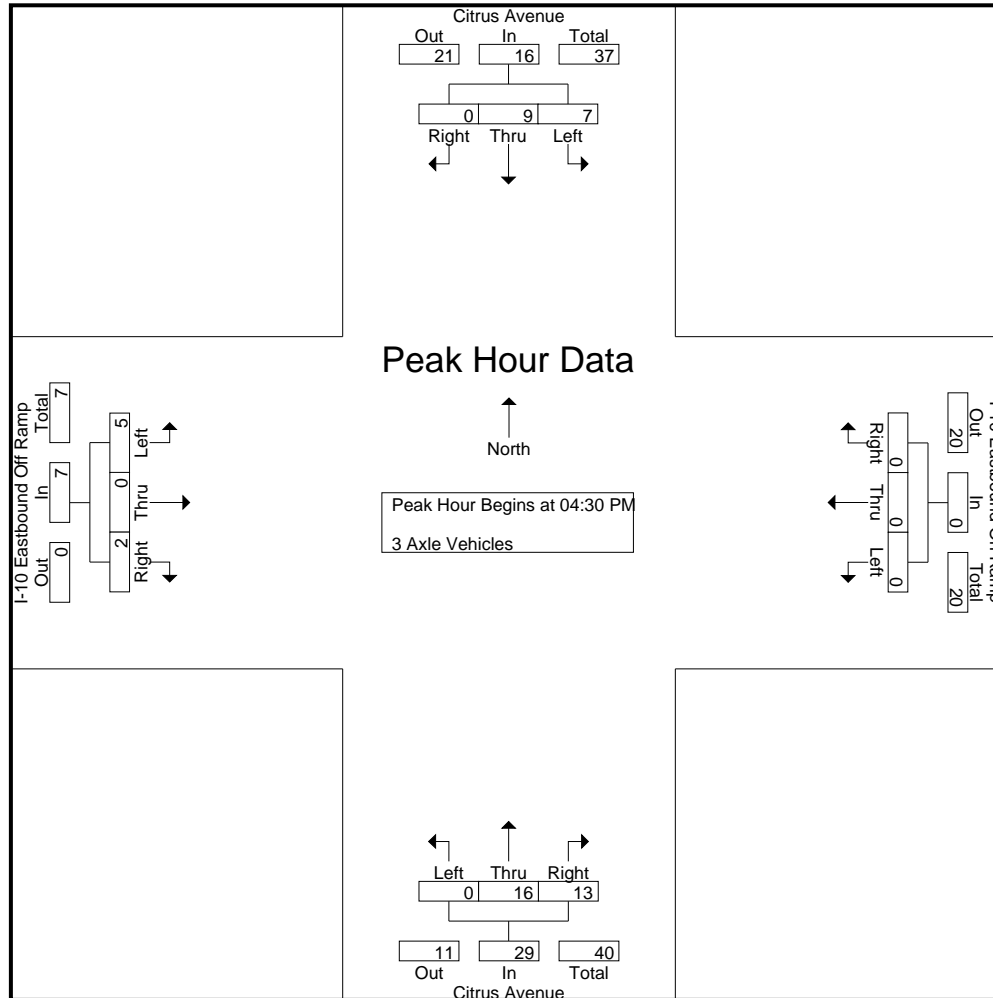
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	3	6	0	0	9	0	0	0	0	0	0	6	2	1	8	0	0	0	0	0	1	17	18
04:15 PM	0	6	0	0	6	0	0	0	0	0	0	4	4	0	8	2	0	1	0	3	0	17	17
04:30 PM	3	3	0	0	6	0	0	0	0	0	0	7	4	1	11	3	0	0	0	3	1	20	21
04:45 PM	1	2	0	0	3	0	0	0	0	0	0	3	5	1	8	1	0	1	0	2	1	13	14
Total	7	17	0	0	24	0	0	0	0	0	0	20	15	3	35	6	0	2	0	8	3	67	70
05:00 PM	3	3	0	0	6	0	0	0	0	0	0	2	3	1	5	0	0	0	0	0	1	11	12
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	4	1	0	5	1	0	1	0	2	0	8	8
05:30 PM	0	4	0	0	4	0	0	0	0	0	0	3	1	1	4	1	0	1	0	2	1	10	11
05:45 PM	1	2	0	0	3	0	0	0	0	0	0	6	2	0	8	0	0	0	0	0	0	11	11
Total	4	10	0	0	14	0	0	0	0	0	0	15	7	2	22	2	0	2	0	4	2	40	42
Grand Total	11	27	0	0	38	0	0	0	0	0	0	35	22	5	57	8	0	4	0	12	5	107	112
Apprch %	28.9	71.1	0			0	0	0			0	61.4	38.6			66.7	0	33.3					
Total %	10.3	25.2	0		35.5	0	0	0		0	0	32.7	20.6		53.3	7.5	0	3.7		11.2	4.5	95.5	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	3	3	0	6	0	0	0	0	0	7	4	11	3	0	0	3	20
04:45 PM	1	2	0	3	0	0	0	0	0	3	5	8	1	0	1	2	13
05:00 PM	3	3	0	6	0	0	0	0	0	2	3	5	0	0	0	0	11
05:15 PM	0	1	0	1	0	0	0	0	0	4	1	5	1	0	1	2	8
Total Volume	7	9	0	16	0	0	0	0	0	16	13	29	5	0	2	7	52
% App. Total	43.8	56.2	0		0	0	0		0	55.2	44.8		71.4	0	28.6		
PHF	.583	.750	.000	.667	.000	.000	.000	.000	.000	.571	.650	.659	.417	.000	.500	.583	.650



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	3	3	0	6	0	0	0	0	0	7	4	11	3	0	0	3	
+15 mins.	1	2	0	3	0	0	0	0	0	3	5	8	1	0	1	2	
+30 mins.	3	3	0	6	0	0	0	0	0	2	3	5	0	0	0	0	
+45 mins.	0	1	0	1	0	0	0	0	0	4	1	5	1	0	1	2	
Total Volume	7	9	0	16	0	0	0	0	0	16	13	29	5	0	2	7	
% App. Total	43.8	56.2	0		0	0	0		0	55.2	44.8		71.4	0	28.6		
PHF	.583	.750	.000	.667	.000	.000	.000	.000	.000	.571	.650	.659	.417	.000	.500	.583	

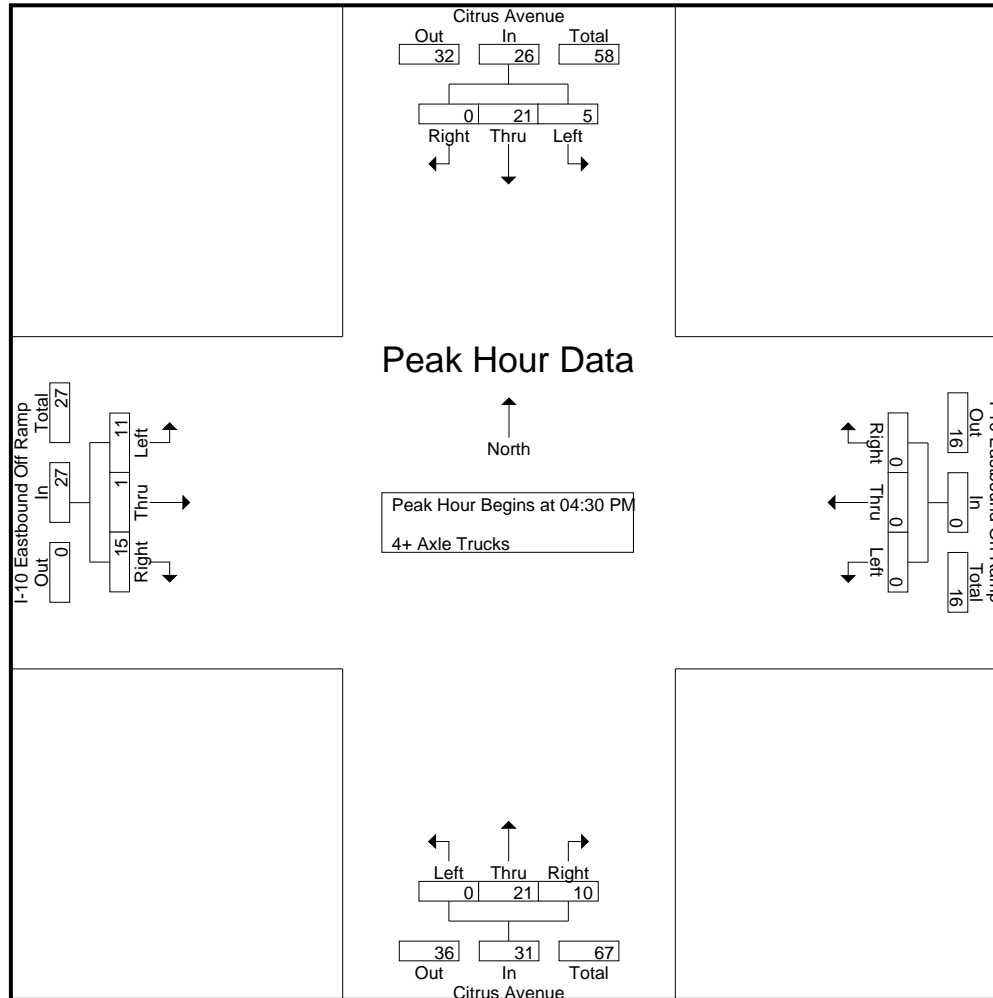
City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					I-10 Eastbound On Ramp Westbound					Citrus Avenue Northbound					I-10 Eastbound Off Ramp Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	2	8	0	0	10	0	0	0	0	0	0	5	2	0	7	1	0	2	0	3	0	20	20
04:15 PM	2	5	0	0	7	0	0	0	0	0	0	4	3	2	7	1	0	3	1	4	3	18	21
04:30 PM	1	7	0	0	8	0	0	0	0	0	0	5	3	1	8	3	1	5	4	9	5	25	30
04:45 PM	1	7	0	0	8	0	0	0	0	0	0	6	2	1	8	3	0	1	1	4	2	20	22
Total	6	27	0	0	33	0	0	0	0	0	0	20	10	4	30	8	1	11	6	20	10	83	93
05:00 PM	3	4	0	0	7	0	0	0	0	0	0	4	2	0	6	0	0	3	2	3	2	16	18
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	6	3	0	9	5	0	6	1	11	1	23	24
05:30 PM	3	6	0	0	9	0	0	0	0	0	0	7	1	0	8	0	0	4	1	4	1	21	22
05:45 PM	3	4	0	0	7	0	0	0	0	0	0	6	2	1	8	1	0	2	1	3	2	18	20
Total	9	17	0	0	26	0	0	0	0	0	0	23	8	1	31	6	0	15	5	21	6	78	84
Grand Total	15	44	0	0	59	0	0	0	0	0	0	43	18	5	61	14	1	26	11	41	16	161	177
Apprch %	25.4	74.6	0			0	0	0			0	70.5	29.5			34.1	2.4	63.4					
Total %	9.3	27.3	0		36.6	0	0	0		0	0	26.7	11.2		37.9	8.7	0.6	16.1		25.5	9	91	

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	7	0	8	0	0	0	0	0	5	3	8	3	1	5	9	25
04:45 PM	1	7	0	8	0	0	0	0	0	6	2	8	3	0	1	4	20
05:00 PM	3	4	0	7	0	0	0	0	0	4	2	6	0	0	3	3	16
05:15 PM	0	3	0	3	0	0	0	0	0	6	3	9	5	0	6	11	23
Total Volume	5	21	0	26	0	0	0	0	0	21	10	31	11	1	15	27	84
% App. Total	19.2	80.8	0		0	0	0		0	67.7	32.3		40.7	3.7	55.6		
PHF	.417	.750	.000	.813	.000	.000	.000	.000	.000	.875	.833	.861	.550	.250	.625	.614	.840



City of Fontana
 N/S: Citrus Avenue
 E/W: I-10 Eastbound Ramps
 Weather: Clear

File Name : 02_FON_Citrus_10E PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				I-10 Eastbound On Ramp Westbound				Citrus Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	7	0	8	0	0	0	0	0	5	3	8	3	1	5	9	
+15 mins.	1	7	0	8	0	0	0	0	0	6	2	8	3	0	1	4	
+30 mins.	3	4	0	7	0	0	0	0	0	4	2	6	0	0	3	3	
+45 mins.	0	3	0	3	0	0	0	0	0	6	3	9	5	0	6	11	
Total Volume	5	21	0	26	0	0	0	0	0	21	10	31	11	1	15	27	
% App. Total	19.2	80.8	0		0	0	0		0	67.7	32.3		40.7	3.7	55.6		
PHF	.417	.750	.000	.813	.000	.000	.000	.000	.000	.875	.833	.861	.550	.250	.625	.614	

Location: Fontana
 N/S: Citrus Avenue
 E/W: I-10 EB Ramps



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Citrus Avenue	East Leg I-10 EB Ramps	South Leg Citrus Avenue	West Leg I-10 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	3	0	0	3
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	5	0	0	5

	North Leg Citrus Avenue	East Leg I-10 EB Ramps	South Leg Citrus Avenue	West Leg I-10 EB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	2	0	1	3

Location: Fontana
 N/S: Citrus Avenue
 E/W: I-10 EB Ramps



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Citrus Avenue			Westbound I-10 EB Ramps			Northbound Citrus Avenue			Eastbound I-10 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
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	1	0	0	0	0	0	1	0	0	0	0	2
8:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	0	0	0	2	0	0	0	0	5

	Southbound Citrus Avenue			Westbound I-10 EB Ramps			Northbound Citrus Avenue			Eastbound I-10 EB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	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
TOTAL VOLUMES:	0	0	0	0	0	0	0	1	0	0	0	0	1

City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

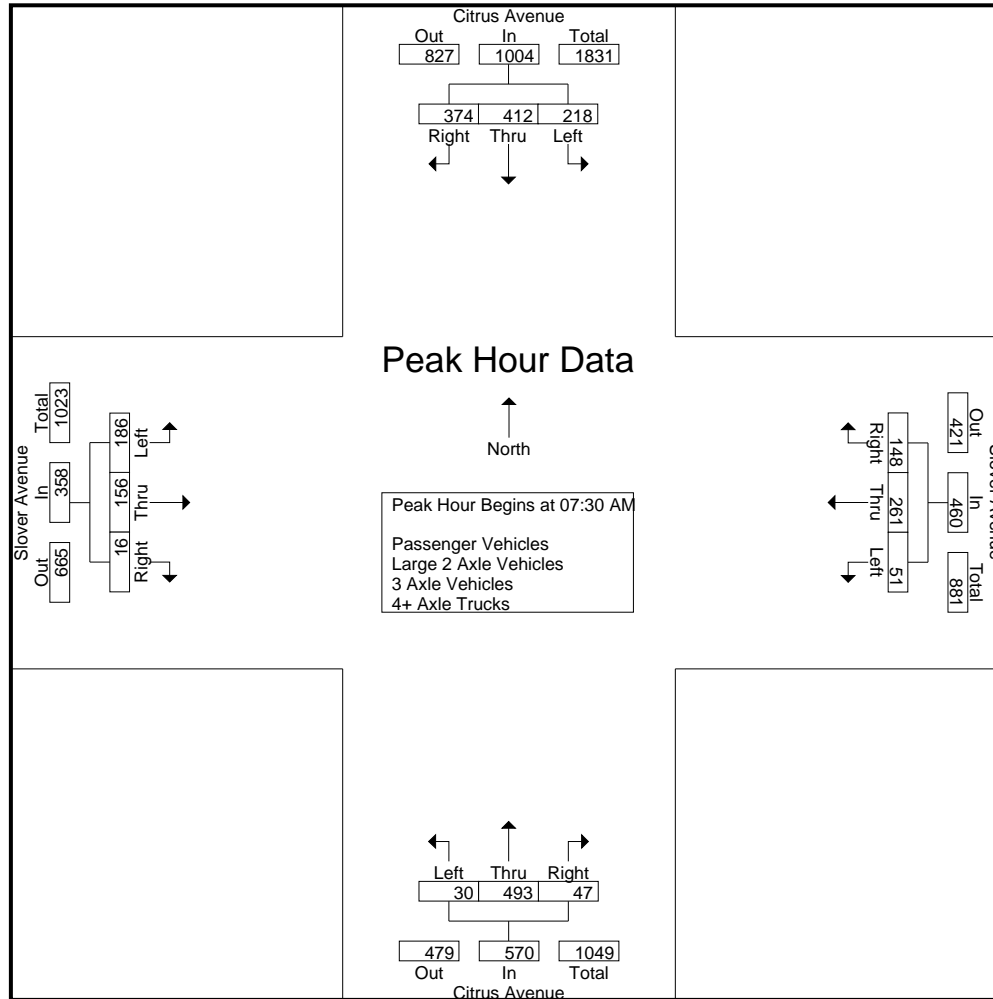
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	35	69	75	18	179	4	56	13	3	73	3	111	5	3	119	34	29	0	0	63	24	434	458
07:15 AM	35	69	81	32	185	11	77	31	10	119	6	90	2	2	98	42	17	0	0	59	44	461	505
07:30 AM	44	64	92	24	200	3	69	37	20	109	2	126	7	4	135	58	37	2	0	97	48	541	589
07:45 AM	56	112	96	29	264	9	75	43	21	127	9	110	5	3	124	40	32	2	0	74	53	589	642
Total	170	314	344	103	828	27	277	124	54	428	20	437	19	12	476	174	115	4	0	293	169	2025	2194
08:00 AM	43	99	85	34	227	17	63	30	9	110	8	113	14	9	135	53	47	7	0	107	52	579	631
08:15 AM	75	137	101	31	313	22	54	38	10	114	11	144	21	12	176	35	40	5	1	80	54	683	737
08:30 AM	30	82	78	21	190	9	50	40	13	99	3	113	3	1	119	55	42	6	1	103	36	511	547
08:45 AM	40	89	66	12	195	7	38	22	7	67	7	86	6	2	99	53	37	3	2	93	23	454	477
Total	188	407	330	98	925	55	205	130	39	390	29	456	44	24	529	196	166	21	4	383	165	2227	2392
Grand Total	358	721	674	201	1753	82	482	254	93	818	49	893	63	36	1005	370	281	25	4	676	334	4252	4586
Apprch %	20.4	41.1	38.4			10	58.9	31.1			4.9	88.9	6.3			54.7	41.6	3.7					
Total %	8.4	17	15.9		41.2	1.9	11.3	6		19.2	1.2	21	1.5		23.6	8.7	6.6	0.6		15.9	7.3	92.7	
Passenger Vehicles	338	634	542		1682	78	399	224		784	34	814	60		942	234	210	12		458	0	0	3866
% Passenger Vehicles	94.4	87.9	80.4	83.6	86.1	95.1	82.8	88.2	89.2	86.1	69.4	91.2	95.2	94.4	90.5	63.2	74.7	48	50	67.4	0	0	84.3
Large 2 Axle Vehicles	12	25	41		87	1	27	19		53	2	22	1		26	35	33	3		71	0	0	237
% Large 2 Axle Vehicles	3.4	3.5	6.1	4.5	4.5	1.2	5.6	7.5	6.5	5.8	4.1	2.5	1.6	2.8	2.5	9.5	11.7	12	0	10.4	0	0	5.2
3 Axle Vehicles	1	12	30		55	1	33	6		43	4	15	0		19	17	19	4		41	0	0	158
% 3 Axle Vehicles	0.3	1.7	4.5	6	2.8	1.2	6.8	2.4	3.2	4.7	8.2	1.7	0	0	1.8	4.6	6.8	16	25	6	0	0	3.4
4+ Axle Trucks	7	50	61		130	2	23	5		31	9	42	2		54	84	19	6		110	0	0	325
% 4+ Axle Trucks	2	6.9	9.1	6	6.7	2.4	4.8	2	1.1	3.4	18.4	4.7	3.2	2.8	5.2	22.7	6.8	24	25	16.2	0	0	7.1

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	44	64	92	200	3	69	37	109	2	126	7	135	58	37	2	97	541
07:45 AM	56	112	96	264	9	75	43	127	9	110	5	124	40	32	2	74	589
08:00 AM	43	99	85	227	17	63	30	110	8	113	14	135	53	47	7	107	579
08:15 AM	75	137	101	313	22	54	38	114	11	144	21	176	35	40	5	80	683
Total Volume	218	412	374	1004	51	261	148	460	30	493	47	570	186	156	16	358	2392
% App. Total	21.7	41	37.3		11.1	56.7	32.2		5.3	86.5	8.2		52	43.6	4.5		
PHF	.727	.752	.926	.802	.580	.870	.860	.906	.682	.856	.560	.810	.802	.830	.571	.836	.876

City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:15 AM				07:30 AM				08:00 AM				
+0 mins.	44	64	92	200	11	77	31	119	2	126	7	135	53	47	7	107	
+15 mins.	56	112	96	264	3	69	37	109	9	110	5	124	35	40	5	80	
+30 mins.	43	99	85	227	9	75	43	127	8	113	14	135	55	42	6	103	
+45 mins.	75	137	101	313	17	63	30	110	11	144	21	176	53	37	3	93	
Total Volume	218	412	374	1004	40	284	141	465	30	493	47	570	196	166	21	383	
% App. Total	21.7	41	37.3		8.6	61.1	30.3		5.3	86.5	8.2		51.2	43.3	5.5		
PHF	.727	.752	.926	.802	.588	.922	.820	.915	.682	.856	.560	.810	.891	.883	.750	.895	

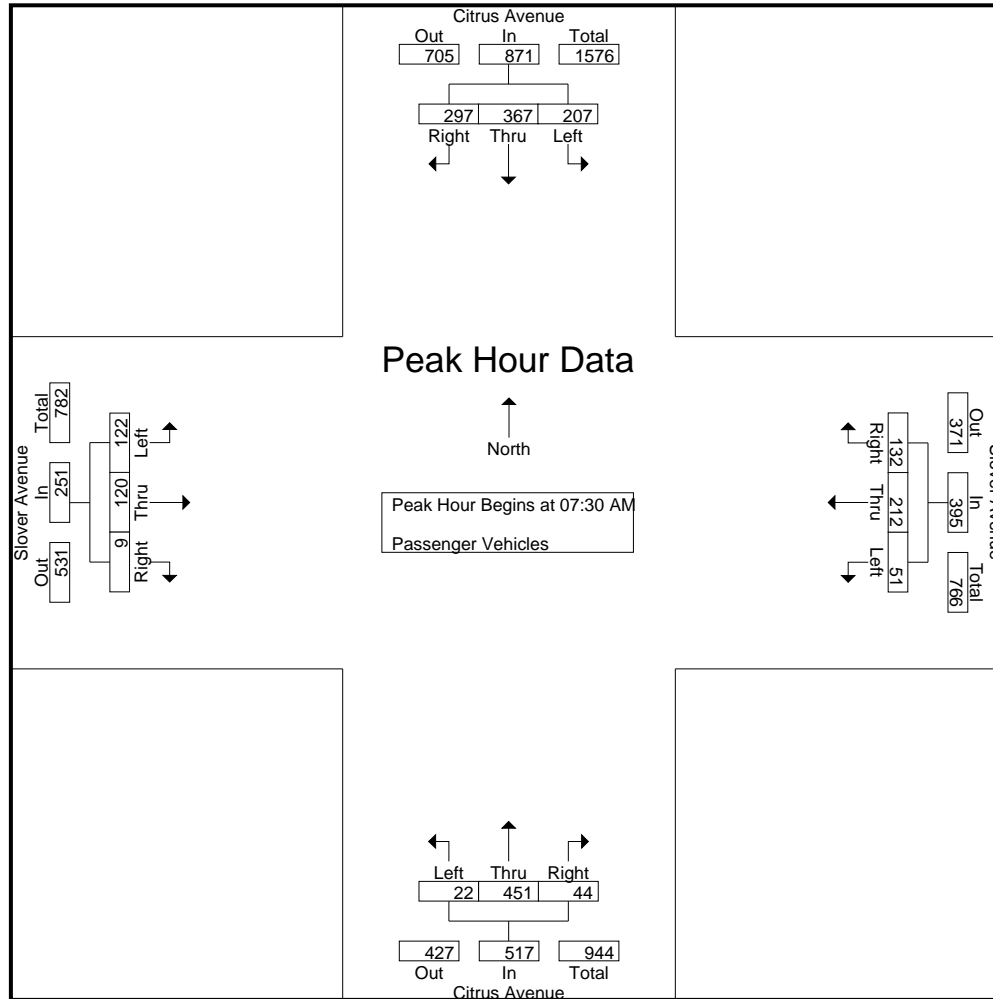
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
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Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	33	59	65	15	157	2	48	13	3	63	2	99	5	3	106	23	22	0	0	45	21	371	392
07:15 AM	33	63	66	28	162	10	66	25	7	101	4	82	2	2	88	27	12	0	0	39	37	390	427
07:30 AM	42	52	76	19	170	3	58	34	18	95	2	119	6	4	127	38	26	1	0	65	41	457	498
07:45 AM	54	98	81	26	233	9	62	34	17	105	8	97	5	3	110	29	22	2	0	53	46	501	547
Total	162	272	288	88	722	24	234	106	45	364	16	397	18	12	431	117	82	3	0	202	145	1719	1864
08:00 AM	41	94	67	30	202	17	51	27	8	95	4	100	13	8	117	34	39	3	0	76	46	490	536
08:15 AM	70	123	73	26	266	22	41	37	10	100	8	135	20	11	163	21	33	3	1	57	48	586	634
08:30 AM	29	74	62	16	165	8	42	35	13	85	1	103	3	1	107	32	33	2	0	67	30	424	454
08:45 AM	36	71	52	8	159	7	31	19	7	57	5	79	6	2	90	30	23	1	1	54	18	360	378
Total	176	362	254	80	792	54	165	118	38	337	18	417	42	22	477	117	128	9	2	254	142	1860	2002
Grand Total	338	634	542	168	1514	78	399	224	83	701	34	814	60	34	908	234	210	12	2	456	287	3579	3866
Apprch %	22.3	41.9	35.8			11.1	56.9	32			3.7	89.6	6.6			51.3	46.1	2.6					
Total %	9.4	17.7	15.1		42.3	2.2	11.1	6.3		19.6	0.9	22.7	1.7		25.4	6.5	5.9	0.3		12.7	7.4	92.6	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	42	52	76	170	3	58	34	95	2	119	6	127	38	26	1	65	457
07:45 AM	54	98	81	233	9	62	34	105	8	97	5	110	29	22	2	53	501
08:00 AM	41	94	67	202	17	51	27	95	4	100	13	117	34	39	3	76	490
08:15 AM	70	123	73	266	22	41	37	100	8	135	20	163	21	33	3	57	586
Total Volume	207	367	297	871	51	212	132	395	22	451	44	517	122	120	9	251	2034
% App. Total	23.8	42.1	34.1		12.9	53.7	33.4		4.3	87.2	8.5		48.6	47.8	3.6		
PHF	.739	.746	.917	.819	.580	.855	.892	.940	.688	.835	.550	.793	.803	.769	.750	.826	.868



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	42	52	76	170	3	58	34	95	2	119	6	127	38	26	1	65	
+15 mins.	54	98	81	233	9	62	34	105	8	97	5	110	29	22	2	53	
+30 mins.	41	94	67	202	17	51	27	95	4	100	13	117	34	39	3	76	
+45 mins.	70	123	73	266	22	41	37	100	8	135	20	163	21	33	3	57	
Total Volume	207	367	297	871	51	212	132	395	22	451	44	517	122	120	9	251	
% App. Total	23.8	42.1	34.1		12.9	53.7	33.4		4.3	87.2	8.5		48.6	47.8	3.6		
PHF	.739	.746	.917	.819	.580	.855	.892	.940	.688	.835	.550	.793	.803	.769	.750	.826	

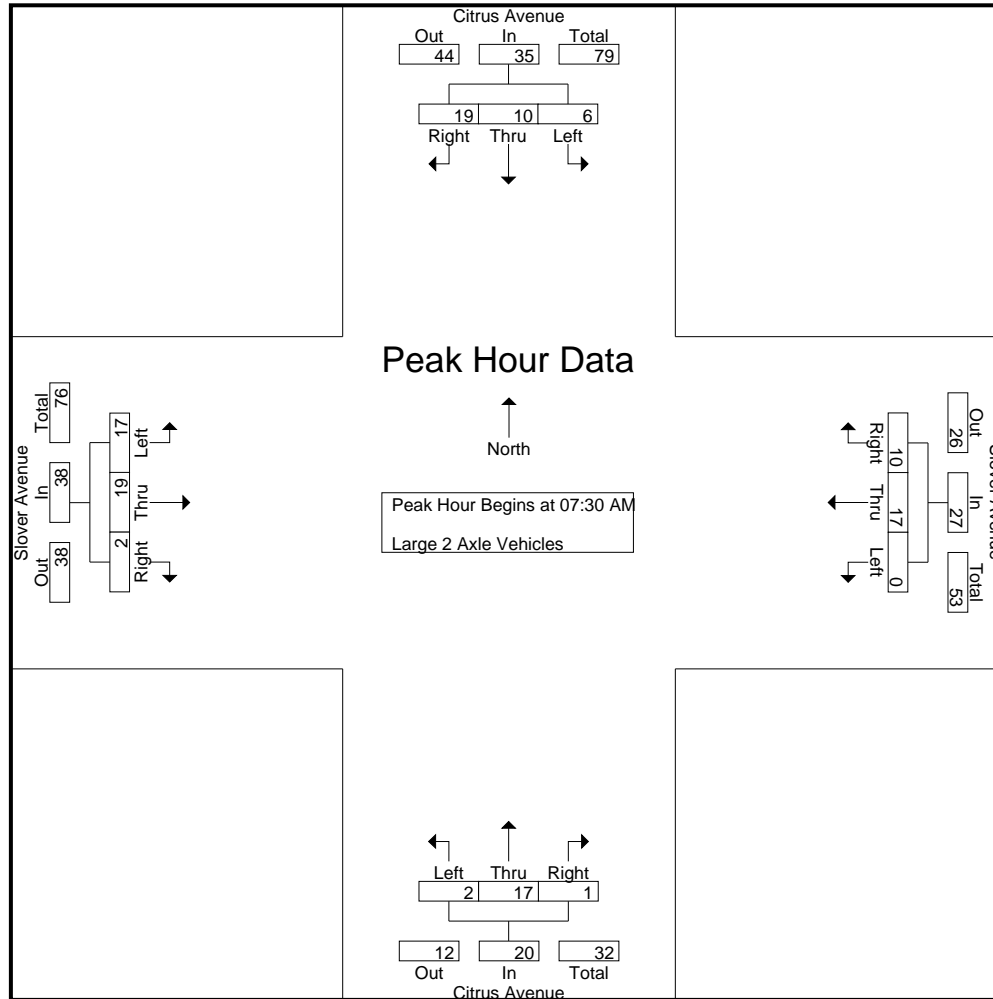
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	5	7	3	13	1	2	0	0	3	0	2	0	0	2	6	1	0	0	7	3	25	28
07:15 AM	2	2	5	1	9	0	2	4	2	6	0	1	0	0	1	3	2	0	0	5	3	21	24
07:30 AM	0	2	5	1	7	0	4	2	1	6	0	3	0	0	3	7	6	1	0	14	2	30	32
07:45 AM	2	3	0	0	5	0	5	5	2	10	1	5	0	0	6	4	5	0	0	9	2	30	32
Total	5	12	17	5	34	1	13	11	5	25	1	11	0	0	12	20	14	1	0	35	10	106	116
08:00 AM	1	0	4	0	5	0	4	2	1	6	0	6	0	0	6	5	3	1	0	9	1	26	27
08:15 AM	3	5	10	1	18	0	4	1	0	5	1	3	1	1	5	1	5	0	0	6	2	34	36
08:30 AM	1	1	5	0	7	0	2	4	0	6	0	1	0	0	1	4	3	1	0	8	0	22	22
08:45 AM	2	7	5	3	14	0	4	1	0	5	0	1	0	0	1	5	8	0	0	13	3	33	36
Total	7	13	24	4	44	0	14	8	1	22	1	11	1	1	13	15	19	2	0	36	6	115	121
Grand Total	12	25	41	9	78	1	27	19	6	47	2	22	1	1	25	35	33	3	0	71	16	221	237
Apprch %	15.4	32.1	52.6			2.1	57.4	40.4			8	88	4			49.3	46.5	4.2					
Total %	5.4	11.3	18.6		35.3	0.5	12.2	8.6		21.3	0.9	10	0.5		11.3	15.8	14.9	1.4		32.1	6.8	93.2	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	5	7	0	4	2	6	0	3	0	3	7	6	1	14	30
07:45 AM	2	3	0	5	0	5	5	10	1	5	0	6	4	5	0	9	30
08:00 AM	1	0	4	5	0	4	2	6	0	6	0	6	5	3	1	9	26
08:15 AM	3	5	10	18	0	4	1	5	1	3	1	5	1	5	0	6	34
Total Volume	6	10	19	35	0	17	10	27	2	17	1	20	17	19	2	38	120
% App. Total	17.1	28.6	54.3		0	63	37		10	85	5		44.7	50	5.3		
PHF	.500	.500	.475	.486	.000	.850	.500	.675	.500	.708	.250	.833	.607	.792	.500	.679	.882



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	2	5	7	0	4	2	6	0	3	0	3	7	6	1	14	
+15 mins.	2	3	0	5	0	5	5	10	1	5	0	6	4	5	0	9	
+30 mins.	1	0	4	5	0	4	2	6	0	6	0	6	5	3	1	9	
+45 mins.	3	5	10	18	0	4	1	5	1	3	1	5	1	5	0	6	
Total Volume	6	10	19	35	0	17	10	27	2	17	1	20	17	19	2	38	
% App. Total	17.1	28.6	54.3		0	63	37		10	85	5		44.7	50	5.3		
PHF	.500	.500	.475	.486	.000	.850	.500	.675	.500	.708	.250	.833	.607	.792	.500	.679	

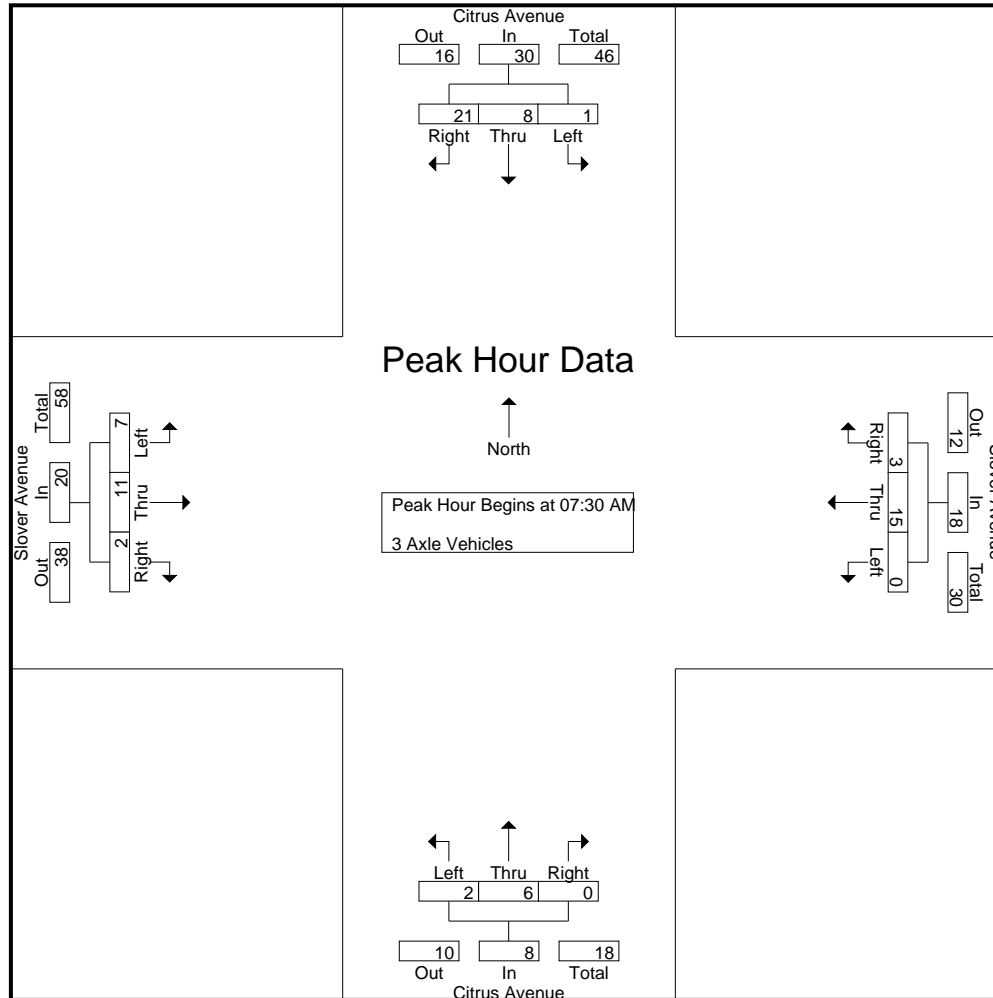
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
 Start Date : 5/18/2022
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Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	2	1	0	3	0	6	0	0	6	0	2	0	0	2	1	4	0	0	5	0	16	16
07:15 AM	0	1	0	0	1	1	8	2	1	11	0	4	0	0	4	3	1	0	0	4	1	20	21
07:30 AM	1	4	5	2	10	0	3	1	1	4	0	2	0	0	2	1	1	0	0	2	3	18	21
07:45 AM	0	2	4	2	6	0	5	1	1	6	0	0	0	0	0	3	5	0	0	8	3	20	23
Total	1	9	10	4	20	1	22	4	3	27	0	8	0	0	8	8	11	0	0	19	7	74	81
08:00 AM	0	0	4	2	4	0	4	1	0	5	1	3	0	0	4	1	4	0	0	5	2	18	20
08:15 AM	0	2	8	3	10	0	3	0	0	3	1	1	0	0	2	2	1	2	0	5	3	20	23
08:30 AM	0	0	4	2	4	0	4	1	0	5	2	2	0	0	4	3	1	1	0	5	2	18	20
08:45 AM	0	1	4	1	5	0	0	0	0	0	0	1	0	0	1	3	2	1	1	6	2	12	14
Total	0	3	20	8	23	0	11	2	0	13	4	7	0	0	11	9	8	4	1	21	9	68	77
Grand Total	1	12	30	12	43	1	33	6	3	40	4	15	0	0	19	17	19	4	1	40	16	142	158
Apprch %	2.3	27.9	69.8			2.5	82.5	15			21.1	78.9	0			42.5	47.5	10					
Total %	0.7	8.5	21.1		30.3	0.7	23.2	4.2		28.2	2.8	10.6	0		13.4	12	13.4	2.8		28.2	10.1	89.9	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	4	5	10	0	3	1	4	0	2	0	2	1	1	0	2	18
07:45 AM	0	2	4	6	0	5	1	6	0	0	0	0	3	5	0	8	20
08:00 AM	0	0	4	4	0	4	1	5	1	3	0	4	1	4	0	5	18
08:15 AM	0	2	8	10	0	3	0	3	1	1	0	2	2	1	2	5	20
Total Volume	1	8	21	30	0	15	3	18	2	6	0	8	7	11	2	20	76
% App. Total	3.3	26.7	70		0	83.3	16.7		25	75	0		35	55	10		
PHF	.250	.500	.656	.750	.000	.750	.750	.750	.500	.500	.000	.500	.583	.550	.250	.625	.950



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	1	4	5	10	0	3	1	4	0	2	0	2	1	1	0	2	
+15 mins.	0	2	4	6	0	5	1	6	0	0	0	0	3	5	0	8	
+30 mins.	0	0	4	4	0	4	1	5	1	3	0	4	1	4	0	5	
+45 mins.	0	2	8	10	0	3	0	3	1	1	0	2	2	1	2	5	
Total Volume	1	8	21	30	0	15	3	18	2	6	0	8	7	11	2	20	
% App. Total	3.3	26.7	70		0	83.3	16.7		25	75	0		35	55	10		
PHF	.250	.500	.656	.750	.000	.750	.750	.750	.500	.500	.000	.500	.583	.550	.250	.625	

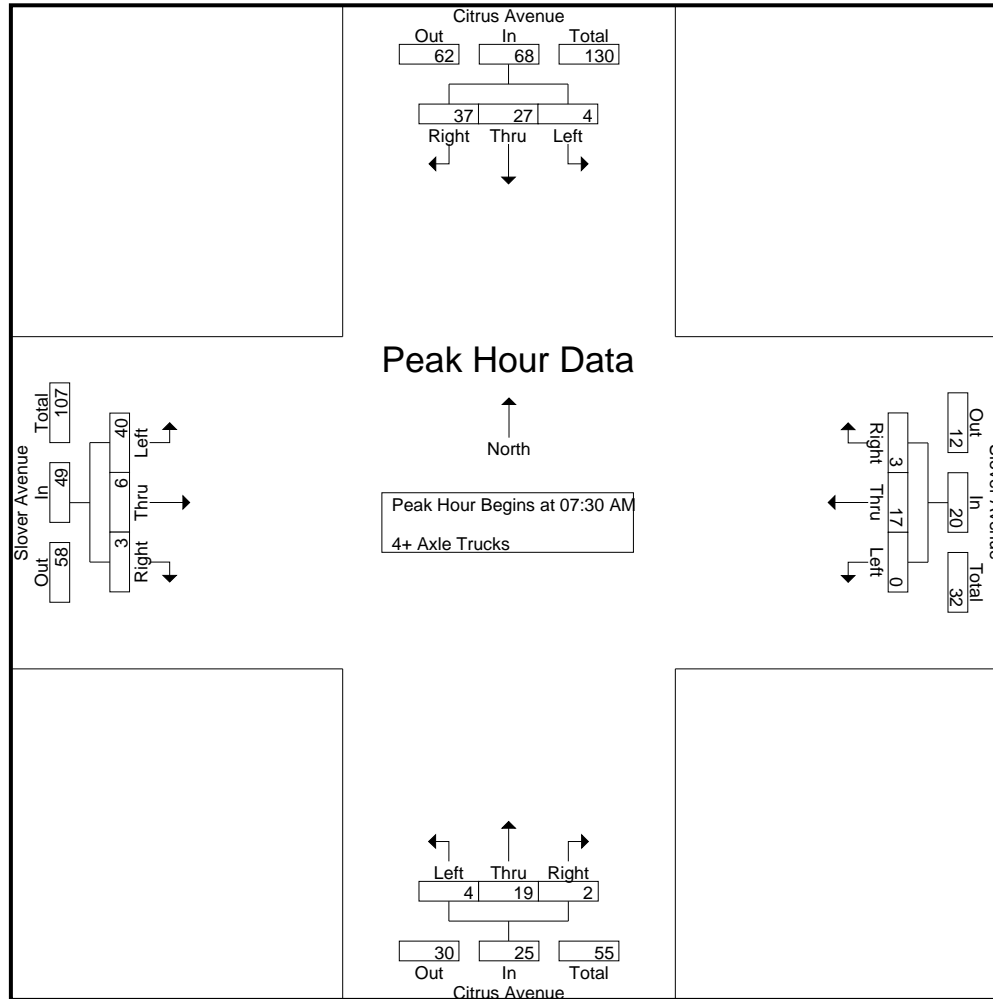
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo AM
 Site Code : 05122471
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Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	1	3	2	0	6	1	0	0	0	1	1	8	0	0	9	4	2	0	0	6	0	0	0	0
07:15 AM	0	3	10	3	13	0	1	0	0	1	2	3	0	0	5	9	2	0	0	11	3	30	33	
07:30 AM	1	6	6	2	13	0	4	0	0	4	0	2	1	0	3	12	4	0	0	16	2	36	38	
07:45 AM	0	9	11	1	20	0	3	3	1	6	0	8	0	0	8	4	0	0	0	4	2	38	40	
Total	2	21	29	6	52	1	8	3	1	12	3	21	1	0	25	29	8	0	0	37	7	126	133	
08:00 AM	1	5	10	2	16	0	4	0	0	4	3	4	1	1	8	13	1	3	0	17	3	45	48	
08:15 AM	2	7	10	1	19	0	6	0	0	6	1	5	0	0	6	11	1	0	0	12	1	43	44	
08:30 AM	0	7	7	3	14	1	2	0	0	3	0	7	0	0	7	16	5	2	1	23	4	47	51	
08:45 AM	2	10	5	0	17	0	3	2	0	5	2	5	0	0	7	15	4	1	0	20	0	49	49	
Total	5	29	32	6	66	1	15	2	0	18	6	21	1	1	28	55	11	6	1	72	8	184	192	
Grand Total	7	50	61	12	118	2	23	5	1	30	9	42	2	1	53	84	19	6	1	109	15	310	325	
Apprch %	5.9	42.4	51.7			6.7	76.7	16.7			17	79.2	3.8			77.1	17.4	5.5						
Total %	2.3	16.1	19.7		38.1	0.6	7.4	1.6		9.7	2.9	13.5	0.6		17.1	27.1	6.1	1.9		35.2	4.6	95.4		

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	1	6	6	13	0	4	0	4	0	2	1	3	12	4	0	16	36
07:45 AM	0	9	11	20	0	3	3	6	0	8	0	8	4	0	0	4	38
08:00 AM	1	5	10	16	0	4	0	4	3	4	1	8	13	1	3	17	45
08:15 AM	2	7	10	19	0	6	0	6	1	5	0	6	11	1	0	12	43
Total Volume	4	27	37	68	0	17	3	20	4	19	2	25	40	6	3	49	162
% App. Total	5.9	39.7	54.4		0	85	15		16	76	8		81.6	12.2	6.1		
PHF	.500	.750	.841	.850	.000	.708	.250	.833	.333	.594	.500	.781	.769	.375	.250	.721	.900



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	1	6	6	13	0	4	0	4	0	2	1	3	12	4	0	16	
+15 mins.	0	9	11	20	0	3	3	6	0	8	0	8	4	0	0	4	
+30 mins.	1	5	10	16	0	4	0	4	3	4	1	8	13	1	3	17	
+45 mins.	2	7	10	19	0	6	0	6	1	5	0	6	11	1	0	12	
Total Volume	4	27	37	68	0	17	3	20	4	19	2	25	40	6	3	49	
% App. Total	5.9	39.7	54.4		0	85	15		16	76	8		81.6	12.2	6.1		
PHF	.500	.750	.841	.850	.000	.708	.250	.833	.333	.594	.500	.781	.769	.375	.250	.721	

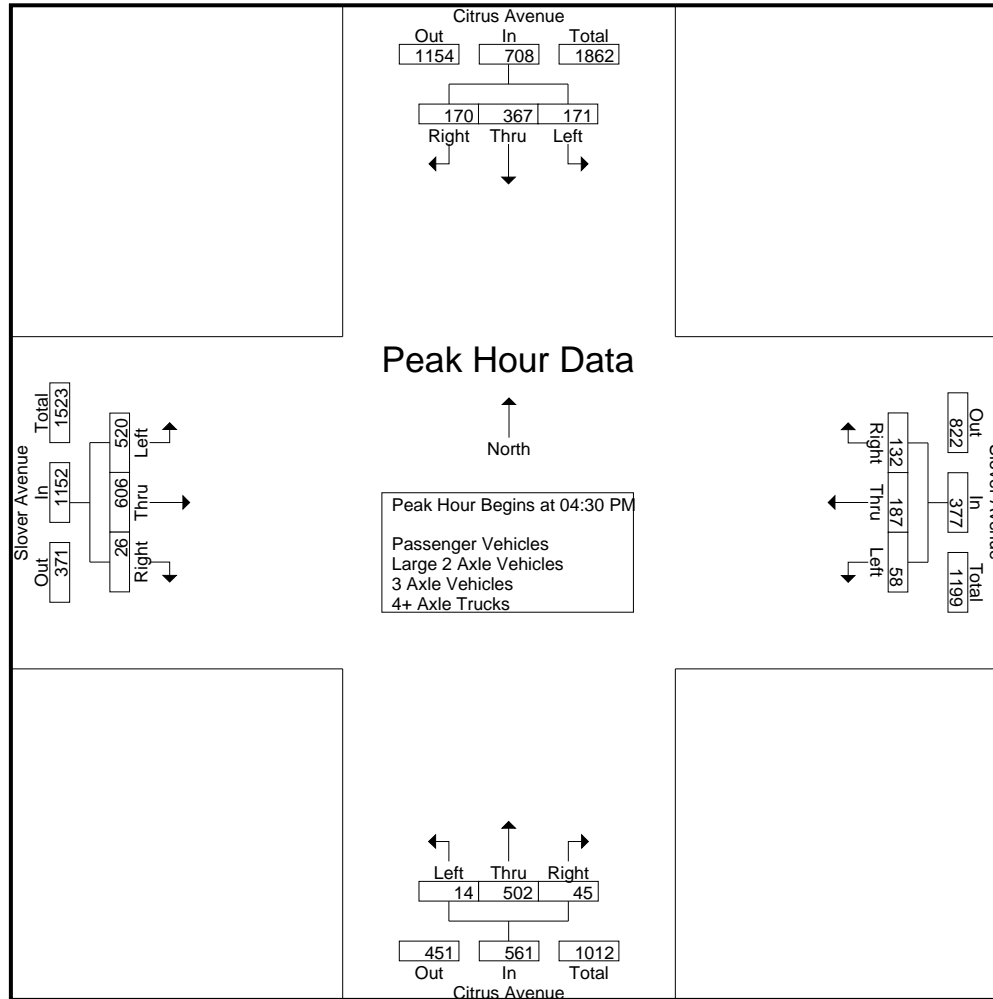
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	35	70	41	6	146	19	45	30	9	94	1	124	14	6	139	131	135	2	0	268	21	647	668
04:15 PM	43	71	47	14	161	13	47	30	11	90	2	130	10	5	142	112	141	5	1	258	31	651	682
04:30 PM	45	81	50	17	176	18	45	29	10	92	5	128	13	7	146	152	163	8	4	323	38	737	775
04:45 PM	42	91	33	8	166	8	40	33	13	81	4	138	15	5	157	114	154	4	0	272	26	676	702
Total	165	313	171	45	649	58	177	122	43	357	12	520	52	23	584	509	593	19	5	1121	116	2711	2827
05:00 PM	37	102	52	7	191	17	54	39	13	110	3	110	8	5	121	128	147	6	2	281	27	703	730
05:15 PM	47	93	35	5	175	15	48	31	14	94	2	126	9	4	137	126	142	8	2	276	25	682	707
05:30 PM	59	97	38	13	194	11	36	22	5	69	2	139	8	4	149	109	120	10	2	239	24	651	675
05:45 PM	56	125	30	8	211	13	33	66	27	112	9	147	5	3	161	86	101	6	1	193	39	677	716
Total	199	417	155	33	771	56	171	158	59	385	16	522	30	16	568	449	510	30	7	989	115	2713	2828
Grand Total	364	730	326	78	1420	114	348	280	102	742	28	1042	82	39	1152	958	1103	49	12	2110	231	5424	5655
Apprch %	25.6	51.4	23			15.4	46.9	37.7			2.4	90.5	7.1			45.4	52.3	2.3					
Total %	6.7	13.5	6		26.2	2.1	6.4	5.2		13.7	0.5	19.2	1.5		21.2	17.7	20.3	0.9		38.9	4.1	95.9	
Passenger Vehicles	346	689	237		1334	108	298	262		762	24	988	77		1126	865	993	45		1912	0	0	5134
% Passenger Vehicles	95.1	94.4	72.7	79.5	89.1	94.7	85.6	93.6	92.2	90.3	85.7	94.8	93.9	94.9	94.5	90.3	90	91.8	75	90.1	0	0	90.8
Large 2 Axle Vehicles	8	13	16		42	1	18	6		27	3	22	1		27	22	36	0		58	0	0	154
% Large 2 Axle Vehicles	2.2	1.8	4.9	6.4	2.8	0.9	5.2	2.1	2	3.2	10.7	2.1	1.2	2.6	2.3	2.3	3.3	0	0	2.7	0	0	2.7
3 Axle Vehicles	2	11	18		34	1	14	7		26	0	13	0		13	37	20	2		60	0	0	133
% 3 Axle Vehicles	0.5	1.5	5.5	3.8	2.3	0.9	4	2.5	3.9	3.1	0	1.2	0	0	1.1	3.9	1.8	4.1	8.3	2.8	0	0	2.4
4+ Axle Trucks	8	17	55		88	4	18	5		29	1	19	4		25	34	54	2		92	0	0	234
% 4+ Axle Trucks	2.2	2.3	16.9	10.3	5.9	3.5	5.2	1.8	2	3.4	3.6	1.8	4.9	2.6	2.1	3.5	4.9	4.1	16.7	4.3	0	0	4.1

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	45	81	50	176	18	45	29	92	5	128	13	146	152	163	8	323	737
04:45 PM	42	91	33	166	8	40	33	81	4	138	15	157	114	154	4	272	676
05:00 PM	37	102	52	191	17	54	39	110	3	110	8	121	128	147	6	281	703
05:15 PM	47	93	35	175	15	48	31	94	2	126	9	137	126	142	8	276	682
Total Volume	171	367	170	708	58	187	132	377	14	502	45	561	520	606	26	1152	2798
% App. Total	24.2	51.8	24		15.4	49.6	35		2.5	89.5	8		45.1	52.6	2.3		
PHF	.910	.900	.817	.927	.806	.866	.846	.857	.700	.909	.750	.893	.855	.929	.813	.892	.949



City of Fontana
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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				04:00 PM				04:30 PM				
+0 mins.	37	102	52	191	17	54	39	110	1	124	14	139	152	163	8	323	
+15 mins.	47	93	35	175	15	48	31	94	2	130	10	142	114	154	4	272	
+30 mins.	59	97	38	194	11	36	22	69	5	128	13	146	128	147	6	281	
+45 mins.	56	125	30	211	13	33	66	112	4	138	15	157	126	142	8	276	
Total Volume	199	417	155	771	56	171	158	385	12	520	52	584	520	606	26	1152	
% App. Total	25.8	54.1	20.1		14.5	44.4	41		2.1	89	8.9		45.1	52.6	2.3		
PHF	.843	.834	.745	.914	.824	.792	.598	.859	.600	.942	.867	.930	.855	.929	.813	.892	

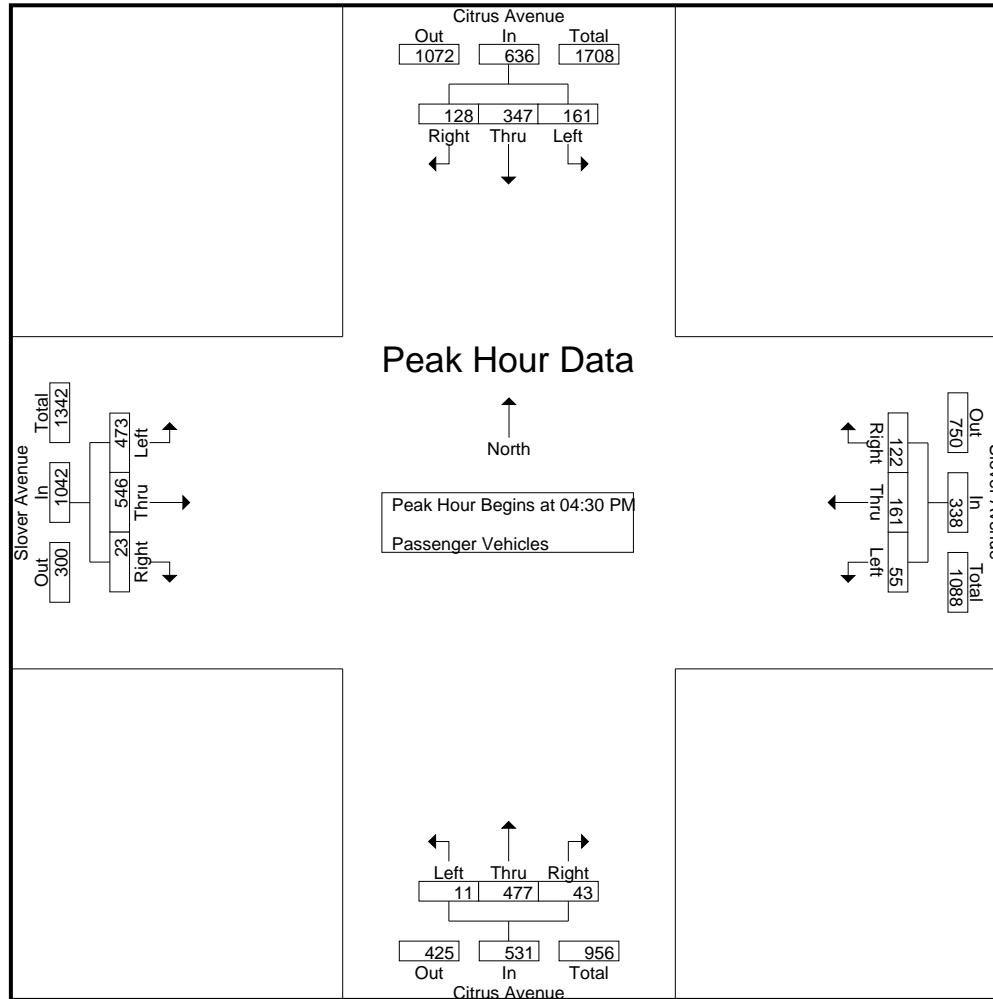
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
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Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	31	64	26	4	121	17	38	29	9	84	1	116	13	6	130	118	119	2	0	239	19	574	593
04:15 PM	41	66	31	9	138	12	38	27	9	77	2	121	9	5	132	101	122	5	1	228	24	575	599
04:30 PM	44	74	34	13	152	17	38	27	10	82	2	117	12	6	131	136	143	7	3	286	32	651	683
04:45 PM	41	87	24	7	152	8	33	29	11	70	4	133	14	4	151	103	142	4	0	249	22	622	644
Total	157	291	115	33	563	54	147	112	39	313	9	487	48	21	544	458	526	18	4	1002	97	2422	2519
05:00 PM	33	97	41	6	171	17	46	39	13	102	3	104	8	5	115	117	131	5	1	253	25	641	666
05:15 PM	43	89	29	4	161	13	44	27	11	84	2	123	9	4	134	117	130	7	1	254	20	633	653
05:30 PM	59	92	27	11	178	11	32	22	5	65	2	133	8	4	143	99	110	9	2	218	22	604	626
05:45 PM	54	120	25	8	199	13	29	62	26	104	8	141	4	3	153	74	96	6	1	176	38	632	670
Total	189	398	122	29	709	54	151	150	55	355	15	501	29	16	545	407	467	27	5	901	105	2510	2615
Grand Total	346	689	237	62	1272	108	298	262	94	668	24	988	77	37	1089	865	993	45	9	1903	202	4932	5134
Apprch %	27.2	54.2	18.6			16.2	44.6	39.2			2.2	90.7	7.1			45.5	52.2	2.4					
Total %	7	14	4.8		25.8	2.2	6	5.3		13.5	0.5	20	1.6		22.1	17.5	20.1	0.9		38.6	3.9	96.1	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	44	74	34	152	17	38	27	82	2	117	12	131	136	143	7	286	651
04:45 PM	41	87	24	152	8	33	29	70	4	133	14	151	103	142	4	249	622
05:00 PM	33	97	41	171	17	46	39	102	3	104	8	115	117	131	5	253	641
05:15 PM	43	89	29	161	13	44	27	84	2	123	9	134	117	130	7	254	633
Total Volume	161	347	128	636	55	161	122	338	11	477	43	531	473	546	23	1042	2547
% App. Total	25.3	54.6	20.1		16.3	47.6	36.1		2.1	89.8	8.1		45.4	52.4	2.2		
PHF	.915	.894	.780	.930	.809	.875	.782	.828	.688	.897	.768	.879	.869	.955	.821	.911	.978



City of Fontana
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 Weather: Clear

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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	44	74	34	152	17	38	27	82	2	117	12	131	136	143	7	286	
+15 mins.	41	87	24	152	8	33	29	70	4	133	14	151	103	142	4	249	
+30 mins.	33	97	41	171	17	46	39	102	3	104	8	115	117	131	5	253	
+45 mins.	43	89	29	161	13	44	27	84	2	123	9	134	117	130	7	254	
Total Volume	161	347	128	636	55	161	122	338	11	477	43	531	473	546	23	1042	
% App. Total	25.3	54.6	20.1		16.3	47.6	36.1		2.1	89.8	8.1		45.4	52.4	2.2		
PHF	.915	.894	.780	.930	.809	.875	.782	.828	.688	.897	.768	.879	.869	.955	.821	.911	

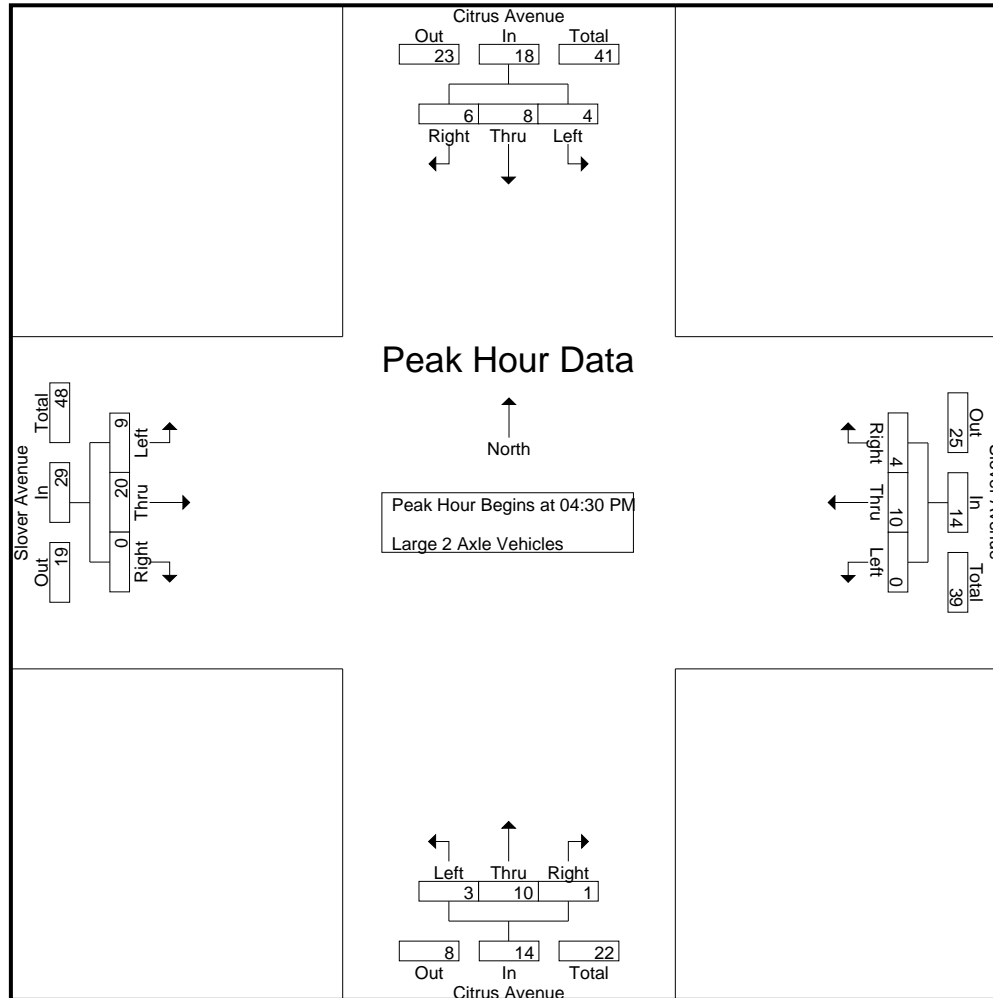
City of Fontana
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 E/W: Slover Avenue
 Weather: Clear

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Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	2	3	1	0	6	0	3	0	0	3	0	4	0	0	4	5	7	0	0	12	0	25	25
04:15 PM	2	1	7	3	10	1	3	0	0	4	0	5	0	0	5	2	6	0	0	8	3	27	30
04:30 PM	1	2	3	1	6	0	2	1	0	3	3	2	0	0	5	4	11	0	0	15	1	29	30
04:45 PM	0	2	0	0	2	0	1	3	1	4	0	4	1	1	5	1	2	0	0	3	2	14	16
Total	5	8	11	4	24	1	9	4	1	14	3	15	1	1	19	12	26	0	0	38	6	95	101
05:00 PM	2	3	3	1	8	0	6	0	0	6	0	4	0	0	4	1	3	0	0	4	1	22	23
05:15 PM	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	3	4	0	0	7	0	10	10
05:30 PM	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1	2	3	0	0	5	0	8	8
05:45 PM	0	1	1	0	2	0	1	2	1	3	0	2	0	0	2	4	0	0	0	4	1	11	12
Total	3	5	5	1	13	0	9	2	1	11	0	7	0	0	7	10	10	0	0	20	2	51	53
Grand Total	8	13	16	5	37	1	18	6	2	25	3	22	1	1	26	22	36	0	0	58	8	146	154
Apprch %	21.6	35.1	43.2			4	72	24			11.5	84.6	3.8			37.9	62.1	0					
Total %	5.5	8.9	11		25.3	0.7	12.3	4.1		17.1	2.1	15.1	0.7		17.8	15.1	24.7	0		39.7	5.2	94.8	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	2	3	6	0	2	1	3	3	2	0	5	4	11	0	15	29
04:45 PM	0	2	0	2	0	1	3	4	0	4	1	5	1	2	0	3	14
05:00 PM	2	3	3	8	0	6	0	6	0	4	0	4	1	3	0	4	22
05:15 PM	1	1	0	2	0	1	0	1	0	0	0	0	3	4	0	7	10
Total Volume	4	8	6	18	0	10	4	14	3	10	1	14	9	20	0	29	75
% App. Total	22.2	44.4	33.3		0	71.4	28.6		21.4	71.4	7.1		31	69	0		
PHF	.500	.667	.500	.563	.000	.417	.333	.583	.250	.625	.250	.700	.563	.455	.000	.483	.647



City of Fontana
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Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	1	2	3	6	0	2	1	3	3	2	0	5	4	11	0	15	
+15 mins.	0	2	0	2	0	1	3	4	0	4	1	5	1	2	0	3	
+30 mins.	2	3	3	8	0	6	0	6	0	4	0	4	1	3	0	4	
+45 mins.	1	1	0	2	0	1	0	1	0	0	0	0	3	4	0	7	
Total Volume	4	8	6	18	0	10	4	14	3	10	1	14	9	20	0	29	
% App. Total	22.2	44.4	33.3		0	71.4	28.6		21.4	71.4	7.1		31	69	0		
PHF	.500	.667	.500	.563	.000	.417	.333	.583	.250	.625	.250	.700	.563	.455	.000	.483	

City of Fontana
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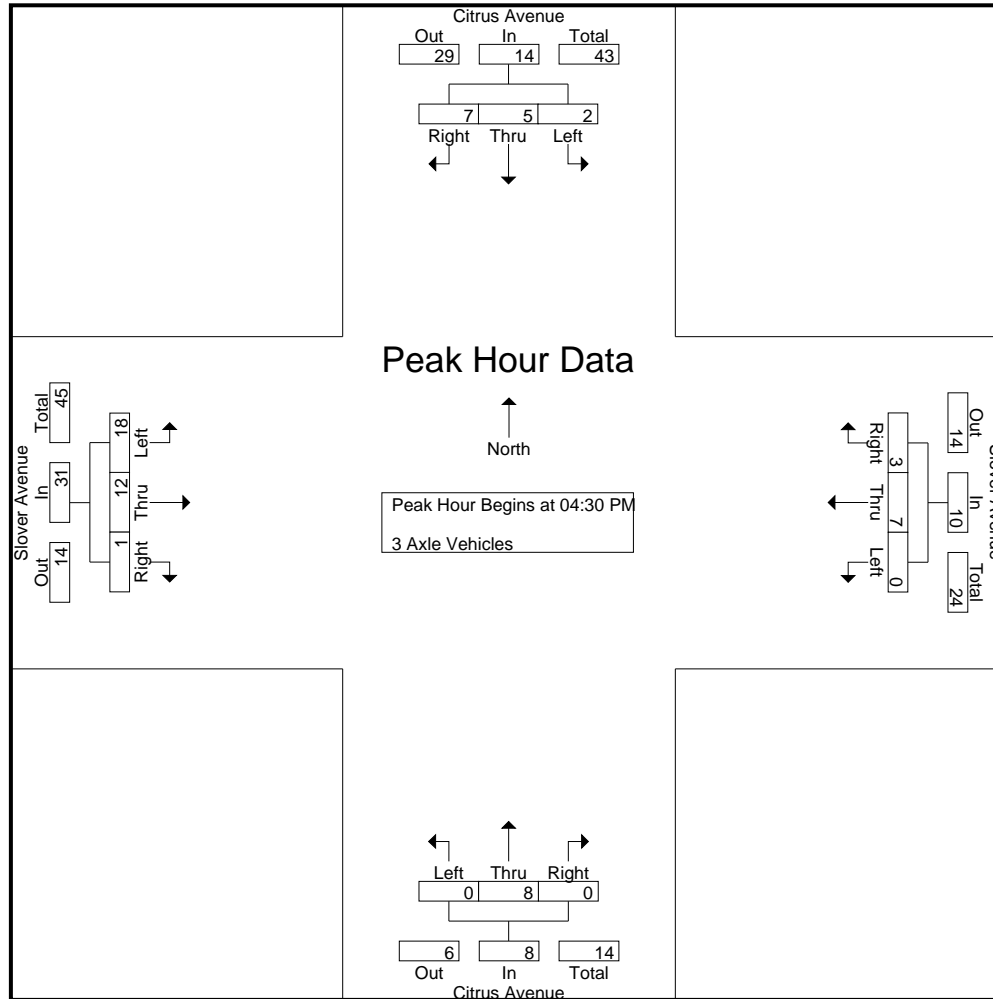
Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	5	1	6	1	1	0	0	2	0	2	0	0	2	4	2	0	0	6	1	16	17
04:15 PM	0	1	2	1	3	0	2	2	1	4	0	1	0	0	1	7	2	0	0	9	2	17	19
04:30 PM	0	2	1	1	3	0	3	0	0	3	0	5	0	0	5	6	3	0	0	9	1	20	21
04:45 PM	1	1	3	0	5	0	3	1	1	4	0	1	0	0	1	5	2	0	0	7	1	17	18
Total	1	5	11	3	17	1	9	3	2	13	0	9	0	0	9	22	9	0	0	31	5	70	75
05:00 PM	0	1	2	0	3	0	1	0	0	1	0	1	0	0	1	5	4	0	0	9	0	14	14
05:15 PM	1	1	1	0	3	0	0	2	2	2	0	1	0	0	1	2	3	1	1	6	3	12	15
05:30 PM	0	2	3	0	5	0	2	0	0	2	0	2	0	0	2	2	2	1	0	5	0	14	14
05:45 PM	0	2	1	0	3	0	2	2	0	4	0	0	0	0	0	6	2	0	0	8	0	15	15
Total	1	6	7	0	14	0	5	4	2	9	0	4	0	0	4	15	11	2	1	28	3	55	58
Grand Total	2	11	18	3	31	1	14	7	4	22	0	13	0	0	13	37	20	2	1	59	8	125	133
Apprch %	6.5	35.5	58.1			4.5	63.6	31.8			0	100	0			62.7	33.9	3.4					
Total %	1.6	8.8	14.4		24.8	0.8	11.2	5.6		17.6	0	10.4	0		10.4	29.6	16	1.6		47.2	6	94	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	2	1	3	0	3	0	3	0	5	0	5	6	3	0	9	20
04:45 PM	1	1	3	5	0	3	1	4	0	1	0	1	5	2	0	7	17
05:00 PM	0	1	2	3	0	1	0	1	0	1	0	1	5	4	0	9	14
05:15 PM	1	1	1	3	0	0	2	2	0	1	0	1	2	3	1	6	12
Total Volume	2	5	7	14	0	7	3	10	0	8	0	8	18	12	1	31	63
% App. Total	14.3	35.7	50		0	70	30		0	100	0		58.1	38.7	3.2		
PHF	.500	.625	.583	.700	.000	.583	.375	.625	.000	.400	.000	.400	.750	.750	.250	.861	.788

City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	2	1	3	0	3	0	3	0	5	0	5	6	3	0	9	
+15 mins.	1	1	3	5	0	3	1	4	0	1	0	1	5	2	0	7	
+30 mins.	0	1	2	3	0	1	0	1	0	1	0	1	5	4	0	9	
+45 mins.	1	1	1	3	0	0	2	2	0	1	0	1	2	3	1	6	
Total Volume	2	5	7	14	0	7	3	10	0	8	0	8	18	12	1	31	
% App. Total	14.3	35.7	50		0	70	30		0	100	0		58.1	38.7	3.2		
PHF	.500	.625	.583	.700	.000	.583	.375	.625	.000	.400	.000	.400	.750	.750	.250	.861	

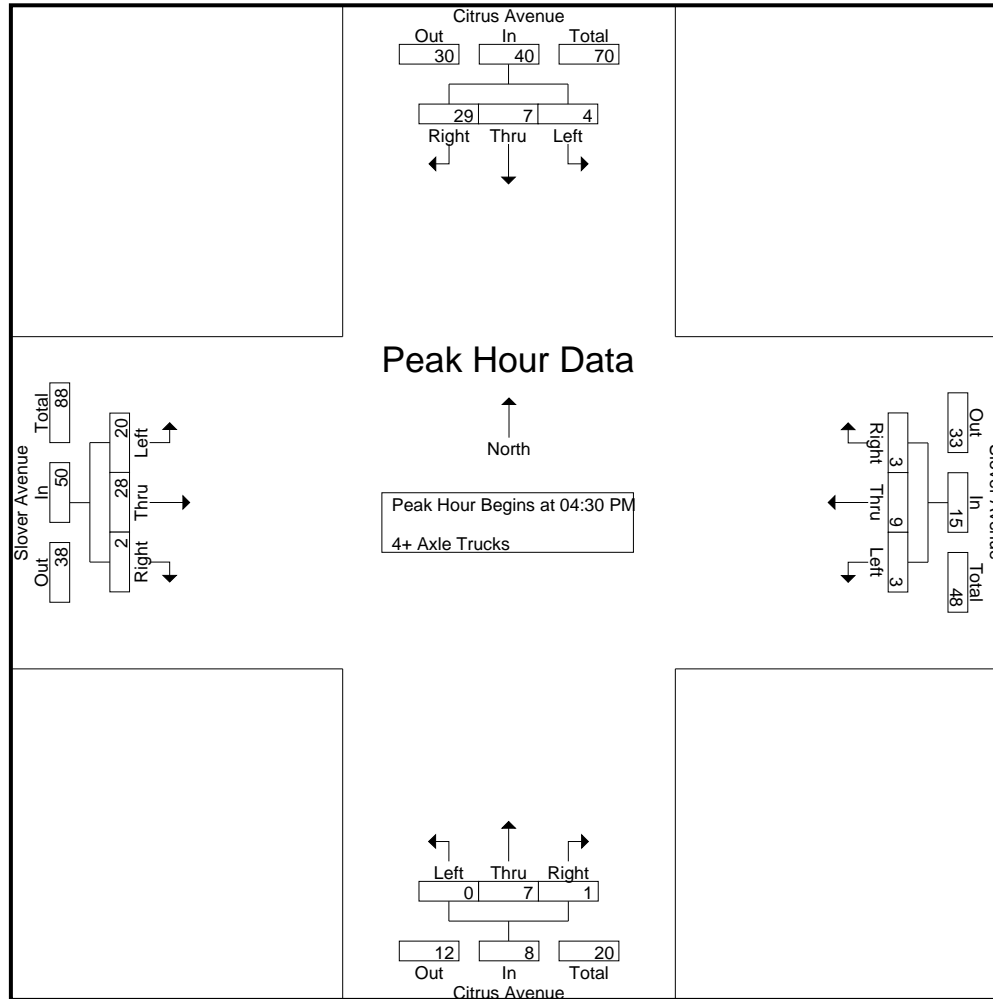
City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Slover Avenue Westbound					Citrus Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	2	2	9	1	13	1	3	1	0	5	0	2	1	0	3	4	7	0	0	11	1	32	33
04:15 PM	0	3	7	1	10	0	4	1	1	5	0	3	1	0	4	2	11	0	0	13	2	32	34
04:30 PM	0	3	12	2	15	1	2	1	0	4	0	4	1	1	5	6	6	1	1	13	4	37	41
04:45 PM	0	1	6	1	7	0	3	0	0	3	0	0	0	0	0	5	8	0	0	13	1	23	24
Total	2	9	34	5	45	2	12	3	1	17	0	9	3	1	12	17	32	1	1	50	8	124	132
05:00 PM	2	1	6	0	9	0	1	0	0	1	0	1	0	0	1	5	9	1	1	15	1	26	27
05:15 PM	2	2	5	1	9	2	3	2	1	7	0	2	0	0	2	4	5	0	0	9	2	27	29
05:30 PM	0	3	7	2	10	0	1	0	0	1	0	3	0	0	3	6	5	0	0	11	2	25	27
05:45 PM	2	2	3	0	7	0	1	0	0	1	1	4	1	0	6	2	3	0	0	5	0	19	19
Total	6	8	21	3	35	2	6	2	1	10	1	10	1	0	12	17	22	1	1	40	5	97	102
Grand Total	8	17	55	8	80	4	18	5	2	27	1	19	4	1	24	34	54	2	2	90	13	221	234
Apprch %	10	21.2	68.8			14.8	66.7	18.5			4.2	79.2	16.7			37.8	60	2.2					
Total %	3.6	7.7	24.9		36.2	1.8	8.1	2.3		12.2	0.5	8.6	1.8		10.9	15.4	24.4	0.9		40.7	5.6	94.4	

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	3	12	15	1	2	1	4	0	4	1	5	6	6	1	13	37
04:45 PM	0	1	6	7	0	3	0	3	0	0	0	0	5	8	0	13	23
05:00 PM	2	1	6	9	0	1	0	1	0	1	0	1	5	9	1	15	26
05:15 PM	2	2	5	9	2	3	2	7	0	2	0	2	4	5	0	9	27
Total Volume	4	7	29	40	3	9	3	15	0	7	1	8	20	28	2	50	113
% App. Total	10	17.5	72.5		20	60	20		0	87.5	12.5		40	56	4		
PHF	.500	.583	.604	.667	.375	.750	.375	.536	.000	.438	.250	.400	.833	.778	.500	.833	.764



City of Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 03_FON_Citrus_Slo PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Slover Avenue Westbound				Citrus Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:30 PM				04:30 PM				04:30 PM				04:30 PM				
+0 mins.	0	3	12	15	1	2	1	4	0	4	1	5	6	6	1	13	
+15 mins.	0	1	6	7	0	3	0	3	0	0	0	0	5	8	0	13	
+30 mins.	2	1	6	9	0	1	0	1	0	1	0	1	5	9	1	15	
+45 mins.	2	2	5	9	2	3	2	7	0	2	0	2	4	5	0	9	
Total Volume	4	7	29	40	3	9	3	15	0	7	1	8	20	28	2	50	
% App. Total	10	17.5	72.5		20	60	20		0	87.5	12.5		40	56	4		
PHF	.500	.583	.604	.667	.375	.750	.375	.536	.000	.438	.250	.400	.833	.778	.500	.833	

Location: Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Citrus Avenue	East Leg Slover Avenue	South Leg Citrus Avenue	West Leg Slover Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	1	3	2	0	6
7:15 AM	0	1	0	0	1
7:30 AM	0	1	1	0	2
7:45 AM	1	3	0	0	4
8:00 AM	0	7	0	0	7
8:15 AM	0	4	0	0	4
8:30 AM	0	0	0	0	0
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	3	19	3	0	25

	North Leg Citrus Avenue	East Leg Slover Avenue	South Leg Citrus Avenue	West Leg Slover Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	1	0	0	1
4:30 PM	0	1	1	0	2
4:45 PM	2	0	0	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	2	1	1	7

Location: Fontana
 N/S: Citrus Avenue
 E/W: Slover Avenue



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Citrus Avenue			Westbound Slover Avenue			Northbound Citrus Avenue			Eastbound Slover Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	2
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	1	0	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	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	1	0	1	1	0	1	0	0	0	0	5

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

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

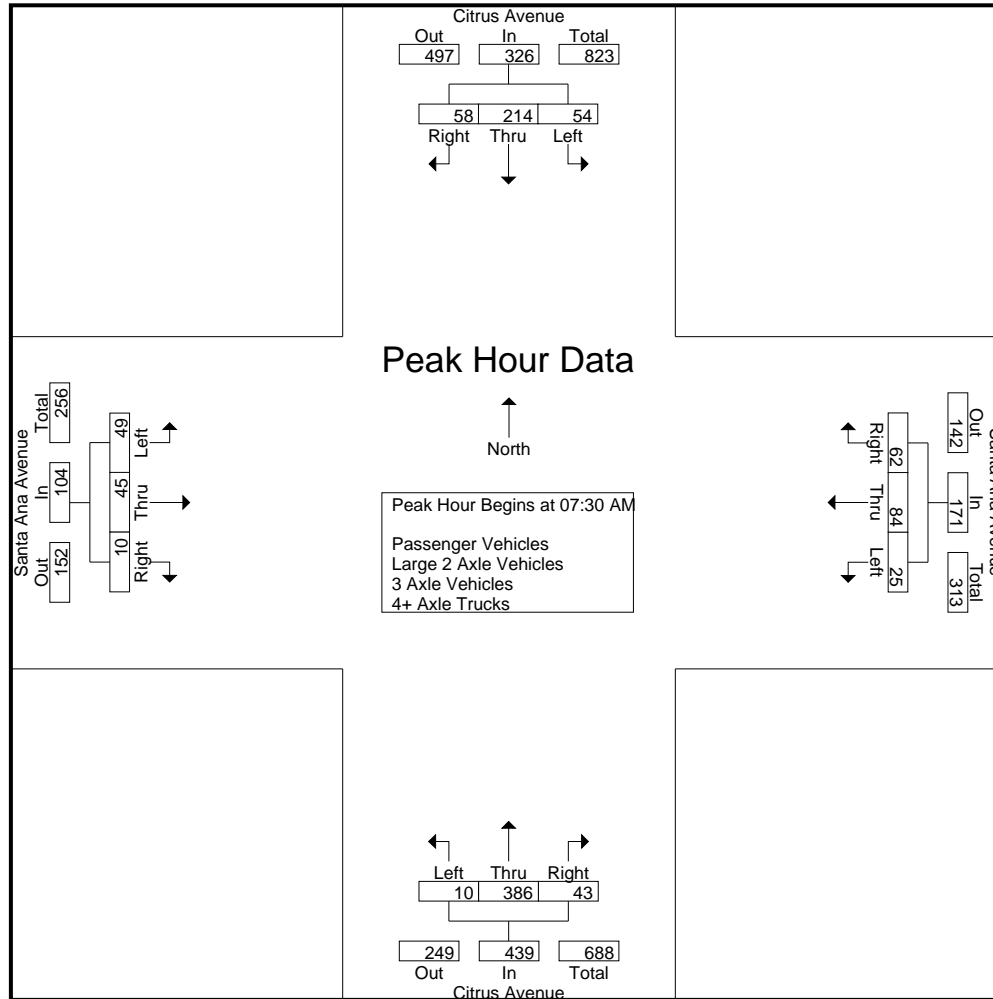
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	12	50	15	3	77	2	18	9	6	29	4	99	2	1	105	7	12	1	1	20	11	231	242
07:15 AM	10	49	12	3	71	5	19	6	1	30	0	90	4	0	94	10	7	5	3	22	7	217	224
07:30 AM	12	42	17	10	71	6	20	7	4	33	1	108	5	1	114	9	4	2	2	15	17	233	250
07:45 AM	14	52	22	10	88	5	24	9	7	38	3	101	7	1	111	5	8	2	1	15	19	252	271
Total	48	193	66	26	307	18	81	31	18	130	8	398	18	3	424	31	31	10	7	72	54	933	987
08:00 AM	12	51	13	4	76	6	22	11	5	39	4	93	20	3	117	21	18	3	1	42	13	274	287
08:15 AM	16	69	6	1	91	8	18	35	18	61	2	84	11	2	97	14	15	3	0	32	21	281	302
08:30 AM	12	61	8	2	81	2	13	4	2	19	2	87	3	0	92	4	8	4	2	16	6	208	214
08:45 AM	19	54	13	4	86	6	14	11	7	31	4	84	5	1	93	8	6	7	3	21	15	231	246
Total	59	235	40	11	334	22	67	61	32	150	12	348	39	6	399	47	47	17	6	111	55	994	1049
Grand Total	107	428	106	37	641	40	148	92	50	280	20	746	57	9	823	78	78	27	13	183	109	1927	2036
Apprch %	16.7	66.8	16.5			14.3	52.9	32.9			2.4	90.6	6.9			42.6	42.6	14.8					
Total %	5.6	22.2	5.5		33.3	2.1	7.7	4.8		14.5	1	38.7	3		42.7	4	4	1.4		9.5	5.4	94.6	
Passenger Vehicles	99	357	91		578	39	144	81		310	16	698	52		775	54	73	13		148	0	0	1811
% Passenger Vehicles	92.5	83.4	85.8	83.8	85.3	97.5	97.3	88	92	93.9	80	93.6	91.2	100	93.1	69.2	93.6	48.1	61.5	75.5	0	0	88.9
Large 2 Axle Vehicles	1	16	2		19	1	3	3		8	0	9	1		10	4	3	4		14	0	0	51
% Large 2 Axle Vehicles	0.9	3.7	1.9	0	2.8	2.5	2	3.3	2	2.4	0	1.2	1.8	0	1.2	5.1	3.8	14.8	23.1	7.1	0	0	2.5
3 Axle Vehicles	1	15	4		22	0	0	3		5	0	11	0		11	5	2	4		11	0	0	49
% 3 Axle Vehicles	0.9	3.5	3.8	5.4	3.2	0	0	3.3	4	1.5	0	1.5	0	0	1.3	6.4	2.6	14.8	0	5.6	0	0	2.4
4+ Axle Trucks	6	40	9		59	0	1	5		7	4	28	4		36	15	0	6		23	0	0	125
% 4+ Axle Trucks	5.6	9.3	8.5	10.8	8.7	0	0.7	5.4	2	2.1	20	3.8	7	0	4.3	19.2	0	22.2	15.4	11.7	0	0	6.1

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	42	17	71	6	20	7	33	1	108	5	114	9	4	2	15	233
07:45 AM	14	52	22	88	5	24	9	38	3	101	7	111	5	8	2	15	252
08:00 AM	12	51	13	76	6	22	11	39	4	93	20	117	21	18	3	42	274
08:15 AM	16	69	6	91	8	18	35	61	2	84	11	97	14	15	3	32	281
Total Volume	54	214	58	326	25	84	62	171	10	386	43	439	49	45	10	104	1040
% App. Total	16.6	65.6	17.8		14.6	49.1	36.3		2.3	87.9	9.8		47.1	43.3	9.6		
PHF	.844	.775	.659	.896	.781	.875	.443	.701	.625	.894	.538	.938	.583	.625	.833	.619	.925

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
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City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:30 AM				07:30 AM				08:00 AM				
+0 mins.	14	52	22	88	6	20	7	33	1	108	5	114	21	18	3	42	
+15 mins.	12	51	13	76	5	24	9	38	3	101	7	111	14	15	3	32	
+30 mins.	16	69	6	91	6	22	11	39	4	93	20	117	4	8	4	16	
+45 mins.	12	61	8	81	8	18	35	61	2	84	11	97	8	6	7	21	
Total Volume	54	233	49	336	25	84	62	171	10	386	43	439	47	47	17	111	
% App. Total	16.1	69.3	14.6		14.6	49.1	36.3		2.3	87.9	9.8		42.3	42.3	15.3		
PHF	.844	.844	.557	.923	.781	.875	.443	.701	.625	.894	.538	.938	.560	.653	.607	.661	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

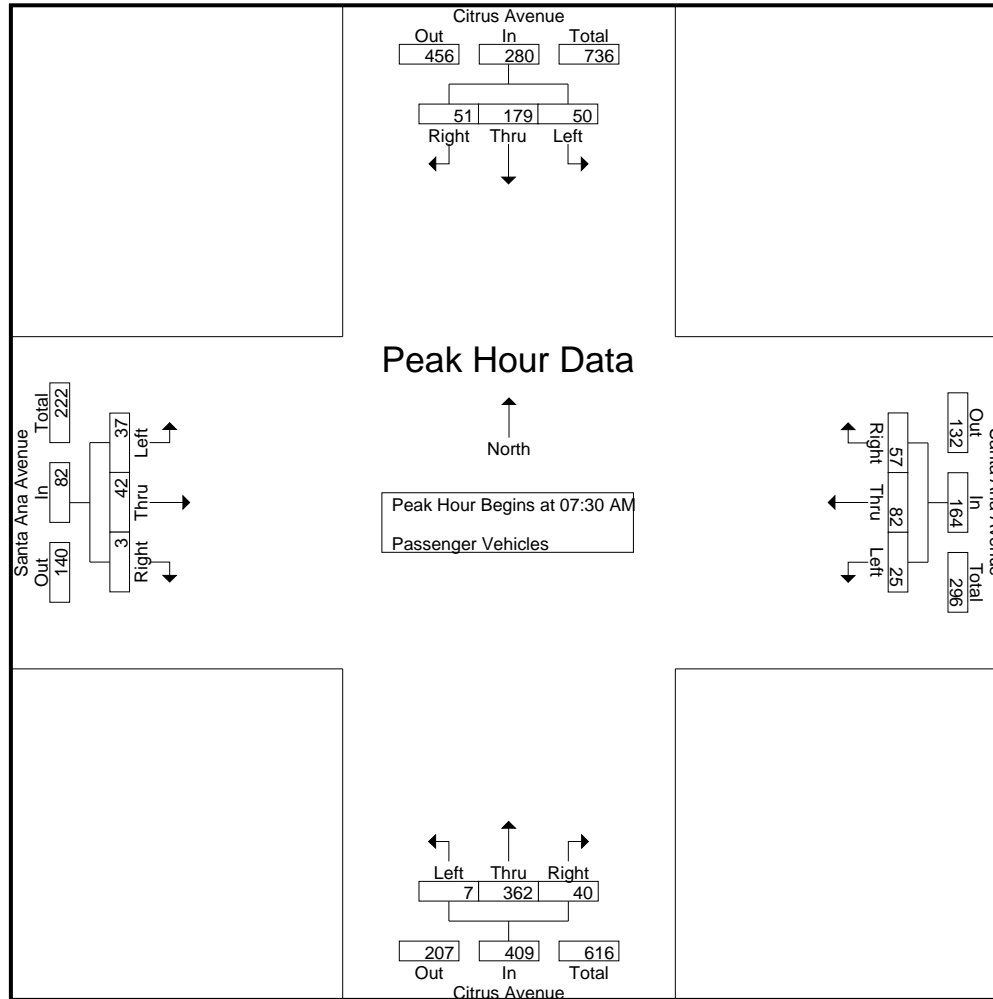
Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	11	40	14	3	65	2	18	6	4	26	4	93	2	1	99	3	11	1	1	15	9	205	214
07:15 AM	9	44	11	2	64	5	19	4	1	28	0	87	2	0	89	5	7	3	2	15	5	196	201
07:30 AM	12	35	12	8	59	6	19	6	4	31	0	103	4	1	107	8	4	1	1	13	14	210	224
07:45 AM	13	45	21	10	79	5	24	9	7	38	2	92	7	1	101	2	7	1	0	10	18	228	246
Total	45	164	58	23	267	18	80	25	16	123	6	375	15	3	396	18	29	6	4	53	46	839	885
08:00 AM	10	44	12	3	66	6	22	10	5	38	3	87	19	3	109	17	16	1	0	34	11	247	258
08:15 AM	15	55	6	1	76	8	17	32	17	57	2	80	10	2	92	10	15	0	0	25	20	250	270
08:30 AM	12	53	7	1	72	2	12	4	2	18	2	78	3	0	83	3	7	2	2	12	5	185	190
08:45 AM	17	41	8	3	66	5	13	10	6	28	3	78	5	1	86	6	6	4	2	16	12	196	208
Total	54	193	33	8	280	21	64	56	30	141	10	323	37	6	370	36	44	7	4	87	48	878	926
Grand Total	99	357	91	31	547	39	144	81	46	264	16	698	52	9	766	54	73	13	8	140	94	1717	1811
Apprch %	18.1	65.3	16.6			14.8	54.5	30.7			2.1	91.1	6.8			38.6	52.1	9.3					
Total %	5.8	20.8	5.3		31.9	2.3	8.4	4.7		15.4	0.9	40.7	3		44.6	3.1	4.3	0.8		8.2	5.2	94.8	

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	12	35	12	59	6	19	6	31	0	103	4	107	8	4	1	13	210
07:45 AM	13	45	21	79	5	24	9	38	2	92	7	101	2	7	1	10	228
08:00 AM	10	44	12	66	6	22	10	38	3	87	19	109	17	16	1	34	247
08:15 AM	15	55	6	76	8	17	32	57	2	80	10	92	10	15	0	25	250
Total Volume	50	179	51	280	25	82	57	164	7	362	40	409	37	42	3	82	935
% App. Total	17.9	63.9	18.2		15.2	50	34.8		1.7	88.5	9.8		45.1	51.2	3.7		
PHF	.833	.814	.607	.886	.781	.854	.445	.719	.583	.879	.526	.938	.544	.656	.750	.603	.935

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
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City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 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.	12	35	12	59	6	19	6	31	0	103	4	107	8	4	1	13	
+15 mins.	13	45	21	79	5	24	9	38	2	92	7	101	2	7	1	10	
+30 mins.	10	44	12	66	6	22	10	38	3	87	19	109	17	16	1	34	
+45 mins.	15	55	6	76	8	17	32	57	2	80	10	92	10	15	0	25	
Total Volume	50	179	51	280	25	82	57	164	7	362	40	409	37	42	3	82	
% App. Total	17.9	63.9	18.2		15.2	50	34.8		1.7	88.5	9.8		45.1	51.2	3.7		
PHF	.833	.814	.607	.886	.781	.854	.445	.719	.583	.879	.526	.938	.544	.656	.750	.603	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

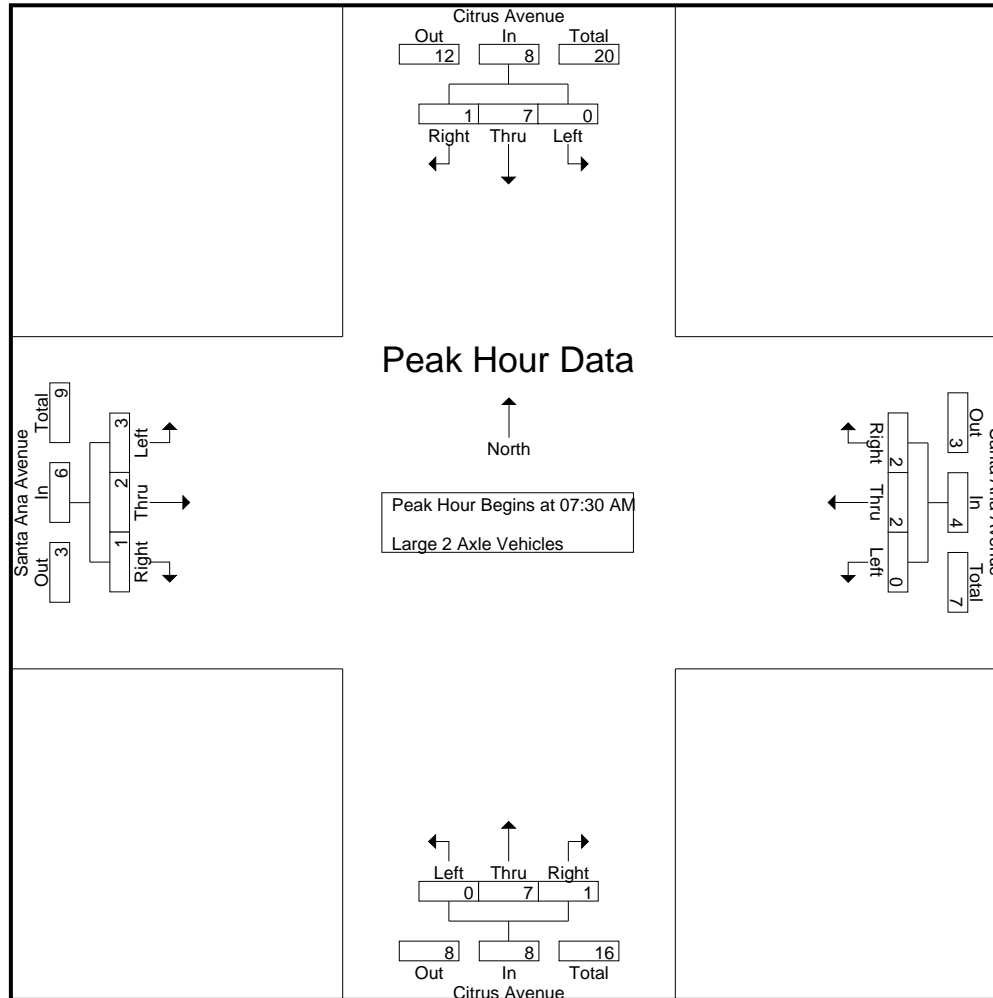
Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	1	4	0	0	5	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	7	7
07:15 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	1	0	1	1	2	1	4	5	
07:30 AM	0	2	0	0	2	0	1	0	0	1	0	2	1	0	3	1	0	0	0	1	0	7	7	
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	3	0	0	3	0	1	1	1	2	1	6	7	
Total	1	7	1	0	9	0	1	1	0	2	0	6	1	0	7	2	2	2	2	6	2	24	26	
08:00 AM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	4	4	
08:15 AM	0	4	0	0	4	0	1	2	1	3	0	0	0	0	0	2	0	0	0	2	1	9	10	
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
08:45 AM	0	4	1	0	5	1	1	0	0	2	0	1	0	0	1	0	0	2	1	2	1	10	11	
Total	0	9	1	0	10	1	2	2	1	5	0	3	0	0	3	2	1	2	1	5	2	23	25	
Grand Total	1	16	2	0	19	1	3	3	1	7	0	9	1	0	10	4	3	4	3	11	4	47	51	
Apprch %	5.3	84.2	10.5			14.3	42.9	42.9			0	90	10		36.4	27.3	36.4							
Total %	2.1	34	4.3		40.4	2.1	6.4	6.4		14.9	0	19.1	2.1		21.3	8.5	6.4	8.5		23.4	7.8	92.2		

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	2	0	2	0	1	0	1	0	2	1	3	1	0	0	1	7
07:45 AM	0	0	1	1	0	0	0	0	0	3	0	3	0	1	1	2	6
08:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	4
08:15 AM	0	4	0	4	0	1	2	3	0	0	0	0	2	0	0	2	9
Total Volume	0	7	1	8	0	2	2	4	0	7	1	8	3	2	1	6	26
% App. Total	0	87.5	12.5		0	50	50		0	87.5	12.5		50	33.3	16.7		
PHF	.000	.438	.250	.500	.000	.500	.250	.333	.000	.583	.250	.667	.375	.500	.250	.750	.722

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
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City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	2	0	2	0	1	0	1	0	2	1	3	1	0	0	1	
+15 mins.	0	0	1	1	0	0	0	0	0	3	0	3	0	1	1	2	
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	1	0	1	
+45 mins.	0	4	0	4	0	1	2	3	0	0	0	0	2	0	0	2	
Total Volume	0	7	1	8	0	2	2	4	0	7	1	8	3	2	1	6	
% App. Total	0	87.5	12.5		0	50	50		0	87.5	12.5		50	33.3	16.7		
PHF	.000	.438	.250	.500	.000	.500	.250	.333	.000	.583	.250	.667	.375	.500	.250	.750	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

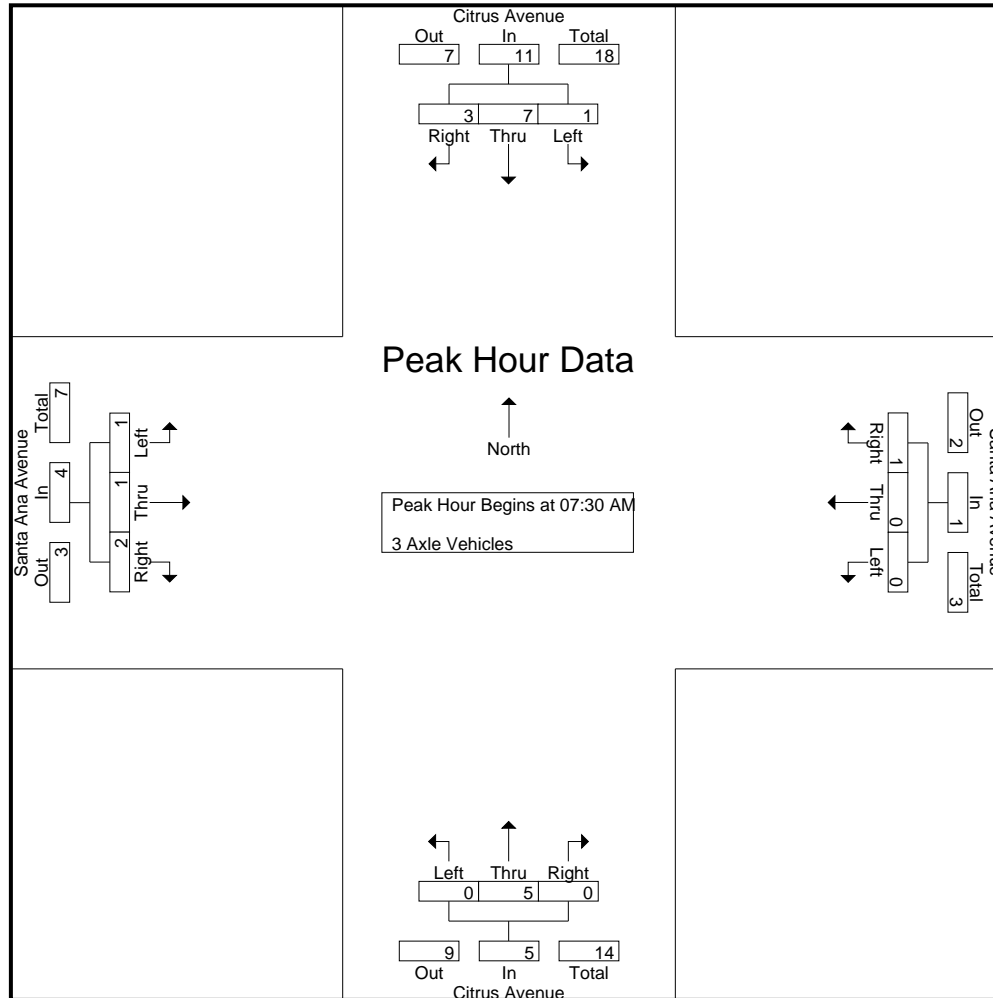
Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	4	0	0	4	0	0	1	1	1	0	1	0	0	1	1	0	0	0	1	1	0	0	0	1	1	7	8
07:15 AM	0	0	1	1	1	0	0	0	0	0	0	1	0	0	1	3	0	0	0	3	1	0	0	0	1	1	5	6
07:30 AM	0	1	3	1	4	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	1	5	6
07:45 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	3	3
Total	0	7	4	2	11	0	0	1	1	1	0	3	0	0	3	5	0	0	0	5	3	0	0	0	3	3	20	23
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	5	5
08:15 AM	0	4	0	0	4	0	0	1	0	1	0	1	0	0	1	0	0	2	0	2	0	0	0	0	2	0	8	8
08:30 AM	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	1	1	0	2	0	0	0	0	0	0	7	7
08:45 AM	0	3	0	0	3	0	0	1	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1	1	5	6
Total	1	8	0	0	9	0	0	2	1	2	0	8	0	0	8	0	2	4	0	6	1	0	0	0	1	1	25	26
Grand Total	1	15	4	2	20	0	0	3	2	3	0	11	0	0	11	5	2	4	0	11	4	0	0	0	4	4	45	49
Apprch %	5	75	20			0	0	100			0	100	0			45.5	18.2	36.4										
Total %	2.2	33.3	8.9		44.4	0	0	6.7		6.7	0	24.4	0		24.4	11.1	4.4	8.9		24.4	8.2					8.2	91.8	

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	1	3	4	0	0	0	0	0	1	0	1	0	0	0	0	5
07:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	3
08:00 AM	1	0	0	1	0	0	0	0	0	3	0	3	0	1	0	1	5
08:15 AM	0	4	0	4	0	0	1	1	0	1	0	1	0	0	2	2	8
Total Volume	1	7	3	11	0	0	1	1	0	5	0	5	1	1	2	4	21
% App. Total	9.1	63.6	27.3		0	0	100		0	100	0		25	25	50		
PHF	.250	.438	.250	.688	.000	.000	.250	.250	.000	.417	.000	.417	.250	.250	.250	.500	.656

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	1	3	4	0	0	0	0	0	1	0	1	0	0	0	0	
+15 mins.	0	2	0	2	0	0	0	0	0	0	0	0	1	0	0	1	
+30 mins.	1	0	0	1	0	0	0	0	0	3	0	3	0	1	0	1	
+45 mins.	0	4	0	4	0	0	1	1	0	1	0	1	0	0	2	2	
Total Volume	1	7	3	11	0	0	1	1	0	5	0	5	1	1	2	4	
% App. Total	9.1	63.6	27.3		0	0	100		0	100	0		25	25	50		
PHF	.250	.438	.250	.688	.000	.000	.250	.250	.000	.417	.000	.417	.250	.250	.250	.500	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

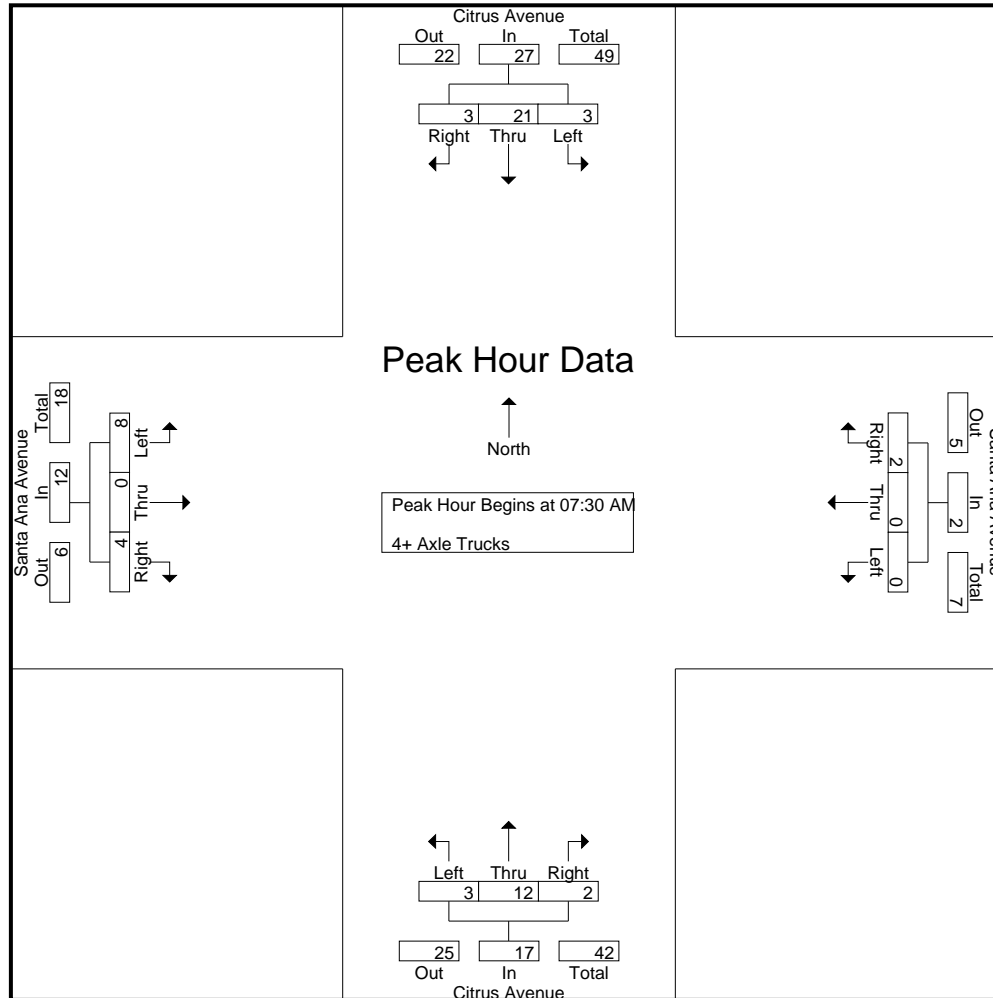
Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	2	1	0	3	0	0	2	1	2	0	4	0	0	4	3	0	0	0	3	1	12	13
07:15 AM	1	4	0	0	5	0	0	1	0	1	0	2	2	0	4	1	0	1	0	2	0	12	12
07:30 AM	0	4	2	1	6	0	0	1	0	1	1	2	0	0	3	0	0	1	1	1	2	11	13
07:45 AM	1	5	0	0	6	0	0	0	0	0	1	6	0	0	7	2	0	0	0	2	0	15	15
Total	2	15	3	1	20	0	0	4	1	4	2	14	2	0	18	6	0	2	1	8	3	50	53
08:00 AM	1	6	1	1	8	0	0	1	0	1	1	1	1	0	3	4	0	2	1	6	2	18	20
08:15 AM	1	6	0	0	7	0	0	0	0	0	0	3	1	0	4	2	0	1	0	3	0	14	14
08:30 AM	0	7	1	1	8	0	1	0	0	1	0	5	0	0	5	1	0	1	0	2	1	16	17
08:45 AM	2	6	4	1	12	0	0	0	0	0	1	5	0	0	6	2	0	0	0	2	1	20	21
Total	4	25	6	3	35	0	1	1	0	2	2	14	2	0	18	9	0	4	1	13	4	68	72
Grand Total	6	40	9	4	55	0	1	5	1	6	4	28	4	0	36	15	0	6	2	21	7	118	125
Apprch %	10.9	72.7	16.4			0	16.7	83.3			11.1	77.8	11.1			71.4	0	28.6					
Total %	5.1	33.9	7.6		46.6	0	0.8	4.2		5.1	3.4	23.7	3.4		30.5	12.7	0	5.1		17.8	5.6	94.4	

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	4	2	6	0	0	1	1	1	2	0	3	0	0	1	1	11
07:45 AM	1	5	0	6	0	0	0	0	1	6	0	7	2	0	0	2	15
08:00 AM	1	6	1	8	0	0	1	1	1	1	1	3	4	0	2	6	18
08:15 AM	1	6	0	7	0	0	0	0	0	3	1	4	2	0	1	3	14
Total Volume	3	21	3	27	0	0	2	2	3	12	2	17	8	0	4	12	58
% App. Total	11.1	77.8	11.1		0	0	100		17.6	70.6	11.8		66.7	0	33.3		
PHF	.750	.875	.375	.844	.000	.000	.500	.500	.750	.500	.500	.607	.500	.000	.500	.500	.806

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:30 AM				07:30 AM				07:30 AM				07:30 AM				
+0 mins.	0	4	2	6	0	0	1	1	1	2	0	3	0	0	1	1	
+15 mins.	1	5	0	6	0	0	0	0	1	6	0	7	2	0	0	2	
+30 mins.	1	6	1	8	0	0	1	1	1	1	1	3	4	0	2	6	
+45 mins.	1	6	0	7	0	0	0	0	0	3	1	4	2	0	1	3	
Total Volume	3	21	3	27	0	0	2	2	3	12	2	17	8	0	4	12	
% App. Total	11.1	77.8	11.1		0	0	100		17.6	70.6	11.8		66.7	0	33.3		
PHF	.750	.875	.375	.844	.000	.000	.500	.500	.750	.500	.500	.607	.500	.000	.500	.500	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

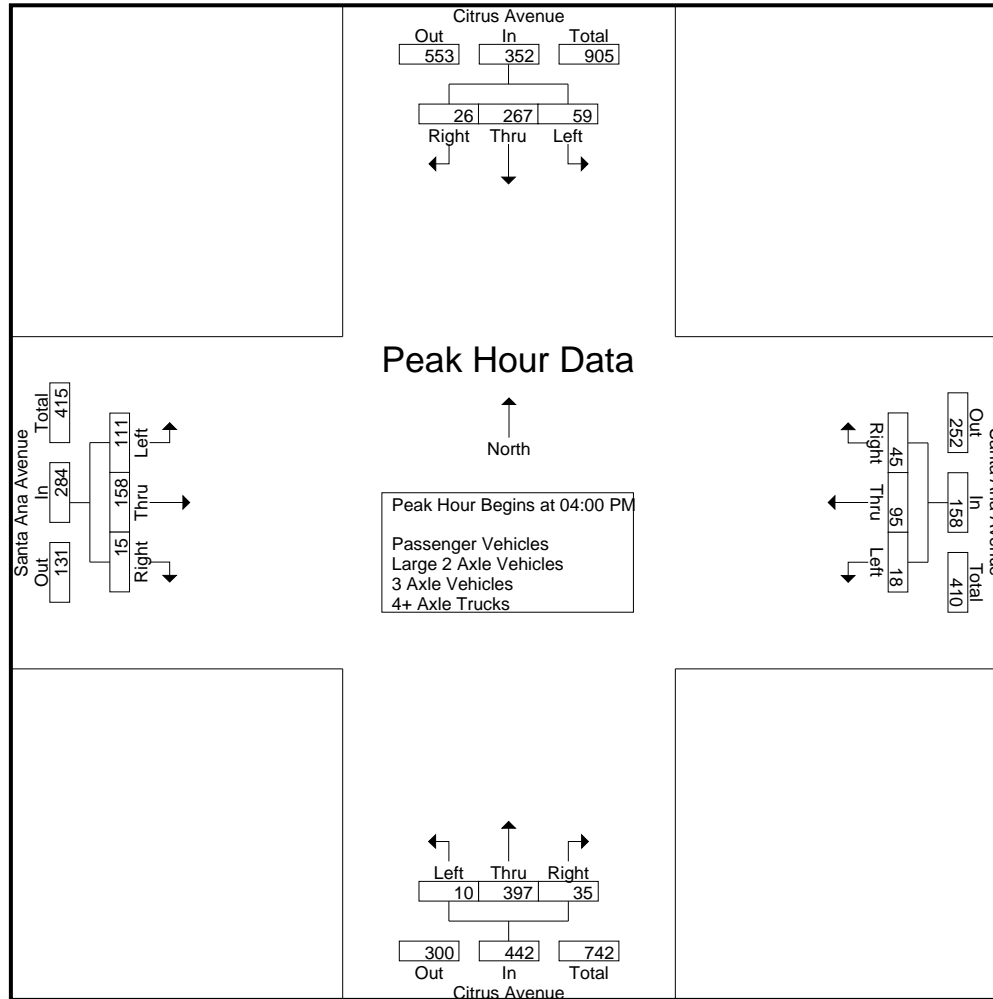
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	10	61	11	0	82	5	26	13	10	44	2	87	9	4	98	25	49	1	0	75	14	299	313
04:15 PM	11	67	2	0	80	6	27	10	7	43	4	108	5	0	117	22	35	1	0	58	7	298	305
04:30 PM	16	75	5	4	96	5	22	10	6	37	0	92	10	1	102	36	42	7	4	85	15	320	335
04:45 PM	22	64	8	1	94	2	20	12	3	34	4	110	11	3	125	28	32	6	2	66	9	319	328
Total	59	267	26	5	352	18	95	45	26	158	10	397	35	8	442	111	158	15	6	284	45	1236	1281
05:00 PM	18	90	7	5	115	5	16	17	11	38	1	86	7	2	94	21	24	5	3	50	21	297	318
05:15 PM	13	80	12	6	105	9	14	9	5	32	0	97	5	2	102	13	25	1	0	39	13	278	291
05:30 PM	27	75	6	2	108	3	9	15	11	27	1	101	5	2	107	22	15	5	3	42	18	284	302
05:45 PM	49	72	3	1	124	4	14	37	16	55	0	128	4	1	132	8	13	1	0	22	18	333	351
Total	107	317	28	14	452	21	53	78	43	152	2	412	21	7	435	64	77	12	6	153	70	1192	1262
Grand Total	166	584	54	19	804	39	148	123	69	310	12	809	56	15	877	175	235	27	12	437	115	2428	2543
Apprch %	20.6	72.6	6.7			12.6	47.7	39.7			1.4	92.2	6.4			40	53.8	6.2					
Total %	6.8	24.1	2.2		33.1	1.6	6.1	5.1		12.8	0.5	33.3	2.3		36.1	7.2	9.7	1.1		18	4.5	95.5	
Passenger Vehicles	164	549	49		781	39	144	121		372	6	768	54		843	165	229	25		431	0	0	2427
% Passenger Vehicles	98.8	94	90.7	100	94.9	100	97.3	98.4	98.6	98.2	50	94.9	96.4	100	94.5	94.3	97.4	92.6	100	96	0	0	95.4
Large 2 Axle Vehicles	1	8	0		9	0	2	0		2	2	12	1		15	4	5	0		9	0	0	35
% Large 2 Axle Vehicles	0.6	1.4	0	0	1.1	0	1.4	0	0	0.5	16.7	1.5	1.8	0	1.7	2.3	2.1	0	0	2	0	0	1.4
3 Axle Vehicles	0	11	3		14	0	0	2		3	1	9	0		10	1	0	1		2	0	0	29
% 3 Axle Vehicles	0	1.9	5.6	0	1.7	0	0	1.6	1.4	0.8	8.3	1.1	0	0	1.1	0.6	0	3.7	0	0.4	0	0	1.1
4+ Axle Trucks	1	16	2		19	0	2	0		2	3	20	1		24	5	1	1		7	0	0	52
% 4+ Axle Trucks	0.6	2.7	3.7	0	2.3	0	1.4	0	0	0.5	25	2.5	1.8	0	2.7	2.9	0.4	3.7	0	1.6	0	0	2

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	10	61	11	82	5	26	13	44	2	87	9	98	25	49	1	75	299
04:15 PM	11	67	2	80	6	27	10	43	4	108	5	117	22	35	1	58	298
04:30 PM	16	75	5	96	5	22	10	37	0	92	10	102	36	42	7	85	320
04:45 PM	22	64	8	94	2	20	12	34	4	110	11	125	28	32	6	66	319
Total Volume	59	267	26	352	18	95	45	158	10	397	35	442	111	158	15	284	1236
% App. Total	16.8	75.9	7.4		11.4	60.1	28.5		2.3	89.8	7.9		39.1	55.6	5.3		
PHF	.670	.890	.591	.917	.750	.880	.865	.898	.625	.902	.795	.884	.771	.806	.536	.835	.966

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	18	90	7	115	5	26	13	44	2	87	9	98	25	49	1	75	
+15 mins.	13	80	12	105	6	27	10	43	4	108	5	117	22	35	1	58	
+30 mins.	27	75	6	108	5	22	10	37	0	92	10	102	36	42	7	85	
+45 mins.	49	72	3	124	2	20	12	34	4	110	11	125	28	32	6	66	
Total Volume	107	317	28	452	18	95	45	158	10	397	35	442	111	158	15	284	
% App. Total	23.7	70.1	6.2		11.4	60.1	28.5		2.3	89.8	7.9		39.1	55.6	5.3		
PHF	.546	.881	.583	.911	.750	.880	.865	.898	.625	.902	.795	.884	.771	.806	.536	.835	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

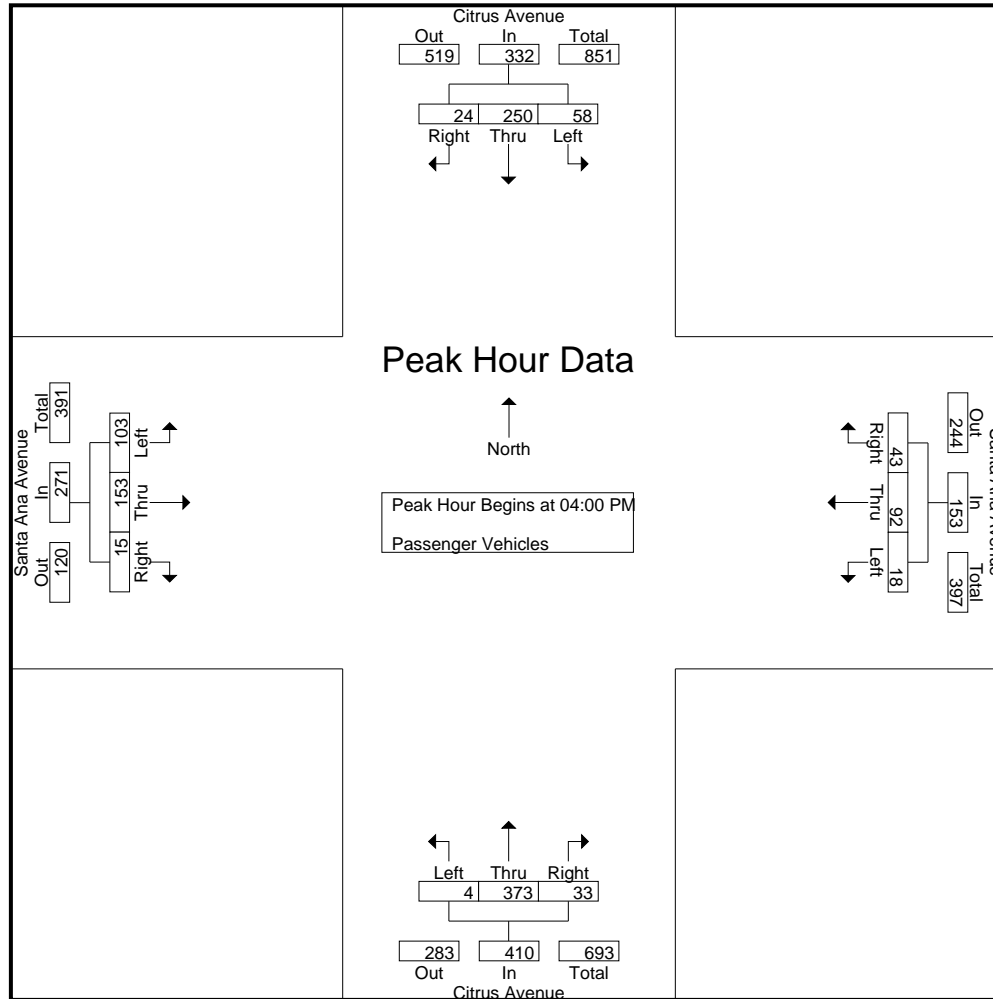
Groups Printed- Passenger Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	9	57	9	0	75	5	24	13	10	42	1	80	9	4	90	25	46	1	0	72	14	279	293
04:15 PM	11	63	2	0	76	6	27	10	7	43	1	105	5	0	111	17	34	1	0	52	7	282	289
04:30 PM	16	69	5	4	90	5	22	8	5	35	0	81	9	1	90	35	41	7	4	83	14	298	312
04:45 PM	22	61	8	1	91	2	19	12	3	33	2	107	10	3	119	26	32	6	2	64	9	307	316
Total	58	250	24	5	332	18	92	43	25	153	4	373	33	8	410	103	153	15	6	271	44	1166	1210
05:00 PM	18	86	7	5	111	5	16	17	11	38	1	82	7	2	90	20	23	4	3	47	21	286	307
05:15 PM	13	75	11	6	99	9	13	9	5	31	0	95	5	2	100	12	25	1	0	38	13	268	281
05:30 PM	27	69	6	2	102	3	9	15	11	27	1	96	5	2	102	22	15	4	3	41	18	272	290
05:45 PM	48	69	1	1	118	4	14	37	16	55	0	122	4	1	126	8	13	1	0	22	18	321	339
Total	106	299	25	14	430	21	52	78	43	151	2	395	21	7	418	62	76	10	6	148	70	1147	1217
Grand Total	164	549	49	19	762	39	144	121	68	304	6	768	54	15	828	165	229	25	12	419	114	2313	2427
Apprch %	21.5	72	6.4			12.8	47.4	39.8			0.7	92.8	6.5			39.4	54.7	6					
Total %	7.1	23.7	2.1		32.9	1.7	6.2	5.2		13.1	0.3	33.2	2.3		35.8	7.1	9.9	1.1		18.1	4.7	95.3	

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	9	57	9	75	5	24	13	42	1	80	9	90	25	46	1	72	279
04:15 PM	11	63	2	76	6	27	10	43	1	105	5	111	17	34	1	52	282
04:30 PM	16	69	5	90	5	22	8	35	0	81	9	90	35	41	7	83	298
04:45 PM	22	61	8	91	2	19	12	33	2	107	10	119	26	32	6	64	307
Total Volume	58	250	24	332	18	92	43	153	4	373	33	410	103	153	15	271	1166
% App. Total	17.5	75.3	7.2		11.8	60.1	28.1		1	91	8		38	56.5	5.5		
PHF	.659	.906	.667	.912	.750	.852	.827	.890	.500	.871	.825	.861	.736	.832	.536	.816	.950

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	9	57	9	75	5	24	13	42	1	80	9	90	25	46	1	72	
+15 mins.	11	63	2	76	6	27	10	43	1	105	5	111	17	34	1	52	
+30 mins.	16	69	5	90	5	22	8	35	0	81	9	90	35	41	7	83	
+45 mins.	22	61	8	91	2	19	12	33	2	107	10	119	26	32	6	64	
Total Volume	58	250	24	332	18	92	43	153	4	373	33	410	103	153	15	271	
% App. Total	17.5	75.3	7.2		11.8	60.1	28.1		1	91	8		38	56.5	5.5		
PHF	.659	.906	.667	.912	.750	.852	.827	.890	.500	.871	.825	.861	.736	.832	.536	.816	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

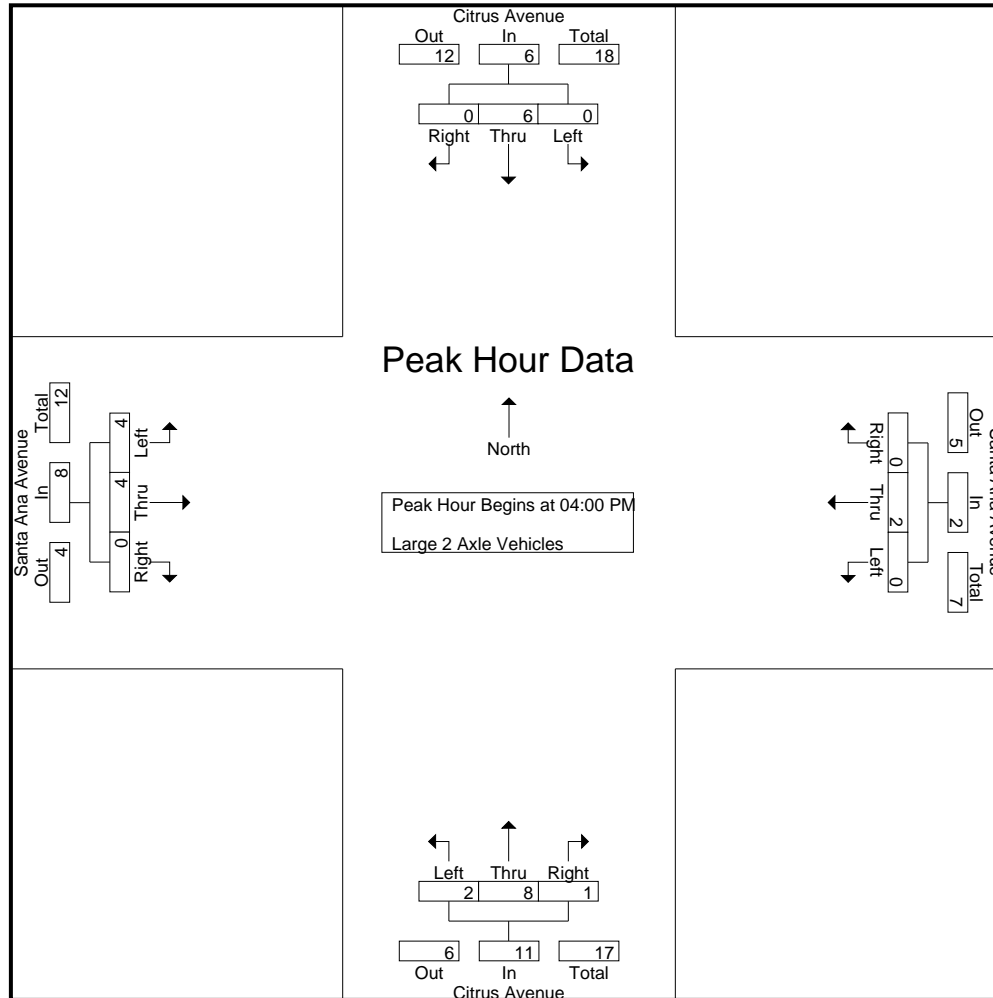
Groups Printed- Large 2 Axle Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	2	0	0	2	0	1	0	0	1	1	2	0	0	3	0	3	0	0	3	0	0	9	9
04:15 PM	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	2	1	0	0	3	0	0	7	7
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	4	4
04:45 PM	0	2	0	0	2	0	1	0	0	1	0	1	1	0	2	2	0	0	0	2	0	0	7	7
Total	0	6	0	0	6	0	2	0	0	2	2	8	1	0	11	4	4	0	0	8	0	0	27	27
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	0	0	4	4
05:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
05:45 PM	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2	2
Total	1	2	0	0	3	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	0	0	8	8
Grand Total	1	8	0	0	9	0	2	0	0	2	2	12	1	0	15	4	5	0	0	9	0	0	35	35
Apprch %	11.1	88.9	0			0	100	0			13.3	80	6.7			44.4	55.6	0			0	0		
Total %	2.9	22.9	0		25.7	0	5.7	0		5.7	5.7	34.3	2.9		42.9	11.4	14.3	0		25.7	0	0	100	

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	2	0	2	0	1	0	1	1	2	0	3	0	3	0	3	9
04:15 PM	0	2	0	2	0	0	0	0	1	1	0	2	2	1	0	3	7
04:30 PM	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
04:45 PM	0	2	0	2	0	1	0	1	0	1	1	2	2	0	0	2	7
Total Volume	0	6	0	6	0	2	0	2	2	8	1	11	4	4	0	8	27
% App. Total	0	100	0		0	100	0		18.2	72.7	9.1		50	50	0		
PHF	.000	.750	.000	.750	.000	.500	.000	.500	.500	.500	.250	.688	.500	.333	.000	.667	.750

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	2	0	2	0	1	0	1	1	2	0	3	0	3	0	3	
+15 mins.	0	2	0	2	0	0	0	0	1	1	0	2	2	1	0	3	
+30 mins.	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	
+45 mins.	0	2	0	2	0	1	0	1	0	1	1	2	2	0	0	2	
Total Volume	0	6	0	6	0	2	0	2	2	8	1	11	4	4	0	8	
% App. Total	0	100	0		0	100	0		18.2	72.7	9.1		50	50	0		
PHF	.000	.750	.000	.750	.000	.500	.000	.500	.500	.500	.250	.688	.500	.333	.000	.667	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

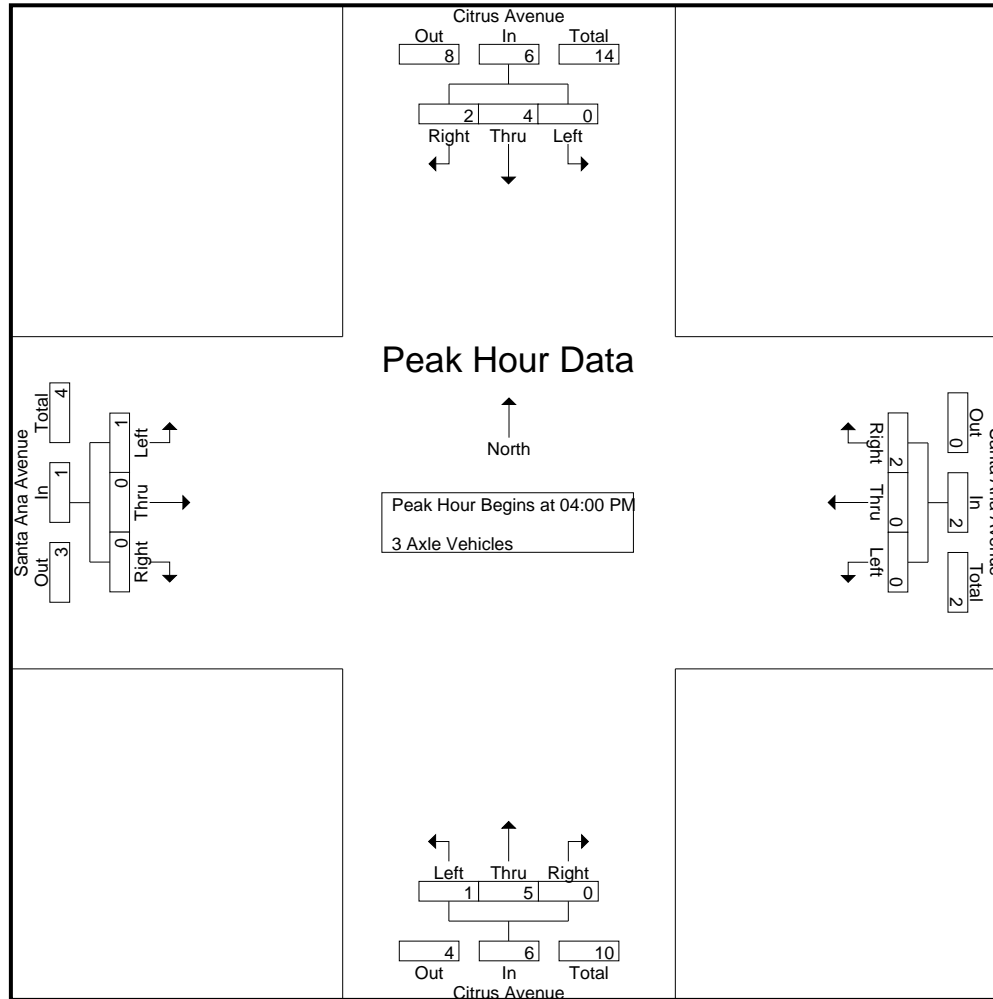
Groups Printed- 3 Axle Vehicles

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	2	0	2	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	4
04:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	2	2
04:30 PM	0	3	0	0	3	0	0	2	1	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	1	7	8
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	4	2	0	6	0	0	2	1	2	1	5	0	0	6	1	0	0	0	1	0	0	0	0	1	1	15	16
05:00 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
05:15 PM	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	4
05:30 PM	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	0	1	0	1	0	5	5
05:45 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	0	7	1	0	8	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	0	0	1	0	1	0	13	13
Grand Total	0	11	3	0	14	0	0	2	1	2	1	9	0	0	10	1	0	1	0	2	0	0	1	0	2	1	28	29
Apprch %	0	78.6	21.4			0	0	100			10	90	0			50	0	50										
Total %	0	39.3	10.7		50	0	0	7.1		7.1	3.6	32.1	0		35.7	3.6	0	3.6		7.1					3.4	96.6		

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
04:30 PM	0	3	0	3	0	0	2	2	0	2	0	2	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total Volume	0	4	2	6	0	0	2	2	1	5	0	6	1	0	0	1	15
% App. Total	0	66.7	33.3		0	0	100		16.7	83.3	0		100	0	0		
PHF	.000	.333	.250	.500	.000	.000	.250	.250	.250	.625	.000	.750	.250	.000	.000	.250	.536

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	0	0	2	2	0	0	0	0	0	2	0	2	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	
+30 mins.	0	3	0	3	0	0	2	2	0	2	0	2	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	
Total Volume	0	4	2	6	0	0	2	2	1	5	0	6	1	0	0	1	
% App. Total	0	66.7	33.3		0	0	100		16.7	83.3	0		100	0	0		
PHF	.000	.333	.250	.500	.000	.000	.250	.250	.250	.625	.000	.750	.250	.000	.000	.250	

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

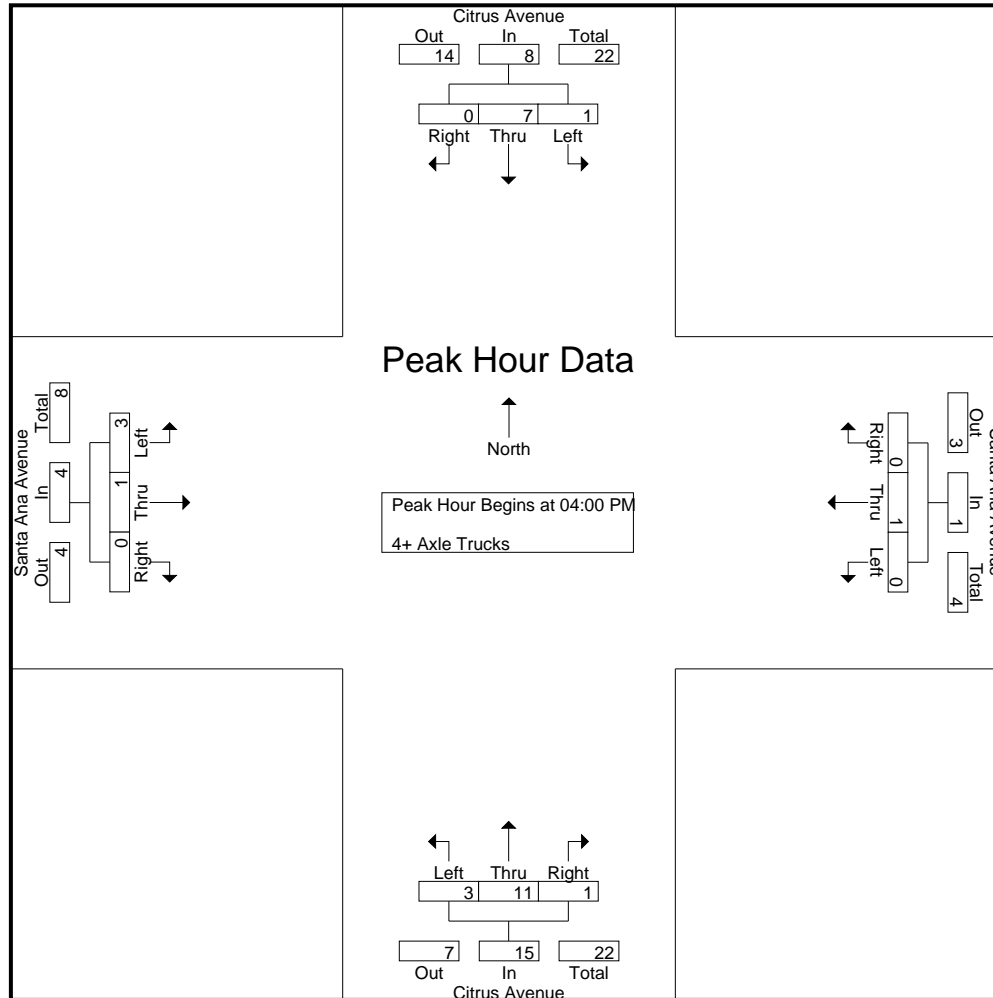
Groups Printed- 4+ Axle Trucks

Start Time	Citrus Avenue Southbound					Santa Ana Avenue Westbound					Citrus Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	1	2	0	0	3	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	7	7
04:15 PM	0	1	0	0	1	0	0	0	0	0	2	2	0	0	4	2	0	0	0	2	0	0	0	0	2	0	7	7
04:30 PM	0	3	0	0	3	0	0	0	0	0	0	5	1	0	6	1	1	0	0	2	0	0	0	0	2	0	11	11
04:45 PM	0	1	0	0	1	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	3	3
Total	1	7	0	0	8	0	1	0	0	1	3	11	1	0	15	3	1	0	0	4	0	0	0	0	4	0	28	28
05:00 PM	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	0	0	0	2	0	5	5
05:15 PM	0	1	1	0	2	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	0	0	0	0	1	0	5	5
05:30 PM	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6	6
05:45 PM	0	2	1	0	3	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	8	8
Total	0	9	2	0	11	0	1	0	0	1	0	9	0	0	9	2	0	1	0	3	0	0	0	0	3	0	24	24
Grand Total	1	16	2	0	19	0	2	0	0	2	3	20	1	0	24	5	1	1	0	7	0	0	0	0	7	0	52	52
Apprch %	5.3	84.2	10.5			0	100	0			12.5	83.3	4.2			71.4	14.3	14.3										
Total %	1.9	30.8	3.8		36.5	0	3.8	0		3.8	5.8	38.5	1.9		46.2	9.6	1.9	1.9		13.5	0	0	0		100			

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 04:00 PM																		
04:00 PM	1	2	0	3	0	1	0	1	0	3	0	3	0	0	0	0	0	7
04:15 PM	0	1	0	1	0	0	0	0	2	2	0	4	2	0	0	2	0	7
04:30 PM	0	3	0	3	0	0	0	0	0	5	1	6	1	1	0	2	0	11
04:45 PM	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	0	3
Total Volume	1	7	0	8	0	1	0	1	3	11	1	15	3	1	0	4	0	28
% App. Total	12.5	87.5	0		0	100	0		20	73.3	6.7		75	25	0			
PHF	.250	.583	.000	.667	.000	.250	.000	.250	.375	.550	.250	.625	.375	.250	.000	.500		.636

City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
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City of Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 04_FON_Citrus_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Citrus Avenue Southbound				Santa Ana Avenue Westbound				Citrus Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	04:00 PM				04:00 PM				04:00 PM				04:00 PM				
+0 mins.	1	2	0	3	0	1	0	1	0	3	0	3	0	0	0	0	
+15 mins.	0	1	0	1	0	0	0	0	2	2	0	4	2	0	0	2	
+30 mins.	0	3	0	3	0	0	0	0	0	5	1	6	1	1	0	2	
+45 mins.	0	1	0	1	0	0	0	0	1	1	0	2	0	0	0	0	
Total Volume	1	7	0	8	0	1	0	1	3	11	1	15	3	1	0	4	
% App. Total	12.5	87.5	0		0	100	0		20	73.3	6.7		75	25	0		
PHF	.250	.583	.000	.667	.000	.250	.000	.250	.375	.550	.250	.625	.375	.250	.000	.500	

Location: Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Citrus Avenue	East Leg Santa Ana Avenue	South Leg Citrus Avenue	West Leg Santa Ana Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	1	1
7:45 AM	0	1	0	0	1
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	1	0	0	1
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	4	0	1	5

	North Leg Citrus Avenue	East Leg Santa Ana Avenue	South Leg Citrus Avenue	West Leg Santa Ana Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	0	0	0	1
4:15 PM	0	1	0	0	1
4:30 PM	0	1	1	0	2
4:45 PM	2	0	0	0	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	3	2	1	1	7

Location: Fontana
 N/S: Citrus Avenue
 E/W: Santa Ana Avenue



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Citrus Avenue			Westbound Santa Ana Avenue			Northbound Citrus Avenue			Eastbound Santa Ana Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
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	1	0	0	0	0	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	3	0	0	0	0	4

	Southbound Citrus Avenue			Westbound Santa Ana Avenue			Northbound Citrus Avenue			Eastbound Santa Ana Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	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	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	3	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	3	0	3	0	6

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

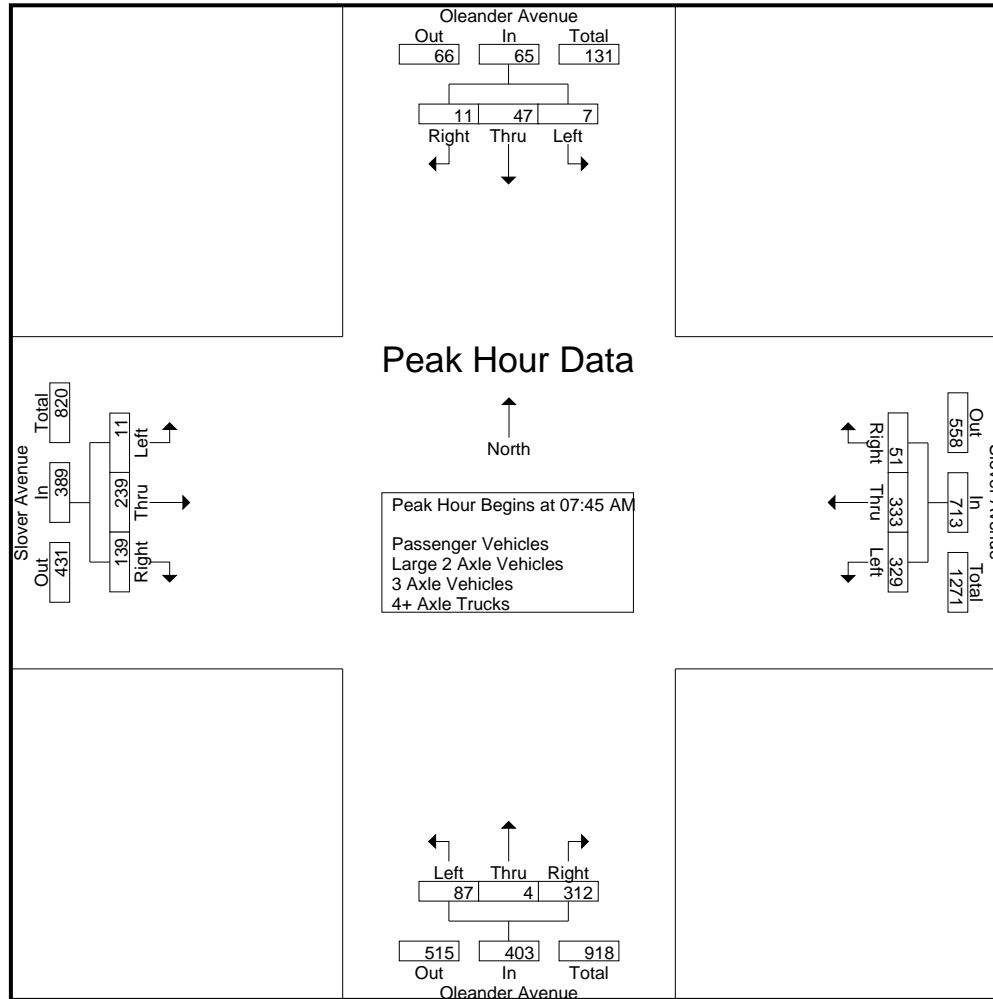
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	3	2	4	10	57	4	0	71	4	1	5	3	10	2	42	14	0	58	5	143	148
07:15 AM	2	1	4	4	7	23	80	0	0	103	12	1	20	16	33	1	27	16	0	44	20	187	207
07:30 AM	1	0	1	1	2	52	92	4	0	148	16	0	43	27	59	2	50	20	9	72	37	281	318
07:45 AM	0	2	4	2	6	65	102	2	2	169	21	0	53	32	74	5	47	32	7	84	43	333	376
Total	3	4	12	9	19	150	331	10	2	491	53	2	121	78	176	10	166	82	16	258	105	944	1049
08:00 AM	3	6	0	0	9	98	87	13	2	198	15	2	74	41	91	1	66	30	10	97	53	395	448
08:15 AM	2	39	3	3	44	115	84	33	12	232	28	0	114	59	142	1	73	58	23	132	97	550	647
08:30 AM	2	0	4	3	6	51	60	3	0	114	23	2	71	39	96	4	53	19	4	76	46	292	338
08:45 AM	1	0	1	0	2	19	60	2	0	81	6	0	21	15	27	2	69	10	2	81	17	191	208
Total	8	45	8	6	61	283	291	51	14	625	72	4	280	154	356	8	261	117	39	386	213	1428	1641
Grand Total	11	49	20	15	80	433	622	61	16	1116	125	6	401	232	532	18	427	199	55	644	318	2372	2690
Apprch %	13.8	61.2	25			38.8	55.7	5.5			23.5	1.1	75.4			2.8	66.3	30.9					
Total %	0.5	2.1	0.8		3.4	18.3	26.2	2.6		47	5.3	0.3	16.9		22.4	0.8	18	8.4		27.2	11.8	88.2	
Passenger Vehicles	9	49	19		92	431	548	60		1055	118	6	396		749	15	372	196		637	0	0	2533
% Passenger Vehicles	81.8	100	95	100	96.8	99.5	88.1	98.4	100	93.2	94.4	100	98.8	98.7	98	83.3	87.1	98.5	98.2	91.1	0	0	94.2
Large 2 Axle Vehicles	1	0	0		1	1	31	0		32	6	0	5		14	3	22	2		27	0	0	74
% Large 2 Axle Vehicles	9.1	0	0	0	1.1	0.2	5	0	0	2.8	4.8	0	1.2	1.3	1.8	16.7	5.2	1	0	3.9	0	0	2.8
3 Axle Vehicles	1	0	0		1	1	15	1		17	1	0	0		1	0	9	1		11	0	0	30
% 3 Axle Vehicles	9.1	0	0	0	1.1	0.2	2.4	1.6	0	1.5	0.8	0	0	0	0.1	0	2.1	0.5	1.8	1.6	0	0	1.1
4+ Axle Trucks	0	0	1		1	0	28	0		28	0	0	0		0	0	24	0		24	0	0	53
% 4+ Axle Trucks	0	0	5	0	1.1	0	4.5	0	0	2.5	0	0	0	0	0	0	5.6	0	0	3.4	0	0	2

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	2	4	6	65	102	2	169	21	0	53	74	5	47	32	84	333
08:00 AM	3	6	0	9	98	87	13	198	15	2	74	91	1	66	30	97	395
08:15 AM	2	39	3	44	115	84	33	232	28	0	114	142	1	73	58	132	550
08:30 AM	2	0	4	6	51	60	3	114	23	2	71	96	4	53	19	76	292
Total Volume	7	47	11	65	329	333	51	713	87	4	312	403	11	239	139	389	1570
% App. Total	10.8	72.3	16.9		46.1	46.7	7.2		21.6	1	77.4		2.8	61.4	35.7		
PHF	.583	.301	.688	.369	.715	.816	.386	.768	.777	.500	.684	.710	.550	.818	.599	.737	.714

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
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City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:30 AM				07:45 AM				07:45 AM				
+0 mins.	0	2	4	6	52	92	4	148	21	0	53	74	5	47	32	84	
+15 mins.	3	6	0	9	65	102	2	169	15	2	74	91	1	66	30	97	
+30 mins.	2	39	3	44	98	87	13	198	28	0	114	142	1	73	58	132	
+45 mins.	2	0	4	6	115	84	33	232	23	2	71	96	4	53	19	76	
Total Volume	7	47	11	65	330	365	52	747	87	4	312	403	11	239	139	389	
% App. Total	10.8	72.3	16.9		44.2	48.9	7		21.6	1	77.4		2.8	61.4	35.7		
PHF	.583	.301	.688	.369	.717	.895	.394	.805	.777	.500	.684	.710	.550	.818	.599	.737	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

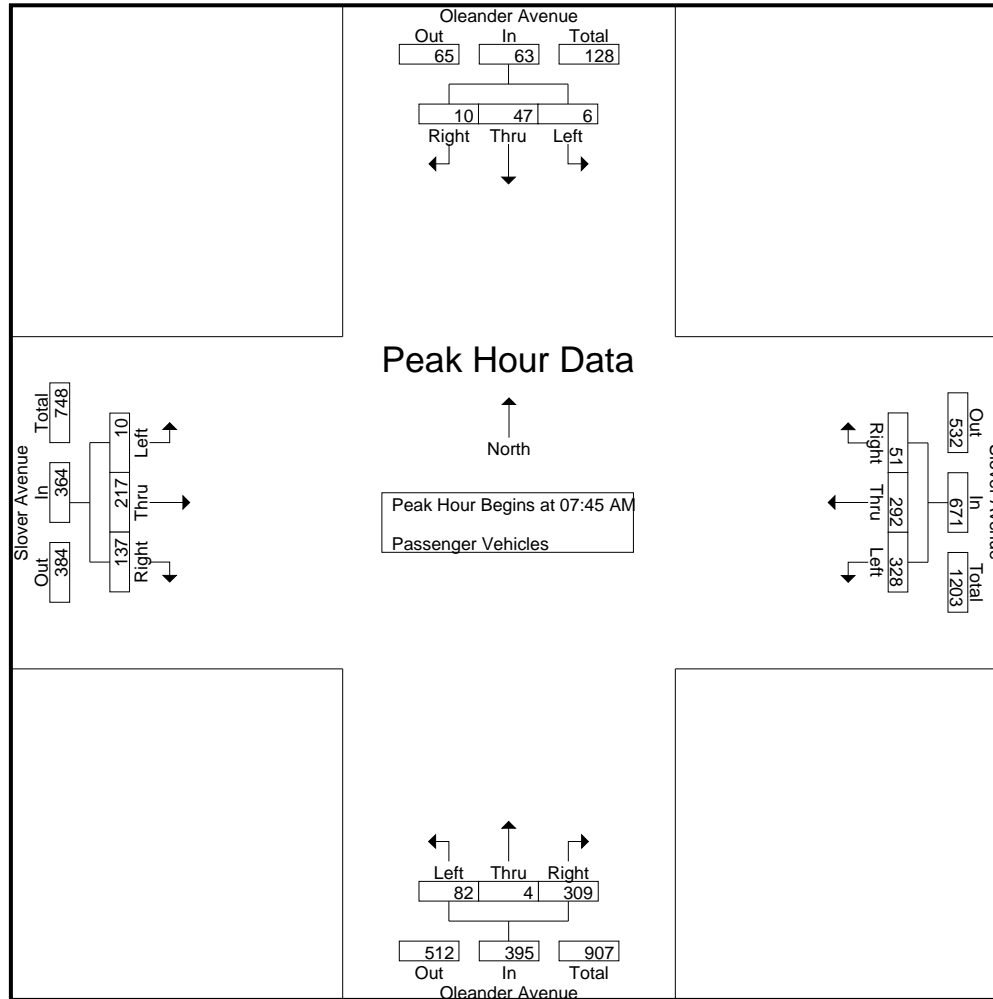
Groups Printed- Passenger Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	1	3	2	4	10	50	4	0	64	4	1	5	3	10	2	38	14	0	54	5	132	137
07:15 AM	2	1	4	4	7	23	70	0	0	93	12	1	18	14	31	1	22	16	0	39	18	170	188
07:30 AM	0	0	1	1	1	52	85	4	0	141	15	0	43	27	58	1	39	19	9	59	37	259	296
07:45 AM	0	2	3	2	5	64	90	2	2	156	20	0	53	32	73	4	43	32	7	79	43	313	356
Total	2	4	11	9	17	149	295	10	2	454	51	2	119	76	172	8	142	81	16	231	103	874	977
08:00 AM	3	6	0	0	9	98	76	13	2	187	15	2	74	41	91	1	60	30	10	91	53	378	431
08:15 AM	2	39	3	3	44	115	73	33	12	221	27	0	112	58	139	1	67	57	23	125	96	529	625
08:30 AM	1	0	4	3	5	51	53	3	0	107	20	2	70	39	92	4	47	18	3	69	45	273	318
08:45 AM	1	0	1	0	2	18	51	1	0	70	5	0	21	15	26	1	56	10	2	67	17	165	182
Total	7	45	8	6	60	282	253	50	14	585	67	4	277	153	348	7	230	115	38	352	211	1345	1556
Grand Total	9	49	19	15	77	431	548	60	16	1039	118	6	396	229	520	15	372	196	54	583	314	2219	2533
Apprch %	11.7	63.6	24.7			41.5	52.7	5.8			22.7	1.2	76.2			2.6	63.8	33.6					
Total %	0.4	2.2	0.9		3.5	19.4	24.7	2.7		46.8	5.3	0.3	17.8		23.4	0.7	16.8	8.8		26.3	12.4	87.6	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	2	3	5	64	90	2	156	20	0	53	73	4	43	32	79	313
08:00 AM	3	6	0	9	98	76	13	187	15	2	74	91	1	60	30	91	378
08:15 AM	2	39	3	44	115	73	33	221	27	0	112	139	1	67	57	125	625
08:30 AM	1	0	4	5	51	53	3	107	20	2	70	92	4	47	18	69	273
Total Volume	6	47	10	63	328	292	51	671	82	4	309	395	10	217	137	364	1493
% App. Total	9.5	74.6	15.9		48.9	43.5	7.6		20.8	1	78.2		2.7	59.6	37.6		
PHF	.500	.301	.625	.358	.713	.811	.386	.759	.759	.500	.690	.710	.625	.810	.601	.728	.706

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
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City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
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Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	2	3	5	64	90	2	156	20	0	53	73	4	43	32	79	
+15 mins.	3	6	0	9	98	76	13	187	15	2	74	91	1	60	30	91	
+30 mins.	2	39	3	44	115	73	33	221	27	0	112	139	1	67	57	125	
+45 mins.	1	0	4	5	51	53	3	107	20	2	70	92	4	47	18	69	
Total Volume	6	47	10	63	328	292	51	671	82	4	309	395	10	217	137	364	
% App. Total	9.5	74.6	15.9		48.9	43.5	7.6		20.8	1	78.2		2.7	59.6	37.6		
PHF	.500	.301	.625	.358	.713	.811	.386	.759	.759	.500	.690	.710	.625	.810	.601	.728	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
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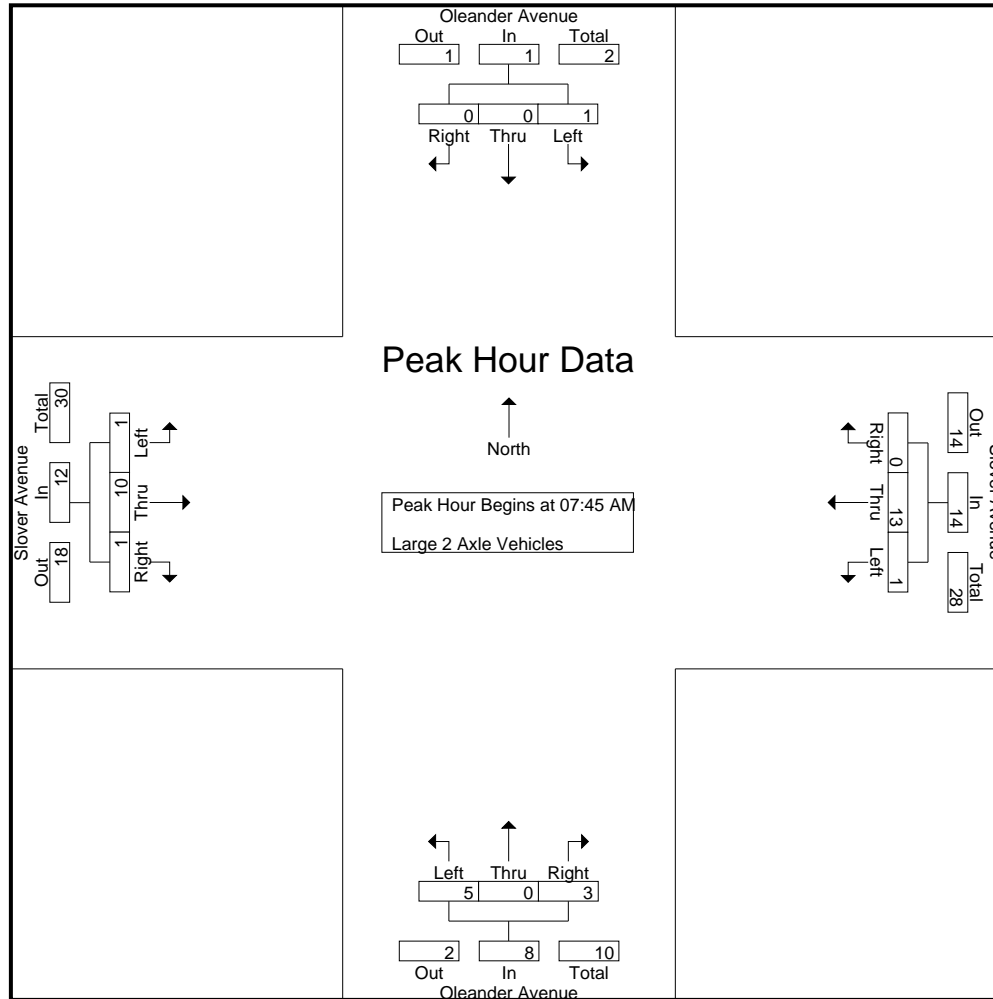
Groups Printed- Large 2 Axle Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	6	6
07:15 AM	0	0	0	0	0	0	5	0	0	5	0	0	2	2	2	0	3	0	0	3	2	10	12
07:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	3	1	0	5	0	8	8
07:45 AM	0	0	0	0	0	1	6	0	0	7	1	0	0	0	1	1	2	0	0	3	0	11	11
Total	0	0	0	0	0	1	19	0	0	20	1	0	2	2	3	2	9	1	0	12	2	35	37
08:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	0	6	6
08:15 AM	0	0	0	0	0	0	2	0	0	2	1	0	2	1	3	0	4	1	0	5	1	10	11
08:30 AM	1	0	0	0	1	0	2	0	0	2	3	0	1	0	4	0	1	0	0	1	0	8	8
08:45 AM	0	0	0	0	0	0	5	0	0	5	1	0	0	0	1	1	5	0	0	6	0	12	12
Total	1	0	0	0	1	0	12	0	0	12	5	0	3	1	8	1	13	1	0	15	1	36	37
Grand Total	1	0	0	0	1	1	31	0	0	32	6	0	5	3	11	3	22	2	0	27	3	71	74
Apprch %	100	0	0			3.1	96.9	0			54.5	0	45.5			11.1	81.5	7.4					
Total %	1.4	0	0		1.4	1.4	43.7	0		45.1	8.5	0	7		15.5	4.2	31	2.8		38	4.1	95.9	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	0	0	0	1	6	0	7	1	0	0	1	1	2	0	3	11
08:00 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	6
08:15 AM	0	0	0	0	0	2	0	2	1	0	2	3	0	4	1	5	10
08:30 AM	1	0	0	1	0	2	0	2	3	0	1	4	0	1	0	1	8
Total Volume	1	0	0	1	1	13	0	14	5	0	3	8	1	10	1	12	35
% App. Total	100	0	0		7.1	92.9	0		62.5	0	37.5		8.3	83.3	8.3		
PHF	.250	.000	.000	.250	.250	.542	.000	.500	.417	.000	.375	.500	.250	.625	.250	.600	.795

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
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City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	0	0	0	1	6	0	7	1	0	0	1	1	2	0	3	
+15 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	3	0	3	
+30 mins.	0	0	0	0	0	2	0	2	1	0	2	3	0	4	1	5	
+45 mins.	1	0	0	1	0	2	0	2	3	0	1	4	0	1	0	1	
Total Volume	1	0	0	1	1	13	0	14	5	0	3	8	1	10	1	12	
% App. Total	100	0	0		7.1	92.9	0		62.5	0	37.5		8.3	83.3	8.3		
PHF	.250	.000	.000	.250	.250	.542	.000	.500	.417	.000	.375	.500	.250	.625	.250	.600	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

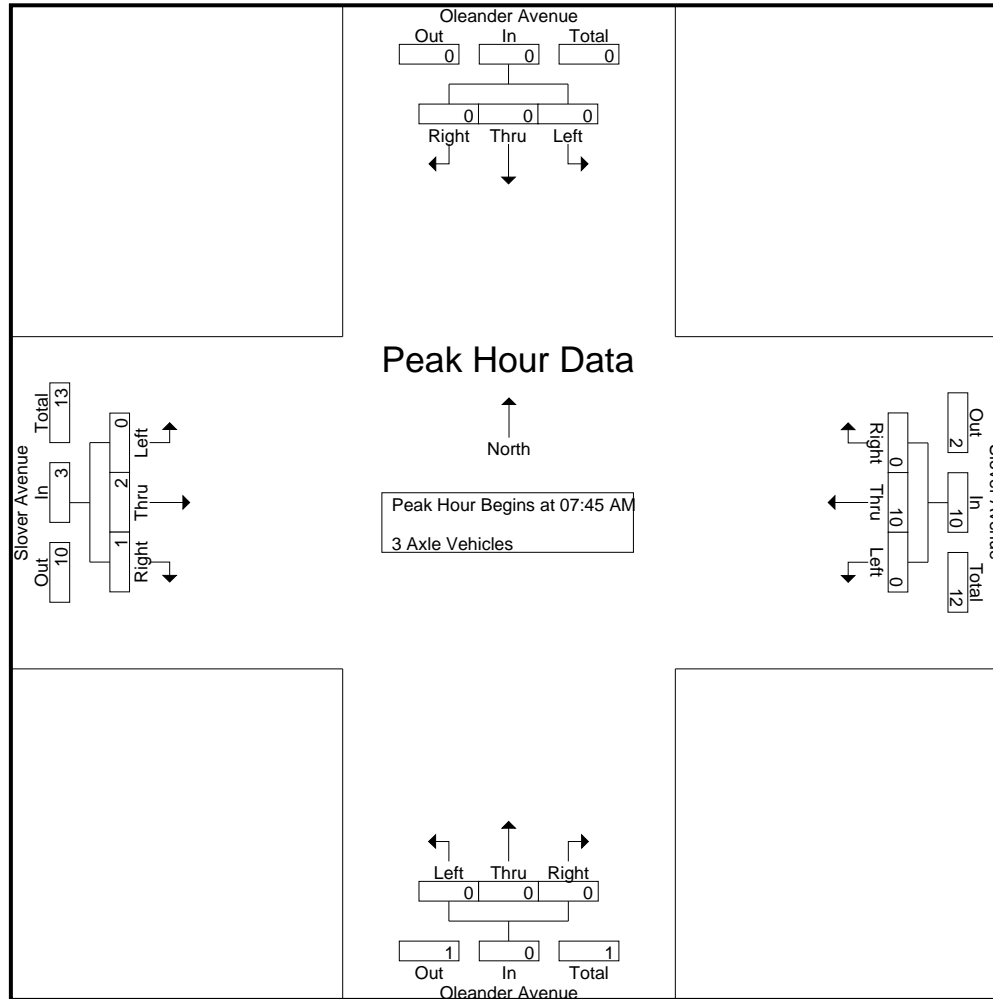
Groups Printed- 3 Axle Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	3	3
07:15 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	4	4
07:30 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	0	4	4	4
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	2	2	2
Total	1	0	0	0	1	0	6	0	0	6	1	0	0	0	1	0	5	0	0	5	0	13	13	13
08:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	0	5	5	5
08:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2	2
08:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	1	1	1	1	4	5	5
08:45 AM	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	3	0	0	3	0	5	5	5
Total	0	0	0	0	0	1	9	1	0	11	0	0	0	0	0	0	4	1	1	5	1	16	17	17
Grand Total	1	0	0	0	1	1	15	1	0	17	1	0	0	0	1	0	9	1	1	10	1	29	30	30
Apprch %	100	0	0			5.9	88.2	5.9			100	0	0			0	90	10						
Total %	3.4	0	0		3.4	3.4	51.7	3.4		58.6	3.4	0	0		3.4	0	31	3.4		34.5	3.3	96.7		

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
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	4	0	4	0	0	0	0	0	1	0	1	5
08:15 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:30 AM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	2	1	3	13
% App. Total	0	0	0		0	100	0		0	0	0		0	66.7	33.3		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.250	.750	.650

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
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City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
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Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 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	4	0	4	0	0	0	0	0	1	0	1	
+30 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	
+45 mins.	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	2	1	3	
% App. Total	0	0	0	0	0	100	0		0	0	0	0	0	66.7	33.3		
PHF	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.000	.500	.250	.750	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
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 Page No : 1

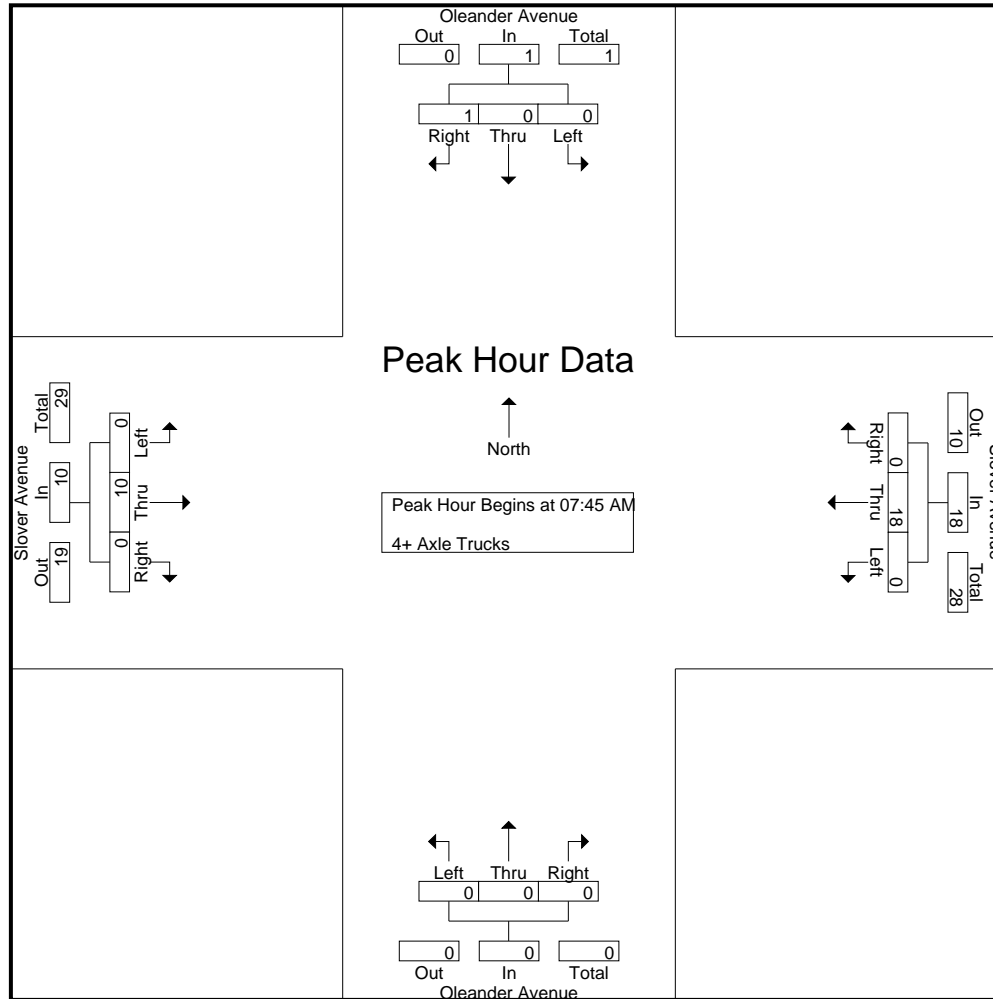
Groups Printed- 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	2
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	0	0	3	3
07:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	6	0	0	6	0	0	10	10
07:45 AM	0	0	1	0	1	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	0	0	7	7
Total	0	0	1	0	1	0	11	0	0	11	0	0	0	0	0	0	10	0	0	10	0	0	22	22
08:00 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	6	6
08:15 AM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	2	0	0	2	0	0	9	9
08:30 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	5	0	0	5	0	0	7	7
08:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	0	9	9
Total	0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	14	0	0	14	0	0	31	31
Grand Total	0	0	1	0	1	0	28	0	0	28	0	0	0	0	0	0	24	0	0	24	0	0	53	53
Apprch %	0	0	100			0	100	0			0	0	0			0	100	0			0	0	100	
Total %	0	0	1.9		1.9	0	52.8	0		52.8	0	0	0		0	0	45.3	0		45.3	0	0	100	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	1	1	0	5	0	5	0	0	0	0	0	1	0	1	7
08:00 AM	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	6
08:15 AM	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	9
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	7
Total Volume	0	0	1	1	0	18	0	18	0	0	0	0	0	10	0	10	29
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.643	.000	.643	.000	.000	.000	.000	.000	.500	.000	.500	.806

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover AM
 Site Code : 05122471
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City of Fontana
 N/S: Oleander Avenue
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 Weather: Clear

File Name : 05_FON_Ole_Slover AM
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Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	0	1	1	0	5	0	5	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	2	0	2	
+30 mins.	0	0	0	0	0	7	0	7	0	0	0	0	0	2	0	2	
+45 mins.	0	0	0	0	0	2	0	2	0	0	0	0	0	5	0	5	
Total Volume	0	0	1	1	0	18	0	18	0	0	0	0	0	10	0	10	
% App. Total	0	0	100		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.250	.250	.000	.643	.000	.643	.000	.000	.000	.000	.000	.500	.000	.500	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
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 Page No : 1

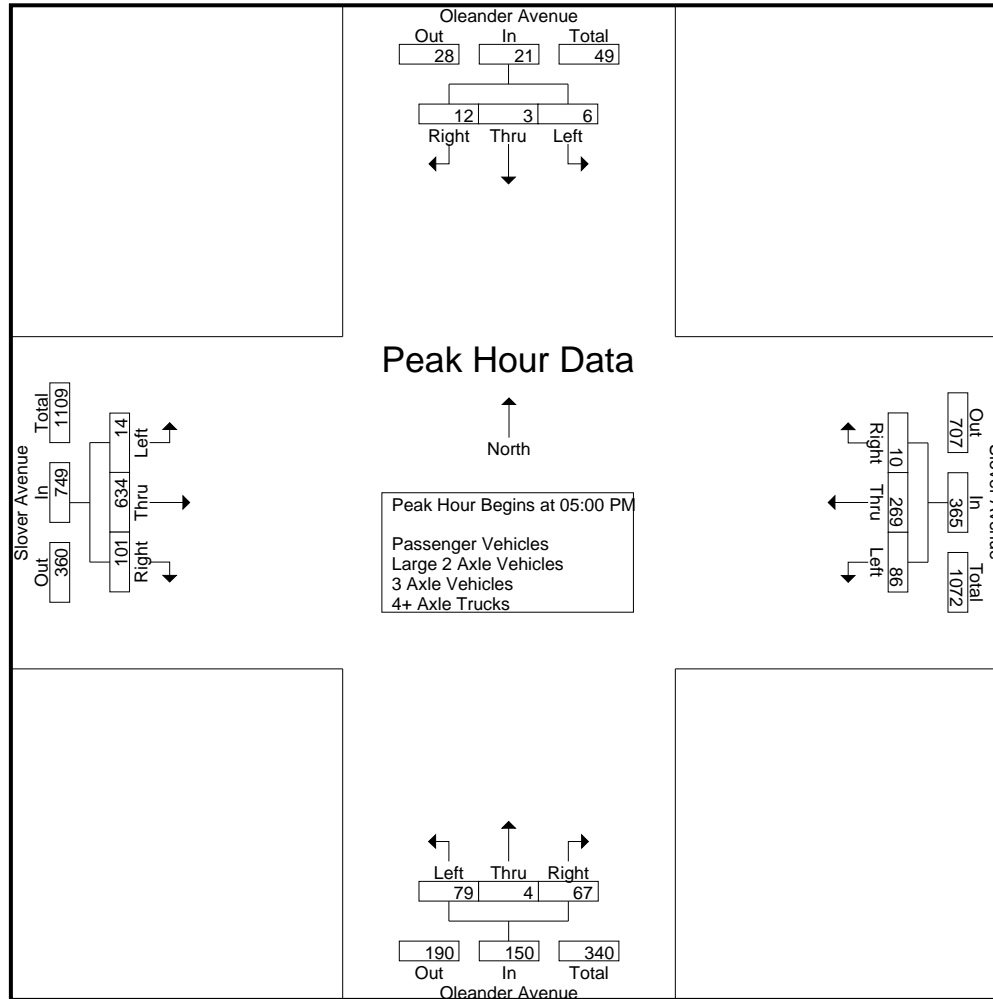
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	5	76	2	0	83	13	0	16	8	29	3	171	9	2	183	10	296	306
04:15 PM	0	1	3	1	4	5	63	0	0	68	8	1	11	8	20	3	179	7	2	189	11	281	292
04:30 PM	0	0	6	3	6	11	78	2	0	91	7	1	7	4	15	1	196	7	1	204	8	316	324
04:45 PM	2	1	1	1	4	8	66	1	0	75	8	0	5	5	13	3	207	20	2	230	8	322	330
Total	2	3	10	5	15	29	283	5	0	317	36	2	39	25	77	10	753	43	7	806	37	1215	1252
05:00 PM	0	0	3	2	3	15	93	2	0	110	13	0	5	3	18	2	185	11	4	198	9	329	338
05:15 PM	3	0	1	1	4	17	73	4	1	94	11	0	8	6	19	5	172	20	3	197	11	314	325
05:30 PM	0	1	3	2	4	28	50	1	0	79	4	2	10	7	16	1	151	39	2	191	11	290	301
05:45 PM	3	2	5	1	10	26	53	3	0	82	51	2	44	20	97	6	126	31	10	163	31	352	383
Total	6	3	12	6	21	86	269	10	1	365	79	4	67	36	150	14	634	101	19	749	62	1285	1347
Grand Total	8	6	22	11	36	115	552	15	1	682	115	6	106	61	227	24	1387	144	26	1555	99	2500	2599
Apprch %	22.2	16.7	61.1			16.9	80.9	2.2			50.7	2.6	46.7			1.5	89.2	9.3					
Total %	0.3	0.2	0.9		1.4	4.6	22.1	0.6		27.3	4.6	0.2	4.2		9.1	1	55.5	5.8		62.2	3.8	96.2	
Passenger Vehicles	6	6	19		41	114	484	14		612	115	6	105		287	23	1254	142		1445	0	0	2385
% Passenger Vehicles	75	100	86.4	90.9	87.2	99.1	87.7	93.3	0	89.6	100	100	99.1	100	99.7	95.8	90.4	98.6	100	91.4	0	0	91.8
Large 2 Axle Vehicles	1	0	0		1	0	19	1		21	0	0	1		1	0	44	2		46	0	0	69
% Large 2 Axle Vehicles	12.5	0	0	0	2.1	0	3.4	6.7	100	3.1	0	0	0.9	0	0.3	0	3.2	1.4	0	2.9	0	0	2.7
3 Axle Vehicles	1	0	3		5	1	23	0		24	0	0	0		0	1	26	0		27	0	0	56
% 3 Axle Vehicles	12.5	0	13.6	9.1	10.6	0.9	4.2	0	0	3.5	0	0	0	0	0	4.2	1.9	0	0	1.7	0	0	2.2
4+ Axle Trucks	0	0	0		0	0	26	0		26	0	0	0		0	0	63	0		63	0	0	89
% 4+ Axle Trucks	0	0	0	0	0	0	4.7	0	0	3.8	0	0	0	0	0	0	4.5	0	0	4	0	0	3.4

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	0	0	3	3	15	93	2	110	13	0	5	18	2	185	11	198	329
05:15 PM	3	0	1	4	17	73	4	94	11	0	8	19	5	172	20	197	314
05:30 PM	0	1	3	4	28	50	1	79	4	2	10	16	1	151	39	191	290
05:45 PM	3	2	5	10	26	53	3	82	51	2	44	97	6	126	31	163	352
Total Volume	6	3	12	21	86	269	10	365	79	4	67	150	14	634	101	749	1285
% App. Total	28.6	14.3	57.1		23.6	73.7	2.7		52.7	2.7	44.7		1.9	84.6	13.5		
PHF	.500	.375	.600	.525	.768	.723	.625	.830	.387	.500	.381	.387	.583	.857	.647	.946	.913

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
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City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
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 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:30 PM				05:00 PM				04:30 PM				
+0 mins.	0	0	3	3	11	78	2	91	13	0	5	18	1	196	7	204	
+15 mins.	3	0	1	4	8	66	1	75	11	0	8	19	3	207	20	230	
+30 mins.	0	1	3	4	15	93	2	110	4	2	10	16	2	185	11	198	
+45 mins.	3	2	5	10	17	73	4	94	51	2	44	97	5	172	20	197	
Total Volume	6	3	12	21	51	310	9	370	79	4	67	150	11	760	58	829	
% App. Total	28.6	14.3	57.1		13.8	83.8	2.4		52.7	2.7	44.7		1.3	91.7	7		
PHF	.500	.375	.600	.525	.750	.833	.563	.841	.387	.500	.381	.387	.550	.918	.725	.901	

City of Fontana
 N/S: Oleander Avenue
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 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
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 Page No : 1

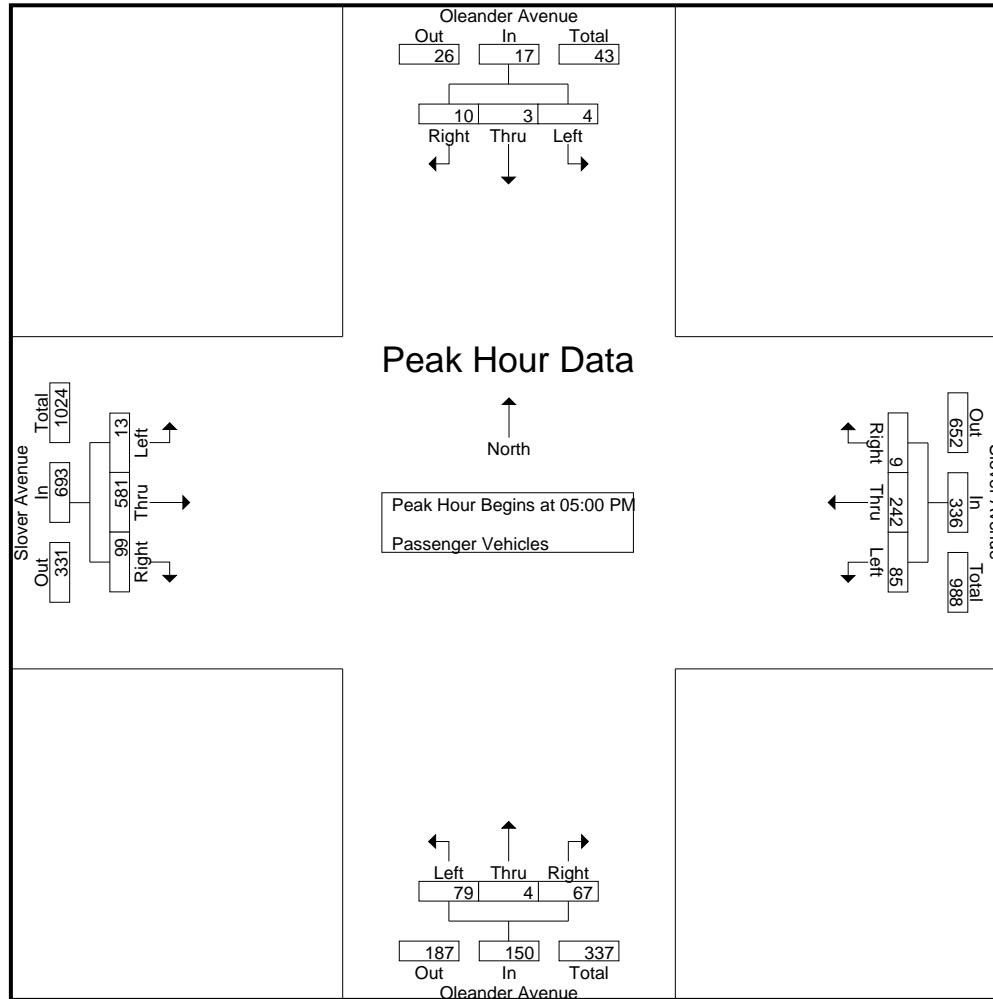
Groups Printed- Passenger Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	1	0	0	1	5	65	2	0	72	13	0	15	8	28	3	152	9	2	164	10	265	275
04:15 PM	0	1	2	1	3	5	56	0	0	61	8	1	11	8	20	3	157	7	2	167	11	251	262
04:30 PM	0	0	6	3	6	11	66	2	0	79	7	1	7	4	15	1	173	7	1	181	8	281	289
04:45 PM	2	1	1	1	4	8	55	1	0	64	8	0	5	5	13	3	191	20	2	214	8	295	303
Total	2	3	9	5	14	29	242	5	0	276	36	2	38	25	76	10	673	43	7	726	37	1092	1129
05:00 PM	0	0	3	2	3	14	84	2	0	100	13	0	5	3	18	2	165	11	4	178	9	299	308
05:15 PM	3	0	1	1	4	17	63	3	0	83	11	0	8	6	19	4	159	18	3	181	10	287	297
05:30 PM	0	1	2	1	3	28	47	1	0	76	4	2	10	7	16	1	138	39	2	178	10	273	283
05:45 PM	1	2	4	1	7	26	48	3	0	77	51	2	44	20	97	6	119	31	10	156	31	337	368
Total	4	3	10	5	17	85	242	9	0	336	79	4	67	36	150	13	581	99	19	693	60	1196	1256
Grand Total	6	6	19	10	31	114	484	14	0	612	115	6	105	61	226	23	1254	142	26	1419	97	2288	2385
Apprch %	19.4	19.4	61.3			18.6	79.1	2.3			50.9	2.7	46.5			1.6	88.4	10					
Total %	0.3	0.3	0.8		1.4	5	21.2	0.6		26.7	5	0.3	4.6		9.9	1	54.8	6.2		62	4.1	95.9	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	3	3	14	84	2	100	13	0	5	18	2	165	11	178	299
05:15 PM	3	0	1	4	17	63	3	83	11	0	8	19	4	159	18	181	287
05:30 PM	0	1	2	3	28	47	1	76	4	2	10	16	1	138	39	178	273
05:45 PM	1	2	4	7	26	48	3	77	51	2	44	97	6	119	31	156	337
Total Volume	4	3	10	17	85	242	9	336	79	4	67	150	13	581	99	693	1196
% App. Total	23.5	17.6	58.8		25.3	72	2.7		52.7	2.7	44.7		1.9	83.8	14.3		
PHF	.333	.375	.625	.607	.759	.720	.750	.840	.387	.500	.381	.387	.542	.880	.635	.957	.887

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	3	3	14	84	2	100	13	0	5	18	2	165	11	178	
+15 mins.	3	0	1	4	17	63	3	83	11	0	8	19	4	159	18	181	
+30 mins.	0	1	2	3	28	47	1	76	4	2	10	16	1	138	39	178	
+45 mins.	1	2	4	7	26	48	3	77	51	2	44	97	6	119	31	156	
Total Volume	4	3	10	17	85	242	9	336	79	4	67	150	13	581	99	693	
% App. Total	23.5	17.6	58.8		25.3	72	2.7		52.7	2.7	44.7		1.9	83.8	14.3		
PHF	.333	.375	.625	.607	.759	.720	.750	.840	.387	.500	.381	.387	.542	.880	.635	.957	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

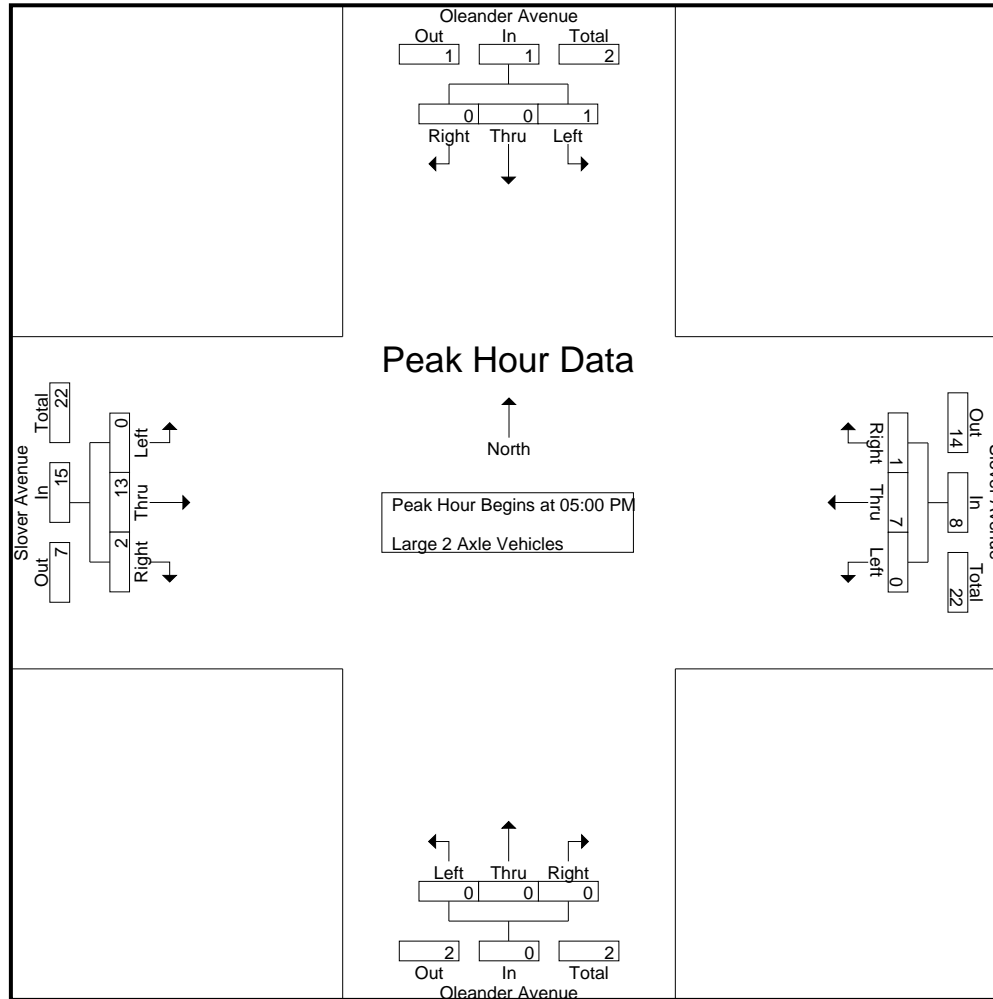
Groups Printed- Large 2 Axle Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	6	0	0	6	0	10	10
04:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	10	0	0	10	0	11	11
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	11	0	0	11	0	15	15
04:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	8	8
Total	0	0	0	0	0	0	12	0	0	12	0	0	1	0	1	0	31	0	0	31	0	44	44
05:00 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	0	9	9
05:15 PM	0	0	0	0	0	0	1	1	1	2	0	0	0	0	0	0	4	2	0	6	1	8	9
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	5	5
05:45 PM	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
Total	1	0	0	0	1	0	7	1	1	8	0	0	0	0	0	0	13	2	0	15	1	24	25
Grand Total	1	0	0	0	1	0	19	1	1	20	0	0	1	0	1	0	44	2	0	46	1	68	69
Apprch %	100	0	0			0	95	5			0	0	100			0	95.7	4.3					
Total %	1.5	0	0		1.5	0	27.9	1.5		29.4	0	0	1.5		1.5	0	64.7	2.9		67.6	1.4	98.6	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	9
05:15 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	4	2	6	8
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	5
05:45 PM	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Volume	1	0	0	1	0	7	1	8	0	0	0	0	0	13	2	15	24
% App. Total	100	0	0		0	87.5	12.5		0	0	0		0	86.7	13.3		
PHF	.250	.000	.000	.250	.000	.438	.250	.500	.000	.000	.000	.000	.000	.650	.250	.625	.667

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	4	0	4	0	0	0	0	0	5	0	5	
+15 mins.	0	0	0	0	0	1	1	2	0	0	0	0	0	4	2	6	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	4	0	4	
+45 mins.	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	
Total Volume	1	0	0	1	0	7	1	8	0	0	0	0	0	13	2	15	
% App. Total	100	0	0		0	87.5	12.5		0	0	0		0	86.7	13.3		
PHF	.250	.000	.000	.250	.000	.438	.250	.500	.000	.000	.000	.000	.000	.650	.250	.625	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

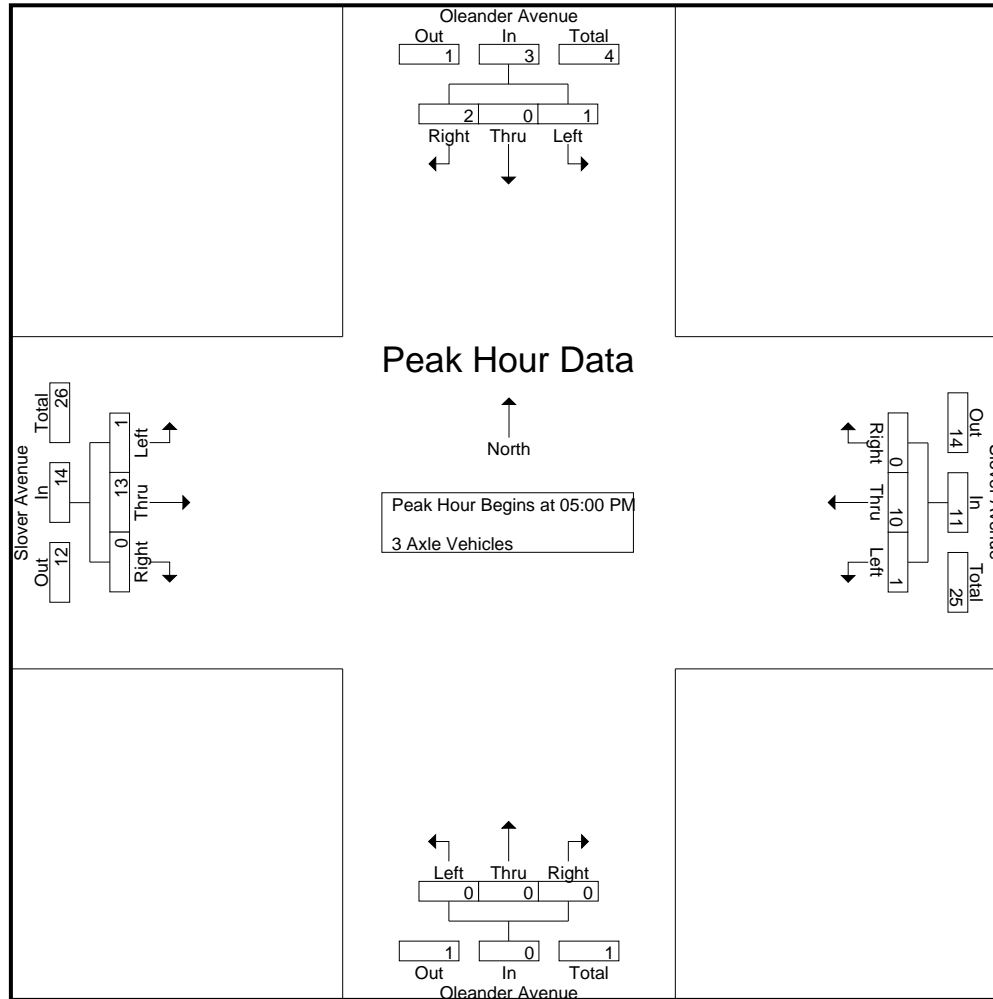
Groups Printed- 3 Axle Vehicles

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	0	0	7	7
04:15 PM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	0	0	6	6
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	6	6
04:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	4	0	0	4	0	0	8	8
Total	0	0	1	0	1	0	13	0	0	13	0	0	0	0	0	0	13	0	0	13	0	0	27	27
05:00 PM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	5	0	0	5	0	0	10	10
05:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	2	0	0	3	0	0	5	5
05:30 PM	0	0	1	1	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	1	0	6	7
05:45 PM	1	0	1	0	2	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	0	0	7	7
Total	1	0	2	1	3	1	10	0	0	11	0	0	0	0	0	1	13	0	0	14	1	0	28	29
Grand Total	1	0	3	1	4	1	23	0	0	24	0	0	0	0	0	1	26	0	0	27	1	0	55	56
Apprch %	25	0	75			4.2	95.8	0			0	0	0			3.7	96.3	0						
Total %	1.8	0	5.5		7.3	1.8	41.8	0		43.6	0	0	0		0	1.8	47.3	0		49.1	1.8	0	98.2	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	1	4	0	5	0	0	0	0	0	5	0	5	10
05:15 PM	0	0	0	0	0	2	0	2	0	0	0	0	1	2	0	3	5
05:30 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	4	0	4	6
05:45 PM	1	0	1	2	0	3	0	3	0	0	0	0	0	2	0	2	7
Total Volume	1	0	2	3	1	10	0	11	0	0	0	0	1	13	0	14	28
% App. Total	33.3	0	66.7		9.1	90.9	0		0	0	0		7.1	92.9	0		
PHF	.250	.000	.500	.375	.250	.625	.000	.550	.000	.000	.000	.000	.250	.650	.000	.700	.700

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	1	4	0	5	0	0	0	0	0	5	0	5	
+15 mins.	0	0	0	0	0	2	0	2	0	0	0	0	1	2	0	3	
+30 mins.	0	0	1	1	0	1	0	1	0	0	0	0	0	4	0	4	
+45 mins.	1	0	1	2	0	3	0	3	0	0	0	0	0	2	0	2	
Total Volume	1	0	2	3	1	10	0	11	0	0	0	0	1	13	0	14	
% App. Total	33.3	0	66.7		9.1	90.9	0		0	0	0		7.1	92.9	0		
PHF	.250	.000	.500	.375	.250	.625	.000	.550	.000	.000	.000	.000	.250	.650	.000	.700	

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

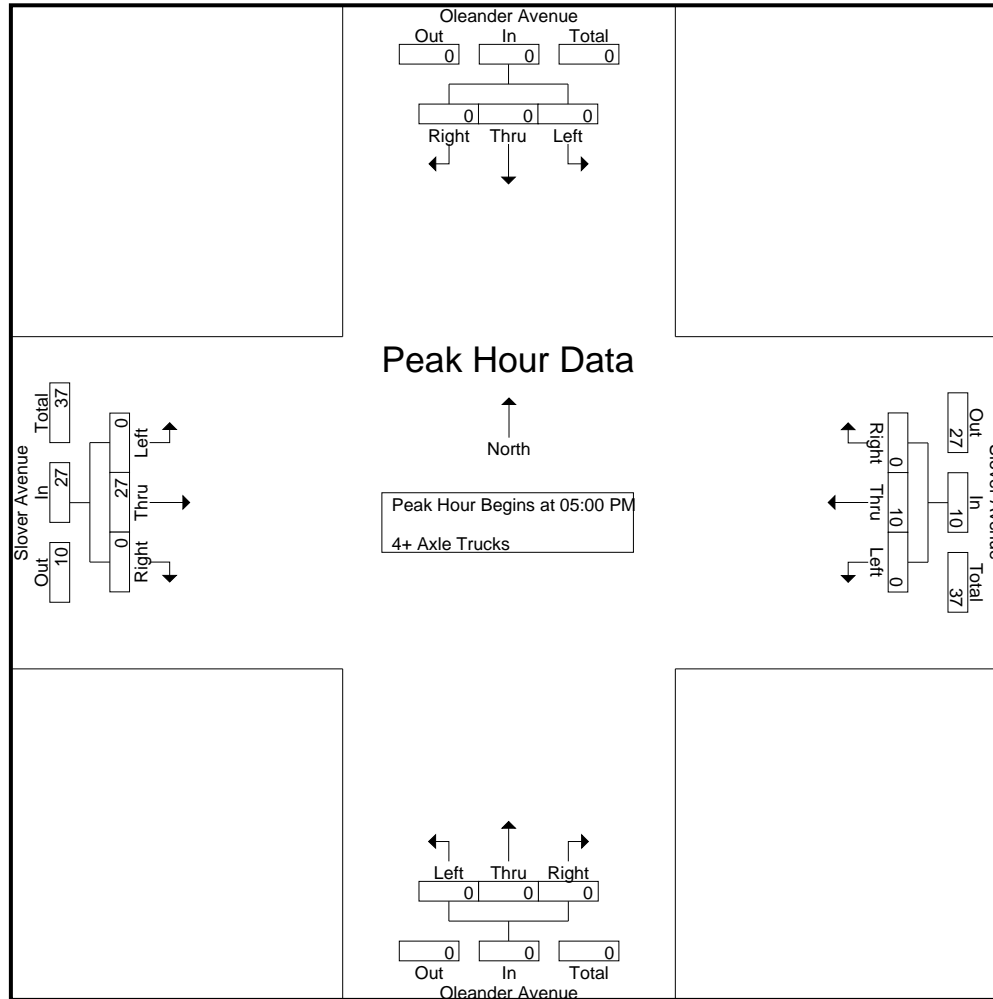
Groups Printed- 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Slover Avenue Westbound					Oleander Avenue Northbound					Slover Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	9	0	0	9	0	14	14
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	0	13	13
04:30 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10	0	0	10	0	14	14
04:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	8	0	0	8	0	11	11
Total	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	0	36	0	0	36	0	52	52
05:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	10	0	0	10	0	11	11
05:15 PM	0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	7	0	0	7	0	14	14
05:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	6	6
05:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	6	6
Total	0	0	0	0	0	0	10	0	0	10	0	0	0	0	0	0	27	0	0	27	0	37	37
Grand Total	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	0	63	0	0	63	0	89	89
Apprch %	0	0	0			0	100	0			0	0	0			0	100	0			0		
Total %	0	0	0			0	29.2	0		29.2	0	0	0			0	70.8	0		70.8	0	100	

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	10	0	10	11
05:15 PM	0	0	0	0	0	7	0	7	0	0	0	0	0	7	0	7	14
05:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	6
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	27	0	27	37
% App. Total	0	0	0		0	100	0		0	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.357	.000	.357	.000	.000	.000	.000	.000	.675	.000	.675	.661

City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue
 Weather: Clear

File Name : 05_FON_Ole_Slover PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Slover Avenue Westbound				Oleander Avenue Northbound				Slover Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	10	0	10	
+15 mins.	0	0	0	0	0	7	0	7	0	0	0	0	0	7	0	7	
+30 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	
+45 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	5	0	5	
Total Volume	0	0	0	0	0	10	0	10	0	0	0	0	0	27	0	27	
% App. Total	0	0	0	0	0	100	0	100	0	0	0	0	0	100	0	100	
PHF	.000	.000	.000	.000	.000	.357	.000	.357	.000	.000	.000	.000	.000	.675	.000	.675	

Location: Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Oleander Avenue	East Leg Slover Avenue	South Leg Oleander Avenue	West Leg Slover Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	4	0	0	0	4
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	1	1
7:45 AM	0	2	0	2	4
8:00 AM	1	0	0	1	2
8:15 AM	0	0	6	1	7
8:30 AM	2	0	0	0	2
8:45 AM	1	0	0	0	1
TOTAL VOLUMES:	8	2	6	5	21

	North Leg Oleander Avenue	East Leg Slover Avenue	South Leg Oleander Avenue	West Leg Slover Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
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	2	0	0	0	2
TOTAL VOLUMES:	2	1	0	0	3

Location: Fontana
 N/S: Oleander Avenue
 E/W: Slover Avenue



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Oleander Avenue			Westbound Slover Avenue			Northbound Oleander Avenue			Eastbound Slover Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	1	0	0	0	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	2	0	0	0	0	1	0	0	0	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	2	0	0	0	0	1	0	0	0	4

	Southbound Oleander Avenue			Westbound Slover Avenue			Northbound Oleander Avenue			Eastbound Slover Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	1	3	0	4

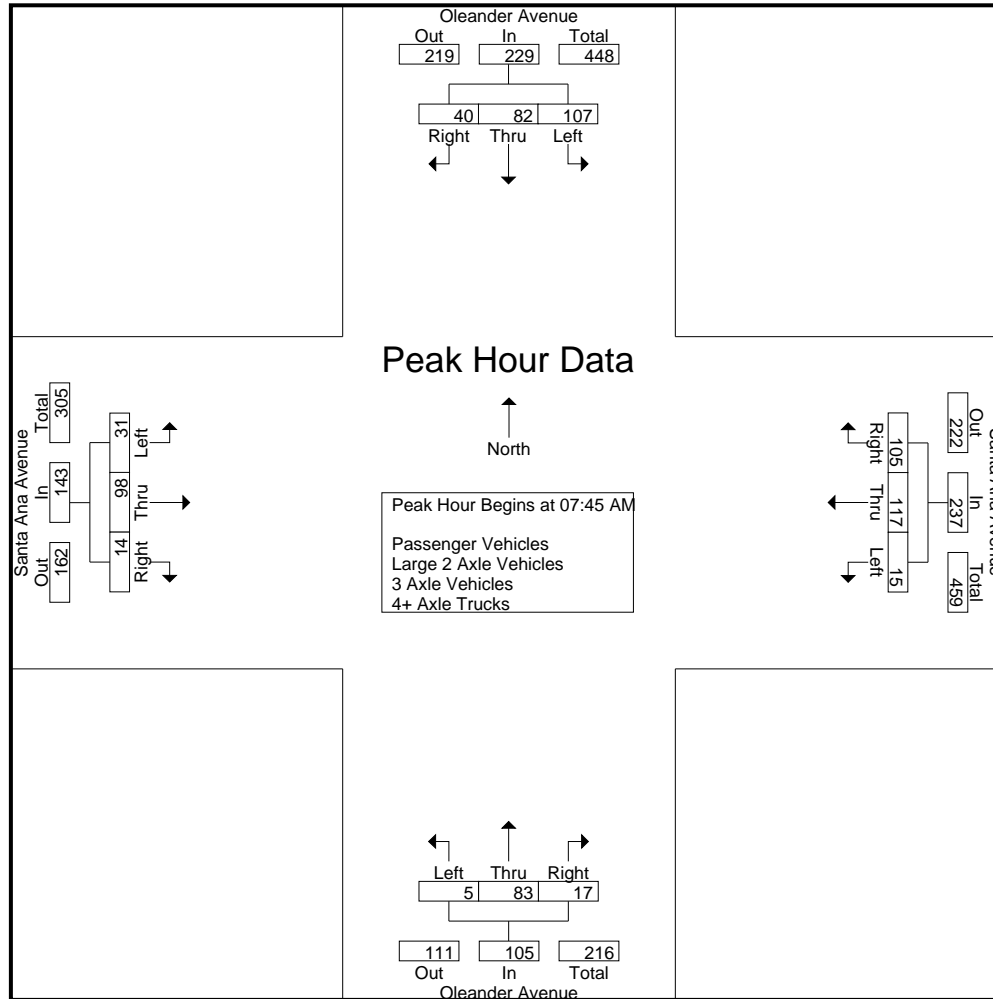
City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

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

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	8	1	1	10	4	27	4	0	35	4	2	2	1	8	1	16	9	3	26	5	79	84
07:15 AM	2	6	2	0	10	4	22	8	1	34	1	8	2	2	11	2	12	8	1	22	4	77	81
07:30 AM	3	12	3	2	18	4	31	6	1	41	2	8	0	0	10	2	13	5	2	20	5	89	94
07:45 AM	12	10	4	1	26	3	38	14	4	55	1	15	2	0	18	3	23	3	0	29	5	128	133
Total	18	36	10	4	64	15	118	32	6	165	8	33	6	3	47	8	64	25	6	97	19	373	392
08:00 AM	22	20	7	0	49	2	31	37	12	70	2	18	5	4	25	15	30	2	0	47	16	191	207
08:15 AM	52	35	27	12	114	5	30	40	15	75	2	39	5	1	46	7	29	4	3	40	31	275	306
08:30 AM	21	17	2	0	40	5	18	14	7	37	0	11	5	1	16	6	16	5	1	27	9	120	129
08:45 AM	5	8	2	1	15	4	23	5	2	32	2	1	5	0	8	3	24	5	2	32	5	87	92
Total	100	80	38	13	218	16	102	96	36	214	6	69	20	6	95	31	99	16	6	146	61	673	734
Grand Total	118	116	48	17	282	31	220	128	42	379	14	102	26	9	142	39	163	41	12	243	80	1046	1126
Apprch %	41.8	41.1	17			8.2	58	33.8			9.9	71.8	18.3			16	67.1	16.9					
Total %	11.3	11.1	4.6		27	3	21	12.2		36.2	1.3	9.8	2.5		13.6	3.7	15.6	3.9		23.2	7.1	92.9	
Passenger Vehicles	114	114	48		293	28	213	117		395	6	98	21		134	39	153	34		236	0	0	1058
% Passenger Vehicles	96.6	98.3	100	100	98	90.3	96.8	91.4	88.1	93.8	42.9	96.1	80.8	100	88.7	100	93.9	82.9	83.3	92.5	0	0	94
Large 2 Axle Vehicles	2	2	0		4	1	6	11		23	0	3	0		3	0	3	1		4	0	0	34
% Large 2 Axle Vehicles	1.7	1.7	0	0	1.3	3.2	2.7	8.6	11.9	5.5	0	2.9	0	0	2	0	1.8	2.4	0	1.6	0	0	3
3 Axle Vehicles	2	0	0		2	1	0	0		1	3	1	1		5	0	3	0		3	0	0	11
% 3 Axle Vehicles	1.7	0	0	0	0.7	3.2	0	0	0	0.2	21.4	1	3.8	0	3.3	0	1.8	0	0	1.2	0	0	1
4+ Axle Trucks	0	0	0		0	1	1	0		2	5	0	4		9	0	4	6		12	0	0	23
% 4+ Axle Trucks	0	0	0	0	0	3.2	0.5	0	0	0.5	35.7	0	15.4	0	6	0	2.5	14.6	16.7	4.7	0	0	2

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	12	10	4	26	3	38	14	55	1	15	2	18	3	23	3	29	128
08:00 AM	22	20	7	49	2	31	37	70	2	18	5	25	15	30	2	47	191
08:15 AM	52	35	27	114	5	30	40	75	2	39	5	46	7	29	4	40	275
08:30 AM	21	17	2	40	5	18	14	37	0	11	5	16	6	16	5	27	120
Total Volume	107	82	40	229	15	117	105	237	5	83	17	105	31	98	14	143	714
% App. Total	46.7	35.8	17.5		6.3	49.4	44.3		4.8	79	16.2		21.7	68.5	9.8		
PHF	.514	.586	.370	.502	.750	.770	.656	.790	.625	.532	.850	.571	.517	.817	.700	.761	.649



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:30 AM				07:45 AM				08:00 AM				
+0 mins.	12	10	4	26	4	31	6	41	1	15	2	18	15	30	2	47	
+15 mins.	22	20	7	49	3	38	14	55	2	18	5	25	7	29	4	40	
+30 mins.	52	35	27	114	2	31	37	70	2	39	5	46	6	16	5	27	
+45 mins.	21	17	2	40	5	30	40	75	0	11	5	16	3	24	5	32	
Total Volume	107	82	40	229	14	130	97	241	5	83	17	105	31	99	16	146	
% App. Total	46.7	35.8	17.5		5.8	53.9	40.2		4.8	79	16.2		21.2	67.8	11		
PHF	.514	.586	.370	.502	.700	.855	.606	.803	.625	.532	.850	.571	.517	.825	.800	.777	

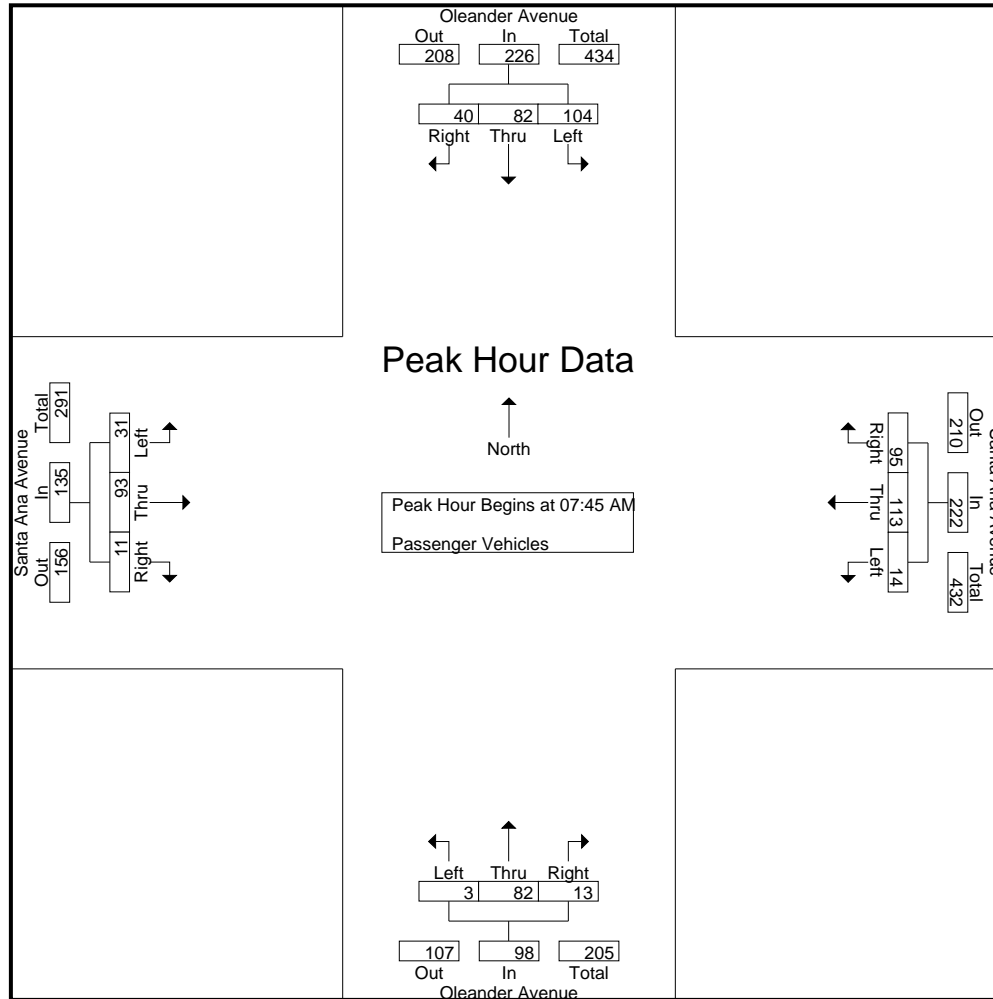
City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
07:00 AM	1	7	1	1	9	4	27	4	0	35	2	2	1	1	5	1	15	8	3	24	5	73	78
07:15 AM	2	6	2	0	10	3	21	8	1	32	0	6	2	2	8	2	12	5	1	19	4	69	73
07:30 AM	3	12	3	2	18	4	30	6	1	40	1	7	0	0	8	2	12	5	2	19	5	85	90
07:45 AM	12	10	4	1	26	3	38	12	3	53	1	15	1	0	17	3	21	3	0	27	4	123	127
Total	18	35	10	4	63	14	116	30	5	160	4	30	4	3	38	8	60	21	6	89	18	350	368
08:00 AM	22	20	7	0	49	1	31	35	12	67	1	17	5	4	23	15	28	1	0	44	16	183	199
08:15 AM	51	35	27	12	113	5	26	36	12	67	1	39	3	1	43	7	29	2	1	38	26	261	287
08:30 AM	19	17	2	0	38	5	18	12	6	35	0	11	4	1	15	6	15	5	1	26	8	114	122
08:45 AM	4	7	2	1	13	3	22	4	2	29	0	1	5	0	6	3	21	5	2	29	5	77	82
Total	96	79	38	13	213	14	97	87	32	198	2	68	17	6	87	31	93	13	4	137	55	635	690
Grand Total	114	114	48	17	276	28	213	117	37	358	6	98	21	9	125	39	153	34	10	226	73	985	1058
Apprch %	41.3	41.3	17.4			7.8	59.5	32.7			4.8	78.4	16.8			17.3	67.7	15					
Total %	11.6	11.6	4.9		28	2.8	21.6	11.9		36.3	0.6	9.9	2.1		12.7	4	15.5	3.5		22.9	6.9	93.1	

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	12	10	4	26	3	38	12	53	1	15	1	17	3	21	3	27	123
08:00 AM	22	20	7	49	1	31	35	67	1	17	5	23	15	28	1	44	183
08:15 AM	51	35	27	113	5	26	36	67	1	39	3	43	7	29	2	38	261
08:30 AM	19	17	2	38	5	18	12	35	0	11	4	15	6	15	5	26	114
Total Volume	104	82	40	226	14	113	95	222	3	82	13	98	31	93	11	135	681
% App. Total	46	36.3	17.7		6.3	50.9	42.8		3.1	83.7	13.3		23	68.9	8.1		
PHF	.510	.586	.370	.500	.700	.743	.660	.828	.750	.526	.650	.570	.517	.802	.550	.767	.652



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	12	10	4	26	3	38	12	53	1	15	1	17	3	21	3	27	
+15 mins.	22	20	7	49	1	31	35	67	1	17	5	23	15	28	1	44	
+30 mins.	51	35	27	113	5	26	36	67	1	39	3	43	7	29	2	38	
+45 mins.	19	17	2	38	5	18	12	35	0	11	4	15	6	15	5	26	
Total Volume	104	82	40	226	14	113	95	222	3	82	13	98	31	93	11	135	
% App. Total	46	36.3	17.7		6.3	50.9	42.8		3.1	83.7	13.3		23	68.9	8.1		
PHF	.510	.586	.370	.500	.700	.743	.660	.828	.750	.526	.650	.570	.517	.802	.550	.767	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

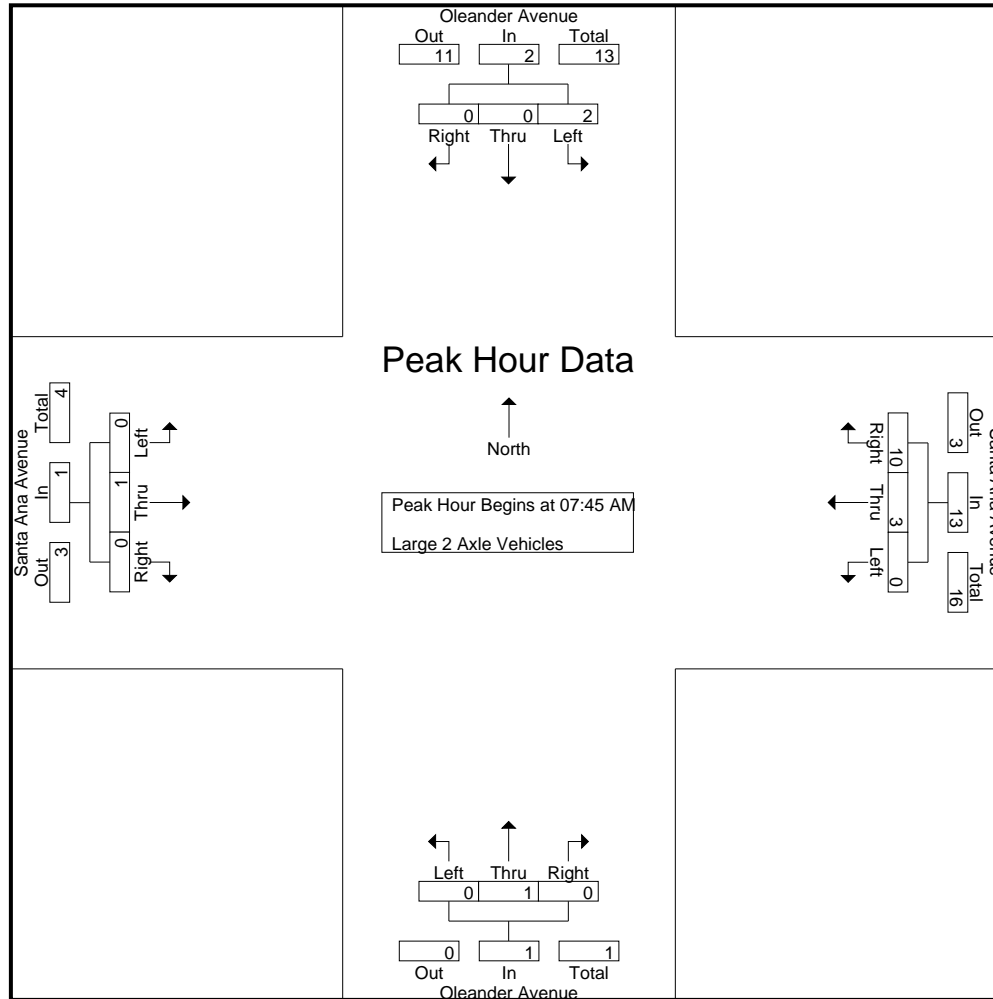
Groups Printed- Large 2 Axle Vehicles

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	3	3
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	3	3
07:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	2	2
07:45 AM	0	0	0	0	0	0	0	2	1	2	0	0	0	0	0	0	1	0	0	1	1	1	3	4
Total	0	1	0	0	1	0	2	2	1	4	0	2	0	0	2	0	3	1	0	4	1	11	12	
08:00 AM	0	0	0	0	0	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0	3	3	3
08:15 AM	1	0	0	0	1	0	3	4	3	7	0	0	0	0	0	0	0	0	0	0	3	8	11	
08:30 AM	1	0	0	0	1	0	0	2	1	2	0	0	0	0	0	0	0	0	0	0	1	3	4	
08:45 AM	0	1	0	0	1	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0	0	4	4	
Total	2	1	0	0	3	1	4	9	4	14	0	1	0	0	1	0	0	0	0	0	4	18	22	
Grand Total	2	2	0	0	4	1	6	11	5	18	0	3	0	0	3	0	3	1	0	4	5	29	34	
Apprch %	50	50	0			5.6	33.3	61.1			0	100	0			0	75	25						
Total %	6.9	6.9	0		13.8	3.4	20.7	37.9		62.1	0	10.3	0		10.3	0	10.3	3.4		13.8	14.7	85.3		

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	3
08:00 AM	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
08:15 AM	1	0	0	1	0	3	4	7	0	0	0	0	0	0	0	0	8
08:30 AM	1	0	0	1	0	0	2	2	0	0	0	0	0	0	0	0	3
Total Volume	2	0	0	2	0	3	10	13	0	1	0	1	0	1	0	1	17
% App. Total	100	0	0		0	23.1	76.9		0	100	0		0	100	0		
PHF	.500	.000	.000	.500	.000	.250	.625	.464	.000	.250	.000	.250	.000	.250	.000	.250	.531

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	0	0	0	0	0	2	2	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	
+30 mins.	1	0	0	1	0	3	4	7	0	0	0	0	0	0	0	0	
+45 mins.	1	0	0	1	0	0	2	2	0	0	0	0	0	0	0	0	
Total Volume	2	0	0	2	0	3	10	13	0	1	0	1	0	1	0	1	
% App. Total	100	0	0		0	23.1	76.9		0	100	0		0	100	0		
PHF	.500	.000	.000	.500	.000	.250	.625	.464	.000	.250	.000	.250	.000	.250	.000	.250	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

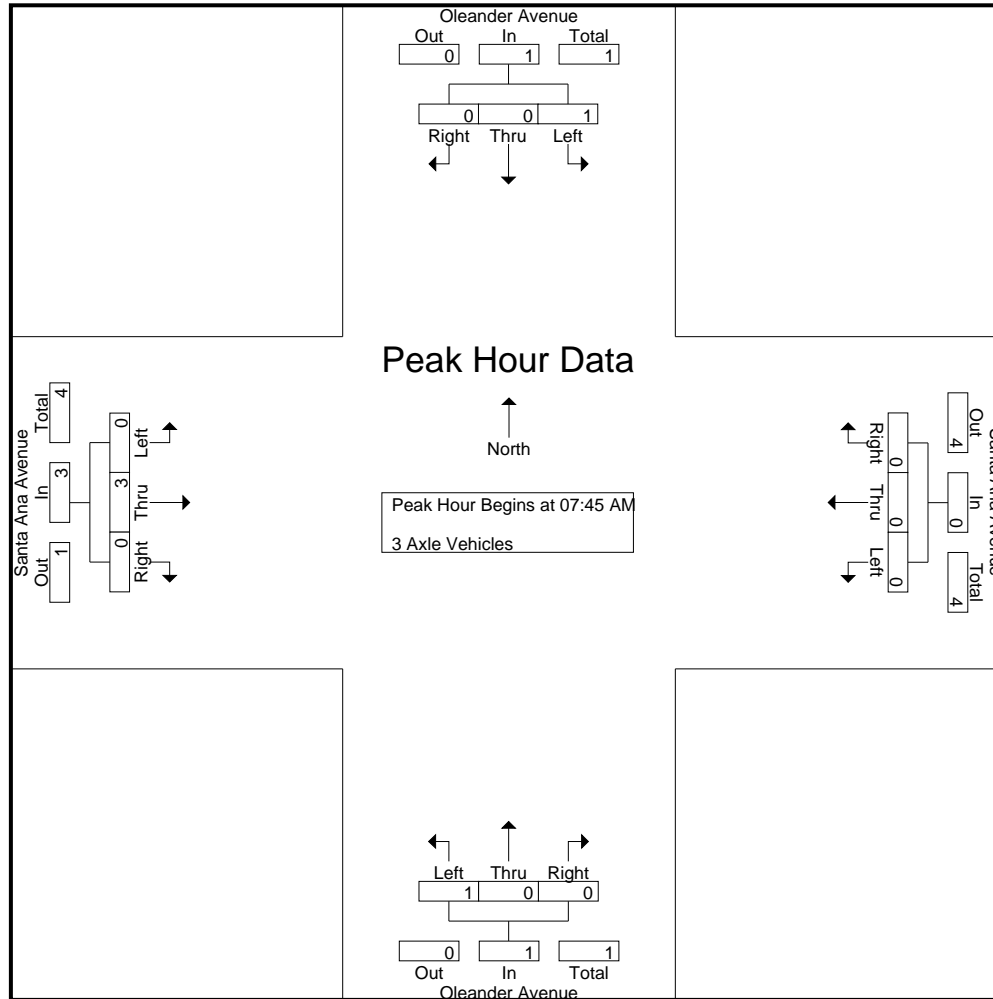
Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2	2
07:15 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	1	1	1	1	0	3	0	0	0	0	0	0	0	4	4
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	2	2	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1	1
08:30 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	2	2
08:45 AM	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	2	2
Total	2	0	0	0	2	0	0	0	0	0	2	0	0	0	2	0	3	0	0	3	0	7	7	7
Grand Total	2	0	0	0	2	1	0	0	0	1	3	1	1	0	5	0	3	0	0	3	0	11	11	11
Apprch %	100	0	0			100	0	0			60	20	20			0	100	0						
Total %	18.2	0	0		18.2	9.1	0	0		9.1	27.3	9.1	9.1		45.5	0	27.3	0		27.3	0	100		

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:30 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
Total Volume	1	0	0	1	0	0	0	0	1	0	0	1	0	3	0	3	5
% App. Total	100	0	0		0	0	0		100	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.375	.000	.375	.625

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:45 AM

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	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	2	0	0	2
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0
+45 mins.	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1
Total Volume	1	0	0	1	0	0	0	0	1	0	0	1	0	3	0	3	3
% App. Total	100	0	0		0	0	0		100	0	0		0	100	0		
PHF	.250	.000	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.375	.000	.375	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

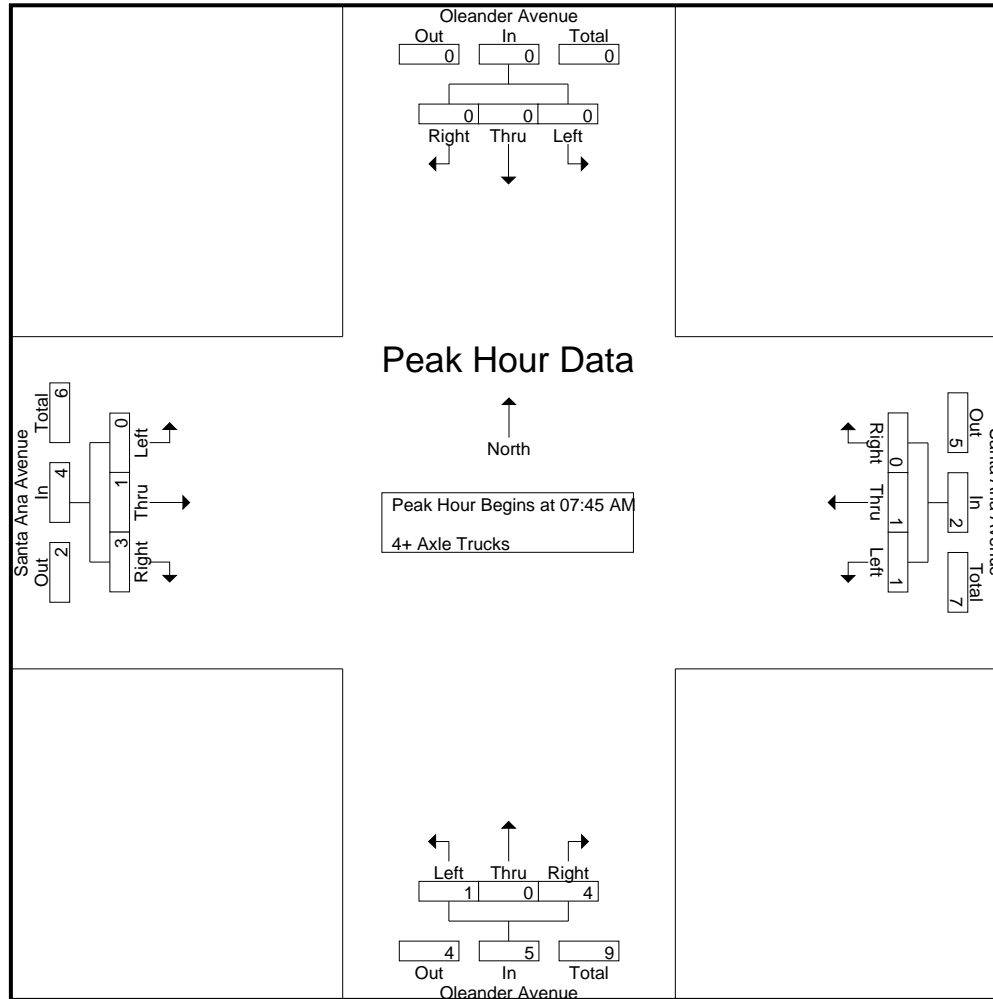
Groups Printed- 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
07:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3	0	3	0	0	0	0	0	0	4	4
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	2	2
Total	0	0	0	0	0	0	0	0	0	0	3	0	1	0	4	0	1	3	0	4	0	0	0	0	0	0	8	8
08:00 AM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	3	3
08:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	2	0	2	0	0	2	2	2	0	0	0	0	0	2	5	7
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	0	0	0	0	0	4	4
Total	0	0	0	0	0	1	1	0	0	2	2	0	3	0	5	0	3	3	2	6	0	0	0	0	0	2	13	15
Grand Total	0	0	0	0	0	1	1	0	0	2	5	0	4	0	9	0	4	6	2	10	0	0	0	0	0	2	21	23
Apprch %	0	0	0			50	50	0			55.6	0	44.4			0	40	60			0	0	0	0	0			
Total %	0	0	0			4.8	4.8	0		9.5	23.8	0	19		42.9	0	19	28.6		47.6	0	0	0	0	0	8.7	91.3	

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
08:00 AM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	1	1	3
08:15 AM	0	0	0	0	0	1	0	1	0	0	2	2	0	0	2	2	5
08:30 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	1	0	2	1	0	4	5	0	1	3	4	11
% App. Total	0	0	0		50	50	0		20	0	80		0	25	75		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.500	.625	.000	.250	.375	.500	.550

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_Santa AM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	07:45 AM				07:45 AM				07:45 AM				07:45 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	
+15 mins.	0	0	0	0	1	0	0	1	1	0	0	1	0	0	1	1	
+30 mins.	0	0	0	0	0	1	0	1	0	0	2	2	0	0	2	2	
+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	1	0	2	1	0	4	5	0	1	3	4	
% App. Total	0	0	0	0	50	50	0		20	0	80		0	25	75		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.250	.000	.500	.625	.000	.250	.375	.500	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

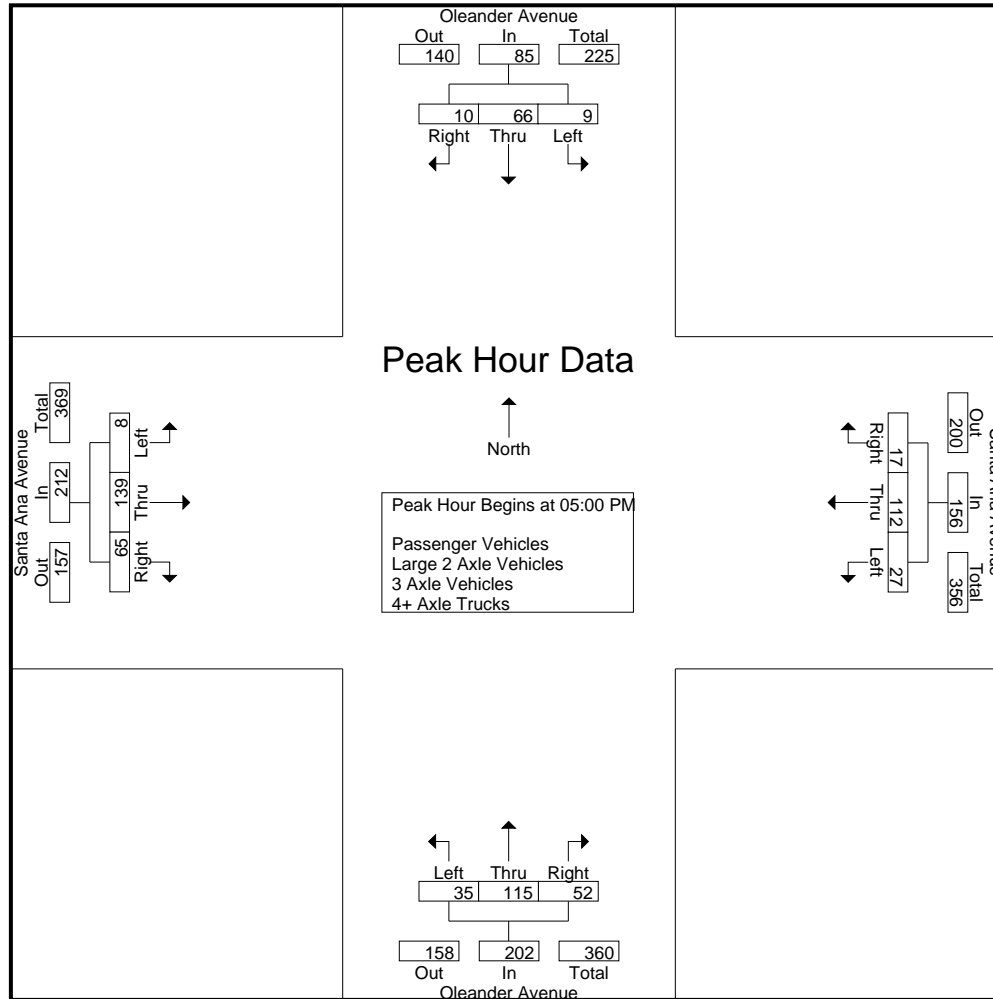
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	4	2	1	11	1	41	5	1	47	1	16	2	1	19	4	61	1	0	66	3	143	146
04:15 PM	1	5	2	2	8	2	39	5	0	46	1	5	2	0	8	1	46	6	0	53	2	115	117
04:30 PM	3	2	1	0	6	1	29	3	0	33	4	8	9	4	21	1	61	4	1	66	5	126	131
04:45 PM	2	4	6	2	12	2	33	1	0	36	2	10	8	2	20	1	52	10	1	63	5	131	136
Total	11	15	11	5	37	6	142	14	1	162	8	39	21	7	68	7	220	21	2	248	15	515	530
05:00 PM	2	2	6	1	10	2	34	2	1	38	2	10	8	4	20	1	45	5	0	51	6	119	125
05:15 PM	1	14	1	0	16	0	28	5	0	33	2	14	2	1	18	3	37	7	0	47	1	114	115
05:30 PM	3	28	1	0	32	9	25	2	0	36	3	20	12	6	35	1	29	14	4	44	10	147	157
05:45 PM	3	22	2	0	27	16	25	8	2	49	28	71	30	6	129	3	28	39	9	70	17	275	292
Total	9	66	10	1	85	27	112	17	3	156	35	115	52	17	202	8	139	65	13	212	34	655	689
Grand Total	20	81	21	6	122	33	254	31	4	318	43	154	73	24	270	15	359	86	15	460	49	1170	1219
Apprch %	16.4	66.4	17.2			10.4	79.9	9.7			15.9	57	27			3.3	78	18.7					
Total %	1.7	6.9	1.8		10.4	2.8	21.7	2.6		27.2	3.7	13.2	6.2		23.1	1.3	30.7	7.4		39.3	4	96	
Passenger Vehicles	19	81	21		127	31	252	30		317	40	153	70		286	15	352	82		464	0	0	1194
% Passenger Vehicles	95	100	100	100	99.2	93.9	99.2	96.8	100	98.4	93	99.4	95.9	95.8	97.3	100	98.1	95.3	100	97.7	0	0	97.9
Large 2 Axle Vehicles	1	0	0		1	1	0	1		2	1	1	1		3	0	5	3		8	0	0	14
% Large 2 Axle Vehicles	5	0	0	0	0.8	3	0	3.2	0	0.6	2.3	0.6	1.4	0	1	0	1.4	3.5	0	1.7	0	0	1.1
3 Axle Vehicles	0	0	0		0	0	0	0		0	2	0	1		4	0	0	0		0	0	0	4
% 3 Axle Vehicles	0	0	0	0	0	0	0	0	0	0	4.7	0	1.4	4.2	1.4	0	0	0	0	0	0	0	0.3
4+ Axle Trucks	0	0	0		0	1	2	0		3	0	0	1		1	0	2	1		3	0	0	7
% 4+ Axle Trucks	0	0	0	0	0	3	0.8	0	0	0.9	0	0	1.4	0	0.3	0	0.6	1.2	0	0.6	0	0	0.6

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	2	6	10	2	34	2	38	2	10	8	20	1	45	5	51	119
05:15 PM	1	14	1	16	0	28	5	33	2	14	2	18	3	37	7	47	114
05:30 PM	3	28	1	32	9	25	2	36	3	20	12	35	1	29	14	44	147
05:45 PM	3	22	2	27	16	25	8	49	28	71	30	129	3	28	39	70	275
Total Volume	9	66	10	85	27	112	17	156	35	115	52	202	8	139	65	212	655
% App. Total	10.6	77.6	11.8		17.3	71.8	10.9		17.3	56.9	25.7		3.8	65.6	30.7		
PHF	.750	.589	.417	.664	.422	.824	.531	.796	.313	.405	.433	.391	.667	.772	.417	.757	.595

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				04:00 PM				05:00 PM				04:00 PM				
+0 mins.	2	2	6	10	1	41	5	47	2	10	8	20	4	61	1	66	
+15 mins.	1	14	1	16	2	39	5	46	2	14	2	18	1	46	6	53	
+30 mins.	3	28	1	32	1	29	3	33	3	20	12	35	1	61	4	66	
+45 mins.	3	22	2	27	2	33	1	36	28	71	30	129	1	52	10	63	
Total Volume	9	66	10	85	6	142	14	162	35	115	52	202	7	220	21	248	
% App. Total	10.6	77.6	11.8		3.7	87.7	8.6		17.3	56.9	25.7		2.8	88.7	8.5		
PHF	.750	.589	.417	.664	.750	.866	.700	.862	.313	.405	.433	.391	.438	.902	.525	.939	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

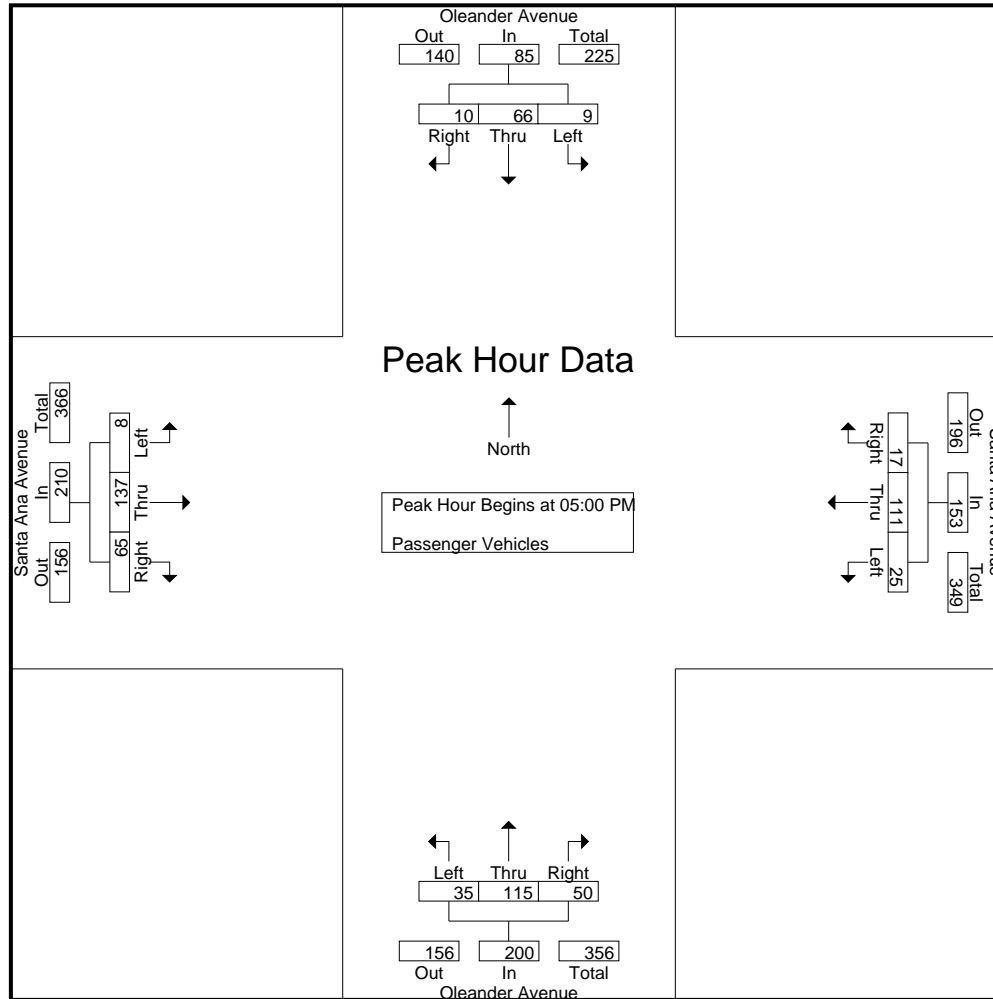
Groups Printed- Passenger Vehicles

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total			
04:00 PM	5	4	2	1	11	1	40	5	1	46	1	15	2	1	18	4	58	0	0	62	3	137	140
04:15 PM	1	5	2	2	8	2	39	5	0	46	1	5	2	0	8	1	46	5	0	52	2	114	116
04:30 PM	2	2	1	0	5	1	29	2	0	32	2	8	9	4	19	1	59	3	1	63	5	119	124
04:45 PM	2	4	6	2	12	2	33	1	0	36	1	10	7	2	18	1	52	9	1	62	5	128	133
Total	10	15	11	5	36	6	141	13	1	160	5	38	20	7	63	7	215	17	2	239	15	498	513
05:00 PM	2	2	6	1	10	2	34	2	1	38	2	10	7	3	19	1	44	5	0	50	5	117	122
05:15 PM	1	14	1	0	16	0	27	5	0	32	2	14	2	1	18	3	37	7	0	47	1	113	114
05:30 PM	3	28	1	0	32	8	25	2	0	35	3	20	11	6	34	1	29	14	4	44	10	145	155
05:45 PM	3	22	2	0	27	15	25	8	2	48	28	71	30	6	129	3	27	39	9	69	17	273	290
Total	9	66	10	1	85	25	111	17	3	153	35	115	50	16	200	8	137	65	13	210	33	648	681
Grand Total	19	81	21	6	121	31	252	30	4	313	40	153	70	23	263	15	352	82	15	449	48	1146	1194
Apprch %	15.7	66.9	17.4			9.9	80.5	9.6			15.2	58.2	26.6			3.3	78.4	18.3					
Total %	1.7	7.1	1.8		10.6	2.7	22	2.6		27.3	3.5	13.4	6.1		22.9	1.3	30.7	7.2		39.2	4	96	

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	2	6	10	2	34	2	38	2	10	7	19	1	44	5	50	117
05:15 PM	1	14	1	16	0	27	5	32	2	14	2	18	3	37	7	47	113
05:30 PM	3	28	1	32	8	25	2	35	3	20	11	34	1	29	14	44	145
05:45 PM	3	22	2	27	15	25	8	48	28	71	30	129	3	27	39	69	273
Total Volume	9	66	10	85	25	111	17	153	35	115	50	200	8	137	65	210	648
% App. Total	10.6	77.6	11.8		16.3	72.5	11.1		17.5	57.5	25		3.8	65.2	31		
PHF	.750	.589	.417	.664	.417	.816	.531	.797	.313	.405	.417	.388	.667	.778	.417	.761	.593

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	2	2	6	10	2	34	2	38	2	10	7	19	1	44	5	50	
+15 mins.	1	14	1	16	0	27	5	32	2	14	2	18	3	37	7	47	
+30 mins.	3	28	1	32	8	25	2	35	3	20	11	34	1	29	14	44	
+45 mins.	3	22	2	27	15	25	8	48	28	71	30	129	3	27	39	69	
Total Volume	9	66	10	85	25	111	17	153	35	115	50	200	8	137	65	210	
% App. Total	10.6	77.6	11.8		16.3	72.5	11.1		17.5	57.5	25		3.8	65.2	31		
PHF	.750	.589	.417	.664	.417	.816	.531	.797	.313	.405	.417	.388	.667	.778	.417	.761	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

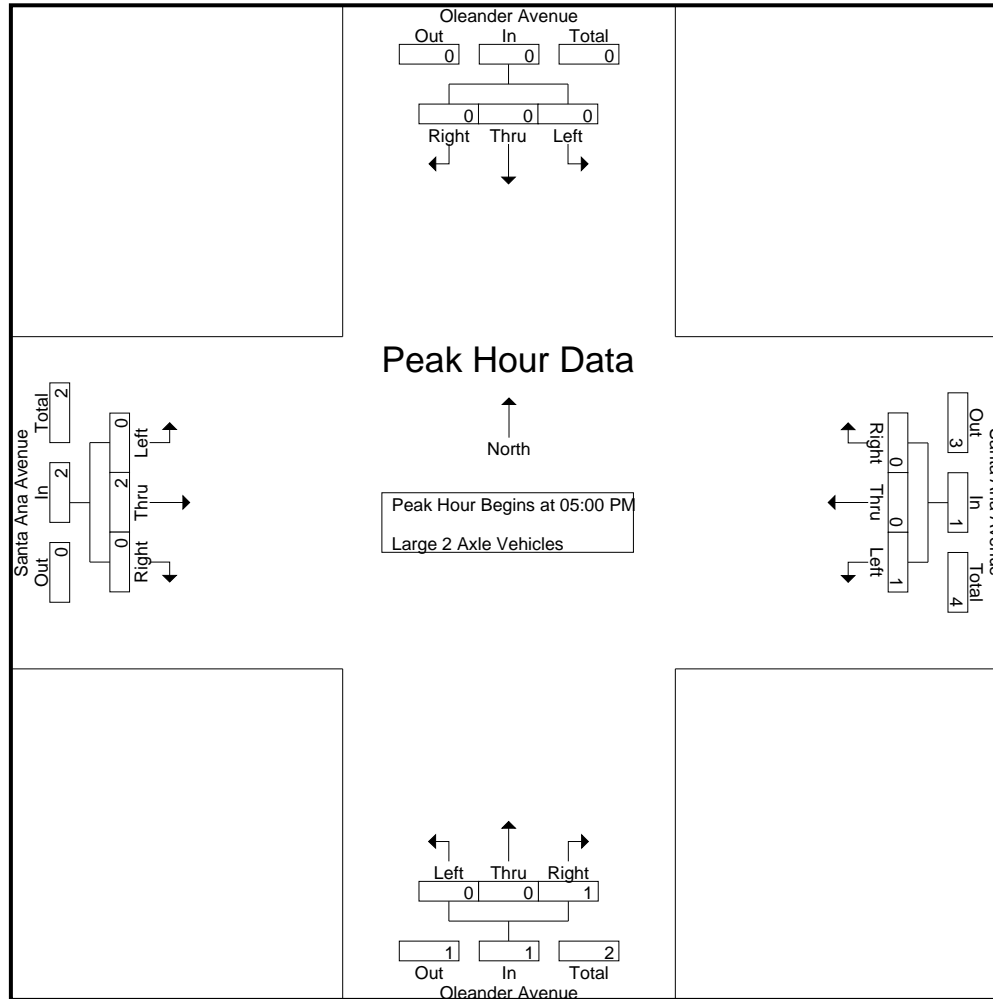
Groups Printed- Large 2 Axle Vehicles

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total	
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total				
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	0	0	4	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	1	1
04:30 PM	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	3	3	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	2	2
Total	1	0	0	0	1	0	0	1	0	1	1	1	0	0	2	0	3	3	0	6	0	10	10	10
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	2	2	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	1	1
Total	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	2	0	0	2	0	4	4	4
Grand Total	1	0	0	0	1	1	0	1	0	2	1	1	1	0	3	0	5	3	0	8	0	14	14	14
Apprch %	100	0	0			50	0	50			33.3	33.3	33.3			0	62.5	37.5						
Total %	7.1	0	0		7.1	7.1	0	7.1		14.3	7.1	7.1	7.1		21.4	0	35.7	21.4		57.1	0	100		

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	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	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total Volume	0	0	0	0	1	0	0	1	0	0	1	1	0	2	0	2	4
% App. Total	0	0	0		100	0	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.250	.250	.000	.500	.000	.500	.500

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
+30 mins.	0	0	0	0	1	0	0	1	0	0	1	1	0	0	0	0	
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
Total Volume	0	0	0	0	1	0	0	1	0	0	1	1	0	2	0	2	
% App. Total	0	0	0	0	100	0	0		0	0	100		0	100	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.250	.250	.000	.500	.000	.500	

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

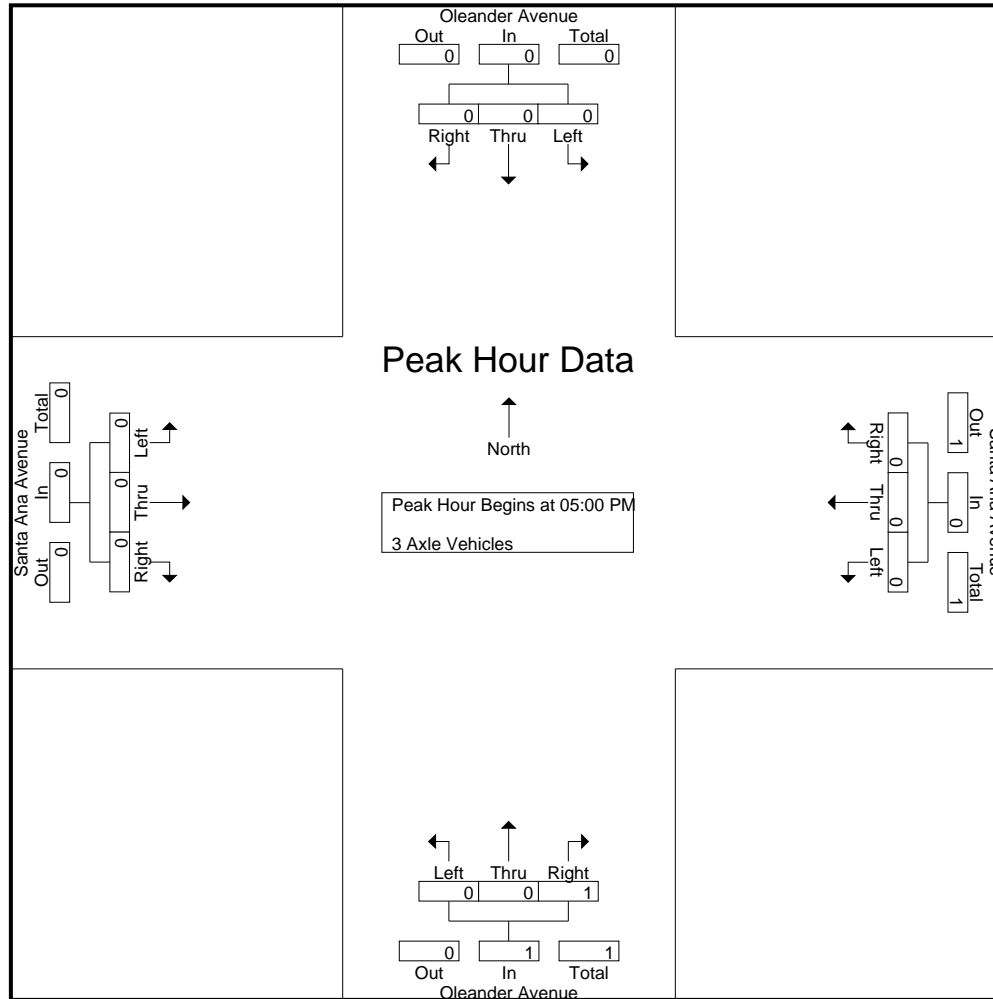
Groups Printed- 3 Axle Vehicles

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total					
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total								
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	1	1	1	1	2
Grand Total	0	0	0	0	0	0	0	0	0	0	2	0	1	1	3	0	0	0	0	0	1	3	3	3	3	1	3	4
Apprch %	0	0	0			0	0	0			66.7	0	33.3			0	0	0										
Total %	0	0	0			0	0	0			66.7	0	33.3		100	0	0	0								25	75	

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	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	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 Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	0	100		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.250

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
% App. Total	0	0	0	0	0	0	0	0	0	0	100	100	0	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 1

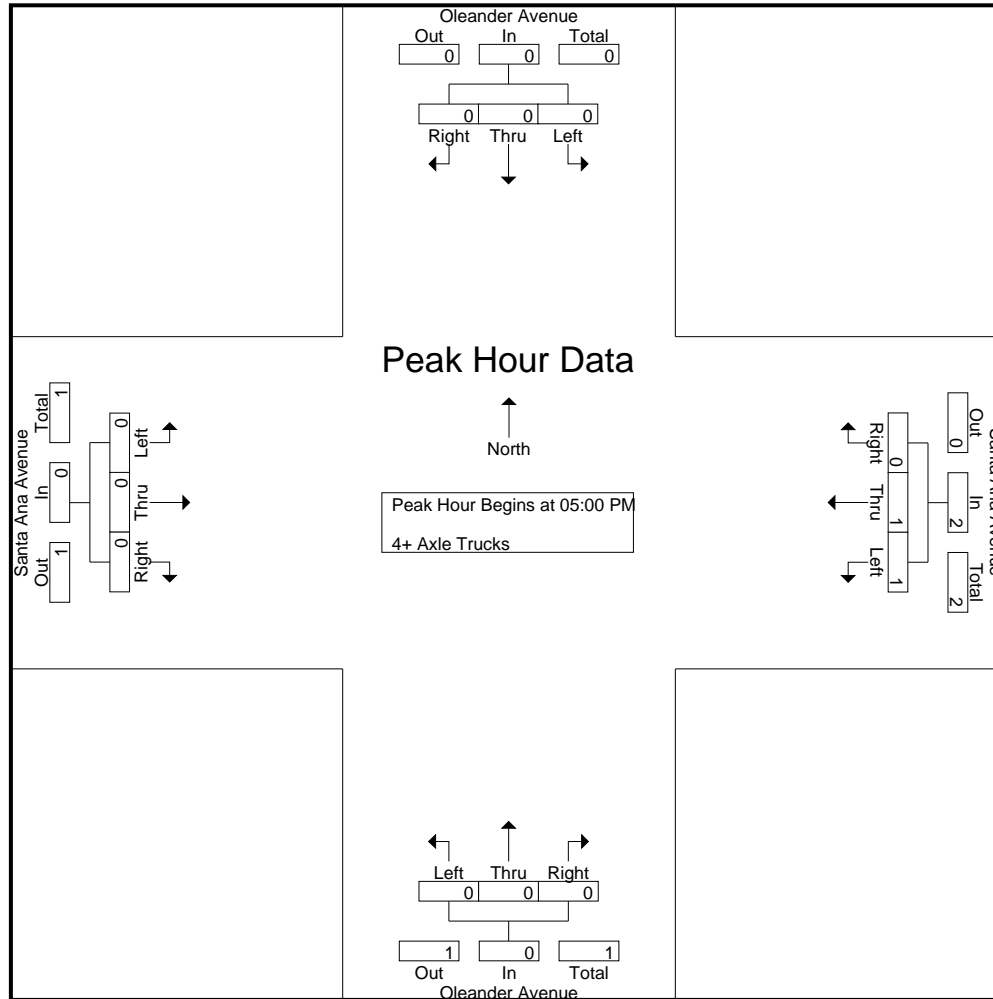
Groups Printed- 4+ Axle Trucks

Start Time	Oleander Avenue Southbound					Santa Ana Avenue Westbound					Oleander Avenue Northbound					Santa Ana Avenue Eastbound					Exclu. Total	Inclu. Total	Int. Total		
	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total	Left	Thru	Right	RTOR	App. Total					
04:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	2	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	2	1	0	3	0	0	5	0	5
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Grand Total	0	0	0	0	0	1	2	0	0	3	0	0	1	0	1	0	2	1	0	3	0	0	7	0	7
Apprch %	0	0	0			33.3	66.7	0			0	0	100			0	66.7	33.3			0	0	100		
Total %	0	0	0			14.3	28.6	0		42.9	0	0	14.3		14.3	0	28.6	14.3		42.9	0	0	100		

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
% App. Total	0	0	0		50	50	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.500

City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 2



City of Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue
 Weather: Clear

File Name : 06_FON_Ole_San PM
 Site Code : 05122471
 Start Date : 5/18/2022
 Page No : 3

Start Time	Oleander Avenue Southbound				Santa Ana Avenue Westbound				Oleander Avenue Northbound				Santa Ana Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Each Approach Begins at:																	
	05:00 PM				05:00 PM				05:00 PM				05:00 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0	0	50	50	0	50	0	0	0	0	0	0	0	0	0
PHF	.000	.000	.000	.000	.250	.250	.000	.500	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue



Date: 5/18/2022
 Day: Wednesday

PEDESTRIANS

	North Leg Oleander Avenue	East Leg Santa Ana Avenue	South Leg Oleander Avenue	West Leg Santa Ana Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	3	3
7:45 AM	0	0	0	0	0
8:00 AM	2	3	0	0	5
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:	2	3	0	3	8

	North Leg Oleander Avenue	East Leg Santa Ana Avenue	South Leg Oleander Avenue	West Leg Santa Ana Avenue	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	3	3
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	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	1	3	4

Location: Fontana
 N/S: Oleander Avenue
 E/W: Santa Ana Avenue



Date: 5/18/2022
 Day: Wednesday

BICYCLES

	Southbound Oleander Avenue			Westbound Santa Ana Avenue			Northbound Oleander Avenue			Eastbound Santa Ana Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

	Southbound Oleander Avenue			Westbound Santa Ana Avenue			Northbound Oleander Avenue			Eastbound Santa Ana Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	4	0	0	0	0	0	0	0	4

Counts Unlimited, Inc.

City of Fontana
 Citrus Avenue
 N/ Santa Ana Avenue
 24 Hour Directional Classification Count

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

FON001
 Site Code: 051-22471

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	47	0	0	0	3	0	0	4	0	0	0	0	54
01:00	1	23	0	0	1	2	0	0	14	0	0	0	0	41
02:00	0	35	2	0	1	2	0	1	11	0	0	0	0	52
03:00	1	55	9	0	3	0	0	0	12	0	0	0	0	80
04:00	1	164	25	0	3	6	1	0	12	0	0	0	0	212
05:00	0	198	22	0	3	9	0	0	11	0	1	0	0	244
06:00	0	229	36	2	10	5	0	1	14	0	0	0	0	297
07:00	0	379	45	3	5	9	0	2	22	0	0	0	0	465
08:00	1	366	52	2	5	9	0	5	20	0	0	0	0	460
09:00	1	242	49	5	10	14	0	3	26	0	0	0	0	350
10:00	0	211	40	0	8	8	0	4	39	0	0	0	0	310
11:00	0	214	47	2	12	5	0	5	31	0	1	0	0	317
12 PM	0	238	40	4	8	15	0	4	18	0	1	0	0	328
13:00	0	380	57	4	10	7	0	2	29	0	2	0	0	491
14:00	1	489	81	2	11	6	0	5	24	0	0	0	0	619
15:00	2	423	84	1	6	5	0	3	24	1	0	0	0	549
16:00	2	460	61	1	6	7	0	1	14	0	0	0	0	552
17:00	0	472	65	0	2	4	0	1	9	0	0	0	0	553
18:00	2	292	29	0	0	3	0	0	12	0	0	0	0	338
19:00	0	213	21	0	5	4	0	1	13	0	0	0	0	257
20:00	2	179	30	0	1	7	0	0	9	0	0	0	0	228
21:00	1	117	17	0	3	1	0	1	7	0	0	0	0	147
22:00	0	104	6	0	2	4	0	0	11	0	0	0	0	127
23:00	2	58	1	0	2	2	0	0	6	0	0	0	0	71
Total	17	5588	819	26	117	137	1	39	392	1	5	0	0	7142
Percent	0.2%	78.2%	11.5%	0.4%	1.6%	1.9%	0.0%	0.5%	5.5%	0.0%	0.1%	0.0%	0.0%	
AM Peak	01:00	07:00	08:00	09:00	11:00	09:00	04:00	08:00	10:00		05:00			07:00
Vol.	1	379	52	5	12	14	1	5	39		1			465
PM Peak	15:00	14:00	15:00	12:00	14:00	12:00		14:00	13:00	15:00	13:00			14:00
Vol.	2	489	84	4	11	15		5	29	1	2			619
Grand Total	17	5588	819	26	117	137	1	39	392	1	5	0	0	7142
Percent	0.2%	78.2%	11.5%	0.4%	1.6%	1.9%	0.0%	0.5%	5.5%	0.0%	0.1%	0.0%	0.0%	

Counts Unlimited, Inc.

City of Fontana
 Citrus Avenue
 N/ Santa Ana Avenue
 24 Hour Directional Classification Count
 Southbound

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

FON001
 Site Code: 051-22471

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	50	1	0	0	0	0	0	4	0	0	0	0	55
01:00	0	36	4	0	0	2	0	1	5	0	0	0	0	48
02:00	0	34	6	0	1	0	0	2	4	0	0	0	0	47
03:00	0	72	7	0	1	0	0	2	4	0	0	0	0	86
04:00	1	207	17	0	5	4	0	7	4	0	0	0	0	245
05:00	0	243	40	0	6	1	0	2	6	0	1	0	0	299
06:00	0	273	48	4	6	7	0	2	19	0	0	0	0	359
07:00	2	226	37	2	8	10	0	2	19	0	0	0	0	306
08:00	0	248	33	6	6	7	0	2	34	0	0	0	0	336
09:00	0	162	38	3	7	6	0	2	30	0	0	0	0	248
10:00	0	139	33	0	12	1	0	3	33	0	0	0	1	222
11:00	0	167	38	2	13	11	0	5	26	1	0	0	0	263
12 PM	0	213	40	4	9	5	0	4	36	0	0	0	0	311
13:00	1	289	39	1	10	9	0	4	27	0	0	0	0	380
14:00	0	317	42	3	10	4	0	2	28	0	0	0	0	406
15:00	1	269	51	3	10	4	0	2	8	0	0	0	0	348
16:00	2	291	47	0	7	3	0	5	6	0	0	0	0	361
17:00	0	379	66	0	3	4	0	5	11	0	0	0	0	468
18:00	0	329	47	0	2	4	0	2	10	0	0	0	0	394
19:00	0	223	37	0	3	9	0	1	8	0	0	0	0	281
20:00	0	226	31	0	1	0	0	1	11	0	0	0	0	270
21:00	0	203	17	0	2	1	0	0	2	0	1	0	0	226
22:00	1	133	12	0	1	3	0	0	6	0	0	0	0	156
23:00	0	95	6	0	0	1	0	0	4	0	0	0	0	106
Total	8	4824	737	28	123	96	0	56	345	1	2	0	1	6221
Percent	0.1%	77.5%	11.8%	0.5%	2.0%	1.5%	0.0%	0.9%	5.5%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	06:00	06:00	08:00	11:00	11:00		04:00	08:00	11:00	05:00		10:00	06:00
Vol.	2	273	48	6	13	11		7	34	1	1		1	359
PM Peak	16:00	17:00	17:00	12:00	13:00	13:00		16:00	12:00		21:00			17:00
Vol.	2	379	66	4	10	9		5	36		1			468
Grand Total	8	4824	737	28	123	96	0	56	345	1	2	0	1	6221
Percent	0.1%	77.5%	11.8%	0.5%	2.0%	1.5%	0.0%	0.9%	5.5%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

City of Fontana
 Citrus Avenue
 N/ Santa Ana Avenue
 24 Hour Directional Classification Count
 Northbound, Southbound

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

FON001
 Site Code: 051-22471

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	97	1	0	0	3	0	0	8	0	0	0	0	109
01:00	1	59	4	0	1	4	0	1	19	0	0	0	0	89
02:00	0	69	8	0	2	2	0	3	15	0	0	0	0	99
03:00	1	127	16	0	4	0	0	2	16	0	0	0	0	166
04:00	2	371	42	0	8	10	1	7	16	0	0	0	0	457
05:00	0	441	62	0	9	10	0	2	17	0	2	0	0	543
06:00	0	502	84	6	16	12	0	3	33	0	0	0	0	656
07:00	2	605	82	5	13	19	0	4	41	0	0	0	0	771
08:00	1	614	85	8	11	16	0	7	54	0	0	0	0	796
09:00	1	404	87	8	17	20	0	5	56	0	0	0	0	598
10:00	0	350	73	0	20	9	0	7	72	0	0	0	1	532
11:00	0	381	85	4	25	16	0	10	57	1	1	0	0	580
12 PM	0	451	80	8	17	20	0	8	54	0	1	0	0	639
13:00	1	669	96	5	20	16	0	6	56	0	2	0	0	871
14:00	1	806	123	5	21	10	0	7	52	0	0	0	0	1025
15:00	3	692	135	4	16	9	0	5	32	1	0	0	0	897
16:00	4	751	108	1	13	10	0	6	20	0	0	0	0	913
17:00	0	851	131	0	5	8	0	6	20	0	0	0	0	1021
18:00	2	621	76	0	2	7	0	2	22	0	0	0	0	732
19:00	0	436	58	0	8	13	0	2	21	0	0	0	0	538
20:00	2	405	61	0	2	7	0	1	20	0	0	0	0	498
21:00	1	320	34	0	5	2	0	1	9	0	1	0	0	373
22:00	1	237	18	0	3	7	0	0	17	0	0	0	0	283
23:00	2	153	7	0	2	3	0	0	10	0	0	0	0	177
Total	25	10412	1556	54	240	233	1	95	737	2	7	0	1	13363
Percent	0.2%	77.9%	11.6%	0.4%	1.8%	1.7%	0.0%	0.7%	5.5%	0.0%	0.1%	0.0%	0.0%	
AM Peak	04:00	08:00	09:00	08:00	11:00	09:00	04:00	11:00	10:00	11:00	05:00		10:00	08:00
Vol.	2	614	87	8	25	20	1	10	72	1	2		1	796
PM Peak	16:00	17:00	15:00	12:00	14:00	12:00		12:00	13:00	15:00	13:00			14:00
Vol.	4	851	135	8	21	20		8	56	1	2			1025
Grand Total	25	10412	1556	54	240	233	1	95	737	2	7	0	1	13363
Percent	0.2%	77.9%	11.6%	0.4%	1.8%	1.7%	0.0%	0.7%	5.5%	0.0%	0.1%	0.0%	0.0%	

Counts Unlimited, Inc.

City of Fontana
 Santa Ana Avenue
 E/ Citrus Avenue
 24 Hour Directional Classification Count
Eastbound

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

FON002
 Site Code: 051-22471

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	14	1	0	0	0	0	0	0	0	0	0	0	15
01:00	0	11	0	0	0	1	0	0	0	0	0	0	0	12
02:00	0	13	3	0	0	0	0	0	1	0	0	0	0	17
03:00	0	12	0	0	0	0	0	0	0	0	0	0	0	12
04:00	1	34	3	0	1	1	0	0	2	0	0	0	0	42
05:00	0	87	9	0	4	3	0	2	0	0	0	0	0	105
06:00	0	137	15	0	4	3	0	2	4	0	0	0	0	165
07:00	1	76	13	1	3	0	0	0	4	0	0	0	0	98
08:00	0	122	21	0	0	1	2	0	5	0	0	0	0	151
09:00	0	86	16	0	6	2	0	0	5	1	0	0	0	116
10:00	0	65	29	0	10	0	0	0	5	0	0	0	0	109
11:00	1	88	28	0	6	4	0	1	3	0	0	0	0	131
12 PM	0	94	24	3	6	0	0	0	3	0	0	0	0	130
13:00	0	170	28	0	7	1	0	0	3	0	0	0	0	209
14:00	0	188	34	1	7	0	0	0	1	0	0	0	0	231
15:00	0	150	43	1	7	2	0	0	1	0	0	0	0	204
16:00	3	189	55	0	6	0	0	1	2	0	0	0	0	256
17:00	1	181	29	0	2	0	0	0	0	0	0	0	0	213
18:00	0	104	20	0	1	2	0	0	0	0	0	0	0	127
19:00	0	63	15	0	0	2	0	1	2	0	0	0	0	83
20:00	0	43	5	0	1	0	0	1	2	0	0	0	0	52
21:00	1	31	5	0	1	0	0	0	0	0	0	0	0	38
22:00	0	31	1	0	0	3	0	0	1	0	0	0	0	36
23:00	0	17	2	0	1	0	0	1	0	0	0	0	0	21
Total	8	2006	399	6	73	25	2	9	44	1	0	0	0	2573
Percent	0.3%	78.0%	15.5%	0.2%	2.8%	1.0%	0.1%	0.3%	1.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	04:00	06:00	10:00	07:00	10:00	11:00	08:00	05:00	08:00	09:00				06:00
Vol.	1	137	29	1	10	4	2	2	5	1				165
PM Peak	16:00	16:00	16:00	12:00	13:00	22:00		16:00	12:00					16:00
Vol.	3	189	55	3	7	3		1	3					256
Grand Total	8	2006	399	6	73	25	2	9	44	1	0	0	0	2573
Percent	0.3%	78.0%	15.5%	0.2%	2.8%	1.0%	0.1%	0.3%	1.7%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

City of Fontana
 Santa Ana Avenue
 E/ Citrus Avenue
 24 Hour Directional Classification Count
 Westbound

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

FON002
 Site Code: 051-22471

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	16	2	0	0	0	0	0	1	0	0	0	0	19
01:00	0	15	0	0	1	0	0	0	1	0	0	0	0	17
02:00	0	13	2	0	0	0	0	0	0	0	0	0	0	15
03:00	0	13	3	0	1	1	0	0	0	0	0	0	0	18
04:00	0	84	8	0	2	3	1	0	2	0	0	0	0	100
05:00	0	62	15	0	1	1	0	0	3	0	0	0	0	82
06:00	0	58	24	0	2	0	0	0	2	0	0	0	0	86
07:00	0	104	22	0	2	1	0	0	4	0	0	0	0	133
08:00	2	111	31	0	3	2	0	1	1	0	0	0	0	151
09:00	0	91	28	0	7	1	0	0	3	0	0	0	0	130
10:00	1	79	24	0	3	3	0	0	8	0	0	0	0	118
11:00	0	113	38	0	5	2	0	0	0	0	0	0	0	158
12 PM	0	118	20	1	6	2	0	1	3	0	0	0	0	151
13:00	1	134	26	0	4	1	0	0	2	0	0	0	0	168
14:00	0	150	35	0	7	0	0	1	0	0	0	0	0	193
15:00	0	118	42	0	7	0	0	0	2	0	0	0	0	169
16:00	0	115	38	0	2	1	0	0	2	0	0	0	0	158
17:00	0	137	19	0	0	0	0	0	1	0	0	0	0	157
18:00	0	85	8	0	0	0	0	0	0	0	0	0	0	93
19:00	0	89	14	0	4	0	0	0	0	0	0	0	0	107
20:00	2	67	11	0	1	1	0	0	0	0	0	0	0	82
21:00	1	30	6	0	3	0	0	0	1	0	0	0	0	41
22:00	0	31	3	0	0	0	0	0	5	0	0	0	0	39
23:00	0	16	0	0	1	0	0	0	2	0	0	0	0	19
Total	7	1849	419	1	62	19	1	3	43	0	0	0	0	2404
Percent	0.3%	76.9%	17.4%	0.0%	2.6%	0.8%	0.0%	0.1%	1.8%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	11:00		09:00	04:00	04:00	08:00	10:00					11:00
Vol.	2	113	38		7	3	1	1	8					158
PM Peak	20:00	14:00	15:00	12:00	14:00	12:00		12:00	22:00					14:00
Vol.	2	150	42	1	7	2		1	5					193
Grand Total	7	1849	419	1	62	19	1	3	43	0	0	0	0	2404
Percent	0.3%	76.9%	17.4%	0.0%	2.6%	0.8%	0.0%	0.1%	1.8%	0.0%	0.0%	0.0%	0.0%	

Counts Unlimited, Inc.

City of Fontana
 Santa Ana Avenue
 E/ Citrus Avenue
 24 Hour Directional Classification Count
 Eastbound, Westbound

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

FON002
 Site Code: 051-22471

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
05/18/22	0	30	3	0	0	0	0	0	1	0	0	0	0	34
01:00	0	26	0	0	1	1	0	0	1	0	0	0	0	29
02:00	0	26	5	0	0	0	0	0	1	0	0	0	0	32
03:00	0	25	3	0	1	1	0	0	0	0	0	0	0	30
04:00	1	118	11	0	3	4	1	0	4	0	0	0	0	142
05:00	0	149	24	0	5	4	0	2	3	0	0	0	0	187
06:00	0	195	39	0	6	3	0	2	6	0	0	0	0	251
07:00	1	180	35	1	5	1	0	0	8	0	0	0	0	231
08:00	2	233	52	0	3	3	2	1	6	0	0	0	0	302
09:00	0	177	44	0	13	3	0	0	8	1	0	0	0	246
10:00	1	144	53	0	13	3	0	0	13	0	0	0	0	227
11:00	1	201	66	0	11	6	0	1	3	0	0	0	0	289
12 PM	0	212	44	4	12	2	0	1	6	0	0	0	0	281
13:00	1	304	54	0	11	2	0	0	5	0	0	0	0	377
14:00	0	338	69	1	14	0	0	1	1	0	0	0	0	424
15:00	0	268	85	1	14	2	0	0	3	0	0	0	0	373
16:00	3	304	93	0	8	1	0	1	4	0	0	0	0	414
17:00	1	318	48	0	2	0	0	0	1	0	0	0	0	370
18:00	0	189	28	0	1	2	0	0	0	0	0	0	0	220
19:00	0	152	29	0	4	2	0	1	2	0	0	0	0	190
20:00	2	110	16	0	2	1	0	1	2	0	0	0	0	134
21:00	2	61	11	0	4	0	0	0	1	0	0	0	0	79
22:00	0	62	4	0	0	3	0	0	6	0	0	0	0	75
23:00	0	33	2	0	2	0	0	1	2	0	0	0	0	40
Total	15	3855	818	7	135	44	3	12	87	1	0	0	0	4977
Percent	0.3%	77.5%	16.4%	0.1%	2.7%	0.9%	0.1%	0.2%	1.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	08:00	11:00	07:00	09:00	11:00	08:00	05:00	10:00	09:00				08:00
Vol.	2	233	66	1	13	6	2	2	13	1				302
PM Peak	16:00	14:00	16:00	12:00	14:00	22:00		12:00	12:00					14:00
Vol.	3	338	93	4	14	3		1	6					424
Grand Total	15	3855	818	7	135	44	3	12	87	1	0	0	0	4977
Percent	0.3%	77.5%	16.4%	0.1%	2.7%	0.9%	0.1%	0.2%	1.7%	0.0%	0.0%	0.0%	0.0%	

**APPENDIX 3.2: EXISTING (2022) CONDITIONS INTERSECTION
OPERATIONS ANALYSIS WORKSHEETS**

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Timings
1: Citrus Av. & I-10 WB Ramps

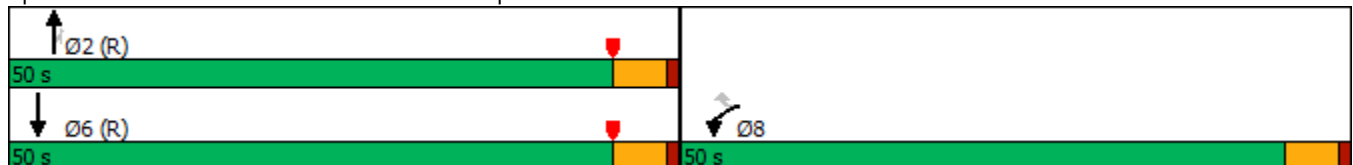


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↙↙	↕↕↕	↙	↕↕
Traffic Volume (vph)	435	542	661	291	947
Future Volume (vph)	435	542	661	291	947
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	50.0	50.0	50.0	50.0	50.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	32.7	32.7	57.3	57.3	57.3
Actuated g/C Ratio	0.33	0.33	0.57	0.57	0.57
v/c Ratio	0.82	0.56	0.25	0.31	0.51
Control Delay	42.0	18.0	13.6	5.9	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	18.0	13.6	5.9	15.2
LOS	D	B	B	A	B
Approach Delay	28.7		11.2		15.2
Approach LOS	C		B		B

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 18.5
 Intersection LOS: B
 Intersection Capacity Utilization 58.6%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	435	542	661	291	0	947
Future Volume (veh/h)	435	542	661	291	0	947
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	483	602	734	314	0	1052
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	538	843	3126	950	0	2176
Arrive On Green	0.30	0.30	1.00	1.00	0.00	0.60
Sat Flow, veh/h	1810	2834	5358	1576	0	3800
Grp Volume(v), veh/h	483	602	734	314	0	1052
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1576	0	1805
Q Serve(g_s), s	25.6	19.0	0.0	0.0	0.0	16.3
Cycle Q Clear(g_c), s	25.6	19.0	0.0	0.0	0.0	16.3
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	538	843	3126	950	0	2176
V/C Ratio(X)	0.90	0.71	0.23	0.33	0.00	0.48
Avail Cap(c_a), veh/h	814	1275	3126	950	0	2176
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.89	0.89	0.00	1.00
Uniform Delay (d), s/veh	33.7	31.3	0.0	0.0	0.0	11.1
Incr Delay (d2), s/veh	6.5	0.4	0.2	0.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	6.4	0.0	0.2	0.0	5.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	40.1	31.8	0.2	0.8	0.0	11.9
LnGrp LOS	D	C	A	A	A	B
Approach Vol, veh/h	1085		1048			1052
Approach Delay, s/veh	35.5		0.4			11.9
Approach LOS	D		A			B
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		65.3			65.3	34.7
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		45.0			45.0	45.0
Max Q Clear Time (g_c+11), s		2.0			18.3	27.6
Green Ext Time (p_c), s		3.8			4.8	2.2

Intersection Summary

HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps

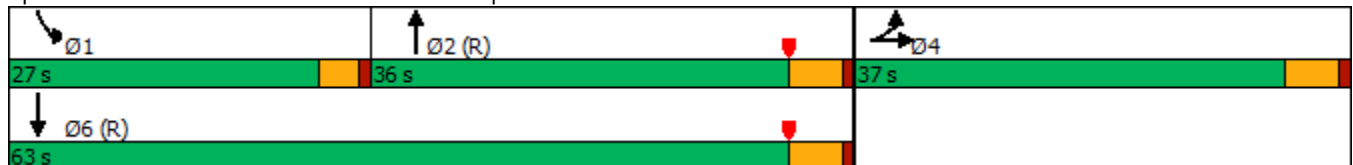


Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	288	2	664	501	881
Future Volume (vph)	288	2	664	501	881
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	37.0	37.0	36.0	27.0	63.0
Total Split (%)	37.0%	37.0%	36.0%	27.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	21.1	21.1	45.9	19.0	68.9
Actuated g/C Ratio	0.21	0.21	0.46	0.19	0.69
v/c Ratio	0.40	0.85	0.46	0.78	0.37
Control Delay	34.1	40.3	18.5	48.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	40.3	18.5	48.7	5.9
LOS	C	D	B	D	A
Approach Delay		37.6	18.5		21.4
Approach LOS		D	B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 23.9
 Intersection LOS: C
 Intersection Capacity Utilization 70.2%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	288	2	369	0	0	0	0	664	369	501	881	0
Future Volume (veh/h)	288	2	369	0	0	0	0	664	369	501	881	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	297	2	258				0	685	266	516	908	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	664	2	303				0	1857	709	582	2566	0
Arrive On Green	0.19	0.19	0.19				0.00	0.51	0.51	0.33	1.00	0.00
Sat Flow, veh/h	3510	12	1600				0	3848	1404	3510	3705	0
Grp Volume(v), veh/h	297	0	260				0	644	307	516	908	0
Grp Sat Flow(s),veh/h/ln	1755	0	1612				0	1729	1622	1755	1805	0
Q Serve(g_s), s	7.5	0.0	15.6				0.0	11.3	11.6	13.9	0.0	0.0
Cycle Q Clear(g_c), s	7.5	0.0	15.6				0.0	11.3	11.6	13.9	0.0	0.0
Prop In Lane	1.00		0.99				0.00		0.87	1.00		0.00
Lane Grp Cap(c), veh/h	664	0	305				0	1747	819	582	2566	0
V/C Ratio(X)	0.45	0.00	0.85				0.00	0.37	0.38	0.89	0.35	0.00
Avail Cap(c_a), veh/h	1123	0	516				0	1747	819	807	2566	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.75	0.75	0.76	0.76	0.00
Uniform Delay (d), s/veh	35.9	0.0	39.2				0.0	15.0	15.1	32.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	2.9				0.0	0.5	1.0	5.6	0.3	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
%ile BackOfQ(50%),veh/ln	3.1	0.0	6.1				0.0	4.1	4.1	5.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	42.0				0.0	15.5	16.1	38.1	0.3	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		557						951			1424	
Approach Delay, s/veh		38.9						15.7			14.0	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	20.6	55.5		23.9				76.1				
Change Period (Y+Rc), s	4.0	5.0		5.0				5.0				
Max Green Setting (Gmax), s	23.0	31.0		32.0				58.0				
Max Q Clear Time (g_c+I1), s	15.9	13.6		17.6				2.0				
Green Ext Time (p_c), s	0.7	3.7		1.3				4.1				
Intersection Summary												
HCM 6th Ctrl Delay			19.3									
HCM 6th LOS			B									

Timings
3: Citrus Av. & Slover Av.

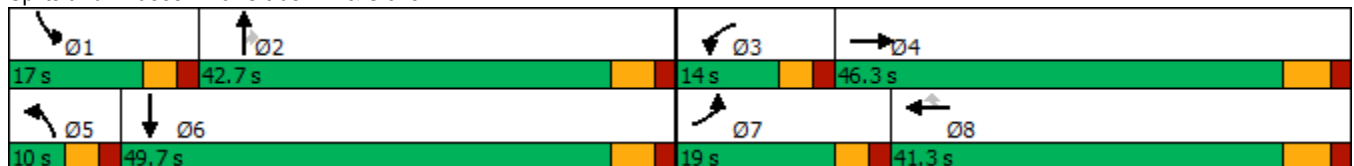


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕
Traffic Volume (vph)	294	204	51	335	169	43	557	52	234	488
Future Volume (vph)	294	204	51	335	169	43	557	52	234	488
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	19.0	46.3	14.0	41.3	41.3	10.0	42.7	42.7	17.0	49.7
Total Split (%)	15.8%	38.6%	11.7%	34.4%	34.4%	8.3%	35.6%	35.6%	14.2%	41.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	12.3	24.8	7.0	16.7	16.7	5.3	22.8	22.8	10.5	33.3
Actuated g/C Ratio	0.14	0.29	0.08	0.19	0.19	0.06	0.27	0.27	0.12	0.39
v/c Ratio	0.67	0.25	0.39	0.54	0.41	0.23	0.66	0.11	0.62	0.78
Control Delay	45.2	25.5	51.9	35.1	7.9	48.7	32.2	0.4	46.3	24.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	25.5	51.9	35.1	7.9	48.7	32.2	0.4	46.3	24.1
LOS	D	C	D	D	A	D	C	A	D	C
Approach Delay		36.5		28.4			30.8			28.4
Approach LOS		D		C			C			C

Intersection Summary































Cycle Length: 120
 Actuated Cycle Length: 85.8
 Natural Cycle: 110
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 30.3
 Intersection Capacity Utilization 70.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av.

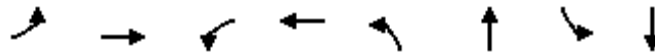
09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	294	204	27	51	335	169	43	557	52	234	488	499
Future Volume (veh/h)	294	204	27	51	335	169	43	557	52	234	488	499
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	334	232	30	58	381	124	49	633	27	266	555	433
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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	434	750	96	87	569	250	154	1081	475	363	689	537
Arrive On Green	0.12	0.23	0.23	0.05	0.16	0.16	0.04	0.30	0.30	0.10	0.36	0.36
Sat Flow, veh/h	3510	3219	411	1810	3610	1586	3510	3610	1586	3510	1917	1496
Grp Volume(v), veh/h	334	129	133	58	381	124	49	633	27	266	522	466
Grp Sat Flow(s),veh/h/ln	1755	1805	1825	1810	1805	1586	1755	1805	1586	1755	1805	1608
Q Serve(g_s), s	6.5	4.1	4.2	2.2	7.0	5.0	1.0	10.5	0.9	5.2	18.4	18.4
Cycle Q Clear(g_c), s	6.5	4.1	4.2	2.2	7.0	5.0	1.0	10.5	0.9	5.2	18.4	18.4
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		0.93
Lane Grp Cap(c), veh/h	434	421	425	87	569	250	154	1081	475	363	648	578
V/C Ratio(X)	0.77	0.31	0.31	0.66	0.67	0.50	0.32	0.59	0.06	0.73	0.81	0.81
Avail Cap(c_a), veh/h	699	1027	1039	232	1798	790	250	1890	830	599	1125	1002
HCM Platoon Ratio	1.00	1.00	1.00	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	22.3	22.3	32.9	27.9	27.0	32.6	20.9	17.5	30.6	20.3	20.3
Incr Delay (d2), s/veh	1.1	0.2	0.2	3.2	0.5	0.6	0.4	0.2	0.0	1.1	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	1.6	1.7	1.0	2.8	1.8	0.4	3.9	0.3	2.1	6.8	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.9	22.4	22.5	36.1	28.4	27.6	33.0	21.1	17.6	31.6	21.2	21.3
LnGrp LOS	C	C	C	D	C	C	C	C	B	C	C	C
Approach Vol, veh/h		596			563			709			1254	
Approach Delay, s/veh		27.2			29.0			21.8			23.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	26.9	8.4	22.7	8.1	31.1	13.7	17.4				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	12.0	36.8	9.0	40.0	5.0	43.8	14.0	35.0				
Max Q Clear Time (g_c+I1), s	7.2	12.5	4.2	6.2	3.0	20.4	8.5	9.0				
Green Ext Time (p_c), s	0.1	2.6	0.0	0.8	0.0	4.0	0.2	1.6				
Intersection Summary												
HCM 6th Ctrl Delay				24.8								
HCM 6th LOS				C								

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

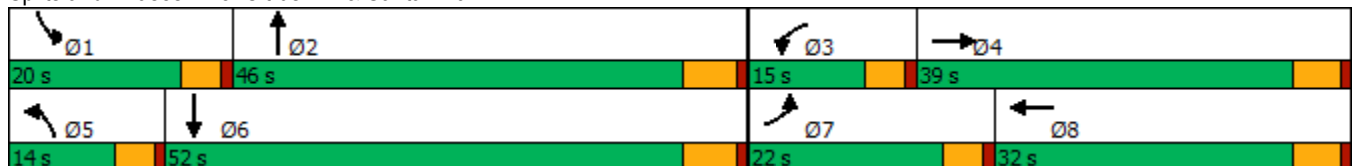


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	70	49	25	86	16	425	62	274
Future Volume (vph)	70	49	25	86	16	425	62	274
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	22.0	39.0	15.0	32.0	14.0	46.0	20.0	52.0
Total Split (%)	18.3%	32.5%	12.5%	26.7%	11.7%	38.3%	16.7%	43.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	8.0	19.3	6.5	13.5	6.3	22.7	7.7	27.6
Actuated g/C Ratio	0.14	0.35	0.12	0.24	0.11	0.41	0.14	0.49
v/c Ratio	0.29	0.06	0.13	0.19	0.08	0.35	0.27	0.21
Control Delay	31.5	14.4	32.9	14.3	33.2	20.1	31.7	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.5	14.4	32.9	14.3	33.2	20.1	31.7	13.6
LOS	C	B	C	B	C	C	C	B
Approach Delay		22.8		16.9		20.5		16.3
Approach LOS		C		B		C		B






















Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 55.9	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.35	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 47.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



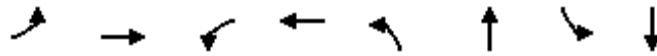
HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	49	22	25	86	70	16	425	48	62	274	70
Future Volume (veh/h)	70	49	22	25	86	70	16	425	48	62	274	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	53	20	27	92	38	17	457	44	67	295	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	121	621	222	57	515	202	38	769	74	112	847	136
Arrive On Green	0.07	0.24	0.24	0.03	0.20	0.20	0.02	0.23	0.23	0.06	0.27	0.27
Sat Flow, veh/h	1810	2605	932	1810	2533	993	1810	3327	319	1810	3113	501
Grp Volume(v), veh/h	75	36	37	27	64	66	17	247	254	67	170	173
Grp Sat Flow(s),veh/h/ln	1810	1805	1732	1810	1805	1721	1810	1805	1842	1810	1805	1809
Q Serve(g_s), s	1.9	0.7	0.8	0.7	1.4	1.5	0.4	5.7	5.7	1.7	3.5	3.6
Cycle Q Clear(g_c), s	1.9	0.7	0.8	0.7	1.4	1.5	0.4	5.7	5.7	1.7	3.5	3.6
Prop In Lane	1.00		0.54	1.00		0.58	1.00		0.17	1.00		0.28
Lane Grp Cap(c), veh/h	121	430	413	57	367	350	38	417	426	112	491	492
V/C Ratio(X)	0.62	0.08	0.09	0.47	0.17	0.19	0.44	0.59	0.60	0.60	0.35	0.35
Avail Cap(c_a), veh/h	674	1298	1246	403	1028	980	364	1554	1585	597	1785	1790
HCM Platoon Ratio	1.00	1.00	1.00	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	21.2	13.8	13.8	22.2	15.4	15.4	22.6	16.0	16.0	21.3	13.7	13.7
Incr Delay (d2), s/veh	2.0	0.1	0.1	2.2	0.2	0.3	3.0	1.3	1.3	1.9	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	0.7	0.2	0.3	0.3	0.5	0.5	0.2	2.0	2.0	0.7	1.1	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	13.9	13.9	24.5	15.6	15.7	25.6	17.3	17.4	23.2	14.1	14.1
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		148			157			518			410	
Approach Delay, s/veh		18.6			17.2			17.6			15.6	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.6	6.1	16.5	5.6	18.5	7.7	14.9				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	15.4	40.2	10.4	33.6	9.4	46.2	17.4	26.6				
Max Q Clear Time (g_c+I1), s	3.7	7.7	2.7	2.8	2.4	5.6	3.9	3.5				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.3	0.0	1.9	0.1	0.6				
Intersection Summary												
HCM 6th Ctrl Delay				17.0								
HCM 6th LOS				B								

Timings
8: Oleander Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

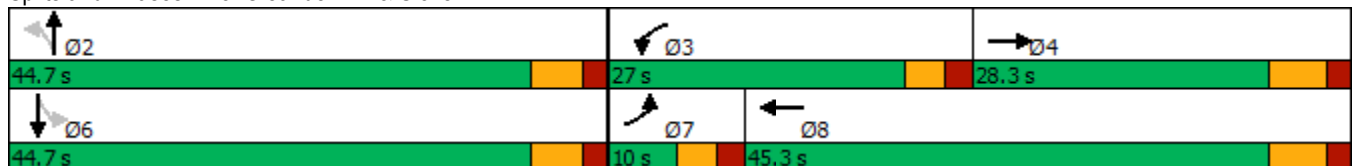


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	14	326	330	397	92	4	8	47
Future Volume (vph)	14	326	330	397	92	4	8	47
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	28.3	27.0	45.3	44.7	44.7	44.7	44.7
Total Split (%)	10.0%	28.3%	27.0%	45.3%	44.7%	44.7%	44.7%	44.7%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.2	17.7	22.8	44.1	14.7	14.7	14.7	14.7
Actuated g/C Ratio	0.07	0.24	0.31	0.60	0.20	0.20	0.20	0.20
v/c Ratio	0.16	0.76	0.83	0.29	0.49	0.67	0.11	0.22
Control Delay	41.4	30.8	41.2	10.0	31.3	7.9	24.6	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.4	30.8	41.2	10.0	31.3	7.9	24.6	20.8
LOS	D	C	D	A	C	A	C	C
Approach Delay		31.1		23.2		13.2		21.3
Approach LOS		C		C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 72.9
 Natural Cycle: 95
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 23.0
 Intersection LOS: C
 Intersection Capacity Utilization 67.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022

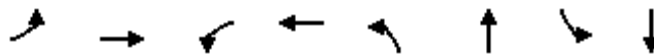


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	14	326	150	330	397	51	92	4	315	8	47	13
Future Volume (veh/h)	14	326	150	330	397	51	92	4	315	8	47	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	459	149	465	559	49	130	6	203	11	66	7
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	43	635	204	515	1670	146	333	9	296	202	323	34
Arrive On Green	0.02	0.24	0.24	0.28	0.50	0.50	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	2676	861	1810	3351	293	1341	46	1546	1189	1685	179
Grp Volume(v), veh/h	20	308	300	465	300	308	130	0	209	11	0	73
Grp Sat Flow(s),veh/h/ln	1810	1805	1732	1810	1805	1839	1341	0	1592	1189	0	1863
Q Serve(g_s), s	0.7	9.4	9.6	14.9	6.0	6.0	5.4	0.0	7.3	0.5	0.0	2.0
Cycle Q Clear(g_c), s	0.7	9.4	9.6	14.9	6.0	6.0	7.4	0.0	7.3	7.9	0.0	2.0
Prop In Lane	1.00		0.50	1.00		0.16	1.00		0.97	1.00		0.10
Lane Grp Cap(c), veh/h	43	429	411	515	900	916	333	0	305	202	0	357
V/C Ratio(X)	0.47	0.72	0.73	0.90	0.33	0.34	0.39	0.00	0.69	0.05	0.00	0.20
Avail Cap(c_a), veh/h	151	661	635	663	1173	1195	942	0	1029	743	0	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	21.1	21.1	20.7	9.1	9.1	23.5	0.0	22.6	26.2	0.0	20.4
Incr Delay (d2), s/veh	2.9	1.7	1.9	11.6	0.2	0.2	0.3	0.0	1.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.6	3.5	6.9	1.8	1.8	1.6	0.0	2.5	0.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	22.8	23.0	32.3	9.2	9.2	23.8	0.0	23.6	26.3	0.0	20.5
LnGrp LOS	C	C	C	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		628			1073			339				84
Approach Delay, s/veh		23.1			19.2			23.7				21.3
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		17.4	22.1	20.6		17.4	6.4	36.2				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		38.8	22.0	22.0		38.8	5.0	39.0				
Max Q Clear Time (g_c+I1), s		9.4	16.9	11.6		9.9	2.7	8.0				
Green Ext Time (p_c), s		1.0	0.2	2.1		0.3	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay				21.2								
HCM 6th LOS				C								

Timings
11: Oleander Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	31	106	17	122	9	84	111	82
Future Volume (vph)	31	106	17	122	9	84	111	82
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	18.0	34.0	14.0	30.0	12.0	39.0	33.0	60.0
Total Split (%)	15.0%	28.3%	11.7%	25.0%	10.0%	32.5%	27.5%	50.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.6	14.6	6.0	12.0	5.6	13.0	10.7	27.1
Actuated g/C Ratio	0.11	0.25	0.10	0.21	0.10	0.22	0.18	0.46
v/c Ratio	0.23	0.22	0.14	0.45	0.08	0.40	0.52	0.22
Control Delay	32.1	19.4	32.6	14.3	32.9	24.1	30.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.1	19.4	32.6	14.3	32.9	24.1	30.7	11.6
LOS	C	B	C	B	C	C	C	B
Approach Delay		21.9		15.5		24.8		20.7
Approach LOS		C		B		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 58.4
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 19.9
 Intersection LOS: B
 Intersection Capacity Utilization 39.1%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕		↗	↕		↖	↕	
Traffic Volume (veh/h)	31	106	20	17	122	115	9	84	25	111	82	40
Future Volume (veh/h)	31	106	20	17	122	115	9	84	25	111	82	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	48	163	25	26	188	119	14	129	29	171	126	42
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	89	706	106	55	445	268	32	321	72	223	435	145
Arrive On Green	0.05	0.22	0.22	0.03	0.21	0.21	0.02	0.21	0.21	0.12	0.32	0.32
Sat Flow, veh/h	1810	3145	474	1810	2163	1301	1810	1500	337	1810	1363	454
Grp Volume(v), veh/h	48	92	96	26	155	152	14	0	158	171	0	168
Grp Sat Flow(s),veh/h/ln	1810	1805	1815	1810	1805	1658	1810	0	1838	1810	0	1817
Q Serve(g_s), s	1.3	2.1	2.1	0.7	3.7	3.9	0.4	0.0	3.6	4.5	0.0	3.4
Cycle Q Clear(g_c), s	1.3	2.1	2.1	0.7	3.7	3.9	0.4	0.0	3.6	4.5	0.0	3.4
Prop In Lane	1.00		0.26	1.00		0.78	1.00		0.18	1.00		0.25
Lane Grp Cap(c), veh/h	89	405	407	55	372	341	32	0	393	223	0	580
V/C Ratio(X)	0.54	0.23	0.23	0.47	0.42	0.44	0.44	0.00	0.40	0.77	0.00	0.29
Avail Cap(c_a), veh/h	495	1053	1059	347	906	832	273	0	1260	1049	0	2024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.8	15.5	15.6	23.4	16.9	17.0	23.8	0.0	16.6	20.8	0.0	12.5
Incr Delay (d2), s/veh	1.9	0.3	0.3	2.3	0.7	0.9	3.5	0.0	0.7	2.1	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	0.8	0.3	1.3	1.3	0.2	0.0	1.3	1.7	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	15.8	15.9	25.7	17.7	17.9	27.3	0.0	17.2	22.9	0.0	12.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		236			333			172				339
Approach Delay, s/veh		17.6			18.4			18.0				17.9
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	15.9	6.1	16.4	5.5	21.1	7.0	15.5				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	28.4	33.6	9.4	28.6	7.4	54.6	13.4	24.6				
Max Q Clear Time (g_c+I1), s	6.5	5.6	2.7	4.1	2.4	5.4	3.3	5.9				
Green Ext Time (p_c), s	0.2	0.8	0.0	0.9	0.0	1.0	0.0	1.5				

Intersection Summary

HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B

Timings
1: Citrus Av. & I-10 WB Ramps

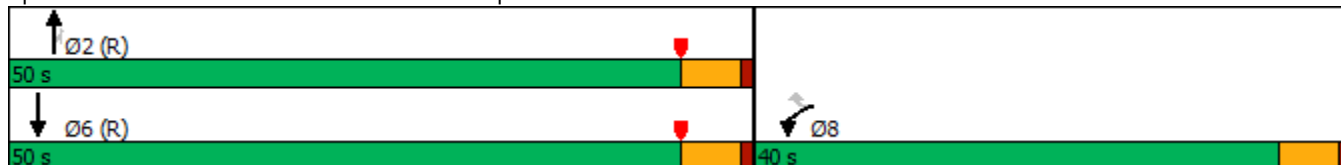


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↵	↵↵	↵↵↵	↵	↵↵
Traffic Volume (vph)	272	484	963	271	828
Future Volume (vph)	272	484	963	271	828
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	40.0	40.0	50.0	50.0	50.0
Total Split (%)	44.4%	44.4%	55.6%	55.6%	55.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	19.1	19.1	60.9	60.9	60.9
Actuated g/C Ratio	0.21	0.21	0.68	0.68	0.68
v/c Ratio	0.75	0.72	0.29	0.25	0.36
Control Delay	44.8	29.8	8.6	4.1	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	29.8	8.6	4.1	7.4
LOS	D	C	A	A	A
Approach Delay	35.2		7.6		7.4
Approach LOS	D		A		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 15.0
 Intersection LOS: B
 Intersection Capacity Utilization 46.3%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	272	484	963	271	0	828
Future Volume (veh/h)	272	484	963	271	0	828
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	286	344	1014	246	0	872
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	339	532	3638	1106	0	2532
Arrive On Green	0.19	0.19	1.00	1.00	0.00	0.70
Sat Flow, veh/h	1810	2834	5358	1577	0	3800
Grp Volume(v), veh/h	286	344	1014	246	0	872
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1577	0	1805
Q Serve(g_s), s	13.7	10.1	0.0	0.0	0.0	8.6
Cycle Q Clear(g_c), s	13.7	10.1	0.0	0.0	0.0	8.6
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	339	532	3638	1106	0	2532
V/C Ratio(X)	0.84	0.65	0.28	0.22	0.00	0.34
Avail Cap(c_a), veh/h	704	1102	3638	1106	0	2532
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.78	0.78	0.00	1.00
Uniform Delay (d), s/veh	35.3	33.8	0.0	0.0	0.0	5.3
Incr Delay (d2), s/veh	2.2	0.5	0.1	0.4	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	3.4	0.1	0.1	0.0	2.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.5	34.3	0.1	0.4	0.0	5.7
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	630		1260			872
Approach Delay, s/veh	35.7		0.2			5.7
Approach LOS	D		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		68.1				21.9
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		45.0				35.0
Max Q Clear Time (g_c+11), s		2.0				10.6
Green Ext Time (p_c), s		5.3				3.9

Intersection Summary

HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps

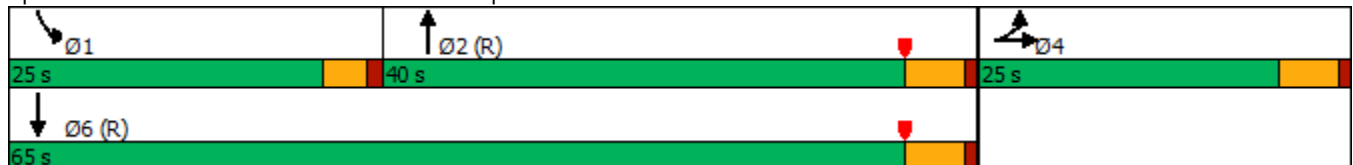


Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↙↘	↗	↑↑↑	↙↘	↑↑
Traffic Volume (vph)	443	10	791	458	642
Future Volume (vph)	443	10	791	458	642
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	25.0	25.0	40.0	25.0	65.0
Total Split (%)	27.8%	27.8%	44.4%	27.8%	72.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	16.2	16.2	43.4	16.4	63.8
Actuated g/C Ratio	0.18	0.18	0.48	0.18	0.71
v/c Ratio	0.73	0.45	0.54	0.74	0.26
Control Delay	41.6	8.8	15.5	34.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	8.8	15.5	34.9	6.8
LOS	D	A	B	C	A
Approach Delay		31.5	15.5		18.5
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 20.0
 Intersection LOS: B
 Intersection Capacity Utilization 63.7%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔						↑↑↑		↔↔	↑↑	
Traffic Volume (veh/h)	443	10	188	0	0	0	0	791	491	458	642	0
Future Volume (veh/h)	443	10	188	0	0	0	0	791	491	458	642	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	457	10	116				0	815	299	472	662	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	553	20	237				0	1983	722	546	2640	0
Arrive On Green	0.16	0.16	0.16				0.00	0.53	0.53	0.31	1.00	0.00
Sat Flow, veh/h	3510	129	1501				0	3904	1360	3510	3705	0
Grp Volume(v), veh/h	457	0	126				0	754	360	472	662	0
Grp Sat Flow(s),veh/h/ln	1755	0	1630				0	1729	1635	1755	1805	0
Q Serve(g_s), s	11.3	0.0	6.4				0.0	11.8	11.9	11.4	0.0	0.0
Cycle Q Clear(g_c), s	11.3	0.0	6.4				0.0	11.8	11.9	11.4	0.0	0.0
Prop In Lane	1.00		0.92				0.00		0.83	1.00		0.00
Lane Grp Cap(c), veh/h	553	0	257				0	1837	869	546	2640	0
V/C Ratio(X)	0.83	0.00	0.49				0.00	0.41	0.41	0.86	0.25	0.00
Avail Cap(c_a), veh/h	780	0	362				0	1837	869	819	2640	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.66	0.66	0.89	0.89	0.00
Uniform Delay (d), s/veh	36.7	0.0	34.6				0.0	12.6	12.7	30.1	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.5				0.0	0.5	1.0	3.9	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	2.4				0.0	4.1	4.0	4.1	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.2	0.0	35.1				0.0	13.1	13.6	34.0	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	C	A	A
Approach Vol, veh/h		583						1114			1134	
Approach Delay, s/veh		39.1						13.3			14.3	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	18.0	52.8	19.2	70.8								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	21.0	35.0	20.0	60.0								
Max Q Clear Time (g_c+I1), s	13.4	13.9	13.3	2.0								
Green Ext Time (p_c), s	0.6	4.6	0.8	2.8								
Intersection Summary												
HCM 6th Ctrl Delay			19.0									
HCM 6th LOS			B									

Timings
3: Citrus Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

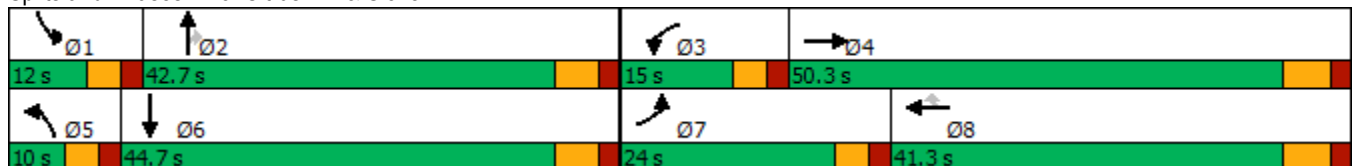


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕
Traffic Volume (vph)	596	700	68	226	143	17	538	48	186	397
Future Volume (vph)	596	700	68	226	143	17	538	48	186	397
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	24.0	50.3	15.0	41.3	41.3	10.0	42.7	42.7	12.0	44.7
Total Split (%)	20.0%	41.9%	12.5%	34.4%	34.4%	8.3%	35.6%	35.6%	10.0%	37.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.6	29.8	7.3	15.1	15.1	5.2	18.5	18.5	7.2	27.5
Actuated g/C Ratio	0.24	0.36	0.09	0.18	0.18	0.06	0.22	0.22	0.09	0.33
v/c Ratio	0.76	0.60	0.46	0.37	0.36	0.08	0.71	0.11	0.65	0.57
Control Delay	39.3	25.8	49.8	31.4	6.6	44.8	35.5	0.4	50.9	22.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	25.8	49.8	31.4	6.6	44.8	35.5	0.4	50.9	22.7
LOS	D	C	D	C	A	D	D	A	D	C
Approach Delay		31.8		26.2			32.9			29.0
Approach LOS		C		C			C			C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 83.4
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 30.5
 Intersection LOS: C
 Intersection Capacity Utilization 68.4%
 ICU Level of Service C
 Analysis Period (min) 15































Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

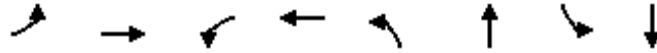
09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	596	700	32	68	226	143	17	538	48	186	397	245
Future Volume (veh/h)	596	700	32	68	226	143	17	538	48	186	397	245
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	627	737	26	72	238	98	18	566	29	196	418	219
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	735	1118	39	100	579	257	75	776	341	290	635	329
Arrive On Green	0.21	0.31	0.31	0.06	0.16	0.16	0.02	0.22	0.22	0.08	0.28	0.28
Sat Flow, veh/h	3510	3555	125	1810	3610	1604	3510	3610	1584	3510	2298	1191
Grp Volume(v), veh/h	627	374	389	72	238	98	18	566	29	196	327	310
Grp Sat Flow(s),veh/h/ln	1755	1805	1875	1810	1805	1604	1755	1805	1584	1755	1805	1684
Q Serve(g_s), s	11.5	12.0	12.0	2.6	4.0	3.6	0.3	9.7	1.0	3.6	10.7	10.9
Cycle Q Clear(g_c), s	11.5	12.0	12.0	2.6	4.0	3.6	0.3	9.7	1.0	3.6	10.7	10.9
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	735	568	590	100	579	257	75	776	341	290	499	465
V/C Ratio(X)	0.85	0.66	0.66	0.72	0.41	0.38	0.24	0.73	0.09	0.68	0.66	0.67
Avail Cap(c_a), veh/h	1000	1190	1237	271	1894	842	263	1991	874	368	1050	979
HCM Platoon Ratio	1.00	1.00	1.00	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	25.4	19.8	19.8	31.0	25.2	25.0	32.1	24.4	20.9	29.7	21.3	21.4
Incr Delay (d2), s/veh	4.2	0.5	0.5	3.6	0.2	0.3	0.6	0.5	0.0	1.8	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	4.7	4.4	4.6	1.1	1.5	1.3	0.1	3.7	0.3	1.5	4.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.6	20.3	20.2	34.6	25.4	25.4	32.7	24.9	21.0	31.5	21.9	22.0
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		1390			408			613			833	
Approach Delay, s/veh		24.5			27.0			24.9			24.2	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	20.2	8.7	27.3	6.4	24.3	19.0	17.0				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	7.0	36.8	10.0	44.0	5.0	38.8	19.0	35.0				
Max Q Clear Time (g_c+I1), s	5.6	11.7	4.6	14.0	2.3	12.9	13.5	6.0				
Green Ext Time (p_c), s	0.0	2.3	0.0	2.7	0.0	2.3	0.5	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

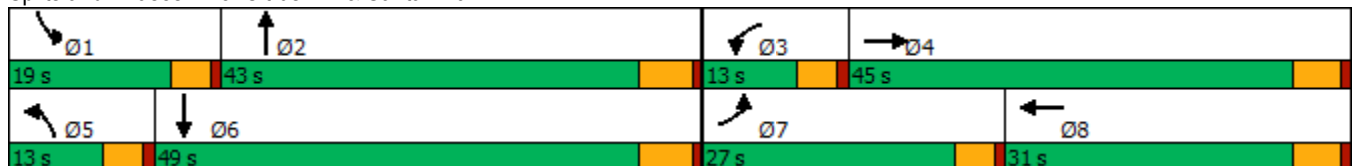


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↘	↕	↘	↕	↘	↕
Traffic Volume (vph)	123	164	18	99	20	435	61	293
Future Volume (vph)	123	164	18	99	20	435	61	293
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	27.0	45.0	13.0	31.0	13.0	43.0	19.0	49.0
Total Split (%)	22.5%	37.5%	10.8%	25.8%	10.8%	35.8%	15.8%	40.8%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	9.7	22.6	6.1	13.0	6.2	15.4	7.5	20.3
Actuated g/C Ratio	0.17	0.39	0.10	0.22	0.11	0.26	0.13	0.35
v/c Ratio	0.43	0.13	0.10	0.19	0.11	0.52	0.27	0.27
Control Delay	32.3	14.3	34.6	17.7	34.6	23.5	33.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	14.3	34.6	17.7	34.6	23.5	33.2	16.2
LOS	C	B	C	B	C	C	C	B
Approach Delay		21.6		19.6		23.9		18.9
Approach LOS		C		B		C		B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 58.7
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.52
 Intersection Signal Delay: 21.4
 Intersection LOS: C
 Intersection Capacity Utilization 51.0%
 ICU Level of Service A
 Analysis Period (min) 15





















Splits and Phases: 5: Citrus Av. & Santa Ana Av.



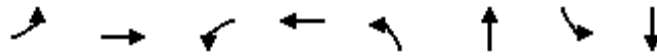
HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

5: Citrus Av. & Santa Ana Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	164	15	18	99	48	20	435	38	61	293	29
Future Volume (veh/h)	123	164	15	18	99	48	20	435	38	61	293	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	127	169	9	19	102	22	21	448	31	63	302	25
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	167	975	52	42	626	131	46	744	51	107	847	70
Arrive On Green	0.09	0.28	0.28	0.02	0.21	0.21	0.03	0.22	0.22	0.06	0.25	0.25
Sat Flow, veh/h	1810	3484	184	1810	2968	622	1810	3425	236	1810	3377	278
Grp Volume(v), veh/h	127	87	91	19	61	63	21	235	244	63	161	166
Grp Sat Flow(s),veh/h/ln	1810	1805	1864	1810	1805	1785	1810	1805	1857	1810	1805	1850
Q Serve(g_s), s	3.3	1.8	1.8	0.5	1.3	1.4	0.6	5.7	5.7	1.6	3.5	3.6
Cycle Q Clear(g_c), s	3.3	1.8	1.8	0.5	1.3	1.4	0.6	5.7	5.7	1.6	3.5	3.6
Prop In Lane	1.00		0.10	1.00		0.35	1.00		0.13	1.00		0.15
Lane Grp Cap(c), veh/h	167	505	521	42	381	376	46	392	403	107	453	464
V/C Ratio(X)	0.76	0.17	0.17	0.45	0.16	0.17	0.46	0.60	0.60	0.59	0.35	0.36
Avail Cap(c_a), veh/h	836	1474	1522	314	953	943	314	1385	1425	537	1608	1649
HCM Platoon Ratio	1.00	1.00	1.00	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	21.5	13.2	13.2	23.4	15.6	15.6	23.3	17.1	17.1	22.2	14.9	15.0
Incr Delay (d2), s/veh	2.7	0.2	0.2	2.8	0.2	0.2	2.6	1.5	1.5	1.9	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	1.3	0.6	0.6	0.2	0.5	0.5	0.2	2.0	2.1	0.7	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	13.4	13.4	26.2	15.8	15.9	25.9	18.6	18.6	24.2	15.4	15.4
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		305			143			500			390	
Approach Delay, s/veh		17.9			17.2			18.9			16.8	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	16.3	5.7	19.0	5.8	18.0	9.1	15.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	14.4	37.2	8.4	39.6	8.4	43.2	22.4	25.6				
Max Q Clear Time (g_c+I1), s	3.6	7.7	2.5	3.8	2.6	5.6	5.3	3.4				
Green Ext Time (p_c), s	0.0	2.6	0.0	0.9	0.0	1.8	0.1	0.5				
Intersection Summary												
HCM 6th Ctrl Delay				17.9								
HCM 6th LOS				B								

Timings
8: Oleander Av. & Slover Av.

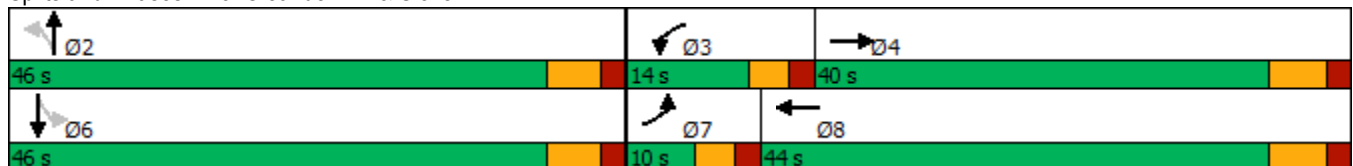


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	16	806	88	311	79	4	9	3
Future Volume (vph)	16	806	88	311	79	4	9	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	40.0	14.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	40.0%	14.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	7.3	28.5	9.3	36.6	14.6	14.6	14.6	14.6
Actuated g/C Ratio	0.13	0.51	0.17	0.65	0.26	0.26	0.26	0.26
v/c Ratio	0.08	0.56	0.32	0.15	0.24	0.16	0.03	0.04
Control Delay	35.9	18.0	34.0	9.1	23.0	7.0	20.2	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.9	18.0	34.0	9.1	23.0	7.0	20.2	11.2
LOS	D	B	C	A	C	A	C	B
Approach Delay		18.3		14.5		15.4		14.3
Approach LOS		B		B		B		B

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 56
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 17.0
 Intersection LOS: B
 Intersection Capacity Utilization 56.1%
 ICU Level of Service B
 Analysis Period (min) 15





















Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022

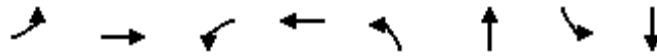
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	806	113	88	311	11	79	4	67	9	3	15
Future Volume (veh/h)	16	806	113	88	311	11	79	4	67	9	3	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	18	886	103	97	342	11	87	4	34	10	3	9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	41	1262	147	144	1587	51	349	23	194	325	56	169
Arrive On Green	0.02	0.39	0.39	0.08	0.44	0.44	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1810	3258	379	1810	3570	115	1424	170	1441	1391	419	1256
Grp Volume(v), veh/h	18	491	498	97	173	180	87	0	38	10	0	12
Grp Sat Flow(s),veh/h/ln	1810	1805	1832	1810	1805	1879	1424	0	1610	1391	0	1674
Q Serve(g_s), s	0.4	9.9	9.9	2.2	2.5	2.5	2.4	0.0	0.9	0.3	0.0	0.3
Cycle Q Clear(g_c), s	0.4	9.9	9.9	2.2	2.5	2.5	2.7	0.0	0.9	1.2	0.0	0.3
Prop In Lane	1.00		0.21	1.00		0.06	1.00		0.89	1.00		0.75
Lane Grp Cap(c), veh/h	41	699	709	144	802	835	349	0	216	325	0	225
V/C Ratio(X)	0.44	0.70	0.70	0.67	0.22	0.22	0.25	0.00	0.18	0.03	0.00	0.05
Avail Cap(c_a), veh/h	210	1410	1431	377	1577	1642	1482	0	1497	1431	0	1556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	11.1	11.1	19.3	7.4	7.4	17.5	0.0	16.6	17.1	0.0	16.3
Incr Delay (d2), s/veh	2.8	1.0	1.0	2.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	2.8	0.8	0.6	0.6	0.7	0.0	0.3	0.1	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	12.1	12.1	21.3	7.5	7.5	17.6	0.0	16.7	17.1	0.0	16.3
LnGrp LOS	C	B	B	C	A	A	B	A	B	B	A	B
Approach Vol, veh/h		1007			450			125				22
Approach Delay, s/veh		12.3			10.5			17.3				16.7
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		11.7	8.4	23.0		11.7	6.0	25.5				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	9.0	33.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		4.7	4.2	11.9		3.2	2.4	4.5				
Green Ext Time (p_c), s		0.2	0.0	4.8		0.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				12.2								
HCM 6th LOS				B								

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022

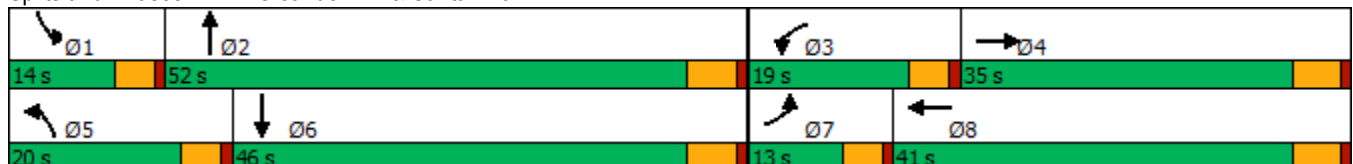


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	8	141	30	114	35	115	9	66
Future Volume (vph)	8	141	30	114	35	115	9	66
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	13.0	35.0	19.0	41.0	20.0	52.0	14.0	46.0
Total Split (%)	10.8%	29.2%	15.8%	34.2%	16.7%	43.3%	11.7%	38.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.0	13.1	6.9	17.6	7.1	17.8	6.0	13.2
Actuated g/C Ratio	0.12	0.26	0.14	0.35	0.14	0.35	0.12	0.26
v/c Ratio	0.07	0.38	0.21	0.18	0.23	0.44	0.07	0.26
Control Delay	29.9	17.1	28.5	13.6	28.3	16.3	29.9	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	17.1	28.5	13.6	28.3	16.3	29.9	20.4
LOS	C	B	C	B	C	B	C	C
Approach Delay		17.6		16.4		18.3		21.4
Approach LOS		B		B		B		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 50.5	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.44	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 35.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↕		↰	↕		↰	↕		↰	↕	
Traffic Volume (veh/h)	8	141	65	30	114	17	35	115	55	9	66	10
Future Volume (veh/h)	8	141	65	30	114	17	35	115	55	9	66	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	239	88	51	193	24	59	195	64	15	112	15
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	32	581	208	95	832	102	105	358	117	34	364	49
Arrive On Green	0.02	0.22	0.22	0.05	0.26	0.26	0.06	0.26	0.26	0.02	0.22	0.22
Sat Flow, veh/h	1810	2603	932	1810	3226	395	1810	1370	450	1810	1641	220
Grp Volume(v), veh/h	14	164	163	51	107	110	59	0	259	15	0	127
Grp Sat Flow(s),veh/h/ln	1810	1805	1730	1810	1805	1817	1810	0	1819	1810	0	1860
Q Serve(g_s), s	0.3	3.5	3.6	1.2	2.1	2.2	1.4	0.0	5.5	0.4	0.0	2.6
Cycle Q Clear(g_c), s	0.3	3.5	3.6	1.2	2.1	2.2	1.4	0.0	5.5	0.4	0.0	2.6
Prop In Lane	1.00		0.54	1.00		0.22	1.00		0.25	1.00		0.12
Lane Grp Cap(c), veh/h	32	403	386	95	465	468	105	0	475	34	0	413
V/C Ratio(X)	0.43	0.41	0.42	0.54	0.23	0.24	0.56	0.00	0.55	0.44	0.00	0.31
Avail Cap(c_a), veh/h	338	1187	1137	579	1427	1436	619	0	1883	378	0	1678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	14.9	15.0	20.8	13.2	13.2	20.7	0.0	14.3	21.8	0.0	14.6
Incr Delay (d2), s/veh	3.4	0.7	0.7	1.8	0.2	0.3	1.8	0.0	1.0	3.2	0.0	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	0.2	1.2	1.2	0.5	0.7	0.7	0.6	0.0	1.9	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	15.6	15.7	22.6	13.4	13.5	22.4	0.0	15.3	25.1	0.0	15.0
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		341			268			318				142
Approach Delay, s/veh		16.1			15.2			16.6				16.1
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	17.2	7.0	15.5	7.2	15.4	5.4	17.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	9.4	46.6	14.4	29.6	15.4	40.6	8.4	35.6				
Max Q Clear Time (g_c+I1), s	2.4	7.5	3.2	5.6	3.4	4.6	2.3	4.2				
Green Ext Time (p_c), s	0.0	1.5	0.0	1.8	0.0	0.7	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

APPENDIX 3.3: EXISTING (2022) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	483	602	734	323	1052
v/c Ratio	0.82	0.56	0.25	0.31	0.51
Control Delay	42.0	18.0	13.6	5.9	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	18.0	13.6	5.9	15.2
Queue Length 50th (ft)	279	109	86	15	202
Queue Length 95th (ft)	347	142	152	108	318
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	812	1401	2971	1041	2067
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	0.59	0.43	0.25	0.31	0.51

Intersection Summary

Queues

Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	297	382	1065	516	908
v/c Ratio	0.40	0.85	0.46	0.78	0.37
Control Delay	34.1	40.3	18.5	48.7	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	40.3	18.5	48.7	5.9
Queue Length 50th (ft)	85	154	141	154	98
Queue Length 95th (ft)	107	234	234	191	124
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	1120	611	2315	810	2485
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	0.63	0.46	0.64	0.37

Intersection Summary

Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	286	509	1014	285	872
v/c Ratio	0.75	0.72	0.29	0.25	0.36
Control Delay	44.8	29.8	8.6	4.1	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	29.8	8.6	4.1	7.4
Queue Length 50th (ft)	153	114	43	0	96
Queue Length 95th (ft)	215	156	208	81	168
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	701	1184	3508	1162	2441
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	0.41	0.43	0.29	0.25	0.36

Intersection Summary

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	457	204	1321	472	662
v/c Ratio	0.73	0.45	0.54	0.74	0.26
Control Delay	41.6	8.8	15.5	34.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.6	8.8	15.5	34.9	6.8
Queue Length 50th (ft)	127	5	153	137	76
Queue Length 95th (ft)	168	59	237	165	97
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	781	513	2455	817	2563
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	0.59	0.40	0.54	0.58	0.26

Intersection Summary

APPENDIX 4.1: POST PROCESSING WORKSHEETS

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Citrus Av. & I-10 WB Ramps
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	661	362	-299	-45%	963	550	-413	-43%
	Right	291	290	-1	0%	271	270	-1	0%
	NB Total	952	652	-300	-31%	1,234	820	-414	-34%
SOUTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	947	923	-24	-3%	828	623	-205	-25%
	Right	539	540	2	0%	415	420	5	1%
	SB Total	1,486	1,463	-23	-2%	1,243	1,043	-200	-16%
EAST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	EB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
WEST BOUND	Left	435	557	122	28%	272	477	205	75%
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	542	468	-74	-14%	484	370	-114	-24%
	WB Total	977	1,025	48	5%	756	847	91	12%
TOTAL ENTERING VOLUME		3,414	3,140	-274	-8%	3,233	2,710	-523	-16%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,463	1,043			
North Leg	Outbound	830	920			
North Leg	TOTAL	2,293	1,963	12%	10%	18,981
South Leg	Inbound	652	820			
South Leg	Outbound	1,480	1,100			
South Leg	TOTAL	2,132	1,920	12%	11%	18,281
East Leg	Inbound	1,025	847			
East Leg	Outbound	290	270			
East Leg	TOTAL	1,315	1,117	18%	15%	7,426
West Leg	Inbound	0	0			
West Leg	Outbound	540	420			
West Leg	TOTAL	540	420	8%	6%	6,687
OVERALL TOTAL		6,280	5,420	12%	11%	51,375

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Citrus Av. & I-10 EB Ramps
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	664	469	-195	-29%	791	570	-221	-28%
	Right	369	511	143	39%	491	860	370	75%
	NB Total	1,033	980	-53	-5%	1,282	1,430	149	12%
SOUTH BOUND	Left	501	650	149	30%	458	563	105	23%
	Through	881	830	-51	-6%	642	537	-105	-16%
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	SB Total	1,382	1,480	98	7%	1,100	1,100	0	0%
EAST BOUND	Left	288	225	-63	-22%	443	353	-90	-20%
	Through	2	3	1	50%	10	19	9	90%
	Right	369	412	43	12%	188	248	60	32%
	EB Total	659	640	-19	-3%	641	620	-21	-3%
WEST BOUND	Left	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Through	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	Right	0	0	0	#DIV/0!	0	0	0	#DIV/0!
	WB Total	0	0	0	#DIV/0!	0	0	0	#DIV/0!
TOTAL ENTERING VOLUME		3,073	3,100	27	1%	3,022	3,150	128	4%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,480	1,100			
North Leg	Outbound	694	923			
North Leg	TOTAL	2,174	2,023	12%	11%	18,281
South Leg	Inbound	980	1,430			
South Leg	Outbound	1,242	785			
South Leg	TOTAL	2,222	2,215	13%	13%	17,163
East Leg	Inbound	0	0			
East Leg	Outbound	1,164	1,442			
East Leg	TOTAL	1,164	1,442	9%	11%	13,063
West Leg	Inbound	640	620			
West Leg	Outbound	0	0			
West Leg	TOTAL	640	620	9%	8%	7,362
OVERALL TOTAL		6,200	6,300	11%	11%	55,869

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Citrus Av. & Slover Av.
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	43	84	41	95%	17	47	30	176%
	Through	557	455	-102	-18%	538	663	125	23%
	Right	52	92	40	77%	48	93	45	94%
	NB Total	652	631	-21	-3%	603	803	200	33%
SOUTH BOUND	Left	234	201	-33	-14%	186	136	-50	-27%
	Through	488	433	-55	-11%	397	295	-102	-26%
	Right	499	470	-29	-6%	245	255	11	4%
	SB Total	1,220	1,104	-116	-10%	827	686	-141	-17%
EAST BOUND	Left	294	408	115	39%	596	649	53	9%
	Through	204	616	413	203%	700	1,191	491	70%
	Right	27	84	57	211%	32	55	24	75%
	EB Total	524	1,108	584	111%	1,328	1,895	568	43%
WEST BOUND	Left	51	73	22	43%	68	90	22	32%
	Through	335	506	172	51%	226	418	193	85%
	Right	169	107	-62	-36%	143	119	-24	-16%
	WB Total	554	686	132	24%	436	627	191	44%
TOTAL ENTERING VOLUME		2,950	3,529	579	20%	3,194	4,011	818	26%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	1,104	686			
North Leg	Outbound	970	1,431			
North Leg	TOTAL	2,074	2,117	12%	12%	17,163
South Leg	Inbound	631	803			
South Leg	Outbound	590	440			
South Leg	TOTAL	1,221	1,243	23%	23%	5,398
East Leg	Inbound	686	627			
East Leg	Outbound	909	1,420			
East Leg	TOTAL	1,595	2,047	6%	8%	25,113
West Leg	Inbound	1,108	1,895			
West Leg	Outbound	1,060	720			
West Leg	TOTAL	2,168	2,615	7%	9%	29,011
OVERALL TOTAL		7,058	8,022	9%	10%	76,685

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Citrus Av. & Santa Ana Av.
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	16	16	0	0%	20	17	-3	-13%
	Through	425	374	-51	-12%	435	409	-26	-6%
	Right	48	50	2	4%	38	40	2	5%
	NB Total	489	440	-49	-10%	492	466	-26	-5%
SOUTH BOUND	Left	62	70	9	14%	61	90	29	48%
	Through	274	275	2	1%	293	218	-75	-26%
	Right	70	75	6	8%	29	35	6	21%
	SB Total	405	420	16	4%	383	343	-40	-10%
EAST BOUND	Left	70	74	5	6%	123	280	158	129%
	Through	49	61	13	26%	164	420	256	156%
	Right	22	25	3	14%	15	19	4	27%
	EB Total	140	160	20	14%	302	719	418	138%
WEST BOUND	Left	25	33	8	32%	18	13	-5	-28%
	Through	86	121	35	41%	99	118	19	19%
	Right	70	87	18	25%	48	61	13	27%
	WB Total	181	241	61	34%	165	192	27	16%
TOTAL ENTERING VOLUME		1,214	1,261	47.5	4%	1,342	1,720	379	28%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	420	343			
North Leg	Outbound	535	750			
North Leg	TOTAL	955	1,093	18%	20%	5,368
South Leg	Inbound	440	466			
South Leg	Outbound	333	250			
South Leg	TOTAL	773	716	22%	21%	3,447
East Leg	Inbound	241	192			
East Leg	Outbound	181	550			
East Leg	TOTAL	422	742	8%	14%	5,153
West Leg	Inbound	160	719			
West Leg	Outbound	212	170			
West Leg	TOTAL	372	889	7%	16%	5,633
OVERALL TOTAL		2,522	3,440	13%	18%	19,601

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Oleander Av. & Slover Av.
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	92	77	-15	-16%	79	118	39	49%
	Through	4	4	0	0%	4	5	1	25%
	Right	315	351	36	11%	67	106	39	58%
	NB Total	411	432	21	5%	150	229	79	53%
SOUTH BOUND	Left	8	15	7	88%	9	14	6	65%
	Through	47	56	9	19%	3	4	1	33%
	Right	13	19	6	46%	15	23	8	53%
	SB Total	68	90	22	32%	27	41	15	55%
EAST BOUND	Left	14	24	11	78%	16	21	6	35%
	Through	326	693	368	113%	806	1,266	461	57%
	Right	150	195	45	30%	113	135	22	19%
	EB Total	489	912	423	87%	934	1,422	488	52%
WEST BOUND	Left	330	354	24	7%	88	103	16	18%
	Through	397	520	123	31%	311	452	141	45%
	Right	51	74	23	45%	11	14	3	27%
	WB Total	778	948	170	22%	410	569	160	39%
TOTAL ENTERING VOLUME		1,746	2,382	636	36%	1,520	2,261	741	49%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	90	41			
North Leg	Outbound	102	40			
North Leg	TOTAL	192	81	8%	4%	2,280
South Leg	Inbound	432	229			
South Leg	Outbound	605	242			
South Leg	TOTAL	1,037	471	49%	22%	2,113
East Leg	Inbound	948	569			
East Leg	Outbound	1,059	1,386			
East Leg	TOTAL	2,007	1,955	8%	8%	25,674
West Leg	Inbound	912	1,422			
West Leg	Outbound	616	593			
West Leg	TOTAL	1,528	2,015	6%	8%	25,113
OVERALL TOTAL		4,764	4,522	9%	8%	55,180

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Project: Oleander & Santa Ana Warehouses
 Scenario: Horizon Year (2040) Without Project

Job #: 14581
 Analyst: CP
 Date: 8/31/22

LOCATION: Oleander Av. & Santa Ana Av.
 FORECAST YEAR: 2040

INDIVIDUAL TURN VOLUME GROWTH REVIEW									
APPROACH	TURNING MOVEMENT	AM PEAK HOUR INPUT DATA				PM PEAK HOUR INPUT DATA			
		EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE	EXISTING COUNT	FUTURE VOLUME	DIFFERENCE	% CHANGE
NORTH BOUND	Left	9	16	8	88%	35	27	-8	-23%
	Through	84	122	38	45%	115	135	20	17%
	Right	25	42	17	68%	55	78	24	43%
	NB Total	118	180	63	53%	205	240	36	17%
SOUTH BOUND	Left	111	114	4	3%	9	24	15	167%
	Through	82	91	9	11%	66	91	25	38%
	Right	40	45	5	13%	10	15	5	50%
	SB Total	233	250	18	8%	85	130	45	53%
EAST BOUND	Left	31	31	0	0%	8	18	10	125%
	Through	106	124	19	18%	141	392	251	178%
	Right	20	25	5	25%	65	91	26	40%
	EB Total	157	180	24	15%	214	501	287	134%
WEST BOUND	Left	17	24	7	41%	30	34	4	13%
	Through	122	170	48	39%	114	143	29	25%
	Right	115	127	12	10%	17	32	15	88%
	WB Total	254	321	67	26%	161	209	48	30%
TOTAL ENTERING VOLUME		761	931	170.5	22%	665	1,080	416	63%

FORECAST PEAK HOUR TO ADT COMPARISON						
		VOLUMES		PERCENT OF ADT		ADT
		AM	PM	AM	PM	
North Leg	Inbound	250	130			
North Leg	Outbound	280	185			
North Leg	TOTAL	530	315	25%	15%	2,113
South Leg	Inbound	180	240			
South Leg	Outbound	140	216			
South Leg	TOTAL	320	456	18%	25%	1,794
East Leg	Inbound	321	209			
East Leg	Outbound	280	494			
East Leg	TOTAL	601	703	10%	12%	5,753
West Leg	Inbound	180	501			
West Leg	Outbound	231	185			
West Leg	TOTAL	411	686	8%	13%	5,153
OVERALL TOTAL		1,862	2,160	13%	15%	14,813

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**APPENDIX 5.1: OPENING YEAR CUMULATIVE (2025) WITHOUT
PROJECT CONDITIONS INTERSECTION OPERATIONS ANALYSIS
WORKSHEETS**

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Timings
1: Citrus Av. & I-10 WB Ramps

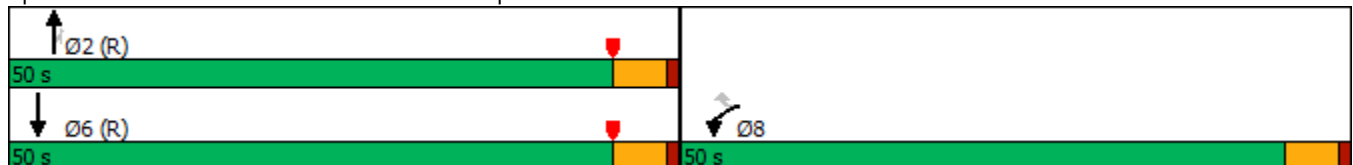


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↗↗	↑↑↑	↗	↑↑
Traffic Volume (vph)	646	525	655	357	989
Future Volume (vph)	646	525	655	357	989
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	50.0	50.0	50.0	50.0	50.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	43.5	43.5	46.5	46.5	46.5
Actuated g/C Ratio	0.44	0.44	0.46	0.46	0.46
v/c Ratio	0.91	0.43	0.30	0.42	0.65
Control Delay	43.9	12.0	22.5	6.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	12.0	22.5	6.6	23.6
LOS	D	B	C	A	C
Approach Delay	29.6		16.9		23.6
Approach LOS	C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 23.7
 Intersection LOS: C
 Intersection Capacity Utilization 71.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵↵	↕↕↕	↵		↕↕
Traffic Volume (veh/h)	646	525	655	357	0	989
Future Volume (veh/h)	646	525	655	357	0	989
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	718	583	728	388	0	1099
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	757	1185	2499	759	0	1739
Arrive On Green	0.42	0.42	0.96	0.96	0.00	0.48
Sat Flow, veh/h	1810	2834	5358	1575	0	3800
Grp Volume(v), veh/h	718	583	728	388	0	1099
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1575	0	1805
Q Serve(g_s), s	38.3	15.1	0.7	1.8	0.0	22.7
Cycle Q Clear(g_c), s	38.3	15.1	0.7	1.8	0.0	22.7
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	757	1185	2499	759	0	1739
V/C Ratio(X)	0.95	0.49	0.29	0.51	0.00	0.63
Avail Cap(c_a), veh/h	814	1275	2499	759	0	1739
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.75	0.75	0.00	1.00
Uniform Delay (d), s/veh	28.1	21.3	1.0	1.0	0.0	19.3
Incr Delay (d2), s/veh	18.9	0.1	0.2	1.8	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.8	4.9	0.2	0.7	0.0	9.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.0	21.4	1.2	2.8	0.0	21.1
LnGrp LOS	D	C	A	A	A	C
Approach Vol, veh/h	1301		1116			1099
Approach Delay, s/veh	35.5		1.7			21.1
Approach LOS	D		A			C
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		53.2				53.2
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		45.0				45.0
Max Q Clear Time (g_c+11), s		3.8				24.7
Green Ext Time (p_c), s		3.9				4.8

Intersection Summary

HCM 6th Ctrl Delay	20.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps

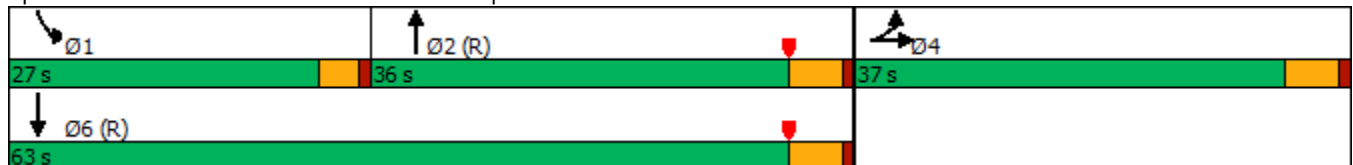


Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↔↔↔	↔↔	↔↔
Traffic Volume (vph)	277	2	736	480	1191
Future Volume (vph)	277	2	736	480	1191
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	37.0	37.0	36.0	27.0	63.0
Total Split (%)	37.0%	37.0%	36.0%	27.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effect Green (s)	37.5	37.5	30.1	18.4	52.5
Actuated g/C Ratio	0.38	0.38	0.30	0.18	0.52
v/c Ratio	0.22	1.29	0.72	0.77	0.65
Control Delay	22.9	170.9	30.5	48.7	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	170.9	30.5	48.7	14.4
LOS	C	F	C	D	B
Approach Delay		133.2	30.5		24.3
Approach LOS		F	C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 56.7
 Intersection LOS: E
 Intersection Capacity Utilization 98.0%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔						↑↑↑		↔↔	↑↑	
Traffic Volume (veh/h)	277	2	808	0	0	0	0	736	362	480	1191	0
Future Volume (veh/h)	277	2	808	0	0	0	0	736	362	480	1191	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	286	2	711				0	759	259	495	1228	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1123	1	514				0	1450	489	562	2094	0
Arrive On Green	0.32	0.32	0.32				0.00	0.38	0.38	0.32	1.00	0.00
Sat Flow, veh/h	3510	5	1606				0	3986	1287	3510	3705	0
Grp Volume(v), veh/h	286	0	713				0	687	331	495	1228	0
Grp Sat Flow(s),veh/h/ln	1755	0	1611				0	1729	1644	1755	1805	0
Q Serve(g_s), s	6.0	0.0	32.0				0.0	15.4	15.6	13.4	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	32.0				0.0	15.4	15.6	13.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.78	1.00		0.00
Lane Grp Cap(c), veh/h	1123	0	515				0	1314	625	562	2094	0
V/C Ratio(X)	0.25	0.00	1.38				0.00	0.52	0.53	0.88	0.59	0.00
Avail Cap(c_a), veh/h	1123	0	515				0	1314	625	807	2094	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.76	0.76	0.57	0.57	0.00
Uniform Delay (d), s/veh	25.2	0.0	34.0				0.0	24.0	24.1	33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	184.2				0.0	1.1	2.4	3.7	0.7	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
%ile BackOfQ(50%),veh/ln	2.4	0.0	38.0				0.0	6.1	6.1	4.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	0.0	218.2				0.0	25.1	26.5	36.8	0.7	0.0
LnGrp LOS	C	A	F				A	C	C	D	A	A
Approach Vol, veh/h		999						1018			1723	
Approach Delay, s/veh		163.0						25.6			11.1	
Approach LOS		F						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	20.0	43.0	37.0	63.0								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	23.0	31.0	32.0	58.0								
Max Q Clear Time (g_c+I1), s	15.4	17.6	34.0	2.0								
Green Ext Time (p_c), s	0.6	3.6	0.0	6.4								
Intersection Summary												
HCM 6th Ctrl Delay			55.6									
HCM 6th LOS			E									

Timings
3: Citrus Av. & Slover Av.

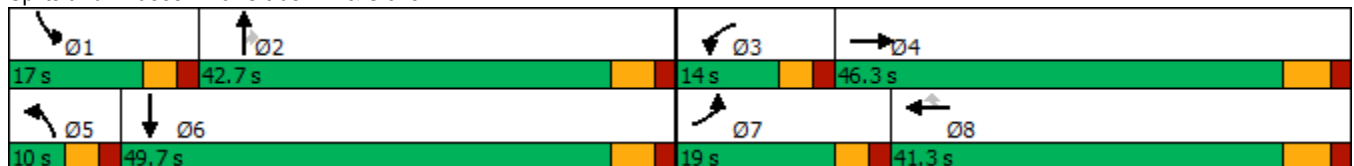


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕
Traffic Volume (vph)	224	211	67	302	220	43	680	84	490	1058
Future Volume (vph)	224	211	67	302	220	43	680	84	490	1058
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	19.0	46.3	14.0	41.3	41.3	10.0	42.7	42.7	17.0	49.7
Total Split (%)	15.8%	38.6%	11.7%	34.4%	34.4%	8.3%	35.6%	35.6%	14.2%	41.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	21.9	7.5	16.3	16.3	5.1	35.0	35.0	12.2	44.6
Actuated g/C Ratio	0.11	0.23	0.08	0.17	0.17	0.05	0.36	0.36	0.13	0.46
v/c Ratio	0.67	0.38	0.55	0.56	0.60	0.27	0.59	0.14	1.26	1.16
Control Delay	52.1	30.5	61.8	40.6	18.2	52.6	28.7	0.4	171.5	104.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	30.5	61.8	40.6	18.2	52.6	28.7	0.4	171.5	104.6
LOS	D	C	E	D	B	D	C	A	F	F
Approach Delay		40.3		34.7			27.1			119.9
Approach LOS		D		C			C			F

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 96.8	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.26	
Intersection Signal Delay: 79.2	Intersection LOS: E
Intersection Capacity Utilization 86.5%	ICU Level of Service E
Analysis Period (min) 15	































Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

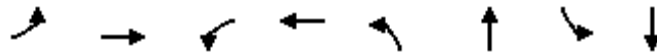
09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	224	211	59	67	302	220	43	680	84	490	1058	597
Future Volume (veh/h)	224	211	59	67	302	220	43	680	84	490	1058	597
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	255	240	66	76	343	182	49	773	63	557	1202	544
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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	330	545	146	98	556	244	136	1380	608	455	1159	498
Arrive On Green	0.09	0.19	0.19	0.05	0.15	0.15	0.04	0.38	0.38	0.13	0.47	0.47
Sat Flow, veh/h	3510	2811	756	1810	3610	1585	3510	3610	1591	3510	2448	1052
Grp Volume(v), veh/h	255	152	154	76	343	182	49	773	63	557	870	876
Grp Sat Flow(s),veh/h/ln	1755	1805	1762	1810	1805	1585	1755	1805	1591	1755	1805	1695
Q Serve(g_s), s	6.6	6.9	7.1	3.8	8.2	10.2	1.3	15.6	2.4	12.0	43.8	43.8
Cycle Q Clear(g_c), s	6.6	6.9	7.1	3.8	8.2	10.2	1.3	15.6	2.4	12.0	43.8	43.8
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	330	350	341	98	556	244	136	1380	608	455	854	802
V/C Ratio(X)	0.77	0.44	0.45	0.77	0.62	0.75	0.36	0.56	0.10	1.22	1.02	1.09
Avail Cap(c_a), veh/h	531	780	762	176	1366	600	190	1436	633	455	854	802
HCM Platoon Ratio	1.00	1.00	1.00	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	40.9	32.8	32.9	43.2	36.6	37.4	43.4	22.5	18.4	40.3	24.4	24.4
Incr Delay (d2), s/veh	1.5	0.3	0.3	4.8	0.4	1.7	0.6	0.2	0.0	118.8	35.3	59.9
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	2.8	2.9	2.9	1.8	3.5	3.9	0.5	6.1	0.8	12.4	24.6	28.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	33.2	33.3	48.0	37.0	39.1	44.0	22.7	18.4	159.1	59.7	84.2
LnGrp LOS	D	C	C	D	D	D	D	C	B	F	F	F
Approach Vol, veh/h		561			601			885			2303	
Approach Delay, s/veh		37.4			39.0			23.6			93.1	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	41.3	10.0	24.2	8.6	49.7	13.7	20.5				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	12.0	36.8	9.0	40.0	5.0	43.8	14.0	35.0				
Max Q Clear Time (g_c+I1), s	14.0	17.6	5.8	9.1	3.3	45.8	8.6	12.2				
Green Ext Time (p_c), s	0.0	3.2	0.0	1.0	0.0	0.0	0.2	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			64.3									
HCM 6th LOS			E									

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

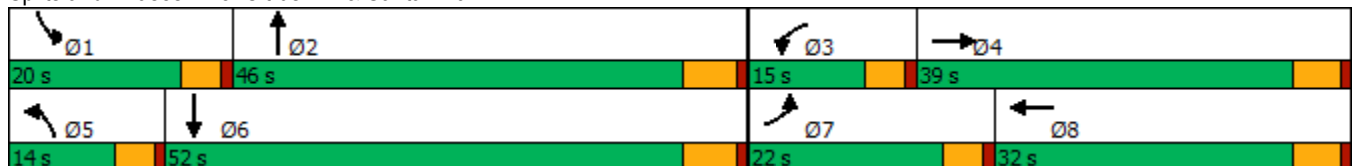


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	116	100	33	164	27	484	272	474
Future Volume (vph)	116	100	33	164	27	484	272	474
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	22.0	39.0	15.0	32.0	14.0	46.0	20.0	52.0
Total Split (%)	18.3%	32.5%	12.5%	26.7%	11.7%	38.3%	16.7%	43.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.5	21.2	6.5	12.6	6.2	23.1	15.9	39.6
Actuated g/C Ratio	0.13	0.26	0.08	0.15	0.07	0.28	0.19	0.48
v/c Ratio	0.55	0.20	0.25	0.50	0.21	0.74	0.85	0.48
Control Delay	46.1	17.3	45.5	21.6	45.4	30.4	59.0	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.1	17.3	45.5	21.6	45.4	30.4	59.0	15.9
LOS	D	B	D	C	D	C	E	B
Approach Delay		29.0		24.0		30.9		27.3
Approach LOS		C		C		C		C






















Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 83.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 28.2
 Intersection LOS: C
 Intersection Capacity Utilization 67.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



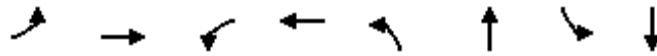
HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	100	70	33	164	130	27	484	198	272	474	276
Future Volume (veh/h)	116	100	70	33	164	130	27	484	198	272	474	276
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	125	108	71	35	176	103	29	520	205	292	510	270
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	429	263	64	326	182	56	711	279	338	997	526
Arrive On Green	0.09	0.20	0.20	0.04	0.15	0.15	0.03	0.28	0.28	0.19	0.44	0.44
Sat Flow, veh/h	1810	2152	1316	1810	2236	1245	1810	2531	993	1810	2283	1204
Grp Volume(v), veh/h	125	89	90	35	140	139	29	370	355	292	403	377
Grp Sat Flow(s),veh/h/ln	1810	1805	1663	1810	1805	1676	1810	1805	1719	1810	1805	1682
Q Serve(g_s), s	4.6	2.9	3.1	1.3	4.9	5.3	1.1	12.7	12.8	10.7	11.1	11.2
Cycle Q Clear(g_c), s	4.6	2.9	3.1	1.3	4.9	5.3	1.1	12.7	12.8	10.7	11.1	11.2
Prop In Lane	1.00		0.79	1.00		0.74	1.00		0.58	1.00		0.72
Lane Grp Cap(c), veh/h	161	360	332	64	263	244	56	507	483	338	788	735
V/C Ratio(X)	0.77	0.25	0.27	0.55	0.53	0.57	0.52	0.73	0.73	0.86	0.51	0.51
Avail Cap(c_a), veh/h	459	884	815	274	700	650	248	1058	1007	406	1216	1133
HCM Platoon Ratio	1.00	1.00	1.00	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	30.6	23.1	23.2	32.5	27.1	27.3	32.7	22.3	22.3	27.0	14.0	14.0
Incr Delay (d2), s/veh	3.0	0.4	0.4	2.7	1.7	2.1	2.7	2.0	2.2	13.4	0.5	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	2.0	1.2	1.2	0.6	2.1	2.1	0.5	5.0	4.8	5.4	3.8	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.6	23.5	23.7	35.2	28.8	29.3	35.5	24.4	24.5	40.5	14.5	14.6
LnGrp LOS	C	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		304			314			754			1072	
Approach Delay, s/veh		27.7			29.8			24.9			21.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	25.1	7.0	19.1	6.7	35.8	10.7	15.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	15.4	40.2	10.4	33.6	9.4	46.2	17.4	26.6				
Max Q Clear Time (g_c+I1), s	12.7	14.8	3.3	5.1	3.1	13.2	6.6	7.3				
Green Ext Time (p_c), s	0.1	4.3	0.0	0.9	0.0	5.0	0.1	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			24.4									
HCM 6th LOS			C									

Timings
8: Oleander Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

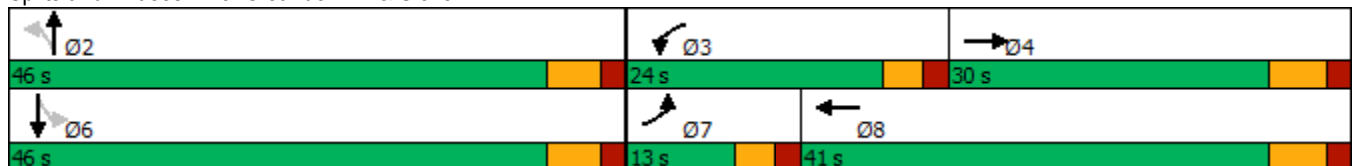


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	12	556	349	456	93	4	7	50
Future Volume (vph)	12	556	349	456	93	4	7	50
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	13.0	30.0	24.0	41.0	46.0	46.0	46.0	46.0
Total Split (%)	13.0%	30.0%	24.0%	41.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	24.1	19.4	46.8	14.9	14.9	14.9	14.9
Actuated g/C Ratio	0.07	0.32	0.26	0.62	0.20	0.20	0.20	0.20
v/c Ratio	0.13	0.89	1.07	0.33	0.50	0.73	0.10	0.24
Control Delay	40.0	37.4	93.1	10.6	32.6	11.8	24.4	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.0	37.4	93.1	10.6	32.6	11.8	24.4	21.7
LOS	D	D	F	B	C	B	C	C
Approach Delay		37.5		44.1		16.3		22.0
Approach LOS		D		D		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 75.9
 Natural Cycle: 125
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 35.3
 Intersection LOS: D
 Intersection Capacity Utilization 75.5%
 ICU Level of Service D
 Analysis Period (min) 15





















Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022

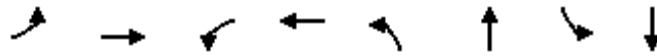
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	556	158	349	456	56	93	4	331	7	50	13
Future Volume (veh/h)	12	556	158	349	456	56	93	4	331	7	50	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	783	117	492	642	56	131	6	225	10	70	7
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	920	137	484	1811	158	319	8	306	173	335	33
Arrive On Green	0.02	0.29	0.29	0.27	0.54	0.54	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1810	3145	470	1810	3352	292	1336	41	1550	1166	1696	170
Grp Volume(v), veh/h	17	449	451	492	345	353	131	0	231	10	0	77
Grp Sat Flow(s),veh/h/ln	1810	1805	1810	1810	1805	1839	1336	0	1591	1166	0	1865
Q Serve(g_s), s	0.7	16.6	16.6	19.0	7.7	7.7	6.5	0.0	9.7	0.6	0.0	2.5
Cycle Q Clear(g_c), s	0.7	16.6	16.6	19.0	7.7	7.7	8.9	0.0	9.7	10.2	0.0	2.5
Prop In Lane	1.00		0.26	1.00		0.16	1.00		0.97	1.00		0.09
Lane Grp Cap(c), veh/h	36	528	529	484	975	993	319	0	314	173	0	368
V/C Ratio(X)	0.47	0.85	0.85	1.02	0.35	0.36	0.41	0.00	0.74	0.06	0.00	0.21
Avail Cap(c_a), veh/h	204	603	604	484	975	993	810	0	899	601	0	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.4	23.6	23.7	26.0	9.3	9.3	27.6	0.0	26.7	31.5	0.0	23.8
Incr Delay (d2), s/veh	3.4	9.7	9.7	44.9	0.2	0.2	0.3	0.0	1.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	7.6	7.7	13.2	2.4	2.4	1.9	0.0	3.5	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	33.4	33.4	70.8	9.4	9.4	27.9	0.0	28.0	31.6	0.0	23.9
LnGrp LOS	D	C	C	F	A	A	C	A	C	C	A	C
Approach Vol, veh/h		917			1190			362				87
Approach Delay, s/veh		33.5			34.8			28.0				24.8
Approach LOS		C			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		19.9	24.0	27.1		19.9	6.4	44.6				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	19.0	23.7		40.1	8.0	34.7				
Max Q Clear Time (g_c+I1), s		11.7	21.0	18.6		12.2	2.7	9.7				
Green Ext Time (p_c), s		1.1	0.0	2.0		0.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				33.0								
HCM 6th LOS				C								

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022

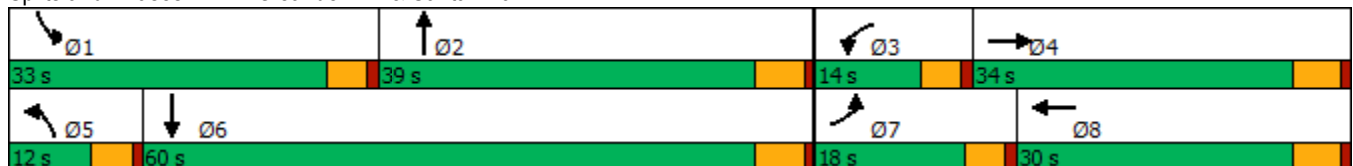


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	33	522	16	269	5	89	114	87
Future Volume (vph)	33	522	16	269	5	89	114	87
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	18.0	34.0	14.0	30.0	12.0	39.0	33.0	60.0
Total Split (%)	15.0%	28.3%	11.7%	25.0%	10.0%	32.5%	27.5%	50.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.0	25.8	6.0	22.8	5.5	13.5	12.1	28.9
Actuated g/C Ratio	0.10	0.36	0.08	0.32	0.08	0.19	0.17	0.41
v/c Ratio	0.29	0.63	0.16	0.52	0.06	0.46	0.57	0.27
Control Delay	39.8	23.7	39.9	22.5	40.2	31.8	38.2	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.8	23.7	39.9	22.5	40.2	31.8	38.2	15.8
LOS	D	C	D	C	D	C	D	B
Approach Delay		24.6		23.2		32.2		26.3
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 71.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 25.1
 Intersection LOS: C
 Intersection Capacity Utilization 45.4%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	33	522	15	16	269	111	5	89	18	114	87	42
Future Volume (veh/h)	33	522	15	16	269	111	5	89	18	114	87	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	51	803	17	25	414	113	8	137	19	175	134	45
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	88	1116	24	52	811	219	19	304	42	225	408	137
Arrive On Green	0.05	0.31	0.31	0.03	0.29	0.29	0.01	0.19	0.19	0.12	0.30	0.30
Sat Flow, veh/h	1810	3615	77	1810	2807	759	1810	1632	226	1810	1360	457
Grp Volume(v), veh/h	51	401	419	25	265	262	8	0	156	175	0	179
Grp Sat Flow(s),veh/h/ln	1810	1805	1886	1810	1805	1760	1810	0	1858	1810	0	1816
Q Serve(g_s), s	1.6	11.2	11.2	0.8	6.9	7.1	0.2	0.0	4.2	5.3	0.0	4.3
Cycle Q Clear(g_c), s	1.6	11.2	11.2	0.8	6.9	7.1	0.2	0.0	4.2	5.3	0.0	4.3
Prop In Lane	1.00		0.04	1.00		0.43	1.00		0.12	1.00		0.25
Lane Grp Cap(c), veh/h	88	557	582	52	521	508	19	0	346	225	0	545
V/C Ratio(X)	0.58	0.72	0.72	0.48	0.51	0.52	0.42	0.00	0.45	0.78	0.00	0.33
Avail Cap(c_a), veh/h	427	909	950	300	782	763	236	0	1099	905	0	1746
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	17.4	17.4	27.2	16.8	16.9	27.9	0.0	20.5	24.1	0.0	15.4
Incr Delay (d2), s/veh	2.2	1.8	1.7	2.6	0.8	0.8	5.5	0.0	0.9	2.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	4.2	4.3	0.3	2.6	2.5	0.1	0.0	1.7	2.2	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	19.2	19.1	29.7	17.6	17.7	33.4	0.0	21.5	26.3	0.0	15.8
LnGrp LOS	C	B	B	C	B	B	C	A	C	C	A	B
Approach Vol, veh/h		871			552			164				354
Approach Delay, s/veh		19.7			18.2			22.0				21.0
Approach LOS		B			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	16.0	6.2	22.9	5.2	22.4	7.4	21.8				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	28.4	33.6	9.4	28.6	7.4	54.6	13.4	24.6				
Max Q Clear Time (g_c+I1), s	7.3	6.2	2.8	13.2	2.2	6.3	3.6	9.1				
Green Ext Time (p_c), s	0.2	0.8	0.0	4.3	0.0	1.0	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				19.7								
HCM 6th LOS				B								

Timings
1: Citrus Av. & I-10 WB Ramps

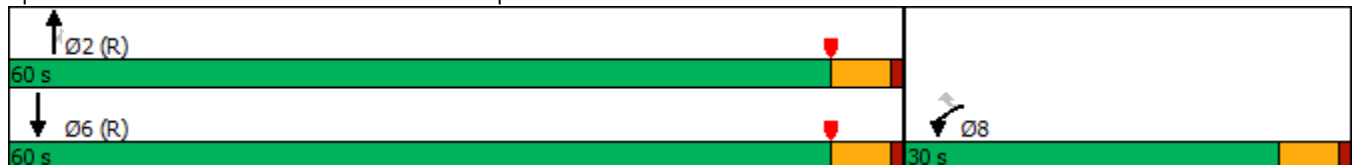


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↵	↵↵	↵↵↵	↵	↵↵
Traffic Volume (vph)	306	480	1005	518	847
Future Volume (vph)	306	480	1005	518	847
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	30.0	30.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.4	20.4	59.6	59.6	59.6
Actuated g/C Ratio	0.23	0.23	0.66	0.66	0.66
v/c Ratio	0.79	0.64	0.31	0.44	0.37
Control Delay	46.3	22.0	11.7	7.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	22.0	11.7	7.2	8.1
LOS	D	C	B	A	A
Approach Delay	31.5		10.2		8.1
Approach LOS	C		B		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.79
 Intersection Signal Delay: 14.9
 Intersection LOS: B
 Intersection Capacity Utilization 48.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵↵	↕↕↕	↵		↕↕
Traffic Volume (veh/h)	306	480	1005	518	0	847
Future Volume (veh/h)	306	480	1005	518	0	847
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	322	340	1058	506	0	892
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	370	580	3549	1079	0	2470
Arrive On Green	0.20	0.20	1.00	1.00	0.00	0.68
Sat Flow, veh/h	1810	2834	5358	1577	0	3800
Grp Volume(v), veh/h	322	340	1058	506	0	892
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1577	0	1805
Q Serve(g_s), s	15.5	9.8	0.0	0.0	0.0	9.3
Cycle Q Clear(g_c), s	15.5	9.8	0.0	0.0	0.0	9.3
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	370	580	3549	1079	0	2470
V/C Ratio(X)	0.87	0.59	0.30	0.47	0.00	0.36
Avail Cap(c_a), veh/h	503	787	3549	1079	0	2470
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.66	0.66	0.00	1.00
Uniform Delay (d), s/veh	34.6	32.3	0.0	0.0	0.0	6.0
Incr Delay (d2), s/veh	9.5	0.4	0.1	1.0	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	3.3	0.0	0.3	0.0	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	32.7	0.1	1.0	0.0	6.4
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	662		1564			892
Approach Delay, s/veh	38.2		0.4			6.4
Approach LOS	D		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		66.6				23.4
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		55.0				25.0
Max Q Clear Time (g_c+11), s		2.0				11.3
Green Ext Time (p_c), s		6.4				4.0

Intersection Summary

HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps

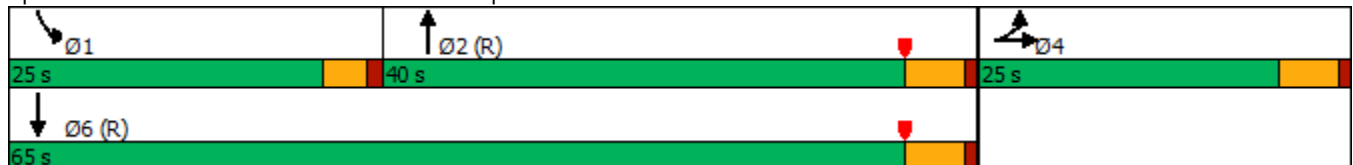


Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↖↗	↖	↕↕↕	↖↗	↕↕
Traffic Volume (vph)	435	8	1083	453	703
Future Volume (vph)	435	8	1083	453	703
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	25.0	25.0	40.0	25.0	65.0
Total Split (%)	27.8%	27.8%	44.4%	27.8%	72.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	16.1	16.1	43.6	16.3	63.9
Actuated g/C Ratio	0.18	0.18	0.48	0.18	0.71
v/c Ratio	0.72	0.66	0.68	0.74	0.28
Control Delay	41.2	14.8	18.8	37.2	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	14.8	18.8	37.2	7.0
LOS	D	B	B	D	A
Approach Delay		30.0	18.8		18.9
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 21.2
 Intersection LOS: C
 Intersection Capacity Utilization 77.7%
 ICU Level of Service D
 Analysis Period (min) 15























Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  		 	 	
Traffic Volume (veh/h)	435	8	315	0	0	0	0	1083	547	453	703	0
Future Volume (veh/h)	435	8	315	0	0	0	0	1083	547	453	703	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	448	8	247				0	1116	357	467	725	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	648	9	289				0	1960	627	541	2543	0
Arrive On Green	0.18	0.18	0.18				0.00	0.51	0.51	0.31	1.00	0.00
Sat Flow, veh/h	3510	51	1567				0	4047	1240	3510	3705	0
Grp Volume(v), veh/h	448	0	255				0	996	477	467	725	0
Grp Sat Flow(s),veh/h/ln	1755	0	1618				0	1729	1658	1755	1805	0
Q Serve(g_s), s	10.7	0.0	13.7				0.0	18.0	18.0	11.3	0.0	0.0
Cycle Q Clear(g_c), s	10.7	0.0	13.7				0.0	18.0	18.0	11.3	0.0	0.0
Prop In Lane	1.00		0.97				0.00		0.75	1.00		0.00
Lane Grp Cap(c), veh/h	648	0	299				0	1749	839	541	2543	0
V/C Ratio(X)	0.69	0.00	0.85				0.00	0.57	0.57	0.86	0.29	0.00
Avail Cap(c_a), veh/h	780	0	360				0	1749	839	819	2543	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.35	0.35	0.87	0.87	0.00
Uniform Delay (d), s/veh	34.3	0.0	35.5				0.0	15.4	15.4	30.2	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	13.6				0.0	0.5	1.0	3.6	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	6.2				0.0	6.3	6.1	4.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	49.1				0.0	15.9	16.4	33.8	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	C	A	A
Approach Vol, veh/h		703						1473			1192	
Approach Delay, s/veh		40.5						16.1			13.4	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	17.9	50.5	21.6	68.4								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	21.0	35.0	20.0	60.0								
Max Q Clear Time (g_c+I1), s	13.3	20.0	15.7	2.0								
Green Ext Time (p_c), s	0.6	5.8	0.9	3.1								
Intersection Summary												
HCM 6th Ctrl Delay			20.2									
HCM 6th LOS			C									

Timings
3: Citrus Av. & Slover Av.

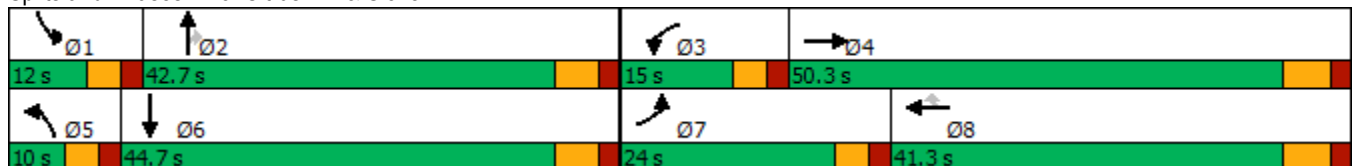


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↔↔	↕↔	↔	↕↕	↔	↔↔	↕↕	↔	↔↔	↕↔
Traffic Volume (vph)	585	693	97	258	400	56	867	69	338	597
Future Volume (vph)	585	693	97	258	400	56	867	69	338	597
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	24.0	50.3	15.0	41.3	41.3	10.0	42.7	42.7	12.0	44.7
Total Split (%)	20.0%	41.9%	12.5%	34.4%	34.4%	8.3%	35.6%	35.6%	10.0%	37.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.4	33.4	8.8	22.8	22.8	5.1	30.2	30.2	7.2	34.8
Actuated g/C Ratio	0.19	0.33	0.09	0.22	0.22	0.05	0.30	0.30	0.07	0.34
v/c Ratio	0.93	0.66	0.66	0.34	0.88	0.34	0.86	0.12	1.45	0.71
Control Delay	64.2	32.7	69.7	34.4	43.1	57.6	43.7	0.4	261.4	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.2	32.7	69.7	34.4	43.1	57.6	43.7	0.4	261.4	33.1
LOS	E	C	E	C	D	E	D	A	F	C
Approach Delay		46.7		43.5			41.4			100.4
Approach LOS		D		D			D			F

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 102.2
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.45
 Intersection Signal Delay: 59.5
 Intersection LOS: E
 Intersection Capacity Utilization 80.3%
 ICU Level of Service D
 Analysis Period (min) 15
























Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

09/01/2022

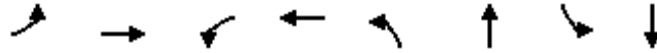
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	585	693	42	97	258	400	56	867	69	338	597	213
Future Volume (veh/h)	585	693	42	97	258	400	56	867	69	338	597	213
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	616	729	36	102	272	368	59	913	51	356	628	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	632	1276	63	128	923	411	137	1039	456	233	866	255
Arrive On Green	0.18	0.36	0.36	0.07	0.26	0.26	0.04	0.29	0.29	0.07	0.32	0.32
Sat Flow, veh/h	3510	3498	173	1810	3610	1606	3510	3610	1585	3510	2750	809
Grp Volume(v), veh/h	616	376	389	102	272	368	59	913	51	356	412	401
Grp Sat Flow(s),veh/h/ln	1755	1805	1866	1810	1805	1606	1755	1805	1585	1755	1805	1753
Q Serve(g_s), s	18.4	17.6	17.7	5.9	6.4	23.3	1.7	25.5	2.5	7.0	21.4	21.4
Cycle Q Clear(g_c), s	18.4	17.6	17.7	5.9	6.4	23.3	1.7	25.5	2.5	7.0	21.4	21.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	632	659	681	128	923	411	137	1039	456	233	569	552
V/C Ratio(X)	0.97	0.57	0.57	0.80	0.29	0.90	0.43	0.88	0.11	1.53	0.72	0.73
Avail Cap(c_a), veh/h	632	752	778	171	1197	533	166	1259	553	233	663	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	26.9	26.9	48.3	31.6	37.9	49.6	35.8	27.7	49.3	32.1	32.1
Incr Delay (d2), s/veh	29.3	0.3	0.3	12.3	0.1	12.8	0.8	5.7	0.0	258.7	2.5	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	7.2	7.5	3.0	2.7	10.2	0.8	11.4	0.9	11.3	9.2	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	27.2	27.2	60.6	31.7	50.7	50.4	41.5	27.7	308.0	34.6	34.7
LnGrp LOS	E	C	C	E	C	D	D	D	C	F	C	C
Approach Vol, veh/h		1381			742			1023			1169	
Approach Delay, s/veh		47.3			45.1			41.3			117.9	
Approach LOS		D			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	36.3	12.5	44.8	9.1	39.2	24.0	33.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	7.0	36.8	10.0	44.0	5.0	38.8	19.0	35.0				
Max Q Clear Time (g_c+I1), s	9.0	27.5	7.9	19.7	3.7	23.4	20.4	25.3				
Green Ext Time (p_c), s	0.0	2.9	0.0	2.6	0.0	2.7	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			64.6									
HCM 6th LOS			E									

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

5: Citrus Av. & Santa Ana Av.

09/01/2022

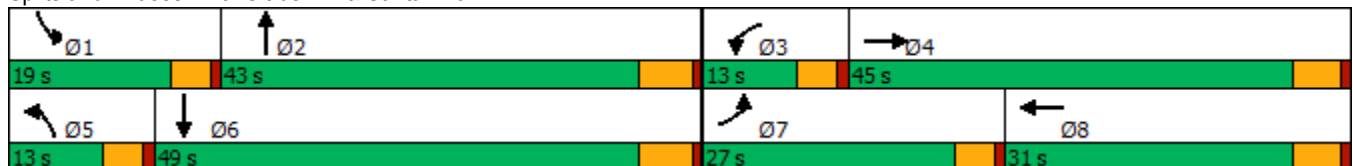


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↙	↕	↘	↕	↙	↕
Traffic Volume (vph)	267	194	42	141	34	519	148	369
Future Volume (vph)	267	194	42	141	34	519	148	369
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	27.0	45.0	13.0	31.0	13.0	43.0	19.0	49.0
Total Split (%)	22.5%	37.5%	10.8%	25.8%	10.8%	35.8%	15.8%	40.8%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	17.8	28.7	6.6	12.6	6.4	21.3	11.6	31.3
Actuated g/C Ratio	0.21	0.34	0.08	0.15	0.08	0.25	0.14	0.37
v/c Ratio	0.73	0.20	0.30	0.53	0.26	0.70	0.62	0.38
Control Delay	45.4	21.5	48.2	18.2	47.5	33.4	49.3	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	21.5	48.2	18.2	47.5	33.4	49.3	21.0
LOS	D	C	D	B	D	C	D	C
Approach Delay		34.4		21.5		34.2		27.7
Approach LOS		C		C		C		C






















Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 84.5
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 30.1
 Intersection LOS: C
 Intersection Capacity Utilization 68.5%
 ICU Level of Service C
 Analysis Period (min) 15

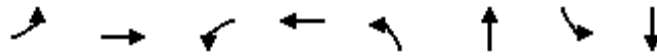
Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	194	36	42	141	197	34	519	87	148	369	113
Future Volume (veh/h)	267	194	36	42	141	197	34	519	87	148	369	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	275	200	31	43	145	176	35	535	82	153	380	111
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	326	950	145	75	297	263	65	756	115	194	864	249
Arrive On Green	0.18	0.30	0.30	0.04	0.16	0.16	0.04	0.24	0.24	0.11	0.31	0.31
Sat Flow, veh/h	1810	3133	478	1810	1805	1601	1810	3138	479	1810	2764	798
Grp Volume(v), veh/h	275	114	117	43	145	176	35	307	310	153	247	244
Grp Sat Flow(s),veh/h/ln	1810	1805	1806	1810	1805	1601	1810	1805	1812	1810	1805	1756
Q Serve(g_s), s	9.8	3.1	3.2	1.5	4.8	6.9	1.3	10.3	10.4	5.5	7.2	7.4
Cycle Q Clear(g_c), s	9.8	3.1	3.2	1.5	4.8	6.9	1.3	10.3	10.4	5.5	7.2	7.4
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.26	1.00		0.45
Lane Grp Cap(c), veh/h	326	547	548	75	297	263	65	435	437	194	564	549
V/C Ratio(X)	0.84	0.21	0.21	0.58	0.49	0.67	0.54	0.71	0.71	0.79	0.44	0.45
Avail Cap(c_a), veh/h	610	1076	1077	229	696	617	229	1011	1015	392	1174	1143
HCM Platoon Ratio	1.00	1.00	1.00	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	26.3	17.2	17.2	31.3	25.2	26.1	31.5	23.0	23.1	28.9	18.2	18.2
Incr Delay (d2), s/veh	2.3	0.2	0.2	2.6	1.2	2.9	2.6	2.1	2.1	2.7	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	1.2	1.2	0.7	2.0	2.6	0.6	4.1	4.2	2.3	2.7	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	17.4	17.4	33.9	26.5	29.0	34.1	25.2	25.2	31.6	18.7	18.8
LnGrp LOS	C	B	B	C	C	C	C	C	C	C	B	B
Approach Vol, veh/h		506			364			652			644	
Approach Delay, s/veh		23.5			28.6			25.7			21.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	21.8	7.3	25.5	7.0	26.5	16.6	16.3				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	14.4	37.2	8.4	39.6	8.4	43.2	22.4	25.6				
Max Q Clear Time (g_c+I1), s	7.5	12.4	3.5	5.2	3.3	9.4	11.8	8.9				
Green Ext Time (p_c), s	0.1	3.5	0.0	1.3	0.0	2.8	0.3	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			24.5									
HCM 6th LOS			C									

Timings
8: Oleander Av. & Slover Av.

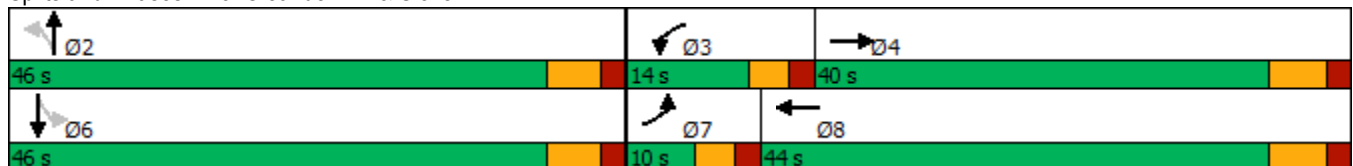


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	28	928	91	564	84	4	40	3
Future Volume (vph)	28	928	91	564	84	4	40	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	40.0	14.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	40.0%	14.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.6	33.5	8.7	39.7	14.2	14.2	14.2	14.2
Actuated g/C Ratio	0.11	0.55	0.14	0.65	0.23	0.23	0.23	0.23
v/c Ratio	0.16	0.59	0.39	0.28	0.29	0.19	0.14	0.13
Control Delay	38.3	18.5	38.0	10.7	26.1	7.3	23.7	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	18.5	38.0	10.7	26.1	7.3	23.7	8.1
LOS	D	B	D	B	C	A	C	A
Approach Delay		19.1		14.3		17.2		15.3
Approach LOS		B		B		B		B

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 61.4
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 17.1
 Intersection LOS: B
 Intersection Capacity Utilization 60.1%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022



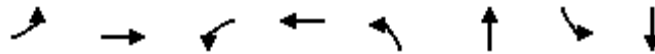
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	28	928	119	91	564	23	84	4	71	40	3	45
Future Volume (veh/h)	28	928	119	91	564	23	84	4	71	40	3	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1020	110	100	620	24	92	4	38	44	3	42
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	1380	149	140	1636	63	312	21	203	314	15	212
Arrive On Green	0.04	0.42	0.42	0.08	0.46	0.46	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1810	3287	354	1810	3543	137	1383	153	1454	1386	108	1518
Grp Volume(v), veh/h	31	560	570	100	316	328	92	0	42	44	0	45
Grp Sat Flow(s),veh/h/ln	1810	1805	1836	1810	1805	1875	1383	0	1607	1386	0	1627
Q Serve(g_s), s	0.8	12.4	12.4	2.6	5.4	5.4	3.0	0.0	1.1	1.4	0.0	1.2
Cycle Q Clear(g_c), s	0.8	12.4	12.4	2.6	5.4	5.4	4.1	0.0	1.1	2.5	0.0	1.2
Prop In Lane	1.00		0.19	1.00		0.07	1.00		0.90	1.00		0.93
Lane Grp Cap(c), veh/h	64	758	771	140	833	866	312	0	225	314	0	228
V/C Ratio(X)	0.48	0.74	0.74	0.72	0.38	0.38	0.30	0.00	0.19	0.14	0.00	0.20
Avail Cap(c_a), veh/h	191	1284	1306	344	1436	1492	1289	0	1360	1294	0	1377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	11.6	11.6	21.3	8.3	8.3	19.9	0.0	18.0	19.1	0.0	18.0
Incr Delay (d2), s/veh	2.1	1.1	1.1	2.5	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.5	3.6	1.0	1.4	1.5	0.8	0.0	0.4	0.4	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.5	12.6	12.6	23.9	8.5	8.5	20.0	0.0	18.1	19.2	0.0	18.2
LnGrp LOS	C	B	B	C	A	A	C	A	B	B	A	B
Approach Vol, veh/h		1161			744			134				89
Approach Delay, s/veh		12.9			10.6			19.5				18.7
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.5	8.7	26.2		12.5	6.7	28.2				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	9.0	33.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		6.1	4.6	14.4		4.5	2.8	7.4				
Green Ext Time (p_c), s		0.3	0.0	5.5		0.2	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.8								
HCM 6th LOS				B								

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022

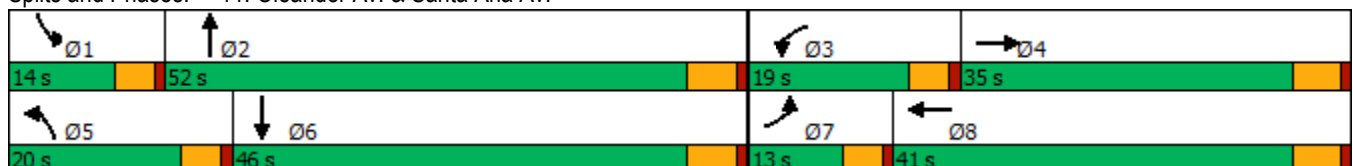


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	8	309	29	331	37	122	10	71
Future Volume (vph)	8	309	29	331	37	122	10	71
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	13.0	35.0	19.0	41.0	20.0	52.0	14.0	46.0
Total Split (%)	10.8%	29.2%	15.8%	34.2%	16.7%	43.3%	11.7%	38.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.1	18.7	7.3	23.2	7.7	19.2	6.2	14.4
Actuated g/C Ratio	0.11	0.32	0.13	0.40	0.13	0.33	0.11	0.25
v/c Ratio	0.07	0.56	0.22	0.41	0.26	0.49	0.09	0.30
Control Delay	34.9	20.4	33.5	14.8	33.0	20.5	34.9	25.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	20.4	33.5	14.8	33.0	20.5	34.9	25.0
LOS	C	C	C	B	C	C	C	C
Approach Delay		20.7		16.3		22.6		26.0
Approach LOS		C		B		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 57.9
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 20.0
 Intersection LOS: B
 Intersection Capacity Utilization 37.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Volume (veh/h)	8	309	69	29	331	18	37	122	55	10	71	11
Future Volume (veh/h)	8	309	69	29	331	18	37	122	55	10	71	11
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	14	524	95	49	561	26	63	207	64	17	120	17
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	32	816	147	90	1050	49	107	342	106	38	338	48
Arrive On Green	0.02	0.27	0.27	0.05	0.30	0.30	0.06	0.25	0.25	0.02	0.21	0.21
Sat Flow, veh/h	1810	3053	551	1810	3509	162	1810	1392	430	1810	1628	231
Grp Volume(v), veh/h	14	309	310	49	288	299	63	0	271	17	0	137
Grp Sat Flow(s),veh/h/ln	1810	1805	1800	1810	1805	1866	1810	0	1823	1810	0	1858
Q Serve(g_s), s	0.4	7.3	7.3	1.3	6.4	6.4	1.6	0.0	6.3	0.4	0.0	3.0
Cycle Q Clear(g_c), s	0.4	7.3	7.3	1.3	6.4	6.4	1.6	0.0	6.3	0.4	0.0	3.0
Prop In Lane	1.00		0.31	1.00		0.09	1.00		0.24	1.00		0.12
Lane Grp Cap(c), veh/h	32	482	481	90	540	558	107	0	448	38	0	386
V/C Ratio(X)	0.44	0.64	0.65	0.54	0.53	0.53	0.59	0.00	0.60	0.44	0.00	0.35
Avail Cap(c_a), veh/h	316	1111	1108	542	1336	1381	579	0	1766	354	0	1569
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	15.6	15.6	22.3	14.0	14.1	22.1	0.0	16.1	23.3	0.0	16.3
Incr Delay (d2), s/veh	3.4	1.4	1.5	1.9	0.8	0.8	1.9	0.0	1.3	3.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.6	2.6	0.5	2.2	2.3	0.7	0.0	2.3	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.8	17.0	17.1	24.2	14.9	14.9	24.0	0.0	17.4	26.3	0.0	16.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		633			636			334				154
Approach Delay, s/veh		17.3			15.6			18.6				17.9
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.6	17.2	7.0	18.2	7.4	15.4	5.5	19.8				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	9.4	46.6	14.4	29.6	15.4	40.6	8.4	35.6				
Max Q Clear Time (g_c+I1), s	2.4	8.3	3.3	9.3	3.6	5.0	2.4	8.4				
Green Ext Time (p_c), s	0.0	1.6	0.0	3.5	0.0	0.7	0.0	3.4				

Intersection Summary

HCM 6th Ctrl Delay	17.0
HCM 6th LOS	B

**APPENDIX 5.2: OPENING YEAR CUMULATIVE (2025) WITH PROJECT
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings
1: Citrus Av. & I-10 WB Ramps

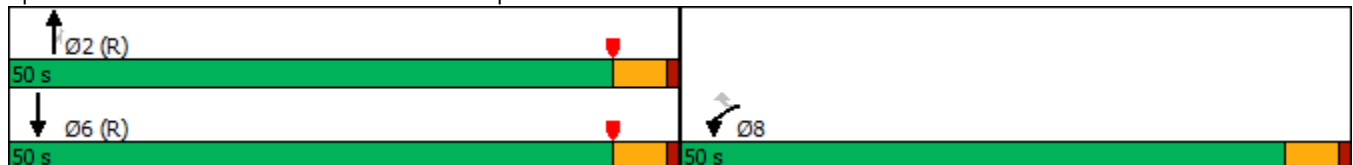


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↙↙	↕↕↕	↙	↕↕
Traffic Volume (vph)	654	525	656	365	992
Future Volume (vph)	654	525	656	365	992
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	50.0	50.0	50.0	50.0	50.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	44.1	44.1	45.9	45.9	45.9
Actuated g/C Ratio	0.44	0.44	0.46	0.46	0.46
v/c Ratio	0.91	0.42	0.31	0.43	0.67
Control Delay	43.3	11.8	22.6	6.6	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	11.8	22.6	6.6	24.2
LOS	D	B	C	A	C
Approach Delay	29.3		16.9		24.2
Approach LOS	C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 23.7
 Intersection LOS: C
 Intersection Capacity Utilization 72.0%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps 10/31/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↵↵	↕↕↕	↵		↕↕
Traffic Volume (veh/h)	654	525	656	365	0	992
Future Volume (veh/h)	654	525	656	365	0	992
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	727	583	729	397	0	1102
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	764	1197	2478	752	0	1724
Arrive On Green	0.42	0.42	0.96	0.96	0.00	0.48
Sat Flow, veh/h	1810	2834	5358	1575	0	3800
Grp Volume(v), veh/h	727	583	729	397	0	1102
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1575	0	1805
Q Serve(g_s), s	38.8	15.0	0.9	2.3	0.0	23.0
Cycle Q Clear(g_c), s	38.8	15.0	0.9	2.3	0.0	23.0
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	764	1197	2478	752	0	1724
V/C Ratio(X)	0.95	0.49	0.29	0.53	0.00	0.64
Avail Cap(c_a), veh/h	814	1275	2478	752	0	1724
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.74	0.74	0.00	1.00
Uniform Delay (d), s/veh	27.9	21.0	1.2	1.2	0.0	19.6
Incr Delay (d2), s/veh	19.5	0.1	0.2	2.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.1	4.8	0.3	0.8	0.0	9.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.4	21.1	1.4	3.2	0.0	21.5
LnGrp LOS	D	C	A	A	A	C
Approach Vol, veh/h	1310		1126			1102
Approach Delay, s/veh	35.7		2.0			21.5
Approach LOS	D		A			C
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		52.8			52.8	47.2
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		45.0			45.0	45.0
Max Q Clear Time (g_c+11), s		4.3			25.0	40.8
Green Ext Time (p_c), s		4.0			4.8	1.4

Intersection Summary

HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	277	2	745	480	1202
Future Volume (vph)	277	2	745	480	1202
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	37.0	37.0	36.0	27.0	63.0
Total Split (%)	37.0%	37.0%	36.0%	27.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effect Green (s)	37.4	37.4	30.2	18.4	52.6
Actuated g/C Ratio	0.37	0.37	0.30	0.18	0.53
v/c Ratio	0.22	1.34	0.73	0.77	0.65
Control Delay	23.0	190.5	30.6	48.9	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	190.5	30.6	48.9	14.2
LOS	C	F	C	D	B
Approach Delay		148.7	30.6		24.1
Approach LOS		F	C		C























Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.34
 Intersection Signal Delay: 61.5
 Intersection LOS: E
 Intersection Capacity Utilization 99.7%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 2: Citrus Av. & I-10 EB Ramps 10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 							  		 	 	
Traffic Volume (veh/h)	277	2	833	0	0	0	0	745	365	480	1202	0
Future Volume (veh/h)	277	2	833	0	0	0	0	745	365	480	1202	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	286	2	737				0	768	262	495	1239	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1123	1	514				0	1450	489	562	2094	0
Arrive On Green	0.32	0.32	0.32				0.00	0.38	0.38	0.32	1.00	0.00
Sat Flow, veh/h	3510	4	1606				0	3986	1288	3510	3705	0
Grp Volume(v), veh/h	286	0	739				0	695	335	495	1239	0
Grp Sat Flow(s),veh/h/ln	1755	0	1611				0	1729	1644	1755	1805	0
Q Serve(g_s), s	6.0	0.0	32.0				0.0	15.6	15.8	13.4	0.0	0.0
Cycle Q Clear(g_c), s	6.0	0.0	32.0				0.0	15.6	15.8	13.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.78	1.00		0.00
Lane Grp Cap(c), veh/h	1123	0	515				0	1314	625	562	2094	0
V/C Ratio(X)	0.25	0.00	1.43				0.00	0.53	0.54	0.88	0.59	0.00
Avail Cap(c_a), veh/h	1123	0	515				0	1314	625	807	2094	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.75	0.75	0.56	0.56	0.00
Uniform Delay (d), s/veh	25.2	0.0	34.0				0.0	24.1	24.1	33.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	206.1				0.0	1.1	2.5	3.6	0.7	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
%ile BackOfQ(50%),veh/ln	2.4	0.0	41.1				0.0	6.2	6.2	4.8	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	0.0	240.1				0.0	25.2	26.6	36.7	0.7	0.0
LnGrp LOS	C	A	F				A	C	C	D	A	A
Approach Vol, veh/h		1025						1030			1734	
Approach Delay, s/veh		180.1						25.7			11.0	
Approach LOS		F						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	20.0	43.0	37.0	63.0								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	23.0	31.0	32.0	58.0								
Max Q Clear Time (g_c+I1), s	15.4	17.8	34.0	2.0								
Green Ext Time (p_c), s	0.6	3.6	0.0	6.5								
Intersection Summary												
HCM 6th Ctrl Delay			60.7									
HCM 6th LOS			E									

Timings
3: Citrus Av. & Slover Av.

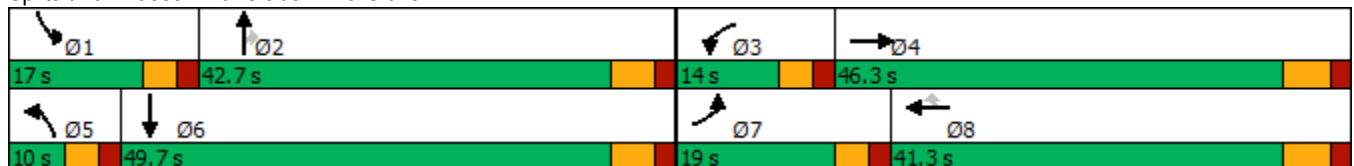


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕↗	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↗
Traffic Volume (vph)	224	211	67	302	223	43	689	84	500	1084
Future Volume (vph)	224	211	67	302	223	43	689	84	500	1084
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	19.0	46.3	14.0	41.3	41.3	10.0	42.7	42.7	17.0	49.7
Total Split (%)	15.8%	38.6%	11.7%	34.4%	34.4%	8.3%	35.6%	35.6%	14.2%	41.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	21.9	7.5	16.3	16.3	5.1	35.0	35.0	12.2	44.6
Actuated g/C Ratio	0.11	0.23	0.08	0.17	0.17	0.05	0.36	0.36	0.13	0.46
v/c Ratio	0.67	0.38	0.55	0.56	0.61	0.27	0.60	0.14	1.29	1.18
Control Delay	52.1	30.5	61.8	40.6	18.9	52.6	28.9	0.4	181.2	112.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	30.5	61.8	40.6	18.9	52.6	28.9	0.4	181.2	112.9
LOS	D	C	E	D	B	D	C	A	F	F
Approach Delay		40.3		34.8			27.2			128.5
Approach LOS		D		C			C			F

































Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 96.8	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 84.0	Intersection LOS: F
Intersection Capacity Utilization 87.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av. 10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	 
Traffic Volume (veh/h)	224	211	59	67	302	223	43	689	84	500	1084	597
Future Volume (veh/h)	224	211	59	67	302	223	43	689	84	500	1084	597
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	255	240	66	76	343	185	49	783	63	568	1232	544
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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	330	549	148	98	562	247	136	1378	607	454	1167	488
Arrive On Green	0.09	0.20	0.20	0.05	0.16	0.16	0.04	0.38	0.38	0.13	0.47	0.47
Sat Flow, veh/h	3510	2811	756	1810	3610	1586	3510	3610	1591	3510	2470	1033
Grp Volume(v), veh/h	255	152	154	76	343	185	49	783	63	568	882	894
Grp Sat Flow(s),veh/h/ln	1755	1805	1763	1810	1805	1586	1755	1805	1591	1755	1805	1699
Q Serve(g_s), s	6.6	6.9	7.1	3.8	8.2	10.3	1.3	15.9	2.4	12.0	43.8	43.8
Cycle Q Clear(g_c), s	6.6	6.9	7.1	3.8	8.2	10.3	1.3	15.9	2.4	12.0	43.8	43.8
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	330	353	344	98	562	247	136	1378	607	454	853	802
V/C Ratio(X)	0.77	0.43	0.45	0.77	0.61	0.75	0.36	0.57	0.10	1.25	1.03	1.11
Avail Cap(c_a), veh/h	530	779	760	176	1363	598	189	1433	631	454	853	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	32.8	32.9	43.3	36.5	37.4	43.5	22.6	18.5	40.4	24.5	24.5
Incr Delay (d2), s/veh	1.5	0.3	0.3	4.8	0.4	1.7	0.6	0.3	0.0	129.8	40.0	68.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	2.9	2.9	1.8	3.5	3.9	0.5	6.2	0.8	13.1	25.7	30.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	33.1	33.2	48.1	36.9	39.2	44.1	22.9	18.5	170.2	64.4	92.6
LnGrp LOS	D	C	C	D	D	D	D	C	B	F	F	F
Approach Vol, veh/h		561			604			895			2344	
Approach Delay, s/veh		37.4			39.0			23.8			100.8	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	41.3	10.0	24.4	8.6	49.7	13.7	20.7				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	12.0	36.8	9.0	40.0	5.0	43.8	14.0	35.0				
Max Q Clear Time (g_c+I1), s	14.0	17.9	5.8	9.1	3.3	45.8	8.6	12.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	1.0	0.0	0.0	0.2	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				68.6								
HCM 6th LOS				E								

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑		Y	↑↑
Traffic Vol, veh/h	1	2	781	3	6	1050
Future Vol, veh/h	1	2	781	3	6	1050
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	849	3	7	1141

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1436	426	0	0	852
Stage 1	851	-	-	-	-
Stage 2	585	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	127	582	-	-	795
Stage 1	384	-	-	-	-
Stage 2	526	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	126	582	-	-	795
Mov Cap-2 Maneuver	314	-	-	-	-
Stage 1	384	-	-	-	-
Stage 2	521	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	453	795
HCM Lane V/C Ratio	-	-	0.007	0.008
HCM Control Delay (s)	-	-	13	9.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

10/31/2022

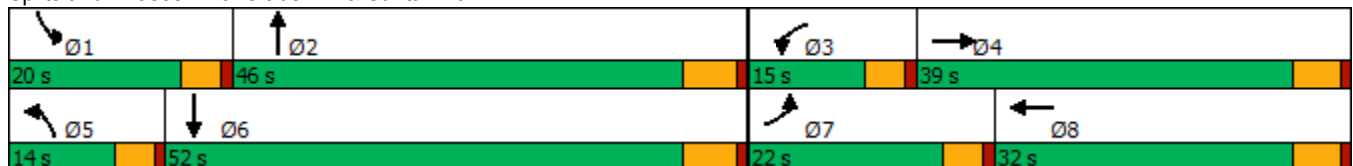


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	116	103	35	165	27	489	290	477
Future Volume (vph)	116	103	35	165	27	489	290	477
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	22.0	39.0	15.0	32.0	14.0	46.0	20.0	52.0
Total Split (%)	18.3%	32.5%	12.5%	26.7%	11.7%	38.3%	16.7%	43.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	10.6	21.2	6.6	12.6	6.2	23.6	15.9	40.1
Actuated g/C Ratio	0.13	0.25	0.08	0.15	0.07	0.28	0.19	0.48
v/c Ratio	0.55	0.20	0.27	0.51	0.22	0.74	0.91	0.48
Control Delay	46.3	17.6	45.9	21.6	45.7	30.3	68.6	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	17.6	45.9	21.6	45.7	30.3	68.6	15.9
LOS	D	B	D	C	D	C	E	B
Approach Delay		29.1		24.2		30.9		30.5
Approach LOS		C		C		C		C

Intersection Summary






















Cycle Length: 120
 Actuated Cycle Length: 83.7
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 29.6
 Intersection LOS: C
 Intersection Capacity Utilization 68.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av.

10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	103	70	35	165	135	27	489	205	290	477	276
Future Volume (veh/h)	116	103	70	35	165	135	27	489	205	290	477	276
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	125	111	71	38	177	108	29	526	212	312	513	270
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	161	421	251	67	312	181	56	711	285	356	1027	539
Arrive On Green	0.09	0.19	0.19	0.04	0.14	0.14	0.03	0.28	0.28	0.20	0.45	0.45
Sat Flow, veh/h	1810	2174	1297	1810	2200	1276	1810	2512	1009	1810	2288	1200
Grp Volume(v), veh/h	125	91	91	38	144	141	29	377	361	312	404	379
Grp Sat Flow(s),veh/h/ln	1810	1805	1667	1810	1805	1670	1810	1805	1716	1810	1805	1683
Q Serve(g_s), s	4.8	3.0	3.3	1.5	5.2	5.6	1.1	13.4	13.4	11.8	11.2	11.3
Cycle Q Clear(g_c), s	4.8	3.0	3.3	1.5	5.2	5.6	1.1	13.4	13.4	11.8	11.2	11.3
Prop In Lane	1.00		0.78	1.00		0.76	1.00		0.59	1.00		0.71
Lane Grp Cap(c), veh/h	161	350	323	67	256	237	56	511	486	356	810	755
V/C Ratio(X)	0.78	0.26	0.28	0.56	0.56	0.60	0.52	0.74	0.74	0.88	0.50	0.50
Avail Cap(c_a), veh/h	447	861	795	267	681	631	241	1030	979	395	1183	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	24.1	24.2	33.4	28.2	28.3	33.6	22.9	22.9	27.5	13.8	13.8
Incr Delay (d2), s/veh	3.0	0.4	0.5	2.7	1.9	2.4	2.8	2.1	2.3	16.9	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	2.1	1.2	1.2	0.7	2.2	2.2	0.5	5.3	5.1	6.3	3.9	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	24.5	24.7	36.1	30.1	30.7	36.4	25.0	25.2	44.4	14.3	14.3
LnGrp LOS	C	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		307			323			767			1095	
Approach Delay, s/veh		28.6			31.1			25.5			22.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	25.7	7.2	19.0	6.8	37.4	10.9	15.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	15.4	40.2	10.4	33.6	9.4	46.2	17.4	26.6				
Max Q Clear Time (g_c+I1), s	13.8	15.4	3.5	5.3	3.1	13.3	6.8	7.6				
Green Ext Time (p_c), s	0.1	4.4	0.0	1.0	0.0	5.0	0.1	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	588	331	2	1	2
Future Vol, veh/h	8	588	331	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	639	360	2	1	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	362	0	-	0	699 181
Stage 1	-	-	-	-	361 -
Stage 2	-	-	-	-	338 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1208	-	-	-	378 837
Stage 1	-	-	-	-	682 -
Stage 2	-	-	-	-	700 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1208	-	-	-	375 837
Mov Cap-2 Maneuver	-	-	-	-	554 -
Stage 1	-	-	-	-	677 -
Stage 2	-	-	-	-	700 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1208	-	-	-	715
HCM Lane V/C Ratio	0.007	-	-	-	0.005
HCM Control Delay (s)	8	-	-	-	10.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

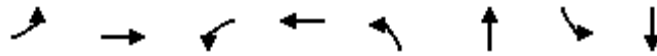
Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	587	333	2	1	1
Future Vol, veh/h	2	587	333	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	638	362	2	1	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	364	0	-	0	686 182
Stage 1	-	-	-	-	363 -
Stage 2	-	-	-	-	323 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1206	-	-	-	386 836
Stage 1	-	-	-	-	680 -
Stage 2	-	-	-	-	712 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1206	-	-	-	385 836
Mov Cap-2 Maneuver	-	-	-	-	561 -
Stage 1	-	-	-	-	679 -
Stage 2	-	-	-	-	712 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1206	-	-	-	671
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	8	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Timings
8: Oleander Av. & Slover Av.

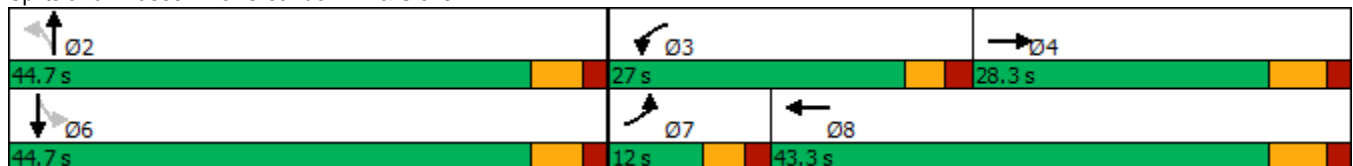


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	12	556	356	456	96	4	7	50
Future Volume (vph)	12	556	356	456	96	4	7	50
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	12.0	28.3	27.0	43.3	44.7	44.7	44.7	44.7
Total Split (%)	12.0%	28.3%	27.0%	43.3%	44.7%	44.7%	44.7%	44.7%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.4	22.4	22.4	48.1	15.1	15.1	15.1	15.1
Actuated g/C Ratio	0.07	0.29	0.29	0.62	0.20	0.20	0.20	0.20
v/c Ratio	0.14	1.00	0.96	0.33	0.52	0.69	0.10	0.24
Control Delay	40.8	56.3	61.7	10.5	33.8	8.3	25.0	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	56.3	61.7	10.5	33.8	8.3	25.0	22.1
LOS	D	E	E	B	C	A	C	C
Approach Delay		56.1		31.5		13.9		22.4
Approach LOS		E		C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 77.4
 Natural Cycle: 125
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 36.2
 Intersection LOS: D
 Intersection Capacity Utilization 76.3%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 8: Oleander Av. & Slover Av. 10/31/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	556	168	356	456	56	96	4	333	7	50	13
Future Volume (veh/h)	12	556	168	356	456	56	96	4	333	7	50	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	17	783	131	501	642	56	135	6	228	10	70	7
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	871	146	529	1859	162	313	8	305	164	334	33
Arrive On Green	0.02	0.28	0.28	0.29	0.55	0.55	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1810	3089	517	1810	3352	292	1336	41	1550	1163	1696	170
Grp Volume(v), veh/h	17	458	456	501	345	353	135	0	234	10	0	77
Grp Sat Flow(s),veh/h/ln	1810	1805	1800	1810	1805	1839	1336	0	1591	1163	0	1865
Q Serve(g_s), s	0.7	18.3	18.3	20.4	7.9	8.0	7.1	0.0	10.4	0.6	0.0	2.6
Cycle Q Clear(g_c), s	0.7	18.3	18.3	20.4	7.9	8.0	9.7	0.0	10.4	11.0	0.0	2.6
Prop In Lane	1.00		0.29	1.00		0.16	1.00		0.97	1.00		0.09
Lane Grp Cap(c), veh/h	36	509	508	529	1001	1020	313	0	313	164	0	368
V/C Ratio(X)	0.47	0.90	0.90	0.95	0.34	0.35	0.43	0.00	0.75	0.06	0.00	0.21
Avail Cap(c_a), veh/h	168	528	526	529	1001	1020	739	0	820	534	0	962
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	26.0	26.0	26.0	9.2	9.2	29.4	0.0	28.4	33.6	0.0	25.3
Incr Delay (d2), s/veh	3.5	17.6	17.7	26.1	0.2	0.1	0.4	0.0	1.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	9.5	9.5	11.6	2.5	2.6	2.2	0.0	3.8	0.2	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.0	43.6	43.7	52.2	9.4	9.4	29.7	0.0	29.8	33.7	0.0	25.4
LnGrp LOS	D	D	D	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		931			1199			369				87
Approach Delay, s/veh		43.6			27.3			29.8				26.4
Approach LOS		D			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		20.7	27.0	27.5		20.7	6.5	48.0				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		38.8	22.0	22.0		38.8	7.0	37.0				
Max Q Clear Time (g_c+I1), s		12.4	22.4	20.3		13.0	2.7	10.0				
Green Ext Time (p_c), s		1.1	0.0	0.8		0.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				33.5								
HCM 6th LOS				C								

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	1	0	2	2	0	1	6	235	6	5	249	5
Future Vol, veh/h	1	0	2	2	0	1	6	235	6	5	249	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	2	2	0	1	7	255	7	5	271	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	557	560	274	558	559	259	276	0	0	262	0	0
Stage 1	284	284	-	273	273	-	-	-	-	-	-	-
Stage 2	273	276	-	285	286	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	444	440	770	443	440	785	1299	-	-	1314	-	-
Stage 1	727	680	-	737	688	-	-	-	-	-	-	-
Stage 2	737	685	-	727	679	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	440	436	770	439	436	785	1299	-	-	1314	-	-
Mov Cap-2 Maneuver	598	566	-	597	566	-	-	-	-	-	-	-
Stage 1	723	677	-	733	685	-	-	-	-	-	-	-
Stage 2	732	682	-	722	676	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	10.6	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1299	-	-	703	649	1314	-
HCM Lane V/C Ratio	0.005	-	-	0.005	0.005	0.004	-
HCM Control Delay (s)	7.8	-	-	10.1	10.6	7.8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	1	0	2	2	0	1	7	244	7	3	248	3
Future Vol, veh/h	1	0	2	2	0	1	7	244	7	3	248	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	2	2	0	1	8	265	8	3	270	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	564	567	272	564	564	269	273	0	0	273	0	0
Stage 1	278	278	-	285	285	-	-	-	-	-	-	-
Stage 2	286	289	-	279	279	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	439	436	772	439	438	775	1302	-	-	1302	-	-
Stage 1	733	684	-	727	679	-	-	-	-	-	-	-
Stage 2	726	677	-	732	683	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	435	433	772	435	434	775	1302	-	-	1302	-	-
Mov Cap-2 Maneuver	595	565	-	594	564	-	-	-	-	-	-	-
Stage 1	729	683	-	723	675	-	-	-	-	-	-	-
Stage 2	721	673	-	728	682	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.2		10.6		0.2		0.1	
HCM LOS	B		B					

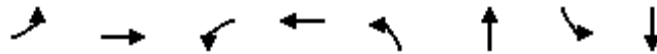
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1302	-	-	702	644	1302	-	-
HCM Lane V/C Ratio	0.006	-	-	0.005	0.005	0.003	-	-
HCM Control Delay (s)	7.8	-	-	10.2	10.6	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

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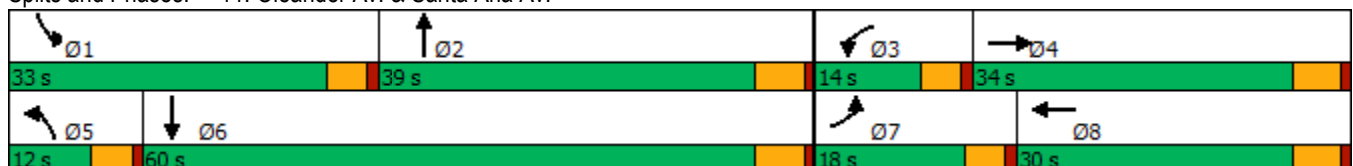


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	49	525	16	273	5	94	115	90
Future Volume (vph)	49	525	16	273	5	94	115	90
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	18.0	34.0	14.0	30.0	12.0	39.0	33.0	60.0
Total Split (%)	15.0%	28.3%	11.7%	25.0%	10.0%	32.5%	27.5%	50.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.9	27.0	6.0	20.7	5.4	13.7	12.2	29.2
Actuated g/C Ratio	0.11	0.37	0.08	0.28	0.07	0.19	0.17	0.40
v/c Ratio	0.38	0.62	0.17	0.59	0.06	0.49	0.58	0.28
Control Delay	40.7	23.6	40.5	25.5	40.6	33.1	39.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	23.6	40.5	25.5	40.6	33.1	39.2	16.2
LOS	D	C	D	C	D	C	D	B
Approach Delay		25.0		26.1		33.4		26.8
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 72.9	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 26.4	Intersection LOS: C
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	525	15	16	273	115	5	94	18	115	90	46
Future Volume (veh/h)	49	525	15	16	273	115	5	94	18	115	90	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	75	808	17	25	420	119	8	145	19	177	138	51
Peak Hour Factor	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	110	1120	24	52	772	217	19	305	40	227	397	147
Arrive On Green	0.06	0.31	0.31	0.03	0.28	0.28	0.01	0.19	0.19	0.13	0.30	0.30
Sat Flow, veh/h	1810	3615	76	1810	2781	780	1810	1644	215	1810	1322	489
Grp Volume(v), veh/h	75	403	422	25	271	268	8	0	164	177	0	189
Grp Sat Flow(s),veh/h/ln	1810	1805	1886	1810	1805	1756	1810	0	1860	1810	0	1810
Q Serve(g_s), s	2.3	11.3	11.3	0.8	7.3	7.4	0.3	0.0	4.5	5.4	0.0	4.7
Cycle Q Clear(g_c), s	2.3	11.3	11.3	0.8	7.3	7.4	0.3	0.0	4.5	5.4	0.0	4.7
Prop In Lane	1.00		0.04	1.00		0.44	1.00		0.12	1.00		0.27
Lane Grp Cap(c), veh/h	110	559	584	52	501	487	19	0	345	227	0	544
V/C Ratio(X)	0.68	0.72	0.72	0.48	0.54	0.55	0.42	0.00	0.48	0.78	0.00	0.35
Avail Cap(c_a), veh/h	425	905	946	298	779	758	235	0	1096	901	0	1733
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	17.5	17.5	27.3	17.5	17.6	28.0	0.0	20.8	24.2	0.0	15.6
Incr Delay (d2), s/veh	2.7	1.8	1.7	2.6	0.9	1.0	5.5	0.0	1.0	2.2	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.2	4.4	0.3	2.7	2.7	0.1	0.0	1.8	2.2	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.0	19.3	19.2	29.8	18.4	18.5	33.5	0.0	21.8	26.4	0.0	16.0
LnGrp LOS	C	B	B	C	B	B	C	A	C	C	A	B
Approach Vol, veh/h		900			564			172				366
Approach Delay, s/veh		20.0			19.0			22.3				21.0
Approach LOS		C			B			C				C
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	16.0	6.2	23.1	5.2	22.5	8.1	21.2				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	28.4	33.6	9.4	28.6	7.4	54.6	13.4	24.6				
Max Q Clear Time (g_c+I1), s	7.4	6.5	2.8	13.3	2.3	6.7	4.3	9.4				
Green Ext Time (p_c), s	0.2	0.8	0.0	4.3	0.0	1.1	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			20.1									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	656	405	2	1	1
Future Vol, veh/h	2	656	405	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	713	440	2	1	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	442	0	-	0	802 221
Stage 1	-	-	-	-	441 -
Stage 2	-	-	-	-	361 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1129	-	-	-	326 789
Stage 1	-	-	-	-	622 -
Stage 2	-	-	-	-	682 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1129	-	-	-	325 789
Mov Cap-2 Maneuver	-	-	-	-	513 -
Stage 1	-	-	-	-	621 -
Stage 2	-	-	-	-	682 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1129	-	-	-	622
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	8.2	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

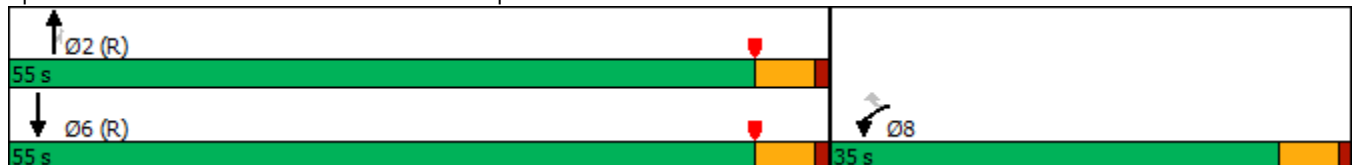
Timings
1: Citrus Av. & I-10 WB Ramps

	↙	↖	↑	↗	↓
Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↖↖	↑↑↑	↗	↑↑
Traffic Volume (vph)	311	480	1008	545	848
Future Volume (vph)	311	480	1008	545	848
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	35.0	35.0	55.0	55.0	55.0
Total Split (%)	38.9%	38.9%	61.1%	61.1%	61.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	20.9	20.9	59.1	59.1	59.1
Actuated g/C Ratio	0.23	0.23	0.66	0.66	0.66
v/c Ratio	0.78	0.65	0.31	0.46	0.38
Control Delay	45.1	24.8	13.7	8.1	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	24.8	13.7	8.1	8.4
LOS	D	C	B	A	A
Approach Delay	32.8		11.7		8.4
Approach LOS	C		B		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 16.0
 Intersection LOS: B
 Intersection Capacity Utilization 49.0%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps 10/31/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	311	480	1008	545	0	848
Future Volume (veh/h)	311	480	1008	545	0	848
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	327	340	1061	535	0	893
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	378	593	3526	1072	0	2454
Arrive On Green	0.21	0.21	0.90	0.90	0.00	0.68
Sat Flow, veh/h	1810	2834	5358	1577	0	3800
Grp Volume(v), veh/h	327	340	1061	535	0	893
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1577	0	1805
Q Serve(g_s), s	15.7	9.7	2.4	5.3	0.0	9.5
Cycle Q Clear(g_c), s	15.7	9.7	2.4	5.3	0.0	9.5
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	378	593	3526	1072	0	2454
V/C Ratio(X)	0.86	0.57	0.30	0.50	0.00	0.36
Avail Cap(c_a), veh/h	603	945	3526	1072	0	2454
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.65	0.65	0.00	1.00
Uniform Delay (d), s/veh	34.4	32.0	1.5	1.6	0.0	6.1
Incr Delay (d2), s/veh	4.5	0.3	0.1	1.1	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	3.3	0.5	1.1	0.0	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.8	32.3	1.6	2.7	0.0	6.5
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	667		1596			893
Approach Delay, s/veh	35.5		2.0			6.5
Approach LOS	D		A			A
Timer - Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		66.2				23.8
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		50.0				30.0
Max Q Clear Time (g_c+11), s		7.3				11.5
Green Ext Time (p_c), s		6.5				4.0

Intersection Summary

HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	435	8	1113	453	709
Future Volume (vph)	435	8	1113	453	709
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	25.0	25.0	40.0	25.0	65.0
Total Split (%)	27.8%	27.8%	44.4%	27.8%	72.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	16.1	16.1	43.6	16.3	63.9
Actuated g/C Ratio	0.18	0.18	0.48	0.18	0.71
v/c Ratio	0.72	0.69	0.70	0.74	0.29
Control Delay	41.2	16.8	19.3	36.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	16.8	19.3	36.0	6.1
LOS	D	B	B	D	A
Approach Delay		30.6	19.3		17.7
Approach LOS		C	B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 21.2
 Intersection LOS: C
 Intersection Capacity Utilization 79.3%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	435	8	328	0	0	0	0	1113	556	453	709	0
Future Volume (veh/h)	435	8	328	0	0	0	0	1113	556	453	709	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	448	8	260				0	1147	366	467	731	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	672	9	301				0	1934	617	541	2517	0
Arrive On Green	0.19	0.19	0.19				0.00	0.50	0.50	0.31	1.00	0.00
Sat Flow, veh/h	3510	48	1569				0	4050	1238	3510	3705	0
Grp Volume(v), veh/h	448	0	268				0	1022	491	467	731	0
Grp Sat Flow(s),veh/h/ln	1755	0	1618				0	1729	1659	1755	1805	0
Q Serve(g_s), s	10.6	0.0	14.4				0.0	18.9	18.9	11.3	0.0	0.0
Cycle Q Clear(g_c), s	10.6	0.0	14.4				0.0	18.9	18.9	11.3	0.0	0.0
Prop In Lane	1.00		0.97				0.00		0.75	1.00		0.00
Lane Grp Cap(c), veh/h	672	0	310				0	1724	827	541	2517	0
V/C Ratio(X)	0.67	0.00	0.86				0.00	0.59	0.59	0.86	0.29	0.00
Avail Cap(c_a), veh/h	780	0	359				0	1724	827	819	2517	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.32	0.32	0.87	0.87	0.00
Uniform Delay (d), s/veh	33.7	0.0	35.3				0.0	16.1	16.1	30.2	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	15.7				0.0	0.5	1.0	3.6	0.3	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
%ile BackOfQ(50%),veh/ln	4.4	0.0	6.7				0.0	6.6	6.5	4.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	0.0	51.0				0.0	16.5	17.1	33.8	0.3	0.0
LnGrp LOS	C	A	D				A	B	B	C	A	A
Approach Vol, veh/h		716						1513			1198	
Approach Delay, s/veh		40.9						16.7			13.3	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	17.9	49.9	22.2	67.8								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	21.0	35.0	20.0	60.0								
Max Q Clear Time (g_c+I1), s	13.3	20.9	16.4	2.0								
Green Ext Time (p_c), s	0.6	5.8	0.8	3.2								

Intersection Summary

HCM 6th Ctrl Delay	20.6
HCM 6th LOS	C

Timings
3: Citrus Av. & Slover Av.

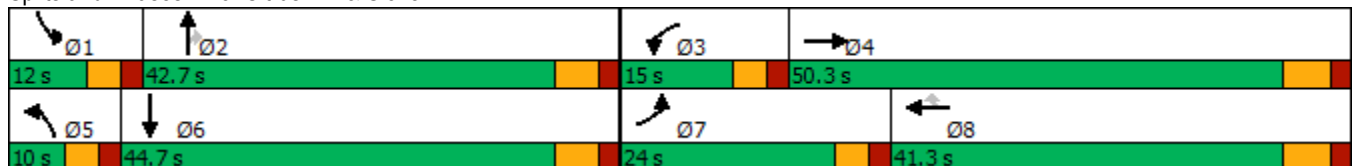


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕	↖	↖↗	↕	↖	↖↗	↕
Traffic Volume (vph)	585	693	97	258	409	56	896	69	341	614
Future Volume (vph)	585	693	97	258	409	56	896	69	341	614
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	24.0	50.3	15.0	41.3	41.3	10.0	42.7	42.7	12.0	44.7
Total Split (%)	20.0%	41.9%	12.5%	34.4%	34.4%	8.3%	35.6%	35.6%	10.0%	37.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.4	34.2	8.8	23.6	23.6	5.1	31.2	31.2	7.1	35.8
Actuated g/C Ratio	0.19	0.33	0.08	0.23	0.23	0.05	0.30	0.30	0.07	0.34
v/c Ratio	0.94	0.66	0.67	0.33	0.89	0.35	0.87	0.12	1.50	0.71
Control Delay	68.0	32.9	71.5	34.5	44.7	58.4	44.9	0.4	278.4	33.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	68.0	32.9	71.5	34.5	44.7	58.4	44.9	0.4	278.4	33.7
LOS	E	C	E	C	D	E	D	A	F	C
Approach Delay		48.5		44.7			42.6			105.2
Approach LOS		D		D			D			F

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 103.9
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.50
 Intersection Signal Delay: 61.9
 Intersection LOS: E
 Intersection Capacity Utilization 81.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av.

10/31/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	585	693	42	97	258	409	56	896	69	341	614	213
Future Volume (veh/h)	585	693	42	97	258	409	56	896	69	341	614	213
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	616	729	36	102	272	378	59	943	51	359	646	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	618	1279	63	128	940	418	135	1059	465	228	885	253
Arrive On Green	0.18	0.37	0.37	0.07	0.26	0.26	0.04	0.29	0.29	0.06	0.32	0.32
Sat Flow, veh/h	3510	3498	173	1810	3610	1606	3510	3610	1586	3510	2769	792
Grp Volume(v), veh/h	616	376	389	102	272	378	59	943	51	359	421	410
Grp Sat Flow(s),veh/h/ln	1755	1805	1866	1810	1805	1606	1755	1805	1586	1755	1805	1757
Q Serve(g_s), s	18.9	18.0	18.0	6.0	6.5	24.6	1.8	27.0	2.5	7.0	22.3	22.4
Cycle Q Clear(g_c), s	18.9	18.0	18.0	6.0	6.5	24.6	1.8	27.0	2.5	7.0	22.3	22.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	618	660	682	128	940	418	135	1059	465	228	577	562
V/C Ratio(X)	1.00	0.57	0.57	0.80	0.29	0.90	0.44	0.89	0.11	1.58	0.73	0.73
Avail Cap(c_a), veh/h	618	736	760	168	1170	521	163	1230	540	228	649	631
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	27.4	27.4	49.4	31.9	38.6	50.8	36.5	27.9	50.5	32.6	32.6
Incr Delay (d2), s/veh	35.5	0.4	0.4	13.5	0.1	14.9	0.8	6.9	0.0	279.9	2.9	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	7.4	7.7	3.1	2.7	10.9	0.8	12.3	0.9	11.8	9.7	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.9	27.8	27.8	62.9	32.0	53.5	51.6	43.4	27.9	330.4	35.5	35.6
LnGrp LOS	E	C	C	E	C	D	D	D	C	F	D	D
Approach Vol, veh/h		1381			752			1053			1190	
Approach Delay, s/veh		51.1			47.0			43.1			124.5	
Approach LOS		D			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	37.6	12.6	45.8	9.1	40.4	24.0	34.4				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	7.0	36.8	10.0	44.0	5.0	38.8	19.0	35.0				
Max Q Clear Time (g_c+I1), s	9.0	29.0	8.0	20.0	3.8	24.4	20.9	26.6				
Green Ext Time (p_c), s	0.0	2.7	0.0	2.6	0.0	2.7	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			68.4									
HCM 6th LOS			E									

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	3	7	1050	1	4	719
Future Vol, veh/h	3	7	1050	1	4	719
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	8	1141	1	4	782

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1541	571	0	0	1142
Stage 1	1142	-	-	-	-
Stage 2	399	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	108	469	-	-	619
Stage 1	271	-	-	-	-
Stage 2	652	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	107	469	-	-	619
Mov Cap-2 Maneuver	247	-	-	-	-
Stage 1	271	-	-	-	-
Stage 2	648	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.1	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	369	619
HCM Lane V/C Ratio	-	-	0.029	0.007
HCM Control Delay (s)	-	-	15.1	10.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

10/31/2022

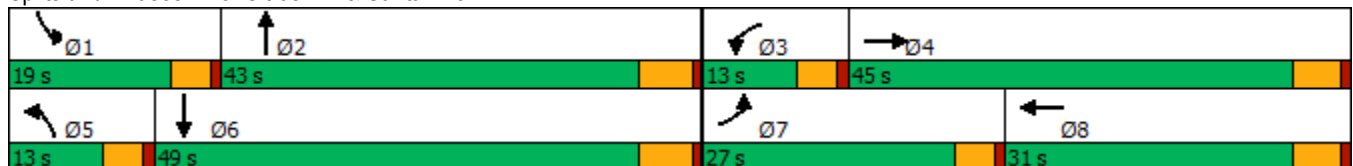


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↷	↶	↷	↶	↷	↶	↷
Traffic Volume (vph)	267	195	49	144	34	525	153	379
Future Volume (vph)	267	195	49	144	34	525	153	379
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	27.0	45.0	13.0	31.0	13.0	43.0	19.0	49.0
Total Split (%)	22.5%	37.5%	10.8%	25.8%	10.8%	35.8%	15.8%	40.8%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	17.8	28.6	6.9	12.7	6.4	21.5	11.9	31.8
Actuated g/C Ratio	0.21	0.34	0.08	0.15	0.08	0.25	0.14	0.37
v/c Ratio	0.73	0.20	0.35	0.55	0.26	0.70	0.63	0.38
Control Delay	45.8	21.8	49.3	18.0	47.8	33.6	50.0	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	21.8	49.3	18.0	47.8	33.6	50.0	21.2
LOS	D	C	D	B	D	C	D	C
Approach Delay		34.7		21.8		34.4		28.0
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 85.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 30.2
 Intersection LOS: C
 Intersection Capacity Utilization 69.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 10/31/2022

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	195	36	49	144	214	34	525	89	153	379	113
Future Volume (veh/h)	267	195	36	49	144	214	34	525	89	153	379	113
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	275	201	31	51	148	194	35	541	84	158	391	111
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	324	965	146	82	313	278	64	754	117	199	878	246
Arrive On Green	0.18	0.31	0.31	0.05	0.17	0.17	0.04	0.24	0.24	0.11	0.32	0.32
Sat Flow, veh/h	1810	3136	476	1810	1805	1602	1810	3132	485	1810	2783	781
Grp Volume(v), veh/h	275	114	118	51	148	194	35	311	314	158	252	250
Grp Sat Flow(s),veh/h/ln	1810	1805	1806	1810	1805	1602	1810	1805	1811	1810	1805	1759
Q Serve(g_s), s	10.1	3.2	3.3	1.9	5.1	7.8	1.3	10.9	11.0	5.9	7.7	7.8
Cycle Q Clear(g_c), s	10.1	3.2	3.3	1.9	5.1	7.8	1.3	10.9	11.0	5.9	7.7	7.8
Prop In Lane	1.00		0.26	1.00		1.00	1.00		0.27	1.00		0.44
Lane Grp Cap(c), veh/h	324	555	556	82	313	278	64	435	436	199	569	555
V/C Ratio(X)	0.85	0.21	0.21	0.62	0.47	0.70	0.55	0.72	0.72	0.79	0.44	0.45
Avail Cap(c_a), veh/h	588	1038	1038	221	671	595	221	975	978	378	1132	1103
HCM Platoon Ratio	1.00	1.00	1.00	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	27.4	17.6	17.7	32.3	25.6	26.8	32.7	24.0	24.0	29.9	18.8	18.8
Incr Delay (d2), s/veh	2.4	0.2	0.2	2.9	1.1	3.1	2.7	2.2	2.2	2.7	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	1.2	1.3	0.8	2.1	3.0	0.6	4.4	4.4	2.5	2.9	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	17.8	17.8	35.2	26.7	29.9	35.4	26.2	26.3	32.6	19.3	19.4
LnGrp LOS	C	B	B	D	C	C	D	C	C	C	B	B
Approach Vol, veh/h		507			393			660			660	
Approach Delay, s/veh		24.3			29.4			26.7			22.5	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.2	22.4	7.7	26.6	7.0	27.5	17.0	17.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	14.4	37.2	8.4	39.6	8.4	43.2	22.4	25.6				
Max Q Clear Time (g_c+I1), s	7.9	13.0	3.9	5.3	3.3	9.8	12.1	9.8				
Green Ext Time (p_c), s	0.1	3.5	0.0	1.3	0.0	2.9	0.3	1.7				
Intersection Summary												
HCM 6th Ctrl Delay			25.4									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	435	399	1	2	8
Future Vol, veh/h	2	435	399	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	473	434	1	2	9

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	435	0	-	0	676 218
Stage 1	-	-	-	-	435 -
Stage 2	-	-	-	-	241 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1135	-	-	-	391 792
Stage 1	-	-	-	-	626 -
Stage 2	-	-	-	-	783 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1135	-	-	-	390 792
Mov Cap-2 Maneuver	-	-	-	-	552 -
Stage 1	-	-	-	-	625 -
Stage 2	-	-	-	-	783 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1135	-	-	-	729
HCM Lane V/C Ratio	0.002	-	-	-	0.015
HCM Control Delay (s)	8.2	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	1	436	398	1	2	2
Future Vol, veh/h	1	436	398	1	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	474	433	1	2	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	434	0	-	0	673 217
Stage 1	-	-	-	-	434 -
Stage 2	-	-	-	-	239 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1136	-	-	-	393 794
Stage 1	-	-	-	-	627 -
Stage 2	-	-	-	-	784 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1136	-	-	-	393 794
Mov Cap-2 Maneuver	-	-	-	-	554 -
Stage 1	-	-	-	-	626 -
Stage 2	-	-	-	-	784 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1136	-	-	-	653
HCM Lane V/C Ratio	0.001	-	-	-	0.007
HCM Control Delay (s)	8.2	-	-	-	10.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Timings
8: Oleander Av. & Slover Av.

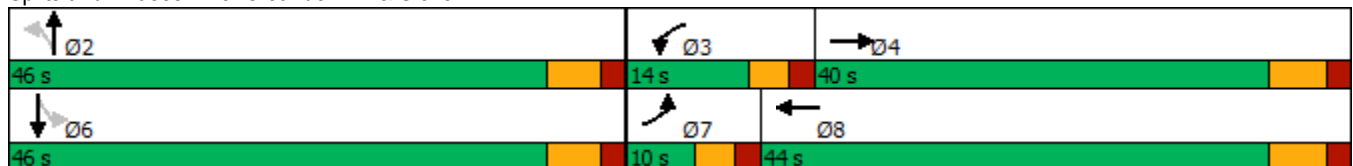


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↙	↖	↖	↗	↘	↘
Traffic Volume (vph)	28	928	93	564	93	4	40	3
Future Volume (vph)	28	928	93	564	93	4	40	3
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	40.0	14.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	40.0%	14.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	6.2	34.2	8.4	40.5	14.1	14.1	14.1	14.1
Actuated g/C Ratio	0.10	0.54	0.13	0.64	0.22	0.22	0.22	0.22
v/c Ratio	0.17	0.59	0.42	0.28	0.33	0.21	0.15	0.13
Control Delay	39.0	18.8	39.3	10.8	26.9	7.2	23.8	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.0	18.8	39.3	10.8	26.9	7.2	23.8	8.1
LOS	D	B	D	B	C	A	C	A
Approach Delay		19.3		14.7		17.7		15.3
Approach LOS		B		B		B		B

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 62.8
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 17.4
 Intersection LOS: B
 Intersection Capacity Utilization 60.8%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	928	122	93	564	23	93	4	77	40	3	45
Future Volume (veh/h)	28	928	122	93	564	23	93	4	77	40	3	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	31	1020	113	102	620	24	102	4	45	44	3	42
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	64	1377	152	141	1639	63	312	18	207	308	15	214
Arrive On Green	0.04	0.42	0.42	0.08	0.46	0.46	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1810	3277	363	1810	3543	137	1383	131	1472	1378	108	1518
Grp Volume(v), veh/h	31	562	571	102	316	328	102	0	49	44	0	45
Grp Sat Flow(s),veh/h/ln	1810	1805	1835	1810	1805	1875	1383	0	1603	1378	0	1627
Q Serve(g_s), s	0.8	12.5	12.5	2.6	5.4	5.4	3.4	0.0	1.3	1.4	0.0	1.2
Cycle Q Clear(g_c), s	0.8	12.5	12.5	2.6	5.4	5.4	4.5	0.0	1.3	2.7	0.0	1.2
Prop In Lane	1.00		0.20	1.00		0.07	1.00		0.92	1.00		0.93
Lane Grp Cap(c), veh/h	64	758	771	141	835	867	312	0	226	308	0	229
V/C Ratio(X)	0.49	0.74	0.74	0.72	0.38	0.38	0.33	0.00	0.22	0.14	0.00	0.20
Avail Cap(c_a), veh/h	190	1277	1298	342	1429	1485	1282	0	1350	1274	0	1370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.5	11.6	11.6	21.5	8.3	8.3	20.1	0.0	18.1	19.3	0.0	18.1
Incr Delay (d2), s/veh	2.1	1.1	1.1	2.6	0.2	0.2	0.2	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.6	3.6	1.0	1.4	1.5	0.9	0.0	0.4	0.4	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.6	12.7	12.7	24.1	8.5	8.5	20.3	0.0	18.3	19.4	0.0	18.2
LnGrp LOS	C	B	B	C	A	A	C	A	B	B	A	B
Approach Vol, veh/h		1164			746			151				89
Approach Delay, s/veh		13.0			10.7			19.6				18.8
Approach LOS		B			B			B				B
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.6	8.7	26.3		12.6	6.7	28.3				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	9.0	33.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		6.5	4.6	14.5		4.7	2.8	7.4				
Green Ext Time (p_c), s		0.3	0.0	5.5		0.2	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay				12.9								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	7	7	0	5	5	155	5	2	93	2
Future Vol, veh/h	5	0	7	7	0	5	5	155	5	2	93	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	8	8	0	5	5	168	5	2	101	2

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	289	289	102	291	288	171	103	0	0	173	0	0
Stage 1	106	106	-	181	181	-	-	-	-	-	-	-
Stage 2	183	183	-	110	107	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	667	624	959	665	625	878	1502	-	-	1416	-	-
Stage 1	905	811	-	825	754	-	-	-	-	-	-	-
Stage 2	823	752	-	900	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	660	622	959	657	623	878	1502	-	-	1416	-	-
Mov Cap-2 Maneuver	743	685	-	745	686	-	-	-	-	-	-	-
Stage 1	902	810	-	823	752	-	-	-	-	-	-	-
Stage 2	815	750	-	892	810	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.6	0.2	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1502	-	-	855	795	1416	-
HCM Lane V/C Ratio	0.004	-	-	0.015	0.016	0.002	-
HCM Control Delay (s)	7.4	-	-	9.3	9.6	7.5	-
HCM Lane LOS	A	-	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	7	6	0	3	2	159	2	1	105	1
Future Vol, veh/h	3	0	7	6	0	3	2	159	2	1	105	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	8	7	0	3	2	173	2	1	114	1

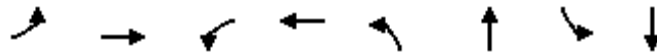
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	297	296	115	299	295	174	115	0	0	175	0	0
Stage 1	117	117	-	178	178	-	-	-	-	-	-	-
Stage 2	180	179	-	121	117	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	659	619	943	657	620	875	1487	-	-	1414	-	-
Stage 1	892	803	-	828	756	-	-	-	-	-	-	-
Stage 2	826	755	-	888	803	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	656	618	943	650	619	875	1487	-	-	1414	-	-
Mov Cap-2 Maneuver	744	684	-	742	685	-	-	-	-	-	-	-
Stage 1	891	802	-	827	755	-	-	-	-	-	-	-
Stage 2	822	754	-	880	802	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.7	0.1	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1487	-	-	873	782	1414	-	-
HCM Lane V/C Ratio	0.001	-	-	0.012	0.013	0.001	-	-
HCM Control Delay (s)	7.4	-	-	9.2	9.7	7.5	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Timings

11: Oleander Av. & Santa Ana Av.

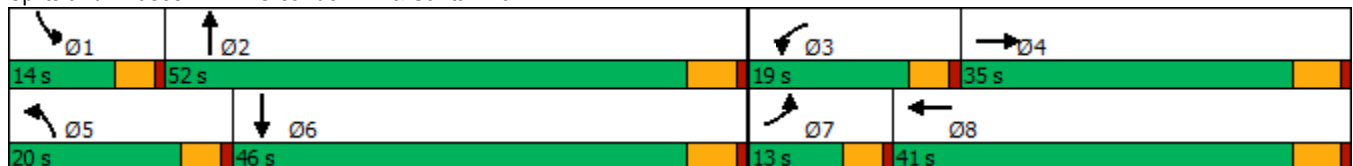


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	13	313	29	334	37	130	14	79
Future Volume (vph)	13	313	29	334	37	130	14	79
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	13.0	35.0	19.0	41.0	20.0	52.0	14.0	46.0
Total Split (%)	10.8%	29.2%	15.8%	34.2%	16.7%	43.3%	11.7%	38.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.4	19.4	7.3	22.1	7.8	21.2	6.5	15.4
Actuated g/C Ratio	0.10	0.31	0.12	0.35	0.12	0.34	0.10	0.25
v/c Ratio	0.12	0.59	0.23	0.47	0.28	0.50	0.13	0.39
Control Delay	37.4	22.6	36.2	19.1	35.9	22.7	37.1	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	22.6	36.2	19.1	35.9	22.7	37.1	25.3
LOS	D	C	D	B	D	C	D	C
Approach Delay		23.1		20.4		24.9		26.7
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 62.6
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 22.9
 Intersection LOS: C
 Intersection Capacity Utilization 39.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	13	313	69	29	334	19	37	130	55	14	79	26
Future Volume (veh/h)	13	313	69	29	334	19	37	130	55	14	79	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	22	531	95	49	566	27	63	220	64	24	134	42
Peak Hour Factor	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	48	824	147	90	1025	49	107	336	98	52	288	90
Arrive On Green	0.03	0.27	0.27	0.05	0.29	0.29	0.06	0.24	0.24	0.03	0.21	0.21
Sat Flow, veh/h	1810	3060	545	1810	3503	167	1810	1414	411	1810	1387	435
Grp Volume(v), veh/h	22	312	314	49	291	302	63	0	284	24	0	176
Grp Sat Flow(s),veh/h/ln	1810	1805	1801	1810	1805	1865	1810	0	1826	1810	0	1822
Q Serve(g_s), s	0.6	7.4	7.4	1.3	6.6	6.6	1.6	0.0	6.8	0.6	0.0	4.1
Cycle Q Clear(g_c), s	0.6	7.4	7.4	1.3	6.6	6.6	1.6	0.0	6.8	0.6	0.0	4.1
Prop In Lane	1.00		0.30	1.00		0.09	1.00		0.23	1.00		0.24
Lane Grp Cap(c), veh/h	48	486	485	90	528	546	107	0	434	52	0	378
V/C Ratio(X)	0.46	0.64	0.65	0.54	0.55	0.55	0.59	0.00	0.65	0.47	0.00	0.47
Avail Cap(c_a), veh/h	315	1108	1105	540	1332	1376	578	0	1764	353	0	1533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	15.6	15.6	22.4	14.4	14.4	22.1	0.0	16.6	23.1	0.0	16.8
Incr Delay (d2), s/veh	2.5	1.4	1.5	1.9	0.9	0.9	1.9	0.0	1.7	2.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.6	2.6	0.5	2.3	2.3	0.7	0.0	2.5	0.3	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	17.0	17.1	24.3	15.3	15.3	24.0	0.0	18.3	25.5	0.0	17.7
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		648			642			347				200
Approach Delay, s/veh		17.3			16.0			19.3				18.6
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	16.9	7.0	18.4	7.5	15.4	5.9	19.5				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	9.4	46.6	14.4	29.6	15.4	40.6	8.4	35.6				
Max Q Clear Time (g_c+I1), s	2.6	8.8	3.3	9.4	3.6	6.1	2.6	8.6				
Green Ext Time (p_c), s	0.0	1.7	0.0	3.5	0.0	1.0	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay	17.4
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	1	382	380	1	2	2
Future Vol, veh/h	1	382	380	1	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	415	413	1	2	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	414	0	-	0	624 207
Stage 1	-	-	-	-	414 -
Stage 2	-	-	-	-	210 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1156	-	-	-	422 805
Stage 1	-	-	-	-	641 -
Stage 2	-	-	-	-	811 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1156	-	-	-	422 805
Mov Cap-2 Maneuver	-	-	-	-	573 -
Stage 1	-	-	-	-	640 -
Stage 2	-	-	-	-	811 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1156	-	-	-	669
HCM Lane V/C Ratio	0.001	-	-	-	0.006
HCM Control Delay (s)	8.1	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

**APPENDIX 5.3: OPENING YEAR CUMULATIVE (2025) WITH PROJECT
CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>OYC 2025 WP</u>
Jurisdiction: <u>City of Fontana</u>				<u>CP</u>		<u>DATE</u> <u>09/01/22</u>
Major Street: <u>Citrus Av.</u>				<u>CHK</u> <u>CP</u>	Critical Approach Speed (Major) <u>45</u> mph	<u>DATE</u> <u>09/01/22</u>
Minor Street: <u>Driveway 1</u>					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u> lane					Minor Street Approach Lanes: <u>1</u> lane	
Major Street Future ADT = <u>22,131</u> vpd					Minor Street Future ADT = <u>82</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input checked="" type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		XX		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		8,000	5,600	2,400	1,680
2 + 22,131		1 82		9,600	6,720 *	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX					
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		XX		(Total of Both Approaches)		(One Direction Only)	
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>		<u>Minor Street</u>					
1		1		12,000	8,400	1,200	850
2 + 22,131		1 82		14,400	10,080 *	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX					
<u>Satisfied</u>		<u>Not Satisfied</u>		2 CONDITIONS		2 CONDITIONS	
No one condition satisfied, but following conditions fulfilled 80% of more		XX		80%		80%	
		<u>A</u>	<u>B</u>				
		5%	10%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	OYC 2025 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane		
Major Street Future ADT = <u>9,630</u>	vpd	Minor Street Future ADT = <u>48</u>	vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);				<input type="checkbox"/>	
				or	RURAL (R)
In built up area of isolated community of < 10,000 population				<input type="checkbox"/>	

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u> XX	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + 9,630	1 48	9,600 *	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + 9,630	1 48	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>	<u>Not Satisfied</u> XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more	A 2% B 4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	OYC 2025 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	

Major Street Approach Lanes = 2 lane Minor Street Approach Lanes: 1 lane

Major Street Future ADT = 9,600 vpd Minor Street Future ADT = 18 vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph);

or

In built up area of isolated community of < 10,000 population **RURAL (R)**

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements			
XX		EADT			
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
<u>Not Satisfied</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + 9,600	1 18	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
<u>Not Satisfied</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
XX					
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + 9,600	1 18	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		80%		80%	
<u>Not Satisfied</u>					
XX					
No one condition satisfied, but following conditions fulfilled 80% of more					
	<u>A</u>				
	1%				
	<u>B</u>				
	2%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>OYC 2025 WP</u>
Jurisdiction: <u>City of Fontana</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Major Street: <u>Oleander Av.</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Minor Street: <u>Driveway 4</u>					Critical Approach Speed (Major) <u>40 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	

Major Street Approach Lanes = 1 lane Minor Street Approach Lanes: 1 lane

Major Street Future ADT = 3,450 vpd Minor Street Future ADT = 104 vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph);

or

In built up area of isolated community of < 10,000 population **RURAL (R)**

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>	<u>Not Satisfied</u>	(Total of Both Approaches)		(One Direction Only)	
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1 3,450</u>	<u>1 104</u>				
2 +	1	8,000	5,600	2,400	1,680
2 +	2 +	9,600	6,720	2,400	1,680
1	2 +	9,600	6,720	3,200	2,240
		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>	<u>Not Satisfied</u>	(Total of Both Approaches)		(One Direction Only)	
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach					
<u>Major Street</u>	<u>Minor Street</u>				
<u>1 3,450</u>	<u>1 104</u>				
2 +	1	12,000	8,400	1,200	850
2 +	2 +	14,400	10,080	1,200	850
1	2 +	14,400	10,080	1,600	1,120
		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more	XX				
	A				
	4%				
	B				
	9%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	OYC 2025 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Oleander Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 5</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	

Major Street Approach Lanes = 1 lane Minor Street Approach Lanes: 1 lane

Major Street Future ADT = 3,598 vpd Minor Street Future ADT = 45 vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph);

or

In built up area of isolated community of < 10,000 population **RURAL (R)**

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume					
<u>Satisfied</u>		<u>Not Satisfied</u>			
		XX			
Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,598	1 45	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic					
<u>Satisfied</u>		<u>Not Satisfied</u>			
		XX			
Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,598	1 45	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B					
<u>Satisfied</u>		<u>Not Satisfied</u>			
		XX			
No one condition satisfied, but following conditions fulfilled 80% of more		2 CONDITIONS 80%		2 CONDITIONS 80%	
	<u>A</u>	<u>B</u>			
	2%	4%			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	OYC 2025 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 6</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes =	<u>2</u>	lane	Minor Street Approach Lanes:	<u>1</u>	lane
Major Street Future ADT =	<u>8,728</u>	vpd	Minor Street Future ADT =	<u>18</u>	vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);	<input type="checkbox"/>		or	<input type="checkbox"/>	
In built up area of isolated community of < 10,000 population	<input type="checkbox"/>			RURAL (R)	

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u> XX	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + 8,728	1 18	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + 8,728	1 18	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>	<u>Not Satisfied</u> XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more	A 1%	B 2%			

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

**APPENDIX 5.4: OPENING YEAR CUMULATIVE (2025) WITHOUT
PROJECT CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	718	583	728	397	1099
v/c Ratio	0.91	0.43	0.30	0.42	0.65
Control Delay	43.9	12.0	22.5	6.6	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.9	12.0	22.5	6.6	23.6
Queue Length 50th (ft)	402	79	107	4	285
Queue Length 95th (ft)	#623	123	114	79	365
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	827	1424	2454	955	1708
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	0.87	0.41	0.30	0.42	0.64

Intersection Summary

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

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	286	835	1132	495	1228
v/c Ratio	0.22	1.29	0.72	0.77	0.65
Control Delay	22.9	170.9	30.5	48.7	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	170.9	30.5	48.7	14.4
Queue Length 50th (ft)	62	~661	209	152	186
Queue Length 95th (ft)	102	#953	257	m204	m188
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	1314	646	1611	805	2093
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	1.29	0.70	0.61	0.59

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	322	505	1058	545	892
v/c Ratio	0.79	0.64	0.31	0.44	0.37
Control Delay	46.3	22.0	11.7	7.2	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	22.0	11.7	7.2	8.1
Queue Length 50th (ft)	173	89	144	96	105
Queue Length 95th (ft)	241	131	216	272	178
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	511	944	3465	1237	2412
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	0.63	0.53	0.31	0.44	0.37

Intersection Summary

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	448	333	1680	467	725
v/c Ratio	0.72	0.66	0.68	0.74	0.28
Control Delay	41.2	14.8	18.8	37.2	7.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	14.8	18.8	37.2	7.0
Queue Length 50th (ft)	123	34	236	136	103
Queue Length 95th (ft)	166	115	344	180	164
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	778	565	2463	817	2563
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	0.58	0.59	0.68	0.57	0.28
Intersection Summary					

**APPENDIX 5.5: OPENING YEAR CUMULATIVE (2025) WITH PROJECT
CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	727	583	729	406	1102
v/c Ratio	0.91	0.42	0.31	0.43	0.67
Control Delay	43.3	11.8	22.6	6.6	24.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	11.8	22.6	6.6	24.2
Queue Length 50th (ft)	406	78	105	0	290
Queue Length 95th (ft)	#636	123	115	82	367
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	833	1432	2441	957	1698
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	0.87	0.41	0.30	0.42	0.65

Intersection Summary

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

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	286	861	1144	495	1239
v/c Ratio	0.22	1.34	0.73	0.77	0.65
Control Delay	23.0	190.5	30.6	48.9	14.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	23.0	190.5	30.6	48.9	14.2
Queue Length 50th (ft)	63	~699	212	156	191
Queue Length 95th (ft)	102	#992	261	m203	m191
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	1309	643	1613	805	2093
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	1.34	0.71	0.61	0.59

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	327	505	1061	574	893
v/c Ratio	0.78	0.65	0.31	0.46	0.38
Control Delay	45.1	24.8	13.7	8.1	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	24.8	13.7	8.1	8.4
Queue Length 50th (ft)	175	102	150	102	108
Queue Length 95th (ft)	241	142	256	293	184
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	601	1048	3406	1235	2370
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	0.54	0.48	0.31	0.46	0.38

Intersection Summary

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	448	346	1720	467	731
v/c Ratio	0.72	0.69	0.70	0.74	0.29
Control Delay	41.2	16.8	19.3	36.0	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	16.8	19.3	36.0	6.1
Queue Length 50th (ft)	123	42	246	136	100
Queue Length 95th (ft)	166	128	357	147	92
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	778	562	2462	817	2563
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	0.58	0.62	0.70	0.57	0.29

Intersection Summary

**APPENDIX 5.6: OPENING YEAR CUMULATIVE (2025) WITH PROJECT
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WITH
IMPROVEMENTS WORKSHEETS**

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Timings
2: Citrus Av. & I-10 EB Ramps

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

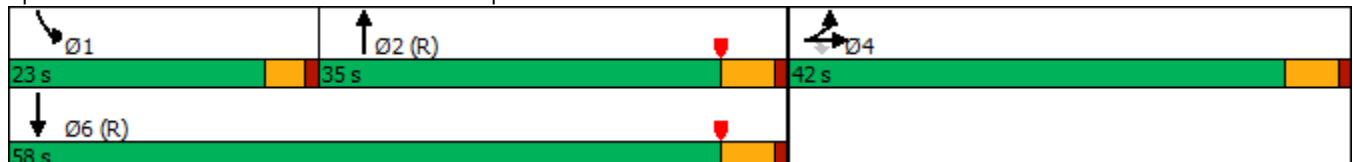


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	277	2	833	745	480	1202
Future Volume (vph)	277	2	833	745	480	1202
Turn Type	Split	NA	Perm	NA	Prot	NA
Protected Phases	4	4		2	1	6
Permitted Phases			4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	25.0	9.0	10.0
Total Split (s)	42.0	42.0	42.0	35.0	23.0	58.0
Total Split (%)	42.0%	42.0%	42.0%	35.0%	23.0%	58.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	30.4	30.4	30.4	38.1	17.4	59.6
Actuated g/C Ratio	0.30	0.30	0.30	0.38	0.17	0.60
v/c Ratio	0.27	0.86	0.84	0.59	0.81	0.58
Control Delay	25.8	46.3	41.8	24.8	57.3	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	46.3	41.8	24.8	57.3	9.6
LOS	C	D	D	C	E	A
Approach Delay		39.5		24.8		23.2
Approach LOS		D		C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 28.3
 Intersection LOS: C
 Intersection Capacity Utilization 75.9%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔	↔					↔↔↔		↔↔	↔↔	
Traffic Volume (veh/h)	277	2	833	0	0	0	0	745	365	480	1202	0
Future Volume (veh/h)	277	2	833	0	0	0	0	745	365	480	1202	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	286	0	739				0	768	262	495	1239	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	942	0	839				0	1684	568	556	2309	0
Arrive On Green	0.26	0.00	0.26				0.00	0.44	0.44	0.32	1.00	0.00
Sat Flow, veh/h	3619	0	3220				0	3986	1288	3510	3705	0
Grp Volume(v), veh/h	286	0	739				0	695	335	495	1239	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1645	1755	1805	0
Q Serve(g_s), s	6.3	0.0	22.0				0.0	14.1	14.3	13.4	0.0	0.0
Cycle Q Clear(g_c), s	6.3	0.0	22.0				0.0	14.1	14.3	13.4	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.78	1.00		0.00
Lane Grp Cap(c), veh/h	942	0	839				0	1526	726	556	2309	0
V/C Ratio(X)	0.30	0.00	0.88				0.00	0.46	0.46	0.89	0.54	0.00
Avail Cap(c_a), veh/h	1339	0	1192				0	1526	726	667	2309	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.61	0.61	0.56	0.56	0.00
Uniform Delay (d), s/veh	29.7	0.0	35.5				0.0	19.5	19.6	33.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	4.4				0.0	0.6	1.3	6.8	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	8.7				0.0	5.3	5.3	5.0	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.8	0.0	39.9				0.0	20.1	20.9	40.2	0.5	0.0
LnGrp LOS	C	A	D				A	C	C	D	A	A
Approach Vol, veh/h		1025						1030			1734	
Approach Delay, s/veh		37.1						20.4			11.8	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	19.8	49.1	31.0	69.0								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	19.0	30.0	37.0	53.0								
Max Q Clear Time (g_c+I1), s	15.4	16.3	24.0	2.0								
Green Ext Time (p_c), s	0.4	3.7	2.0	6.4								

Intersection Summary

HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
3: Citrus Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

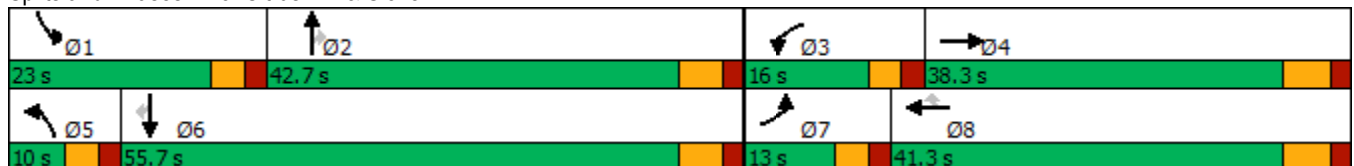
09/01/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	224	211	67	302	223	43	689	84	500	1084	597
Future Volume (vph)	224	211	67	302	223	43	689	84	500	1084	597
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9	36.9
Total Split (s)	13.0	38.3	16.0	41.3	41.3	10.0	42.7	42.7	23.0	55.7	55.7
Total Split (%)	10.8%	31.9%	13.3%	34.4%	34.4%	8.3%	35.6%	35.6%	19.2%	46.4%	46.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	8.2	19.0	7.9	16.2	16.2	5.1	25.7	25.7	18.5	41.5	41.5
Actuated g/C Ratio	0.09	0.21	0.09	0.18	0.18	0.06	0.28	0.28	0.20	0.45	0.45
v/c Ratio	0.81	0.41	0.49	0.54	0.52	0.25	0.77	0.17	0.80	0.75	0.73
Control Delay	64.2	32.2	54.9	37.5	8.3	50.3	36.3	0.7	47.0	25.9	14.6
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	64.2	32.2	54.9	37.5	8.3	50.3	36.3	0.7	47.0	25.9	14.6
LOS	E	C	D	D	A	D	D	A	D	C	B
Approach Delay		46.7		28.5			33.4			27.6	
Approach LOS		D		C			C			C	

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 91.5	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	
























Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	224	211	59	67	302	223	43	689	84	500	1084	597
Future Volume (veh/h)	224	211	59	67	302	223	43	689	84	500	1084	597
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	255	240	66	76	343	185	49	783	63	568	1232	544
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	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	335	568	153	98	581	255	145	1024	449	652	1545	681
Arrive On Green	0.10	0.20	0.20	0.05	0.16	0.16	0.04	0.28	0.28	0.19	0.43	0.43
Sat Flow, veh/h	3510	2811	756	1810	3610	1586	3510	3610	1585	3510	3610	1590
Grp Volume(v), veh/h	255	152	154	76	343	185	49	783	63	568	1232	544
Grp Sat Flow(s),veh/h/ln	1755	1805	1763	1810	1805	1586	1755	1805	1585	1755	1805	1590
Q Serve(g_s), s	5.7	5.9	6.2	3.4	7.1	9.0	1.1	16.1	2.4	12.7	24.0	24.1
Cycle Q Clear(g_c), s	5.7	5.9	6.2	3.4	7.1	9.0	1.1	16.1	2.4	12.7	24.0	24.1
Prop In Lane	1.00		0.43	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	335	365	356	98	581	255	145	1024	449	652	1545	681
V/C Ratio(X)	0.76	0.42	0.43	0.77	0.59	0.72	0.34	0.76	0.14	0.87	0.80	0.80
Avail Cap(c_a), veh/h	347	714	697	246	1561	686	217	1641	721	781	2221	978
HCM Platoon Ratio	1.00	1.00	1.00	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	28.1	28.2	37.8	31.5	32.3	37.7	26.5	21.6	32.0	20.1	20.1
Incr Delay (d2), s/veh	8.2	0.3	0.3	4.7	0.4	1.5	0.5	0.5	0.1	8.1	0.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	2.4	2.4	1.5	2.9	3.3	0.5	6.3	0.8	5.7	8.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.9	28.4	28.5	42.5	31.8	33.7	38.2	27.0	21.7	40.1	20.9	22.0
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		561			604			895			2344	
Approach Delay, s/veh		35.5			33.8			27.2			25.8	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	28.8	9.4	22.6	8.3	40.5	12.7	19.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	18.0	36.8	11.0	32.0	5.0	49.8	8.0	35.0				
Max Q Clear Time (g_c+I1), s	14.7	18.1	5.4	8.2	3.1	26.1	7.7	11.0				
Green Ext Time (p_c), s	0.3	3.2	0.0	0.9	0.0	7.2	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				28.4								
HCM 6th LOS				C								

Timings
2: Citrus Av. & I-10 EB Ramps

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↖↗	↗	↖	↑↑↑	↖↗	↑↑
Traffic Volume (vph)	435	8	328	1113	453	709
Future Volume (vph)	435	8	328	1113	453	709
Turn Type	Split	NA	Perm	NA	Prot	NA
Protected Phases	4	4		2	1	6
Permitted Phases			4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	25.0	9.0	10.0
Total Split (s)	23.0	23.0	23.0	45.0	22.0	67.0
Total Split (%)	25.6%	25.6%	25.6%	50.0%	24.4%	74.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	15.6	15.6	15.6	44.7	15.7	64.4
Actuated g/C Ratio	0.17	0.17	0.17	0.50	0.17	0.72
v/c Ratio	0.74	0.43	0.42	0.68	0.77	0.28
Control Delay	42.9	9.5	8.6	17.7	36.9	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.9	9.5	8.6	17.7	36.9	6.1
LOS	D	A	A	B	D	A
Approach Delay		28.1		17.7		18.1
Approach LOS		C		B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 20.1
 Intersection Capacity Utilization 70.9%
 Analysis Period (min) 15

Intersection LOS: C

ICU Level of Service C

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↘	↗					↑↑↑		↗↘	↑↑	
Traffic Volume (veh/h)	435	8	328	0	0	0	0	1113	556	453	709	0
Future Volume (veh/h)	435	8	328	0	0	0	0	1113	556	453	709	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	448	0	265				0	1147	366	467	731	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	548	0	487				0	2095	668	537	2662	0
Arrive On Green	0.15	0.00	0.15				0.00	0.54	0.54	0.31	1.00	0.00
Sat Flow, veh/h	3619	0	3220				0	4050	1238	3510	3705	0
Grp Volume(v), veh/h	448	0	265				0	1022	491	467	731	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1659	1755	1805	0
Q Serve(g_s), s	10.8	0.0	6.8				0.0	17.4	17.4	11.3	0.0	0.0
Cycle Q Clear(g_c), s	10.8	0.0	6.8				0.0	17.4	17.4	11.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		0.75	1.00		0.00
Lane Grp Cap(c), veh/h	548	0	487				0	1868	896	537	2662	0
V/C Ratio(X)	0.82	0.00	0.54				0.00	0.55	0.55	0.87	0.27	0.00
Avail Cap(c_a), veh/h	724	0	644				0	1868	896	702	2662	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.16	0.16	0.87	0.87	0.00
Uniform Delay (d), s/veh	37.0	0.0	35.3				0.0	13.5	13.5	30.4	0.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	0.4				0.0	0.2	0.4	6.7	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	2.6				0.0	5.8	5.6	4.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.2	0.0	35.7				0.0	13.7	13.9	37.1	0.2	0.0
LnGrp LOS	D	A	D				A	B	B	D	A	A
Approach Vol, veh/h		713						1513			1198	
Approach Delay, s/veh		39.1						13.8			14.6	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	17.8	53.6	18.6	71.4								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	18.0	40.0	18.0	62.0								
Max Q Clear Time (g_c+I1), s	13.3	19.4	12.8	2.0								
Green Ext Time (p_c), s	0.4	6.8	0.8	3.2								

Intersection Summary

HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Timings
3: Citrus Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

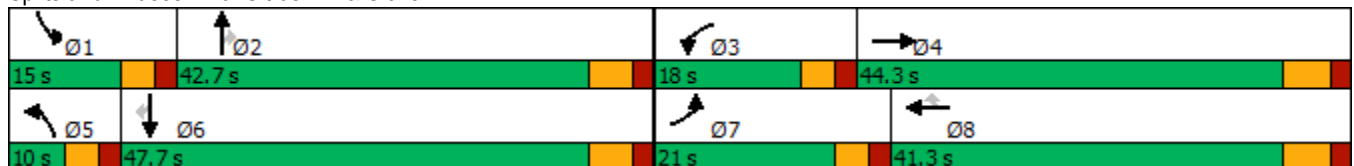
09/01/2022

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	585	693	97	258	409	56	896	69	341	614	213
Future Volume (vph)	585	693	97	258	409	56	896	69	341	614	213
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4	3	8		5	2		1	6	
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9	36.9
Total Split (s)	21.0	44.3	18.0	41.3	41.3	10.0	42.7	42.7	15.0	47.7	47.7
Total Split (%)	17.5%	36.9%	15.0%	34.4%	34.4%	8.3%	35.6%	35.6%	12.5%	39.8%	39.8%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	16.3	33.3	9.7	26.8	26.8	5.1	31.9	31.9	10.2	39.5	39.5
Actuated g/C Ratio	0.15	0.31	0.09	0.25	0.25	0.05	0.30	0.30	0.09	0.37	0.37
v/c Ratio	1.17	0.70	0.63	0.30	0.89	0.36	0.88	0.13	1.09	0.49	0.31
Control Delay	135.5	37.1	67.1	33.7	50.2	60.4	47.3	1.5	122.5	29.3	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	135.5	37.1	67.1	33.7	50.2	60.4	47.3	1.5	122.5	29.3	4.8
LOS	F	D	E	C	D	E	D	A	F	C	A
Approach Delay		80.7		46.7			44.9			52.1	
Approach LOS		F		D			D			D	
























Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 107.7	
Natural Cycle: 130	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.17	
Intersection Signal Delay: 58.2	Intersection LOS: E
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av. 09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	585	693	42	97	258	409	56	896	69	341	614	213
Future Volume (veh/h)	585	693	42	97	258	409	56	896	69	341	614	213
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	616	729	36	102	272	378	59	943	51	359	646	185
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	520	1182	58	128	940	418	135	1059	465	325	1254	559
Arrive On Green	0.15	0.34	0.34	0.07	0.26	0.26	0.04	0.29	0.29	0.09	0.35	0.35
Sat Flow, veh/h	3510	3498	173	1810	3610	1606	3510	3610	1586	3510	3610	1609
Grp Volume(v), veh/h	616	376	389	102	272	378	59	943	51	359	646	185
Grp Sat Flow(s),veh/h/ln	1755	1805	1866	1810	1805	1606	1755	1805	1586	1755	1805	1609
Q Serve(g_s), s	16.0	18.8	18.8	6.0	6.5	24.6	1.8	27.0	2.5	10.0	15.4	9.2
Cycle Q Clear(g_c), s	16.0	18.8	18.8	6.0	6.5	24.6	1.8	27.0	2.5	10.0	15.4	9.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	520	610	630	128	940	418	135	1059	465	325	1254	559
V/C Ratio(X)	1.18	0.62	0.62	0.80	0.29	0.90	0.44	0.89	0.11	1.10	0.51	0.33
Avail Cap(c_a), veh/h	520	635	657	218	1170	521	163	1230	540	325	1397	623
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.0	29.9	29.9	49.4	31.9	38.6	50.8	36.5	27.9	49.0	28.0	26.0
Incr Delay (d2), s/veh	101.1	1.2	1.1	4.2	0.1	14.9	0.8	6.9	0.0	80.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.0	7.9	8.2	2.8	2.7	10.9	0.8	12.3	0.9	7.9	6.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	147.1	31.1	31.1	53.6	32.0	53.5	51.6	43.4	27.9	129.9	28.1	26.1
LnGrp LOS	F	C	C	D	C	D	D	D	C	F	C	C
Approach Vol, veh/h		1381			752			1053			1190	
Approach Delay, s/veh		82.8			45.8			43.1			58.5	
Approach LOS		F			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	37.6	12.6	42.8	9.1	43.4	21.0	34.4				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	10.0	36.8	13.0	38.0	5.0	41.8	16.0	35.0				
Max Q Clear Time (g_c+I1), s	12.0	29.0	8.0	20.8	3.8	17.4	18.0	26.6				
Green Ext Time (p_c), s	0.0	2.7	0.0	2.5	0.0	2.9	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay				60.3								
HCM 6th LOS				E								

**APPENDIX 6.1: HORIZON YEAR (2040) WITHOUT PROJECT
CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings
1: Citrus Av. & I-10 WB Ramps

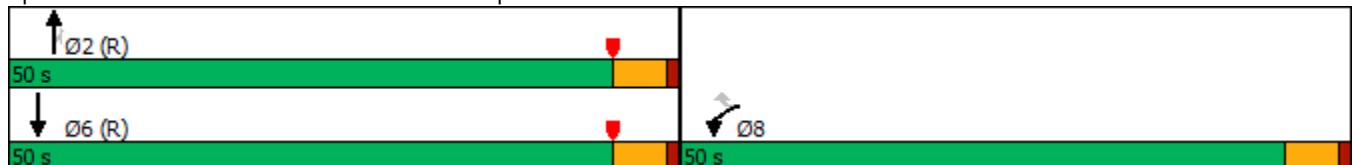


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↵	↵↵	↵↵↵	↵	↵↵
Traffic Volume (vph)	711	578	721	392	1087
Future Volume (vph)	711	578	721	392	1087
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	50.0	50.0	50.0	50.0	50.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	45.7	45.7	44.3	44.3	44.3
Actuated g/C Ratio	0.46	0.46	0.44	0.44	0.44
v/c Ratio	0.94	0.45	0.34	0.46	0.74
Control Delay	46.3	13.5	26.3	8.7	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	13.5	26.3	8.7	26.7
LOS	D	B	C	A	C
Approach Delay	31.6		20.1		26.7
Approach LOS	C		C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 26.4
 Intersection LOS: C
 Intersection Capacity Utilization 77.8%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	711	578	721	392	0	1087
Future Volume (veh/h)	711	578	721	392	0	1087
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	773	628	784	417	0	1182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	800	1254	2374	721	0	1652
Arrive On Green	0.44	0.44	0.92	0.92	0.00	0.46
Sat Flow, veh/h	1810	2834	5358	1575	0	3800
Grp Volume(v), veh/h	773	628	784	417	0	1182
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1575	0	1805
Q Serve(g_s), s	41.6	15.9	1.8	4.8	0.0	26.4
Cycle Q Clear(g_c), s	41.6	15.9	1.8	4.8	0.0	26.4
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	800	1254	2374	721	0	1652
V/C Ratio(X)	0.97	0.50	0.33	0.58	0.00	0.72
Avail Cap(c_a), veh/h	814	1275	2374	721	0	1652
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.59	0.59	0.00	1.00
Uniform Delay (d), s/veh	27.1	20.0	2.4	2.5	0.0	21.9
Incr Delay (d2), s/veh	23.0	0.1	0.2	2.0	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.1	5.1	0.5	1.2	0.0	10.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.2	20.1	2.6	4.5	0.0	24.6
LnGrp LOS	D	C	A	A	A	C
Approach Vol, veh/h	1401		1201			1182
Approach Delay, s/veh	36.7		3.3			24.6
Approach LOS	D		A			C
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		50.8			50.8	49.2
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		45.0			45.0	45.0
Max Q Clear Time (g_c+11), s		6.8			28.4	43.6
Green Ext Time (p_c), s		4.3			4.9	0.6

Intersection Summary

HCM 6th Ctrl Delay	22.3
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	305	3	810	650	1311
Future Volume (vph)	305	3	810	650	1311
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	37.0	37.0	36.0	27.0	63.0
Total Split (%)	37.0%	37.0%	36.0%	27.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	33.7	33.7	30.6	21.7	56.3
Actuated g/C Ratio	0.34	0.34	0.31	0.22	0.56
v/c Ratio	0.27	1.60	0.85	0.88	0.67
Control Delay	25.4	302.0	34.7	52.9	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	302.0	34.7	52.9	12.1
LOS	C	F	C	D	B
Approach Delay		231.6	34.7		25.6
Approach LOS		F	C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.60
 Intersection Signal Delay: 83.3
 Intersection LOS: F
 Intersection Capacity Utilization 112.7%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	305	3	889	0	0	0	0	810	511	650	1311	0
Future Volume (veh/h)	305	3	889	0	0	0	0	810	511	650	1311	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	314	3	794				0	835	413	670	1352	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1123	2	514				0	1154	529	724	2094	0
Arrive On Green	0.32	0.32	0.32				0.00	0.33	0.33	0.41	1.00	0.00
Sat Flow, veh/h	3510	6	1605				0	3629	1584	3510	3705	0
Grp Volume(v), veh/h	314	0	797				0	835	413	670	1352	0
Grp Sat Flow(s),veh/h/ln	1755	0	1611				0	1729	1584	1755	1805	0
Q Serve(g_s), s	6.7	0.0	32.0				0.0	21.2	23.5	18.1	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	32.0				0.0	21.2	23.5	18.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1123	0	516				0	1154	529	724	2094	0
V/C Ratio(X)	0.28	0.00	1.55				0.00	0.72	0.78	0.93	0.65	0.00
Avail Cap(c_a), veh/h	1123	0	516				0	1154	529	807	2094	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.60	0.60	0.47	0.47	0.00
Uniform Delay (d), s/veh	25.4	0.0	34.0				0.0	29.3	30.0	28.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	255.2				0.0	2.4	6.8	8.0	0.7	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
%ile BackOfQ(50%),veh/ln	2.7	0.0	48.1				0.0	8.6	9.4	6.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	0.0	289.2				0.0	31.7	36.9	36.6	0.7	0.0
LnGrp LOS	C	A	F				A	C	D	D	A	A
Approach Vol, veh/h		1111						1248			2022	
Approach Delay, s/veh		214.6						33.4			12.6	
Approach LOS		F						C			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	24.6	38.4		37.0				63.0				
Change Period (Y+Rc), s	4.0	5.0		5.0				5.0				
Max Green Setting (Gmax), s	23.0	31.0		32.0				58.0				
Max Q Clear Time (g_c+I1), s	20.1	25.5		34.0				2.0				
Green Ext Time (p_c), s	0.5	2.7		0.0				7.4				

Intersection Summary

HCM 6th Ctrl Delay	69.8
HCM 6th LOS	E

Timings
3: Citrus Av. & Slover Av.

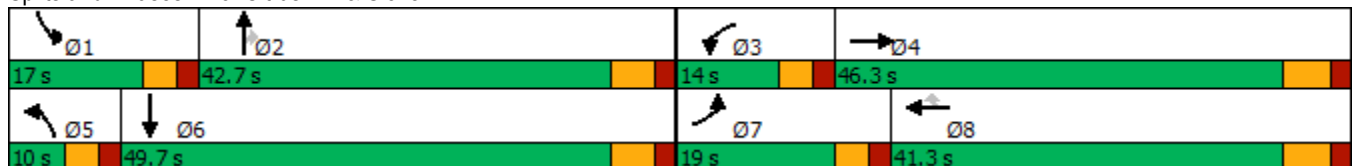


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕
Traffic Volume (vph)	408	616	73	506	242	84	748	92	539	1164
Future Volume (vph)	408	616	73	506	242	84	748	92	539	1164
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	19.0	46.3	14.0	41.3	41.3	10.0	42.7	42.7	17.0	49.7
Total Split (%)	15.8%	38.6%	11.7%	34.4%	34.4%	8.3%	35.6%	35.6%	14.2%	41.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.1	31.4	7.7	22.9	22.9	5.0	36.9	36.9	12.0	44.0
Actuated g/C Ratio	0.13	0.29	0.07	0.21	0.21	0.05	0.34	0.34	0.11	0.41
v/c Ratio	0.98	0.74	0.62	0.72	0.57	0.56	0.66	0.16	1.50	1.37
Control Delay	84.6	39.4	71.1	45.1	18.9	66.1	34.4	0.8	274.4	199.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	39.4	71.1	45.1	18.9	66.1	34.4	0.8	274.4	199.4
LOS	F	D	E	D	B	E	C	A	F	F
Approach Delay		56.0		39.7			33.9			216.5
Approach LOS		E		D			C			F

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 108.2	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay: 122.2	Intersection LOS: F
Intersection Capacity Utilization 102.0%	ICU Level of Service G
Analysis Period (min) 15	




























Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

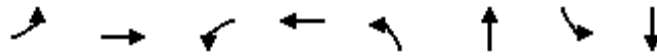
09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 	 	 	 				
Traffic Volume (veh/h)	408	616	84	73	506	242	84	748	92	539	1164	657
Future Volume (veh/h)	408	616	84	73	506	242	84	748	92	539	1164	657
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	670	90	79	550	198	91	813	70	586	1265	586
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	470	860	115	101	690	303	156	1257	554	403	1022	442
Arrive On Green	0.13	0.27	0.27	0.06	0.19	0.19	0.04	0.35	0.35	0.11	0.42	0.42
Sat Flow, veh/h	3510	3198	429	1810	3610	1587	3510	3610	1589	3510	2442	1057
Grp Volume(v), veh/h	443	378	382	79	550	198	91	813	70	586	912	939
Grp Sat Flow(s),veh/h/ln	1755	1805	1822	1810	1805	1587	1755	1805	1589	1755	1805	1694
Q Serve(g_s), s	13.1	20.3	20.3	4.5	15.2	12.1	2.7	19.8	3.1	12.0	43.8	43.8
Cycle Q Clear(g_c), s	13.1	20.3	20.3	4.5	15.2	12.1	2.7	19.8	3.1	12.0	43.8	43.8
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	470	485	490	101	690	303	156	1257	554	403	755	709
V/C Ratio(X)	0.94	0.78	0.78	0.78	0.80	0.65	0.58	0.65	0.13	1.46	1.21	1.32
Avail Cap(c_a), veh/h	470	690	697	156	1207	531	168	1269	559	403	755	709
HCM Platoon Ratio	1.00	1.00	1.00	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	44.9	35.4	35.4	48.8	40.4	39.1	49.1	28.7	23.2	46.3	30.4	30.4
Incr Delay (d2), s/veh	27.5	2.1	2.2	5.6	0.8	0.9	2.5	0.9	0.0	218.5	105.6	155.7
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	7.3	8.7	8.9	2.1	6.5	4.6	1.2	8.2	1.1	17.3	39.5	46.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	37.5	37.6	54.3	41.2	40.0	51.6	29.6	23.3	264.8	136.0	186.1
LnGrp LOS	E	D	D	D	D	D	D	C	C	F	F	F
Approach Vol, veh/h		1203			827			974			2437	
Approach Delay, s/veh		50.4			42.2			31.2			186.3	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	42.3	10.9	34.4	9.6	49.7	19.0	26.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	12.0	36.8	9.0	40.0	5.0	43.8	14.0	35.0				
Max Q Clear Time (g_c+I1), s	14.0	21.8	6.5	22.3	4.7	45.8	15.1	17.2				
Green Ext Time (p_c), s	0.0	3.1	0.0	2.5	0.0	0.0	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			106.6									
HCM 6th LOS			F									

Timings
5: Citrus Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

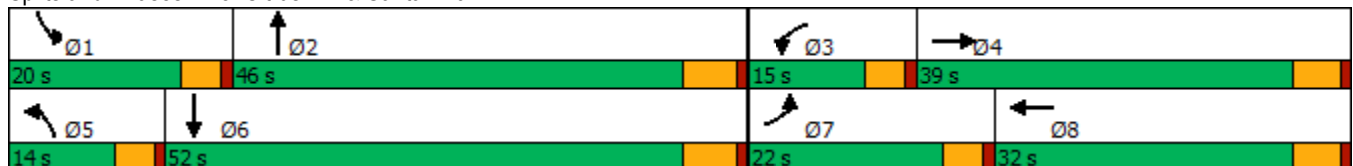


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	128	110	33	181	29	532	299	522
Future Volume (vph)	128	110	33	181	29	532	299	522
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	22.0	39.0	15.0	32.0	14.0	46.0	20.0	52.0
Total Split (%)	18.3%	32.5%	12.5%	26.7%	11.7%	38.3%	16.7%	43.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.3	22.4	6.5	13.0	6.4	26.0	15.9	40.1
Actuated g/C Ratio	0.13	0.26	0.07	0.15	0.07	0.30	0.18	0.46
v/c Ratio	0.59	0.22	0.26	0.55	0.24	0.76	0.98	0.55
Control Delay	49.1	17.8	48.0	23.6	47.9	31.2	85.0	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.1	17.8	48.0	23.6	47.9	31.2	85.0	18.2
LOS	D	B	D	C	D	C	F	B
Approach Delay		30.5		25.8		31.8		36.0
Approach LOS		C		C		C		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 87.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.98
 Intersection Signal Delay: 32.6
 Intersection LOS: C
 Intersection Capacity Utilization 72.0%
 ICU Level of Service C
 Analysis Period (min) 15

























Splits and Phases: 5: Citrus Av. & Santa Ana Av.



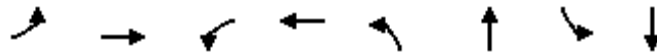
HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

5: Citrus Av. & Santa Ana Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	128	110	77	33	181	143	29	532	217	299	522	304
Future Volume (veh/h)	128	110	77	33	181	143	29	532	217	299	522	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	118	79	35	195	117	31	572	225	322	561	300
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	175	422	263	62	299	171	57	750	294	362	1055	564
Arrive On Green	0.10	0.20	0.20	0.03	0.14	0.14	0.03	0.30	0.30	0.20	0.46	0.46
Sat Flow, veh/h	1810	2134	1332	1810	2211	1266	1810	2531	993	1810	2272	1214
Grp Volume(v), veh/h	138	98	99	35	158	154	31	408	389	322	446	415
Grp Sat Flow(s),veh/h/ln	1810	1805	1660	1810	1805	1672	1810	1805	1719	1810	1805	1681
Q Serve(g_s), s	5.6	3.5	3.8	1.4	6.2	6.6	1.3	15.4	15.5	13.0	13.2	13.2
Cycle Q Clear(g_c), s	5.6	3.5	3.8	1.4	6.2	6.6	1.3	15.4	15.5	13.0	13.2	13.2
Prop In Lane	1.00		0.80	1.00		0.76	1.00		0.58	1.00		0.72
Lane Grp Cap(c), veh/h	175	357	328	62	244	226	57	535	509	362	838	781
V/C Ratio(X)	0.79	0.28	0.30	0.56	0.65	0.68	0.54	0.76	0.76	0.89	0.53	0.53
Avail Cap(c_a), veh/h	419	808	743	251	640	592	227	967	920	371	1111	1034
HCM Platoon Ratio	1.00	1.00	1.00	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	33.1	25.6	25.7	35.7	30.8	30.9	35.8	24.0	24.0	29.2	14.3	14.3
Incr Delay (d2), s/veh	3.0	0.4	0.5	2.9	2.8	3.6	2.9	2.3	2.4	21.3	0.5	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	2.5	1.4	1.4	0.6	2.7	2.7	0.6	6.2	5.9	7.3	4.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	26.0	26.2	38.6	33.6	34.5	38.7	26.3	26.5	50.5	14.8	14.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	B	B
Approach Vol, veh/h		335			347			828			1183	
Approach Delay, s/veh		30.2			34.5			26.8			24.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.6	28.0	7.2	20.2	7.0	40.7	11.9	15.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	15.4	40.2	10.4	33.6	9.4	46.2	17.4	26.6				
Max Q Clear Time (g_c+I1), s	15.0	17.5	3.4	5.8	3.3	15.2	7.6	8.6				
Green Ext Time (p_c), s	0.0	4.7	0.0	1.0	0.0	5.7	0.1	1.5				
Intersection Summary												
HCM 6th Ctrl Delay				27.2								
HCM 6th LOS				C								

Timings
8: Oleander Av. & Slover Av.

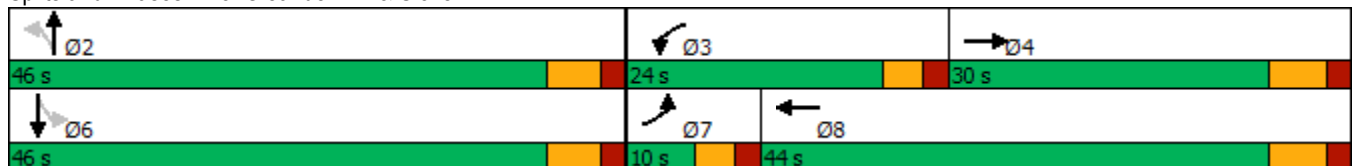


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	24	693	354	520	103	5	15	56
Future Volume (vph)	24	693	354	520	103	5	15	56
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	30.0	24.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	30.0%	24.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	24.2	19.4	45.1	13.9	13.9	13.9	13.9
Actuated g/C Ratio	0.07	0.32	0.26	0.60	0.19	0.19	0.19	0.19
v/c Ratio	0.21	0.85	0.83	0.30	0.45	0.64	0.16	0.23
Control Delay	41.8	33.3	45.3	10.8	31.5	8.0	26.6	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.8	33.3	45.3	10.8	31.5	8.0	26.6	20.2
LOS	D	C	D	B	C	A	C	C
Approach Delay		33.5		23.7		13.3		21.2
Approach LOS		C		C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 75
 Natural Cycle: 105
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 82.0%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022

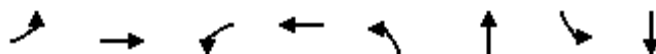


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↻		↰	↻		↰	↻		↰	↻	
Traffic Volume (veh/h)	24	693	195	354	520	74	103	5	351	15	56	19
Future Volume (veh/h)	24	693	195	354	520	74	103	5	351	15	56	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	753	164	385	565	63	112	5	196	16	61	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	52	907	198	432	1692	188	318	7	291	195	288	57
Arrive On Green	0.03	0.31	0.31	0.24	0.52	0.52	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	2942	641	1810	3266	363	1341	40	1551	1198	1536	302
Grp Volume(v), veh/h	26	462	455	385	312	316	112	0	201	16	0	73
Grp Sat Flow(s),veh/h/ln	1810	1805	1777	1810	1805	1824	1341	0	1590	1198	0	1838
Q Serve(g_s), s	0.9	15.4	15.4	13.3	6.5	6.6	5.0	0.0	7.6	0.8	0.0	2.2
Cycle Q Clear(g_c), s	0.9	15.4	15.4	13.3	6.5	6.6	7.2	0.0	7.6	8.4	0.0	2.2
Prop In Lane	1.00		0.36	1.00		0.20	1.00		0.98	1.00		0.16
Lane Grp Cap(c), veh/h	52	557	548	432	935	945	318	0	298	195	0	345
V/C Ratio(X)	0.50	0.83	0.83	0.89	0.33	0.33	0.35	0.00	0.67	0.08	0.00	0.21
Avail Cap(c_a), veh/h	140	660	650	530	1050	1061	895	0	984	711	0	1137
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.0	20.8	20.8	23.9	9.1	9.1	25.3	0.0	24.5	28.4	0.0	22.3
Incr Delay (d2), s/veh	2.7	7.2	7.3	13.3	0.2	0.2	0.2	0.0	1.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	6.6	6.5	6.6	2.0	2.0	1.5	0.0	2.7	0.2	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	28.0	28.1	37.2	9.2	9.3	25.6	0.0	25.5	28.5	0.0	22.4
LnGrp LOS	C	C	C	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		943			1013			313				89
Approach Delay, s/veh		28.2			19.9			25.5				23.5
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.1	20.5	26.3		18.1	6.9	39.9				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	19.0	23.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		9.6	15.3	17.4		10.4	2.9	8.6				
Green Ext Time (p_c), s		0.9	0.1	2.4		0.3	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			24.1									
HCM 6th LOS			C									

Timings
11: Oleander Av. & Santa Ana Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Traffic Volume (vph)	36	575	24	296	16	122	114	91
Future Volume (vph)	36	575	24	296	16	122	114	91
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	18.0	34.0	14.0	30.0	12.0	39.0	33.0	60.0
Total Split (%)	15.0%	28.3%	11.7%	25.0%	10.0%	32.5%	27.5%	50.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.8	20.1	6.4	17.6	6.2	14.3	9.9	23.9
Actuated g/C Ratio	0.11	0.33	0.10	0.29	0.10	0.23	0.16	0.39
v/c Ratio	0.20	0.55	0.14	0.45	0.09	0.41	0.42	0.21
Control Delay	35.6	21.3	36.1	20.1	36.6	26.7	33.9	14.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	21.3	36.1	20.1	36.6	26.7	33.9	14.5
LOS	D	C	D	C	D	C	C	B
Approach Delay		22.1		20.9		27.6		23.3
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 61.3
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 22.6
 Intersection LOS: C
 Intersection Capacity Utilization 53.8%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	36	575	25	24	296	127	16	122	42	114	91	45
Future Volume (veh/h)	36	575	25	24	296	127	16	122	42	114	91	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	39	625	23	26	322	97	17	133	39	124	99	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	76	954	35	55	705	209	38	297	87	163	374	132
Arrive On Green	0.04	0.27	0.27	0.03	0.26	0.26	0.02	0.21	0.21	0.09	0.28	0.28
Sat Flow, veh/h	1810	3551	131	1810	2743	812	1810	1410	413	1810	1339	474
Grp Volume(v), veh/h	39	317	331	26	210	209	17	0	172	124	0	134
Grp Sat Flow(s),veh/h/ln	1810	1805	1876	1810	1805	1750	1810	0	1823	1810	0	1813
Q Serve(g_s), s	1.1	7.8	7.8	0.7	4.9	5.0	0.5	0.0	4.1	3.3	0.0	2.9
Cycle Q Clear(g_c), s	1.1	7.8	7.8	0.7	4.9	5.0	0.5	0.0	4.1	3.3	0.0	2.9
Prop In Lane	1.00		0.07	1.00		0.46	1.00		0.23	1.00		0.26
Lane Grp Cap(c), veh/h	76	485	504	55	464	450	38	0	384	163	0	507
V/C Ratio(X)	0.52	0.65	0.66	0.47	0.45	0.46	0.45	0.00	0.45	0.76	0.00	0.26
Avail Cap(c_a), veh/h	486	1034	1075	341	890	862	268	0	1227	1029	0	1983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	16.2	16.2	23.8	15.6	15.6	24.1	0.0	17.2	22.2	0.0	14.0
Incr Delay (d2), s/veh	2.0	1.5	1.5	2.3	0.7	0.7	3.0	0.0	0.8	2.7	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.8	2.9	0.3	1.7	1.7	0.2	0.0	1.5	1.4	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	17.7	17.7	26.2	16.3	16.4	27.2	0.0	18.0	24.9	0.0	14.3
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		687			445			189			258	
Approach Delay, s/veh		18.1			16.9			18.8			19.4	
Approach LOS		B			B			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	15.9	6.1	18.8	5.7	19.3	6.7	18.2				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	28.4	33.6	9.4	28.6	7.4	54.6	13.4	24.6				
Max Q Clear Time (g_c+I1), s	5.3	6.1	2.7	9.8	2.5	4.9	3.1	7.0				
Green Ext Time (p_c), s	0.1	0.9	0.0	3.5	0.0	0.8	0.0	2.1				

Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

Timings
1: Citrus Av. & I-10 WB Ramps

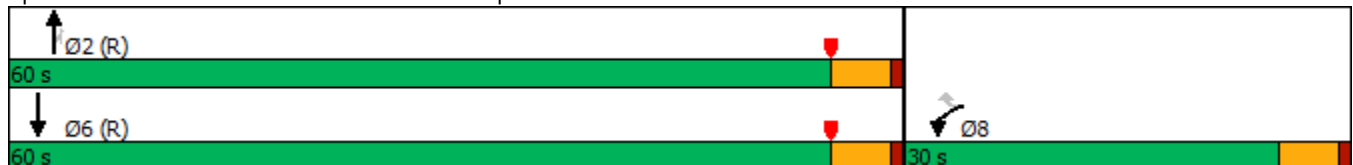


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↵	↵↵	↵↵↵	↵	↵↵
Traffic Volume (vph)	477	528	1105	569	932
Future Volume (vph)	477	528	1105	569	932
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	30.0	30.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	32.0	32.0	48.0	48.0	48.0
Actuated g/C Ratio	0.36	0.36	0.53	0.53	0.53
v/c Ratio	0.78	0.50	0.42	0.53	0.51
Control Delay	35.7	17.6	22.0	9.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	17.6	22.0	9.6	14.9
LOS	D	B	C	A	B
Approach Delay	26.2		17.8		14.9
Approach LOS	C		B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 19.4
 Intersection LOS: B
 Intersection Capacity Utilization 60.5%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps

09/01/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶↶	↶↶↶	↷		↶↶
Traffic Volume (veh/h)	477	528	1105	569	0	932
Future Volume (veh/h)	477	528	1105	569	0	932
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	502	391	1163	560	0	981
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	503	787	3170	964	0	2206
Arrive On Green	0.28	0.28	1.00	1.00	0.00	0.61
Sat Flow, veh/h	1810	2834	5358	1577	0	3800
Grp Volume(v), veh/h	502	391	1163	560	0	981
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1577	0	1805
Q Serve(g_s), s	25.0	10.4	0.0	0.0	0.0	13.1
Cycle Q Clear(g_c), s	25.0	10.4	0.0	0.0	0.0	13.1
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	503	787	3170	964	0	2206
V/C Ratio(X)	1.00	0.50	0.37	0.58	0.00	0.44
Avail Cap(c_a), veh/h	503	787	3170	964	0	2206
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.34	0.34	0.00	1.00
Uniform Delay (d), s/veh	32.5	27.2	0.0	0.0	0.0	9.3
Incr Delay (d2), s/veh	39.8	0.2	0.1	0.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.1	3.5	0.0	0.2	0.0	4.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.3	27.4	0.1	0.9	0.0	10.0
LnGrp LOS	E	C	A	A	A	A
Approach Vol, veh/h	893		1723			981
Approach Delay, s/veh	52.6		0.4			10.0
Approach LOS	D		A			A
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		60.0			60.0	30.0
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		55.0			55.0	25.0
Max Q Clear Time (g_c+I1), s		2.0			15.1	27.0
Green Ext Time (p_c), s		7.4			4.6	0.0

Intersection Summary

HCM 6th Ctrl Delay	16.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↑↑↑	↔↔	↑↑
Traffic Volume (vph)	479	19	1192	563	774
Future Volume (vph)	479	19	1192	563	774
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	25.0	25.0	40.0	25.0	65.0
Total Split (%)	27.8%	27.8%	44.4%	27.8%	72.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	17.2	17.2	40.3	18.5	62.8
Actuated g/C Ratio	0.19	0.19	0.45	0.21	0.70
v/c Ratio	0.74	0.76	1.03dr	0.81	0.32
Control Delay	41.0	24.1	30.4	36.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	24.1	30.4	36.0	5.4
LOS	D	C	C	D	A
Approach Delay		33.7	30.4		18.3
Approach LOS		C	C		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 27.2
 Intersection LOS: C
 Intersection Capacity Utilization 92.5%
 ICU Level of Service F
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	479	19	347	0	0	0	0	1192	860	563	774	0
Future Volume (veh/h)	479	19	347	0	0	0	0	1192	860	563	774	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	494	20	280				0	1229	680	580	798	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	728	22	315				0	1564	719	648	2460	0
Arrive On Green	0.21	0.21	0.21				0.00	0.45	0.45	0.37	1.00	0.00
Sat Flow, veh/h	3510	108	1518				0	3629	1590	3510	3705	0
Grp Volume(v), veh/h	494	0	300				0	1229	680	580	798	0
Grp Sat Flow(s),veh/h/ln	1755	0	1627				0	1729	1590	1755	1805	0
Q Serve(g_s), s	11.7	0.0	16.1				0.0	27.2	36.8	14.0	0.0	0.0
Cycle Q Clear(g_c), s	11.7	0.0	16.1				0.0	27.2	36.8	14.0	0.0	0.0
Prop In Lane	1.00		0.93				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	728	0	337				0	1564	719	648	2460	0
V/C Ratio(X)	0.68	0.00	0.89				0.00	0.79	0.95	0.89	0.32	0.00
Avail Cap(c_a), veh/h	780	0	361				0	1564	719	819	2460	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.11	0.11	0.77	0.77	0.00
Uniform Delay (d), s/veh	32.9	0.0	34.7				0.0	20.9	23.6	27.6	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	20.8				0.0	0.5	4.1	7.3	0.3	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
%ile BackOfQ(50%),veh/ln	4.8	0.0	7.9				0.0	9.8	12.8	5.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	0.0	55.5				0.0	21.4	27.7	34.8	0.3	0.0
LnGrp LOS	C	A	E				A	C	C	C	A	A
Approach Vol, veh/h		794						1909			1378	
Approach Delay, s/veh		42.5						23.6			14.8	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	20.6	45.7	23.7	66.3								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	21.0	35.0	20.0	60.0								
Max Q Clear Time (g_c+I1), s	16.0	38.8	18.1	2.0								
Green Ext Time (p_c), s	0.6	0.0	0.5	3.5								
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									

Timings
3: Citrus Av. & Slover Av.

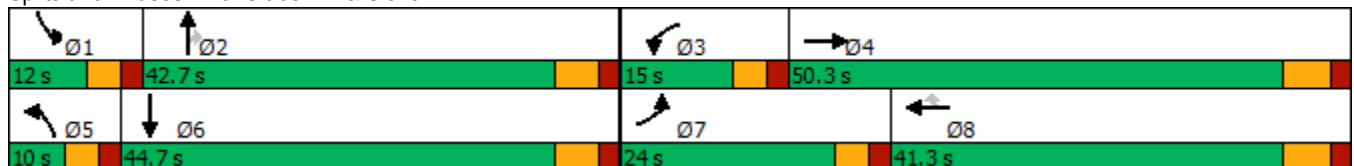


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕↗	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↗
Traffic Volume (vph)	649	1191	106	418	440	61	953	93	372	657
Future Volume (vph)	649	1191	106	418	440	61	953	93	372	657
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	24.0	50.3	15.0	41.3	41.3	10.0	42.7	42.7	12.0	44.7
Total Split (%)	20.0%	41.9%	12.5%	34.4%	34.4%	8.3%	35.6%	35.6%	10.0%	37.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.0	44.1	9.3	34.4	34.4	5.0	35.2	35.2	7.0	39.3
Actuated g/C Ratio	0.16	0.37	0.08	0.29	0.29	0.04	0.30	0.30	0.06	0.33
v/c Ratio	1.21	0.98	0.78	0.42	0.80	0.43	0.93	0.17	1.88	0.81
Control Delay	152.3	56.8	88.4	35.4	36.5	65.3	55.5	0.7	446.2	41.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	152.3	56.8	88.4	35.4	36.5	65.3	55.5	0.7	446.2	41.0
LOS	F	E	F	D	D	E	E	A	F	D
Approach Delay		89.5		41.7			51.4			158.5
Approach LOS		F		D			D			F

Intersection Summary































Cycle Length: 120
 Actuated Cycle Length: 117.8
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.88
 Intersection Signal Delay: 89.6
 Intersection LOS: F
 Intersection Capacity Utilization 96.0%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 3: Citrus Av. & Slover Av.

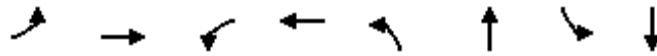


HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	649	1191	55	106	418	440	61	953	93	372	657	255
Future Volume (veh/h)	649	1191	55	106	418	440	61	953	93	372	657	255
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	683	1254	50	112	440	410	64	1003	76	392	692	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	574	1316	52	138	1027	457	132	1085	476	212	861	285
Arrive On Green	0.16	0.37	0.37	0.08	0.28	0.28	0.04	0.30	0.30	0.06	0.32	0.32
Sat Flow, veh/h	3510	3536	141	1810	3610	1607	3510	3610	1586	3510	2664	881
Grp Volume(v), veh/h	683	640	664	112	440	410	64	1003	76	392	469	452
Grp Sat Flow(s),veh/h/ln	1755	1805	1872	1810	1805	1607	1755	1805	1586	1755	1805	1740
Q Serve(g_s), s	19.0	40.0	40.1	7.1	11.5	28.5	2.1	31.3	4.1	7.0	27.6	27.6
Cycle Q Clear(g_c), s	19.0	40.0	40.1	7.1	11.5	28.5	2.1	31.3	4.1	7.0	27.6	27.6
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	574	671	697	138	1027	457	132	1085	476	212	583	562
V/C Ratio(X)	1.19	0.95	0.95	0.81	0.43	0.90	0.48	0.92	0.16	1.85	0.80	0.80
Avail Cap(c_a), veh/h	574	684	709	156	1088	484	151	1144	503	212	603	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.6	35.5	35.5	52.8	33.8	39.9	54.8	39.3	29.8	54.6	35.9	35.9
Incr Delay (d2), s/veh	101.6	22.9	22.6	21.8	0.1	17.8	1.0	11.7	0.1	401.2	6.9	7.2
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	16.1	20.8	21.6	4.0	4.9	13.0	0.9	15.0	1.5	14.8	12.7	12.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	150.1	58.3	58.1	74.6	34.0	57.7	55.8	51.1	29.9	455.8	42.9	43.1
LnGrp LOS	F	E	E	E	C	E	E	D	C	F	D	D
Approach Vol, veh/h		1987			962			1143			1313	
Approach Delay, s/veh		89.8			48.8			49.9			166.2	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	40.8	13.8	49.5	9.4	43.4	24.0	39.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	7.0	36.8	10.0	44.0	5.0	38.8	19.0	35.0				
Max Q Clear Time (g_c+I1), s	9.0	33.3	9.1	42.1	4.1	29.6	21.0	30.5				
Green Ext Time (p_c), s	0.0	1.6	0.0	1.1	0.0	2.5	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay				92.6								
HCM 6th LOS				F								

Timings
5: Citrus Av. & Santa Ana Av.

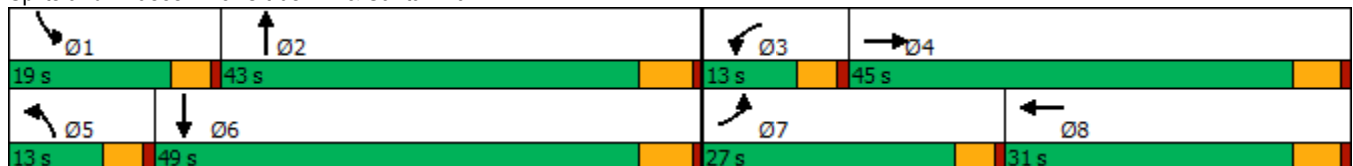


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↘	↕	↙	↕	↙	↕	↘	↕
Traffic Volume (vph)	280	420	46	155	37	571	163	406
Future Volume (vph)	280	420	46	155	37	571	163	406
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	27.0	45.0	13.0	31.0	13.0	43.0	19.0	49.0
Total Split (%)	22.5%	37.5%	10.8%	25.8%	10.8%	35.8%	15.8%	40.8%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	19.0	29.9	6.8	12.8	6.5	23.6	12.4	34.3
Actuated g/C Ratio	0.21	0.34	0.08	0.14	0.07	0.27	0.14	0.39
v/c Ratio	0.75	0.39	0.34	0.58	0.29	0.73	0.67	0.40
Control Delay	48.3	25.9	51.3	19.6	50.3	34.7	53.5	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.3	25.9	51.3	19.6	50.3	34.7	53.5	21.4
LOS	D	C	D	B	D	C	D	C
Approach Delay		34.4		23.1		35.6		28.9
Approach LOS		C		C		D		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 89
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 31.4
 Intersection LOS: C
 Intersection Capacity Utilization 72.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av.

09/01/2022



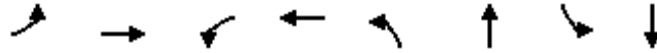
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	420	40	46	155	216	37	571	96	163	406	124
Future Volume (veh/h)	280	420	40	46	155	216	37	571	96	163	406	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	289	433	35	47	160	196	38	589	91	168	419	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	335	1065	86	76	310	275	66	793	122	208	914	266
Arrive On Green	0.19	0.32	0.32	0.04	0.17	0.17	0.04	0.25	0.25	0.12	0.33	0.33
Sat Flow, veh/h	1810	3379	272	1810	1805	1602	1810	3134	483	1810	2759	802
Grp Volume(v), veh/h	289	230	238	47	160	196	38	339	341	168	273	269
Grp Sat Flow(s),veh/h/ln	1810	1805	1846	1810	1805	1602	1810	1805	1812	1810	1805	1756
Q Serve(g_s), s	11.5	7.4	7.5	1.9	6.0	8.6	1.5	12.8	12.9	6.7	8.8	9.0
Cycle Q Clear(g_c), s	11.5	7.4	7.5	1.9	6.0	8.6	1.5	12.8	12.9	6.7	8.8	9.0
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.27	1.00		0.46
Lane Grp Cap(c), veh/h	335	569	582	76	310	275	66	456	458	208	598	582
V/C Ratio(X)	0.86	0.41	0.41	0.62	0.52	0.71	0.57	0.74	0.75	0.81	0.46	0.46
Avail Cap(c_a), veh/h	547	964	986	205	623	553	205	906	909	351	1052	1023
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.3	19.9	20.0	34.9	27.9	29.0	35.1	25.5	25.5	32.0	19.5	19.6
Incr Delay (d2), s/veh	4.2	0.5	0.5	3.1	1.3	3.4	2.9	2.4	2.4	2.8	0.5	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	5.0	2.9	3.0	0.9	2.5	3.3	0.7	5.2	5.3	2.9	3.4	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	20.4	20.4	38.0	29.2	32.4	38.0	27.9	27.9	34.8	20.1	20.1
LnGrp LOS	C	C	C	D	C	C	D	C	C	C	C	C
Approach Vol, veh/h		757			403			718			710	
Approach Delay, s/veh		25.4			31.8			28.4			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	13.1	24.6	7.7	28.8	7.3	30.4	18.3	18.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	14.4	37.2	8.4	39.6	8.4	43.2	22.4	25.6				
Max Q Clear Time (g_c+I1), s	8.7	14.9	3.9	9.5	3.5	11.0	13.5	10.6				
Green Ext Time (p_c), s	0.1	3.8	0.0	2.7	0.0	3.1	0.3	1.7				
Intersection Summary												
HCM 6th Ctrl Delay			26.7									
HCM 6th LOS			C									

Timings

Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

09/01/2022

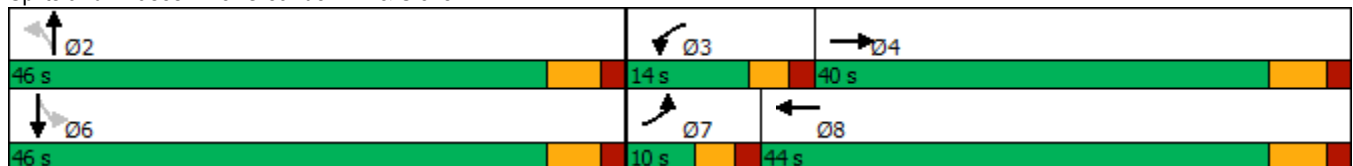


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	31	1266	103	621	118	5	44	4
Future Volume (vph)	31	1266	103	621	118	5	44	4
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	40.0	14.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	40.0%	14.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	34.5	7.9	43.9	14.3	14.3	14.3	14.3
Actuated g/C Ratio	0.07	0.46	0.11	0.59	0.19	0.19	0.19	0.19
v/c Ratio	0.27	0.92	0.58	0.33	0.49	0.30	0.19	0.16
Control Delay	43.3	31.3	47.9	11.4	31.9	7.1	25.2	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	31.3	47.9	11.4	31.9	7.1	25.2	8.3
LOS	D	C	D	B	C	A	C	A
Approach Delay		31.6		16.5		19.9		16.0
Approach LOS		C		B		B		B

Intersection Summary

Cycle Length: 100	
Actuated Cycle Length: 74.3	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 25.4	Intersection LOS: C
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

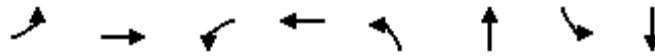
8: Oleander Av. & Slover Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	31	1266	135	103	621	25	118	5	106	44	4	49
Future Volume (veh/h)	31	1266	135	103	621	25	118	5	106	44	4	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	1376	126	112	675	26	128	5	76	48	4	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	1617	147	144	1869	72	295	15	233	265	20	233
Arrive On Green	0.04	0.48	0.48	0.08	0.53	0.53	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	3345	305	1810	3544	136	1376	99	1500	1338	130	1500
Grp Volume(v), veh/h	34	740	762	112	344	357	128	0	81	48	0	50
Grp Sat Flow(s),veh/h/ln	1810	1805	1845	1810	1805	1875	1376	0	1598	1338	0	1630
Q Serve(g_s), s	1.1	21.9	22.2	3.7	6.8	6.8	5.5	0.0	2.8	2.0	0.0	1.6
Cycle Q Clear(g_c), s	1.1	21.9	22.2	3.7	6.8	6.8	7.1	0.0	2.8	4.8	0.0	1.6
Prop In Lane	1.00		0.17	1.00		0.07	1.00		0.94	1.00		0.92
Lane Grp Cap(c), veh/h	65	873	892	144	952	989	295	0	248	265	0	253
V/C Ratio(X)	0.52	0.85	0.85	0.78	0.36	0.36	0.43	0.00	0.33	0.18	0.00	0.20
Avail Cap(c_a), veh/h	148	996	1018	267	1114	1157	984	0	1049	936	0	1070
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.9	13.8	13.9	27.6	8.4	8.4	25.6	0.0	23.0	25.1	0.0	22.5
Incr Delay (d2), s/veh	2.4	6.0	6.3	3.3	0.2	0.2	0.4	0.0	0.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.0	8.3	1.6	1.9	2.0	1.6	0.0	1.0	0.6	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.3	19.8	20.2	30.9	8.6	8.6	26.0	0.0	23.2	25.2	0.0	22.6
LnGrp LOS	C	B	C	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1536			813			209				98
Approach Delay, s/veh		20.2			11.7			24.9				23.9
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.4	9.9	35.8		15.4	7.2	38.5				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	9.0	33.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		9.1	5.7	24.2		6.8	3.1	8.8				
Green Ext Time (p_c), s		0.4	0.0	5.3		0.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				18.1								
HCM 6th LOS				B								

Timings
11: Oleander Av. & Santa Ana Av.

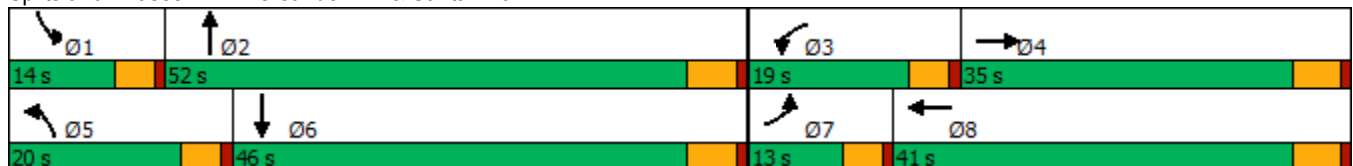


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	18	392	34	364	41	135	24	91
Future Volume (vph)	18	392	34	364	41	135	24	91
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	13.0	35.0	19.0	41.0	20.0	52.0	14.0	46.0
Total Split (%)	10.8%	29.2%	15.8%	34.2%	16.7%	43.3%	11.7%	38.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.2	15.2	6.6	17.2	6.9	16.5	6.4	13.8
Actuated g/C Ratio	0.12	0.30	0.13	0.34	0.14	0.32	0.13	0.27
v/c Ratio	0.09	0.50	0.16	0.36	0.18	0.38	0.12	0.23
Control Delay	30.6	18.6	29.5	15.4	29.1	17.5	30.3	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	18.6	29.5	15.4	29.1	17.5	30.3	19.6
LOS	C	B	C	B	C	B	C	B
Approach Delay		19.1		16.5		19.3		21.6
Approach LOS		B		B		B		C

Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 50.8	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.50	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 50.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕		↖	↕	
Traffic Volume (veh/h)	18	392	92	34	364	32	41	135	78	24	91	15
Future Volume (veh/h)	18	392	92	34	364	32	41	135	78	24	91	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	20	426	86	37	396	32	45	147	67	26	99	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	45	711	142	75	858	69	87	298	136	56	362	55
Arrive On Green	0.02	0.24	0.24	0.04	0.25	0.25	0.05	0.24	0.24	0.03	0.22	0.22
Sat Flow, veh/h	1810	2995	600	1810	3376	271	1810	1236	563	1810	1612	244
Grp Volume(v), veh/h	20	255	257	37	211	217	45	0	214	26	0	114
Grp Sat Flow(s),veh/h/ln	1810	1805	1791	1810	1805	1843	1810	0	1799	1810	0	1856
Q Serve(g_s), s	0.5	5.6	5.7	0.9	4.4	4.4	1.1	0.0	4.6	0.6	0.0	2.3
Cycle Q Clear(g_c), s	0.5	5.6	5.7	0.9	4.4	4.4	1.1	0.0	4.6	0.6	0.0	2.3
Prop In Lane	1.00		0.34	1.00		0.15	1.00		0.31	1.00		0.13
Lane Grp Cap(c), veh/h	45	429	425	75	459	468	87	0	434	56	0	417
V/C Ratio(X)	0.45	0.60	0.60	0.50	0.46	0.46	0.52	0.00	0.49	0.47	0.00	0.27
Avail Cap(c_a), veh/h	341	1199	1190	585	1442	1472	625	0	1881	382	0	1691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.4	15.1	15.1	20.9	14.0	14.0	20.7	0.0	14.5	21.2	0.0	14.3
Incr Delay (d2), s/veh	2.6	1.3	1.4	1.9	0.7	0.7	1.8	0.0	0.9	2.2	0.0	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	0.2	2.0	2.0	0.4	1.5	1.5	0.4	0.0	1.6	0.3	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.0	16.4	16.5	22.8	14.8	14.8	22.5	0.0	15.4	23.5	0.0	14.6
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		532			465			259				140
Approach Delay, s/veh		16.7			15.4			16.6				16.3
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	16.2	6.4	16.0	6.7	15.4	5.7	16.7				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	9.4	46.6	14.4	29.6	15.4	40.6	8.4	35.6				
Max Q Clear Time (g_c+1), s	2.6	6.6	2.9	7.7	3.1	4.3	2.5	6.4				
Green Ext Time (p_c), s	0.0	1.2	0.0	2.8	0.0	0.6	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay				16.2								
HCM 6th LOS				B								

**APPENDIX 6.2: HORIZON YEAR (2040) WITH PROJECT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WORKSHEETS**

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Timings
1: Citrus Av. & I-10 WB Ramps

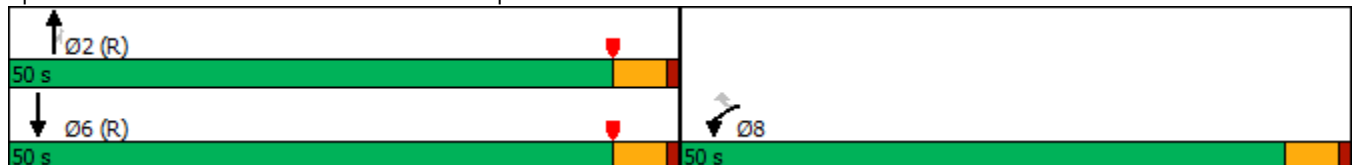


Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↗↗	↑↑↑	↙	↑↑
Traffic Volume (vph)	728	578	723	404	1094
Future Volume (vph)	728	578	723	404	1094
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	50.0	50.0	50.0	50.0	50.0
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	46.9	46.9	43.1	43.1	43.1
Actuated g/C Ratio	0.47	0.47	0.43	0.43	0.43
v/c Ratio	0.93	0.44	0.35	0.47	0.76
Control Delay	45.0	13.0	26.5	8.4	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	13.0	26.5	8.4	28.2
LOS	D	B	C	A	C
Approach Delay	30.9		20.0		28.2
Approach LOS	C		C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 26.6
 Intersection LOS: C
 Intersection Capacity Utilization 78.9%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 1: Citrus Av. & I-10 WB Ramps

10/31/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗↗	↑↑↑	↗		↑↑
Traffic Volume (veh/h)	728	578	723	404	0	1094
Future Volume (veh/h)	728	578	723	404	0	1094
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	791	628	786	430	0	1189
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	812	1272	2339	710	0	1628
Arrive On Green	0.45	0.45	0.90	0.90	0.00	0.45
Sat Flow, veh/h	1810	2834	5358	1575	0	3800
Grp Volume(v), veh/h	791	628	786	430	0	1189
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1575	0	1805
Q Serve(g_s), s	42.8	15.7	2.1	5.9	0.0	27.0
Cycle Q Clear(g_c), s	42.8	15.7	2.1	5.9	0.0	27.0
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	812	1272	2339	710	0	1628
V/C Ratio(X)	0.97	0.49	0.34	0.61	0.00	0.73
Avail Cap(c_a), veh/h	814	1275	2339	710	0	1628
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.58	0.58	0.00	1.00
Uniform Delay (d), s/veh	27.0	19.5	2.8	3.0	0.0	22.5
Incr Delay (d2), s/veh	25.0	0.1	0.2	2.2	0.0	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	23.1	5.0	0.6	1.4	0.0	11.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.9	19.6	3.0	5.2	0.0	25.4
LnGrp LOS	D	B	A	A	A	C
Approach Vol, veh/h	1419		1216			1189
Approach Delay, s/veh	37.6		3.8			25.4
Approach LOS	D		A			C
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		50.1			50.1	49.9
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		45.0			45.0	45.0
Max Q Clear Time (g_c+1), s		7.9			29.0	44.8
Green Ext Time (p_c), s		4.3			4.9	0.1

Intersection Summary

HCM 6th Ctrl Delay	23.1
HCM 6th LOS	C

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps

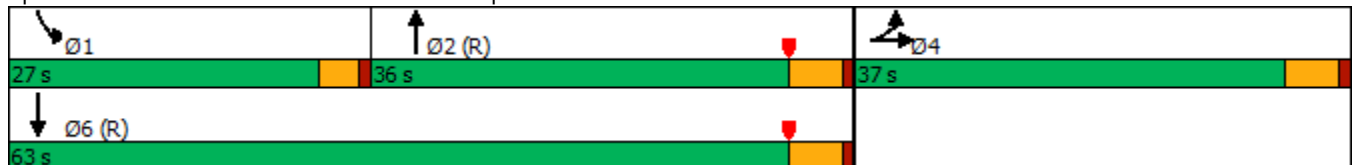


Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations	↔↔	↔	↔↔↔	↔↔	↔↔
Traffic Volume (vph)	305	3	823	650	1335
Future Volume (vph)	305	3	823	650	1335
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	37.0	37.0	36.0	27.0	63.0
Total Split (%)	37.0%	37.0%	36.0%	27.0%	63.0%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	33.6	33.6	30.7	21.7	56.4
Actuated g/C Ratio	0.34	0.34	0.31	0.22	0.56
v/c Ratio	0.27	1.71	0.86	0.88	0.68
Control Delay	25.5	350.8	35.2	53.9	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	25.5	350.8	35.2	53.9	11.9
LOS	C	F	D	D	B
Approach Delay		271.6	35.2		25.7
Approach LOS		F	D		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.71
 Intersection Signal Delay: 95.7
 Intersection LOS: F
 Intersection Capacity Utilization 116.4%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 2: Citrus Av. & I-10 EB Ramps

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	305	3	944	0	0	0	0	823	515	650	1335	0
Future Volume (veh/h)	305	3	944	0	0	0	0	823	515	650	1335	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	314	3	851				0	848	417	670	1376	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1123	2	514				0	1154	529	724	2094	0
Arrive On Green	0.32	0.32	0.32				0.00	0.33	0.33	0.41	1.00	0.00
Sat Flow, veh/h	3510	6	1605				0	3629	1584	3510	3705	0
Grp Volume(v), veh/h	314	0	854				0	848	417	670	1376	0
Grp Sat Flow(s),veh/h/ln	1755	0	1611				0	1729	1584	1755	1805	0
Q Serve(g_s), s	6.7	0.0	32.0				0.0	21.6	23.8	18.1	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	32.0				0.0	21.6	23.8	18.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1123	0	516				0	1154	529	724	2094	0
V/C Ratio(X)	0.28	0.00	1.66				0.00	0.73	0.79	0.93	0.66	0.00
Avail Cap(c_a), veh/h	1123	0	516				0	1154	529	807	2094	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.59	0.59	0.44	0.44	0.00
Uniform Delay (d), s/veh	25.4	0.0	34.0				0.0	29.4	30.1	28.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	304.0				0.0	2.5	7.0	7.6	0.7	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
%ile BackOfQ(50%),veh/ln	2.7	0.0	55.1				0.0	8.8	9.5	6.1	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	0.0	338.0				0.0	31.9	37.1	36.2	0.7	0.0
LnGrp LOS	C	A	F				A	C	D	D	A	A
Approach Vol, veh/h		1168						1265			2046	
Approach Delay, s/veh		254.0						33.6			12.3	
Approach LOS		F						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.6	38.4	37.0	63.0								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	23.0	31.0	32.0	58.0								
Max Q Clear Time (g_c+I1), s	20.1	25.8	34.0	2.0								
Green Ext Time (p_c), s	0.5	2.6	0.0	7.6								

Intersection Summary

HCM 6th Ctrl Delay	81.4
HCM 6th LOS	F

Timings
3: Citrus Av. & Slover Av.

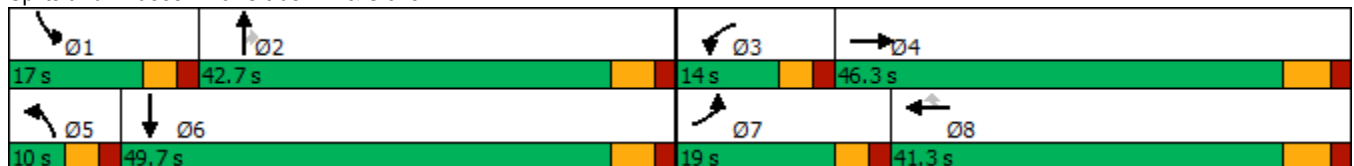


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕	↗	↖↗	↕	↗	↖↗	↕
Traffic Volume (vph)	408	616	73	506	245	84	763	92	549	1234
Future Volume (vph)	408	616	73	506	245	84	763	92	549	1234
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	19.0	46.3	14.0	41.3	41.3	10.0	42.7	42.7	17.0	49.7
Total Split (%)	15.8%	38.6%	11.7%	34.4%	34.4%	8.3%	35.6%	35.6%	14.2%	41.4%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	14.1	31.4	7.7	22.9	22.9	5.0	36.9	36.9	12.0	44.0
Actuated g/C Ratio	0.13	0.29	0.07	0.21	0.21	0.05	0.34	0.34	0.11	0.41
v/c Ratio	0.98	0.74	0.62	0.72	0.57	0.56	0.67	0.16	1.53	1.43
Control Delay	84.6	39.4	71.1	45.1	19.4	66.1	34.7	0.8	286.2	224.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	39.4	71.1	45.1	19.4	66.1	34.7	0.8	286.2	224.1
LOS	F	D	E	D	B	E	C	A	F	F
Approach Delay		56.0		39.8			34.2			238.1
Approach LOS		E		D			C			F































Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 108.2	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.53	
Intersection Signal Delay: 133.3	Intersection LOS: F
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 3: Citrus Av. & Slover Av. 10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	408	616	84	73	506	245	84	763	92	549	1234	657
Future Volume (veh/h)	408	616	84	73	506	245	84	763	92	549	1234	657
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	670	90	79	550	201	91	829	70	597	1341	586
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	470	860	115	101	690	303	156	1257	553	403	1045	424
Arrive On Green	0.13	0.27	0.27	0.06	0.19	0.19	0.04	0.35	0.35	0.11	0.42	0.42
Sat Flow, veh/h	3510	3198	429	1810	3610	1587	3510	3610	1589	3510	2496	1012
Grp Volume(v), veh/h	443	378	382	79	550	201	91	829	70	597	941	986
Grp Sat Flow(s),veh/h/ln	1755	1805	1822	1810	1805	1587	1755	1805	1589	1755	1805	1703
Q Serve(g_s), s	13.1	20.3	20.3	4.5	15.2	12.3	2.7	20.3	3.1	12.0	43.8	43.8
Cycle Q Clear(g_c), s	13.1	20.3	20.3	4.5	15.2	12.3	2.7	20.3	3.1	12.0	43.8	43.8
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	470	485	490	101	690	303	156	1257	553	403	755	713
V/C Ratio(X)	0.94	0.78	0.78	0.78	0.80	0.66	0.58	0.66	0.13	1.48	1.25	1.38
Avail Cap(c_a), veh/h	470	690	696	156	1207	531	168	1269	559	403	755	713
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	35.4	35.4	48.8	40.4	39.2	49.1	28.9	23.3	46.3	30.4	30.4
Incr Delay (d2), s/veh	27.5	2.1	2.2	5.6	0.8	0.9	2.5	1.0	0.0	230.4	121.5	181.3
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	7.3	8.7	8.9	2.1	6.5	4.7	1.2	8.5	1.1	17.9	42.8	52.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.4	37.5	37.6	54.3	41.2	40.1	51.6	29.8	23.3	276.7	151.9	211.8
LnGrp LOS	E	D	D	D	D	D	D	C	C	F	F	F
Approach Vol, veh/h		1203			830			990			2524	
Approach Delay, s/veh		50.4			42.2			31.4			204.8	
Approach LOS		D			D			C			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	42.3	10.9	34.4	9.6	49.7	19.0	26.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	12.0	36.8	9.0	40.0	5.0	43.8	14.0	35.0				
Max Q Clear Time (g_c+I1), s	14.0	22.3	6.5	22.3	4.7	45.8	15.1	17.2				
Green Ext Time (p_c), s	0.0	3.2	0.0	2.5	0.0	0.0	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			116.0									
HCM 6th LOS			F									

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑		↘	↑↑
Traffic Vol, veh/h	1	2	816	3	6	1189
Future Vol, veh/h	1	2	816	3	6	1189
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	2	887	3	7	1292

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1549	445	0	0	890
Stage 1	889	-	-	-	-
Stage 2	660	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	107	566	-	-	770
Stage 1	367	-	-	-	-
Stage 2	481	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	106	566	-	-	770
Mov Cap-2 Maneuver	293	-	-	-	-
Stage 1	367	-	-	-	-
Stage 2	477	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	432	770
HCM Lane V/C Ratio	-	-	0.008	0.008
HCM Control Delay (s)	-	-	13.4	9.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings
5: Citrus Av. & Santa Ana Av.

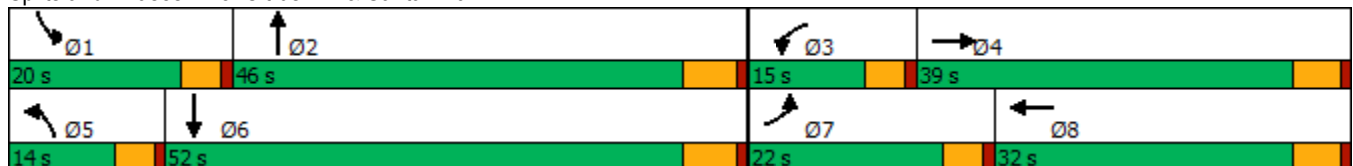


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	128	117	37	183	29	537	361	525
Future Volume (vph)	128	117	37	183	29	537	361	525
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	22.0	39.0	15.0	32.0	14.0	46.0	20.0	52.0
Total Split (%)	18.3%	32.5%	12.5%	26.7%	11.7%	38.3%	16.7%	43.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	11.4	22.4	6.8	13.1	6.4	26.8	15.9	40.9
Actuated g/C Ratio	0.13	0.25	0.08	0.15	0.07	0.30	0.18	0.46
v/c Ratio	0.59	0.23	0.29	0.57	0.24	0.77	1.19	0.55
Control Delay	49.8	18.5	48.9	23.5	48.6	31.2	148.6	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.8	18.5	48.9	23.5	48.6	31.2	148.6	18.2
LOS	D	B	D	C	D	C	F	B
Approach Delay		30.9		26.0		31.9		57.7
Approach LOS		C		C		C		E





















Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 88.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.19	
Intersection Signal Delay: 42.4	Intersection LOS: D
Intersection Capacity Utilization 76.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	117	77	37	183	154	29	537	237	361	525	304
Future Volume (veh/h)	128	117	77	37	183	154	29	537	237	361	525	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	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	138	126	79	40	197	85	31	577	247	388	565	300
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	175	416	244	68	325	135	57	748	320	365	1080	573
Arrive On Green	0.10	0.19	0.19	0.04	0.13	0.13	0.03	0.30	0.30	0.20	0.47	0.47
Sat Flow, veh/h	1810	2188	1286	1810	2485	1034	1810	2461	1052	1810	2278	1208
Grp Volume(v), veh/h	138	102	103	40	141	141	31	423	401	388	448	417
Grp Sat Flow(s),veh/h/ln	1810	1805	1669	1810	1805	1714	1810	1805	1708	1810	1805	1682
Q Serve(g_s), s	5.7	3.7	4.1	1.7	5.6	5.9	1.3	16.3	16.3	15.4	13.3	13.3
Cycle Q Clear(g_c), s	5.7	3.7	4.1	1.7	5.6	5.9	1.3	16.3	16.3	15.4	13.3	13.3
Prop In Lane	1.00		0.77	1.00		0.60	1.00		0.62	1.00		0.72
Lane Grp Cap(c), veh/h	175	343	317	68	236	224	57	548	519	365	855	797
V/C Ratio(X)	0.79	0.30	0.32	0.59	0.60	0.63	0.54	0.77	0.77	1.06	0.52	0.52
Avail Cap(c_a), veh/h	412	794	734	246	628	597	223	950	899	365	1091	1017
HCM Platoon Ratio	1.00	1.00	1.00	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	33.7	26.6	26.7	36.2	31.3	31.4	36.5	24.2	24.2	30.5	14.1	14.1
Incr Delay (d2), s/veh	3.0	0.5	0.6	3.0	2.4	2.9	3.0	2.3	2.5	65.1	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	2.5	1.5	1.6	0.8	2.5	2.5	0.6	6.5	6.2	12.7	4.6	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	27.0	27.3	39.2	33.7	34.3	39.4	26.5	26.7	95.6	14.6	14.6
LnGrp LOS	D	C	C	D	C	C	D	C	C	F	B	B
Approach Vol, veh/h		343			322			855			1253	
Approach Delay, s/veh		31.0			34.7			27.1			39.7	
Approach LOS		C			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	29.0	7.5	19.9	7.0	42.0	12.0	15.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	15.4	40.2	10.4	33.6	9.4	46.2	17.4	26.6				
Max Q Clear Time (g_c+I1), s	17.4	18.3	3.7	6.1	3.3	15.3	7.7	7.9				
Green Ext Time (p_c), s	0.0	4.9	0.0	1.1	0.0	5.7	0.1	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	8	706	370	2	1	2
Future Vol, veh/h	8	706	370	2	1	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	9	767	402	2	1	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	404	0	-	0	805 202
Stage 1	-	-	-	-	403 -
Stage 2	-	-	-	-	402 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1166	-	-	-	324 811
Stage 1	-	-	-	-	649 -
Stage 2	-	-	-	-	650 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1166	-	-	-	321 811
Mov Cap-2 Maneuver	-	-	-	-	511 -
Stage 1	-	-	-	-	644 -
Stage 2	-	-	-	-	650 -

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1166	-	-	-	678
HCM Lane V/C Ratio	0.007	-	-	-	0.005
HCM Control Delay (s)	8.1	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	647	390	2	1	1
Future Vol, veh/h	2	647	390	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	703	424	2	1	1

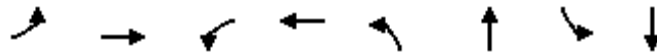
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	426	0	-	0	781 213
Stage 1	-	-	-	-	425 -
Stage 2	-	-	-	-	356 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1144	-	-	-	336 798
Stage 1	-	-	-	-	633 -
Stage 2	-	-	-	-	686 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1144	-	-	-	335 798
Mov Cap-2 Maneuver	-	-	-	-	521 -
Stage 1	-	-	-	-	632 -
Stage 2	-	-	-	-	686 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1144	-	-	-	630
HCM Lane V/C Ratio	0.002	-	-	-	0.003
HCM Control Delay (s)	8.2	-	-	-	10.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Timings

8: Oleander Av. & Slover Av.

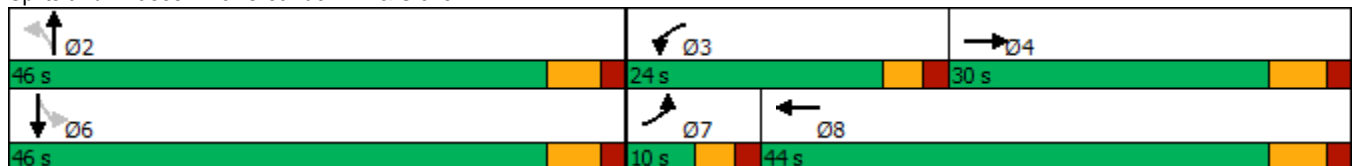


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	24	693	370	520	106	5	15	56
Future Volume (vph)	24	693	370	520	106	5	15	56
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	30.0	24.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	30.0%	24.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	24.2	19.4	45.0	14.0	14.0	14.0	14.0
Actuated g/C Ratio	0.07	0.32	0.26	0.60	0.19	0.19	0.19	0.19
v/c Ratio	0.21	0.86	0.86	0.30	0.46	0.64	0.16	0.23
Control Delay	41.9	34.1	49.1	10.8	31.7	7.9	26.5	20.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	34.1	49.1	10.8	31.7	7.9	26.5	20.1
LOS	D	C	D	B	C	A	C	C
Approach Delay		34.3		25.5		13.3		21.2
Approach LOS		C		C		B		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 75.1
 Natural Cycle: 105
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 26.3
 Intersection LOS: C
 Intersection Capacity Utilization 83.3%
 ICU Level of Service E
 Analysis Period (min) 15





















Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	693	205	370	520	74	106	5	354	15	56	19
Future Volume (veh/h)	24	693	205	370	520	74	106	5	354	15	56	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	26	753	175	402	565	63	115	5	199	16	61	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	52	892	207	447	1717	191	315	7	292	190	289	57
Arrive On Green	0.03	0.31	0.31	0.25	0.53	0.53	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1810	2902	674	1810	3266	363	1341	39	1551	1195	1536	302
Grp Volume(v), veh/h	26	468	460	402	312	316	115	0	204	16	0	73
Grp Sat Flow(s),veh/h/ln	1810	1805	1771	1810	1805	1824	1341	0	1590	1195	0	1838
Q Serve(g_s), s	0.9	16.2	16.2	14.4	6.6	6.7	5.3	0.0	8.0	0.8	0.0	2.2
Cycle Q Clear(g_c), s	0.9	16.2	16.2	14.4	6.6	6.7	7.5	0.0	8.0	8.8	0.0	2.2
Prop In Lane	1.00		0.38	1.00		0.20	1.00		0.98	1.00		0.16
Lane Grp Cap(c), veh/h	52	555	545	447	949	959	315	0	299	190	0	346
V/C Ratio(X)	0.50	0.84	0.84	0.90	0.33	0.33	0.36	0.00	0.68	0.08	0.00	0.21
Avail Cap(c_a), veh/h	135	640	628	515	1018	1029	868	0	955	682	0	1103
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.0	21.6	21.6	24.4	9.1	9.1	26.1	0.0	25.3	29.4	0.0	22.9
Incr Delay (d2), s/veh	2.8	8.6	8.7	16.0	0.1	0.1	0.3	0.0	1.0	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	7.2	7.1	7.4	2.0	2.0	1.6	0.0	2.8	0.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	30.2	30.4	40.4	9.2	9.2	26.4	0.0	26.3	29.4	0.0	23.0
LnGrp LOS	C	C	C	D	A	A	C	A	C	C	A	C
Approach Vol, veh/h		954			1030			319				89
Approach Delay, s/veh		30.4			21.4			26.3				24.2
Approach LOS		C			C			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		18.5	21.5	26.8		18.5	6.9	41.4				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	19.0	23.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		10.0	16.4	18.2		10.8	2.9	8.7				
Green Ext Time (p_c), s		0.9	0.1	2.2		0.3	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay				25.8								
HCM 6th LOS				C								

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	1	0	2	2	0	1	6	288	6	5	265	5
Future Vol, veh/h	1	0	2	2	0	1	6	288	6	5	265	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	2	2	0	1	7	313	7	5	288	5

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	632	635	291	633	634	317	293	0	0	320	0	0
Stage 1	301	301	-	331	331	-	-	-	-	-	-	-
Stage 2	331	334	-	302	303	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	396	399	753	395	399	728	1280	-	-	1251	-	-
Stage 1	712	669	-	687	649	-	-	-	-	-	-	-
Stage 2	687	647	-	712	667	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	392	395	753	391	395	728	1280	-	-	1251	-	-
Mov Cap-2 Maneuver	562	537	-	561	537	-	-	-	-	-	-	-
Stage 1	708	666	-	684	646	-	-	-	-	-	-	-
Stage 2	682	644	-	707	664	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.4		11		0.2		0.1	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	676	607	1251	-
HCM Lane V/C Ratio	0.005	-	-	0.005	0.005	0.004	-
HCM Control Delay (s)	7.8	-	-	10.4	11	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

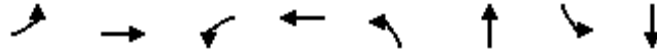
Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	1	0	2	2	0	1	7	297	7	3	264	3
Future Vol, veh/h	1	0	2	2	0	1	7	297	7	3	264	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	0	2	2	0	1	8	323	8	3	287	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	639	642	289	639	639	327	290	0	0	331	0	0
Stage 1	295	295	-	343	343	-	-	-	-	-	-	-
Stage 2	344	347	-	296	296	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	392	395	755	392	397	719	1283	-	-	1240	-	-
Stage 1	718	673	-	676	641	-	-	-	-	-	-	-
Stage 2	676	638	-	717	672	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	389	392	755	388	394	719	1283	-	-	1240	-	-
Mov Cap-2 Maneuver	559	535	-	558	535	-	-	-	-	-	-	-
Stage 1	714	672	-	672	637	-	-	-	-	-	-	-
Stage 2	671	634	-	713	671	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	11	0.2	0.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1283	-	-	676	603	1240	-
HCM Lane V/C Ratio	0.006	-	-	0.005	0.005	0.003	-
HCM Control Delay (s)	7.8	-	-	10.4	11	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Timings
11: Oleander Av. & Santa Ana Av.

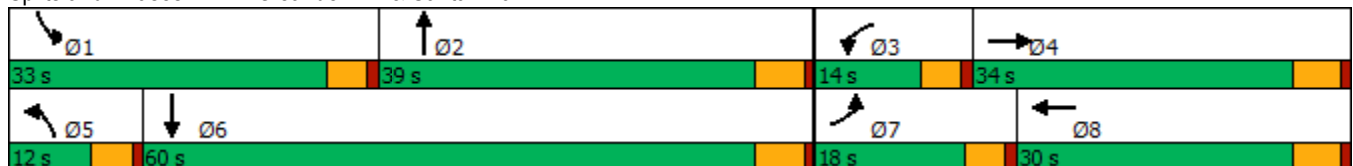


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	53	580	24	313	20	127	115	94
Future Volume (vph)	53	580	24	313	20	127	115	94
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	18.0	34.0	14.0	30.0	12.0	39.0	33.0	60.0
Total Split (%)	15.0%	28.3%	11.7%	25.0%	10.0%	32.5%	27.5%	50.0%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	7.5	20.5	6.4	17.6	6.3	14.4	10.0	22.3
Actuated g/C Ratio	0.12	0.33	0.10	0.28	0.10	0.23	0.16	0.36
v/c Ratio	0.27	0.55	0.14	0.48	0.12	0.43	0.43	0.25
Control Delay	35.6	21.3	36.5	21.1	36.7	27.1	34.2	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	21.3	36.5	21.1	36.7	27.1	34.2	16.4
LOS	D	C	D	C	D	C	C	B
Approach Delay		22.5		21.9		28.1		24.1
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 62
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 23.3
 Intersection LOS: C
 Intersection Capacity Utilization 54.2%
 ICU Level of Service A
 Analysis Period (min) 15





















Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	580	26	24	313	131	20	127	42	115	94	58
Future Volume (veh/h)	53	580	26	24	313	131	20	127	42	115	94	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	58	630	24	26	340	101	22	138	39	125	102	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	100	958	36	55	675	197	48	298	84	164	332	159
Arrive On Green	0.06	0.27	0.27	0.03	0.25	0.25	0.03	0.21	0.21	0.09	0.27	0.27
Sat Flow, veh/h	1810	3546	135	1810	2751	805	1810	1423	402	1810	1211	582
Grp Volume(v), veh/h	58	320	334	26	221	220	22	0	177	125	0	151
Grp Sat Flow(s),veh/h/ln	1810	1805	1876	1810	1805	1751	1810	0	1826	1810	0	1793
Q Serve(g_s), s	1.6	7.9	7.9	0.7	5.3	5.4	0.6	0.0	4.3	3.4	0.0	3.3
Cycle Q Clear(g_c), s	1.6	7.9	7.9	0.7	5.3	5.4	0.6	0.0	4.3	3.4	0.0	3.3
Prop In Lane	1.00		0.07	1.00		0.46	1.00		0.22	1.00		0.32
Lane Grp Cap(c), veh/h	100	488	507	55	443	429	48	0	383	164	0	491
V/C Ratio(X)	0.58	0.66	0.66	0.47	0.50	0.51	0.46	0.00	0.46	0.76	0.00	0.31
Avail Cap(c_a), veh/h	484	1030	1070	339	886	860	267	0	1224	1026	0	1954
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	16.2	16.2	23.9	16.3	16.3	24.0	0.0	17.3	22.2	0.0	14.4
Incr Delay (d2), s/veh	2.0	1.5	1.5	2.4	0.9	0.9	2.6	0.0	0.9	2.7	0.0	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	2.9	3.0	0.3	1.9	1.9	0.3	0.0	1.6	1.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	17.7	17.7	26.3	17.1	17.3	26.6	0.0	18.2	25.0	0.0	14.8
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		712			467			199				276
Approach Delay, s/veh		18.3			17.7			19.1				19.4
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	15.9	6.1	18.9	5.9	19.1	7.4	17.7				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	28.4	33.6	9.4	28.6	7.4	54.6	13.4	24.6				
Max Q Clear Time (g_c+I1), s	5.4	6.3	2.7	9.9	2.6	5.3	3.6	7.4				
Green Ext Time (p_c), s	0.1	0.9	0.0	3.5	0.0	0.9	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay				18.4								
HCM 6th LOS				B								

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	2	735	468	2	1	1
Future Vol, veh/h	2	735	468	2	1	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	799	509	2	1	1

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	511	0	-	0	914 256
Stage 1	-	-	-	-	510 -
Stage 2	-	-	-	-	404 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1065	-	-	-	276 749
Stage 1	-	-	-	-	574 -
Stage 2	-	-	-	-	649 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1065	-	-	-	275 749
Mov Cap-2 Maneuver	-	-	-	-	470 -
Stage 1	-	-	-	-	573 -
Stage 2	-	-	-	-	649 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1065	-	-	-	578
HCM Lane V/C Ratio	0.002	-	-	-	0.004
HCM Control Delay (s)	8.4	-	-	-	11.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

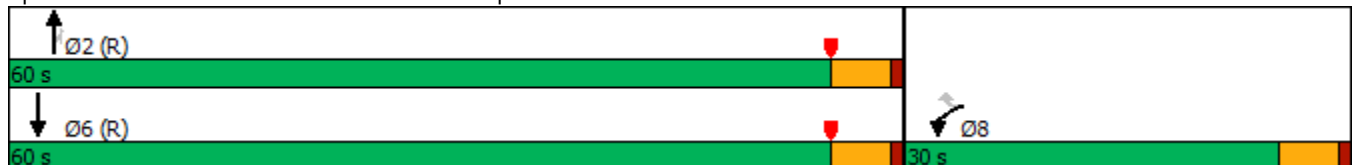
Timings
1: Citrus Av. & I-10 WB Ramps

	↙	↖	↑	↗	↓
Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Configurations	↙	↖↖	↑↑↑	↗	↑↑
Traffic Volume (vph)	483	528	1112	622	934
Future Volume (vph)	483	528	1112	622	934
Turn Type	Prot	Perm	NA	Perm	NA
Protected Phases	8		2		6
Permitted Phases		8		2	
Detector Phase	8	8	2	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	26.6	26.6	26.6	26.6	26.6
Total Split (s)	30.0	30.0	60.0	60.0	60.0
Total Split (%)	33.3%	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	C-Min	C-Min
Act Effct Green (s)	32.5	32.5	47.5	47.5	47.5
Actuated g/C Ratio	0.36	0.36	0.53	0.53	0.53
v/c Ratio	0.78	0.50	0.43	0.57	0.52
Control Delay	35.1	17.4	22.9	10.0	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	17.4	22.9	10.0	15.2
LOS	D	B	C	B	B
Approach Delay	25.9		18.3		15.2
Approach LOS	C		B		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 19.6
 Intersection LOS: B
 Intersection Capacity Utilization 60.9%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 1: Citrus Av. & I-10 WB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

1: Citrus Av. & I-10 WB Ramps

10/31/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	483	528	1112	622	0	934
Future Volume (veh/h)	483	528	1112	622	0	934
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.98	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	0	1900
Adj Flow Rate, veh/h	508	391	1171	616	0	983
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	503	787	3170	964	0	2206
Arrive On Green	0.28	0.28	1.00	1.00	0.00	0.61
Sat Flow, veh/h	1810	2834	5358	1577	0	3800
Grp Volume(v), veh/h	508	391	1171	616	0	983
Grp Sat Flow(s),veh/h/ln	1810	1417	1729	1577	0	1805
Q Serve(g_s), s	25.0	10.4	0.0	0.0	0.0	13.1
Cycle Q Clear(g_c), s	25.0	10.4	0.0	0.0	0.0	13.1
Prop In Lane	1.00	1.00		1.00	0.00	
Lane Grp Cap(c), veh/h	503	787	3170	964	0	2206
V/C Ratio(X)	1.01	0.50	0.37	0.64	0.00	0.45
Avail Cap(c_a), veh/h	503	787	3170	964	0	2206
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.28	0.28	0.00	1.00
Uniform Delay (d), s/veh	32.5	27.2	0.0	0.0	0.0	9.4
Incr Delay (d2), s/veh	42.8	0.2	0.1	0.9	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.5	3.5	0.0	0.2	0.0	4.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	75.3	27.4	0.1	0.9	0.0	10.0
LnGrp LOS	F	C	A	A	A	B
Approach Vol, veh/h	899		1787			983
Approach Delay, s/veh	54.5		0.4			10.0
Approach LOS	D		A			B
Timer - Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		60.0			60.0	30.0
Change Period (Y+Rc), s		5.0			5.0	5.0
Max Green Setting (Gmax), s		55.0			55.0	25.0
Max Q Clear Time (g_c+I1), s		2.0			15.1	27.0
Green Ext Time (p_c), s		7.7			4.6	0.0

Intersection Summary

HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [SBT] is excluded from calculations of the approach delay and intersection delay.

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	479	19	1251	563	782
Future Volume (vph)	479	19	1251	563	782
Turn Type	Split	NA	NA	Prot	NA
Protected Phases	4	4	2	1	6
Permitted Phases					
Detector Phase	4	4	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	25.0	9.0	10.0
Total Split (s)	25.0	25.0	40.0	25.0	65.0
Total Split (%)	27.8%	27.8%	44.4%	27.8%	72.2%
Yellow Time (s)	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	4.0	5.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	17.2	17.2	40.3	18.5	62.8
Actuated g/C Ratio	0.19	0.19	0.45	0.21	0.70
v/c Ratio	0.74	0.80	1.05dr	0.81	0.32
Control Delay	41.0	27.7	34.7	35.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	27.7	34.7	35.8	5.2
LOS	D	C	C	D	A
Approach Delay		35.1	34.7		18.0
Approach LOS		D	C		B

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 29.6
 Intersection LOS: C
 Intersection Capacity Utilization 95.0%
 ICU Level of Service F
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 2: Citrus Av. & I-10 EB Ramps

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↘						↑↑↑		↖↗	↑↑	
Traffic Volume (veh/h)	479	19	364	0	0	0	0	1251	876	563	782	0
Future Volume (veh/h)	479	19	364	0	0	0	0	1251	876	563	782	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	494	20	297				0	1290	696	580	806	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	756	22	328				0	1537	707	648	2431	0
Arrive On Green	0.22	0.22	0.22				0.00	0.44	0.44	0.37	1.00	0.00
Sat Flow, veh/h	3510	103	1523				0	3629	1590	3510	3705	0
Grp Volume(v), veh/h	494	0	317				0	1290	696	580	806	0
Grp Sat Flow(s),veh/h/ln	1755	0	1626				0	1729	1590	1755	1805	0
Q Serve(g_s), s	11.6	0.0	17.1				0.0	29.8	38.9	14.0	0.0	0.0
Cycle Q Clear(g_c), s	11.6	0.0	17.1				0.0	29.8	38.9	14.0	0.0	0.0
Prop In Lane	1.00		0.94				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	756	0	350				0	1537	707	648	2431	0
V/C Ratio(X)	0.65	0.00	0.91				0.00	0.84	0.99	0.89	0.33	0.00
Avail Cap(c_a), veh/h	780	0	361				0	1537	707	819	2431	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.09	0.09	0.76	0.76	0.00
Uniform Delay (d), s/veh	32.2	0.0	34.4				0.0	22.2	24.7	27.6	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	24.2				0.0	0.5	7.3	7.2	0.3	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
%ile BackOfQ(50%),veh/ln	4.8	0.0	8.7				0.0	10.8	14.2	5.0	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	0.0	58.6				0.0	22.7	32.0	34.8	0.3	0.0
LnGrp LOS	C	A	E				A	C	C	C	A	A
Approach Vol, veh/h		811						1986			1386	
Approach Delay, s/veh		43.4						26.0			14.7	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2		4				6				
Phs Duration (G+Y+Rc), s	20.6	45.0		24.4				65.6				
Change Period (Y+Rc), s	4.0	5.0		5.0				5.0				
Max Green Setting (Gmax), s	21.0	35.0		20.0				60.0				
Max Q Clear Time (g_c+I1), s	16.0	40.9		19.1				2.0				
Green Ext Time (p_c), s	0.6	0.0		0.3				3.6				
Intersection Summary												
HCM 6th Ctrl Delay			25.6									
HCM 6th LOS			C									

Timings
3: Citrus Av. & Slover Av.

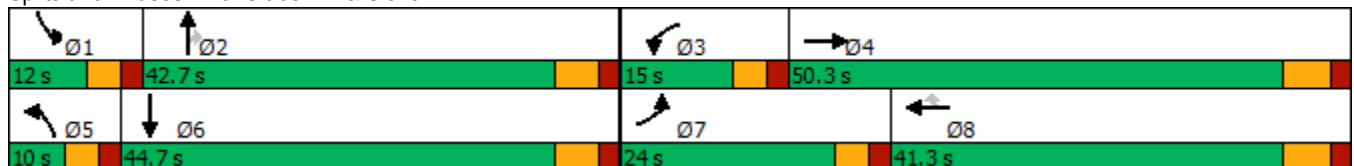


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕↕	↗	↖↗	↕↕	↗	↖↗	↕↕
Traffic Volume (vph)	649	1191	106	418	449	61	1019	93	375	680
Future Volume (vph)	649	1191	106	418	449	61	1019	93	375	680
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA
Protected Phases	7	4	3	8		5	2		1	6
Permitted Phases					8			2		
Detector Phase	7	4	3	8	8	5	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	10.0	38.3	10.0	41.3	41.3	10.0	41.9	41.9	12.0	36.9
Total Split (s)	24.0	50.3	15.0	41.3	41.3	10.0	42.7	42.7	12.0	44.7
Total Split (%)	20.0%	41.9%	12.5%	34.4%	34.4%	8.3%	35.6%	35.6%	10.0%	37.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	4.3	3.0	3.9	3.9	3.0	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	6.3	5.0	5.9	5.9	5.0	5.9
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	19.0	44.0	9.4	34.4	34.4	5.0	36.5	36.5	7.0	40.6
Actuated g/C Ratio	0.16	0.37	0.08	0.29	0.29	0.04	0.31	0.31	0.06	0.34
v/c Ratio	1.22	0.99	0.79	0.42	0.82	0.44	0.97	0.16	1.93	0.82
Control Delay	158.4	60.0	89.3	35.8	38.7	65.7	61.7	0.7	463.0	41.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	158.4	60.0	89.3	35.8	38.7	65.7	61.7	0.7	463.0	41.3
LOS	F	E	F	D	D	E	E	A	F	D
Approach Delay		93.7		43.0			57.1			162.1
Approach LOS		F		D			E			F

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 119.1
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.93
 Intersection Signal Delay: 93.2
 Intersection LOS: F
 Intersection Capacity Utilization 97.9%
 ICU Level of Service F
 Analysis Period (min) 15



































Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 	 	 	 	 	 	 	 
Traffic Volume (veh/h)	649	1191	55	106	418	449	61	1019	93	375	680	255
Future Volume (veh/h)	649	1191	55	106	418	449	61	1019	93	375	680	255
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	683	1254	50	112	440	420	64	1073	76	395	716	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	562	1303	52	137	1026	456	130	1118	491	207	892	285
Arrive On Green	0.16	0.37	0.37	0.08	0.28	0.28	0.04	0.31	0.31	0.06	0.33	0.33
Sat Flow, veh/h	3510	3536	141	1810	3610	1607	3510	3610	1586	3510	2689	860
Grp Volume(v), veh/h	683	640	664	112	440	420	64	1073	76	395	481	464
Grp Sat Flow(s),veh/h/ln	1755	1805	1872	1810	1805	1607	1755	1805	1586	1755	1805	1744
Q Serve(g_s), s	19.0	41.1	41.2	7.2	11.8	30.1	2.1	34.6	4.1	7.0	28.8	28.8
Cycle Q Clear(g_c), s	19.0	41.1	41.2	7.2	11.8	30.1	2.1	34.6	4.1	7.0	28.8	28.8
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	562	665	690	137	1026	456	130	1118	491	207	599	578
V/C Ratio(X)	1.21	0.96	0.96	0.82	0.43	0.92	0.49	0.96	0.15	1.91	0.80	0.80
Avail Cap(c_a), veh/h	562	669	694	153	1065	474	148	1120	492	207	599	578
HCM Platoon Ratio	1.00	1.00	1.00	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	49.8	36.7	36.7	54.0	34.6	41.2	56.0	40.2	29.7	55.8	36.1	36.1
Incr Delay (d2), s/veh	112.3	25.3	25.1	23.1	0.1	22.2	1.1	17.9	0.1	425.7	7.2	7.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.8	21.8	22.6	4.1	5.0	14.2	0.9	17.4	1.5	15.3	13.3	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	162.1	62.0	61.8	77.1	34.7	63.4	57.1	58.1	29.7	481.5	43.3	43.6
LnGrp LOS	F	E	E	E	C	E	E	E	C	F	D	D
Approach Vol, veh/h		1987			972			1213			1340	
Approach Delay, s/veh		96.3			52.0			56.3			172.6	
Approach LOS		F			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	42.6	14.0	50.0	9.4	45.2	24.0	40.0				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	7.0	36.8	10.0	44.0	5.0	38.8	19.0	35.0				
Max Q Clear Time (g_c+1), s	9.0	36.6	9.2	43.2	4.1	30.8	21.0	32.1				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.5	0.0	2.4	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				98.2								
HCM 6th LOS				F								

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑		↘	↑↑
Traffic Vol, veh/h	3	7	1126	1	4	711
Future Vol, veh/h	3	7	1126	1	4	711
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	8	1224	1	4	773

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1620	613	0	0	1225
Stage 1	1225	-	-	-	-
Stage 2	395	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	96	440	-	-	576
Stage 1	245	-	-	-	-
Stage 2	656	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	95	440	-	-	576
Mov Cap-2 Maneuver	225	-	-	-	-
Stage 1	245	-	-	-	-
Stage 2	651	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	342	576
HCM Lane V/C Ratio	-	-	0.032	0.008
HCM Control Delay (s)	-	-	15.9	11.3
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.1	0

Timings
5: Citrus Av. & Santa Ana Av.

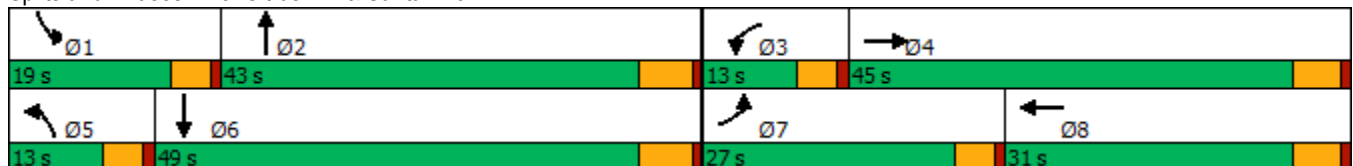


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↶	↶↷	↶	↶↷	↶	↶↷	↶	↶↷
Traffic Volume (vph)	280	422	64	162	37	577	174	416
Future Volume (vph)	280	422	64	162	37	577	174	416
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	28.4	9.6	28.4	9.6	28.8	9.6	28.8
Total Split (s)	27.0	45.0	13.0	31.0	13.0	43.0	19.0	49.0
Total Split (%)	22.5%	37.5%	10.8%	25.8%	10.8%	35.8%	15.8%	40.8%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	19.2	27.8	7.2	13.4	6.5	24.1	13.0	35.4
Actuated g/C Ratio	0.21	0.31	0.08	0.15	0.07	0.27	0.14	0.39
v/c Ratio	0.76	0.43	0.46	0.64	0.29	0.74	0.69	0.40
Control Delay	49.9	28.0	55.6	21.0	51.3	35.5	55.1	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.9	28.0	55.6	21.0	51.3	35.5	55.1	21.7
LOS	D	C	E	C	D	D	E	C
Approach Delay		36.3		25.5		36.3		29.9
Approach LOS		D		C		D		C






















Intersection Summary

Cycle Length: 120	
Actuated Cycle Length: 90.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 32.6	Intersection LOS: C
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Citrus Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)
 5: Citrus Av. & Santa Ana Av. 10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	422	40	64	162	270	37	577	100	174	416	124
Future Volume (veh/h)	280	422	40	64	162	270	37	577	100	174	416	124
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	289	435	35	66	167	251	38	595	95	179	429	123
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	331	1131	91	86	360	319	64	776	124	217	926	263
Arrive On Green	0.18	0.33	0.33	0.05	0.20	0.20	0.04	0.25	0.25	0.12	0.33	0.33
Sat Flow, veh/h	1810	3381	271	1810	1805	1603	1810	3118	497	1810	2775	788
Grp Volume(v), veh/h	289	231	239	66	167	251	38	344	346	179	278	274
Grp Sat Flow(s),veh/h/ln	1810	1805	1847	1810	1805	1603	1810	1805	1809	1810	1805	1758
Q Serve(g_s), s	12.7	8.0	8.1	3.0	6.7	12.2	1.7	14.5	14.6	7.9	9.9	10.1
Cycle Q Clear(g_c), s	12.7	8.0	8.1	3.0	6.7	12.2	1.7	14.5	14.6	7.9	9.9	10.1
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.27	1.00		0.45
Lane Grp Cap(c), veh/h	331	604	618	86	360	319	64	449	451	217	602	587
V/C Ratio(X)	0.87	0.38	0.39	0.77	0.46	0.79	0.59	0.77	0.77	0.82	0.46	0.47
Avail Cap(c_a), veh/h	495	872	892	185	564	501	185	819	821	318	952	927
HCM Platoon Ratio	1.00	1.00	1.00	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	32.6	20.8	20.8	38.6	28.9	31.1	38.9	28.5	28.6	35.2	21.5	21.6
Incr Delay (d2), s/veh	7.8	0.4	0.4	5.3	0.9	4.3	3.3	2.7	2.8	7.0	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	6.0	3.2	3.3	1.4	2.8	4.8	0.8	6.1	6.1	3.7	3.9	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.4	21.2	21.2	43.9	29.9	35.5	42.2	31.3	31.4	42.2	22.0	22.1
LnGrp LOS	D	C	C	D	C	D	D	C	C	D	C	C
Approach Vol, veh/h		759			484			728			731	
Approach Delay, s/veh		28.5			34.7			31.9			27.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	26.2	8.5	32.8	7.5	33.1	19.6	21.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.4	4.6	5.8	4.6	5.4				
Max Green Setting (Gmax), s	14.4	37.2	8.4	39.6	8.4	43.2	22.4	25.6				
Max Q Clear Time (g_c+I1), s	9.9	16.6	5.0	10.1	3.7	12.1	14.7	14.2				
Green Ext Time (p_c), s	0.1	3.8	0.0	2.7	0.0	3.2	0.3	1.8				
Intersection Summary												
HCM 6th Ctrl Delay				30.1								
HCM 6th LOS				C								

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	693	487	1	2	8
Future Vol, veh/h	2	693	487	1	2	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	753	529	1	2	9

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	530	0	-	0	911
Stage 1	-	-	-	-	530
Stage 2	-	-	-	-	381
Critical Hdwy	4.1	-	-	-	6.8
Critical Hdwy Stg 1	-	-	-	-	5.8
Critical Hdwy Stg 2	-	-	-	-	5.8
Follow-up Hdwy	2.2	-	-	-	3.5
Pot Cap-1 Maneuver	1048	-	-	-	277
Stage 1	-	-	-	-	560
Stage 2	-	-	-	-	666
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1048	-	-	-	276
Mov Cap-2 Maneuver	-	-	-	-	468
Stage 1	-	-	-	-	559
Stage 2	-	-	-	-	666

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1048	-	-	-	662
HCM Lane V/C Ratio	0.002	-	-	-	0.016
HCM Control Delay (s)	8.4	-	-	-	10.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑		↘	
Traffic Vol, veh/h	1	708	438	1	2	2
Future Vol, veh/h	1	708	438	1	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	770	476	1	2	2

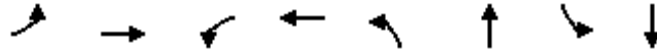
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	477	0	-	0	864 239
Stage 1	-	-	-	-	477 -
Stage 2	-	-	-	-	387 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1096	-	-	-	297 768
Stage 1	-	-	-	-	596 -
Stage 2	-	-	-	-	662 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1096	-	-	-	297 768
Mov Cap-2 Maneuver	-	-	-	-	489 -
Stage 1	-	-	-	-	595 -
Stage 2	-	-	-	-	662 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1096	-	-	-	598
HCM Lane V/C Ratio	0.001	-	-	-	0.007
HCM Control Delay (s)	8.3	-	-	-	11.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Timings

8: Oleander Av. & Slover Av.

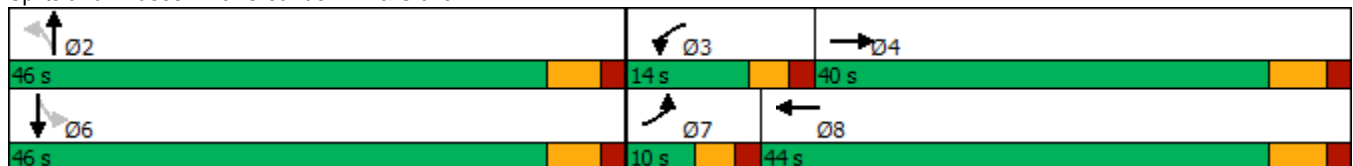


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↗	↖	↗
Traffic Volume (vph)	31	1266	106	621	127	5	44	4
Future Volume (vph)	31	1266	106	621	127	5	44	4
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	28.3	10.0	29.3	37.9	37.9	43.9	43.9
Total Split (s)	10.0	40.0	14.0	44.0	46.0	46.0	46.0	46.0
Total Split (%)	10.0%	40.0%	14.0%	44.0%	46.0%	46.0%	46.0%	46.0%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.9	3.9	3.9	3.9
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.9	5.9	5.9	5.9
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	5.1	34.5	8.0	44.0	14.7	14.7	14.7	14.7
Actuated g/C Ratio	0.07	0.46	0.11	0.59	0.20	0.20	0.20	0.20
v/c Ratio	0.28	0.93	0.60	0.33	0.51	0.32	0.19	0.16
Control Delay	43.6	32.6	48.6	11.6	32.6	7.0	25.1	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	32.6	48.6	11.6	32.6	7.0	25.1	8.2
LOS	D	C	D	B	C	A	C	A
Approach Delay		32.9		16.8		20.0		15.9
Approach LOS		C		B		B		B

Intersection Summary

Cycle Length: 100	
Actuated Cycle Length: 74.8	
Natural Cycle: 105	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 26.2	Intersection LOS: C
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	






















Splits and Phases: 8: Oleander Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

8: Oleander Av. & Slover Av.

10/31/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	1266	138	106	621	25	127	5	119	44	4	49
Future Volume (veh/h)	31	1266	138	106	621	25	127	5	119	44	4	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	34	1376	129	115	675	26	138	5	90	48	4	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	65	1603	150	148	1865	72	302	14	246	260	21	244
Arrive On Green	0.04	0.48	0.48	0.08	0.53	0.53	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1810	3338	311	1810	3544	136	1376	84	1512	1321	130	1500
Grp Volume(v), veh/h	34	741	764	115	344	357	138	0	95	48	0	50
Grp Sat Flow(s),veh/h/ln	1810	1805	1844	1810	1805	1875	1376	0	1596	1321	0	1630
Q Serve(g_s), s	1.2	22.6	22.9	3.9	7.0	7.0	6.0	0.0	3.3	2.1	0.0	1.7
Cycle Q Clear(g_c), s	1.2	22.6	22.9	3.9	7.0	7.0	7.7	0.0	3.3	5.4	0.0	1.7
Prop In Lane	1.00		0.17	1.00		0.07	1.00		0.95	1.00		0.92
Lane Grp Cap(c), veh/h	65	867	886	148	950	987	302	0	259	260	0	265
V/C Ratio(X)	0.53	0.85	0.86	0.78	0.36	0.36	0.46	0.00	0.37	0.18	0.00	0.19
Avail Cap(c_a), veh/h	145	974	995	261	1090	1132	963	0	1025	894	0	1047
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	14.3	14.4	28.1	8.6	8.7	25.9	0.0	23.3	25.7	0.0	22.6
Incr Delay (d2), s/veh	2.5	6.6	7.0	3.3	0.2	0.2	0.4	0.0	0.3	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	8.5	8.8	1.7	2.0	2.1	1.8	0.0	1.1	0.6	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	21.0	21.4	31.4	8.8	8.8	26.3	0.0	23.6	25.8	0.0	22.7
LnGrp LOS	C	C	C	C	A	A	C	A	C	C	A	C
Approach Vol, veh/h		1539			816			233				98
Approach Delay, s/veh		21.4			12.0			25.2				24.2
Approach LOS		C			B			C				C
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.0	10.1	36.3		16.0	7.2	39.2				
Change Period (Y+Rc), s		5.9	5.0	6.3		5.9	5.0	6.3				
Max Green Setting (Gmax), s		40.1	9.0	33.7		40.1	5.0	37.7				
Max Q Clear Time (g_c+I1), s		9.7	5.9	24.9		7.4	3.2	9.0				
Green Ext Time (p_c), s		0.5	0.0	5.0		0.3	0.0	3.2				
Intersection Summary												
HCM 6th Ctrl Delay				19.0								
HCM 6th LOS				B								

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	5	0	7	7	0	5	5	198	5	2	133	2
Future Vol, veh/h	5	0	7	7	0	5	5	198	5	2	133	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	5	0	8	8	0	5	5	215	5	2	145	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	380	380	146	382	379	218	147	0	0	220	0	0
Stage 1	150	150	-	228	228	-	-	-	-	-	-	-
Stage 2	230	230	-	154	151	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	581	556	906	580	556	827	1447	-	-	1361	-	-
Stage 1	857	777	-	779	719	-	-	-	-	-	-	-
Stage 2	777	718	-	853	776	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	575	554	906	573	554	827	1447	-	-	1361	-	-
Mov Cap-2 Maneuver	688	642	-	689	643	-	-	-	-	-	-	-
Stage 1	854	776	-	777	717	-	-	-	-	-	-	-
Stage 2	769	716	-	845	775	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	10	0.2	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1447	-	-	800	740	1361	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.018	0.002	-
HCM Control Delay (s)	7.5	-	-	9.6	10	7.6	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	3	0	7	6	0	3	2	202	2	1	145	1
Future Vol, veh/h	3	0	7	6	0	3	2	202	2	1	145	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	3	0	8	7	0	3	2	220	2	1	158	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	388	387	159	390	386	221	159	0	0	222	0	0
Stage 1	161	161	-	225	225	-	-	-	-	-	-	-
Stage 2	227	226	-	165	161	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	574	551	892	573	551	824	1433	-	-	1359	-	-
Stage 1	846	769	-	782	721	-	-	-	-	-	-	-
Stage 2	780	721	-	842	769	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	571	550	892	567	550	824	1433	-	-	1359	-	-
Mov Cap-2 Maneuver	689	642	-	687	642	-	-	-	-	-	-	-
Stage 1	845	768	-	781	720	-	-	-	-	-	-	-
Stage 2	776	720	-	834	768	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.4	10	0.1	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1433	-	-	820	727	1359	-
HCM Lane V/C Ratio	0.002	-	-	0.013	0.013	0.001	-
HCM Control Delay (s)	7.5	-	-	9.4	10	7.7	-
HCM Lane LOS	A	-	-	A	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-

Timings
11: Oleander Av. & Santa Ana Av.

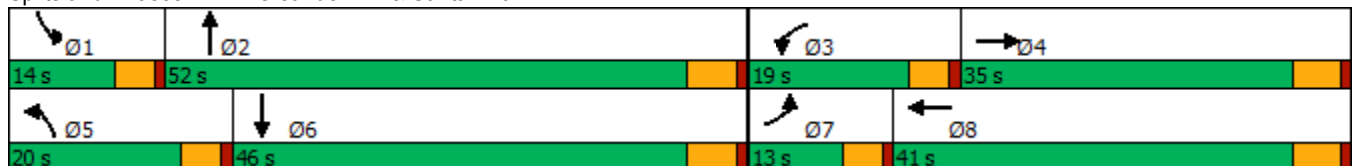


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↙	↕	↙	↕	↙	↕	↙	↕
Traffic Volume (vph)	30	407	34	369	42	143	28	99
Future Volume (vph)	30	407	34	369	42	143	28	99
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	25.4	9.6	22.4	9.6	27.4	9.6	27.4
Total Split (s)	13.0	35.0	19.0	41.0	20.0	52.0	14.0	46.0
Total Split (%)	10.8%	29.2%	15.8%	34.2%	16.7%	43.3%	11.7%	38.3%
Yellow Time (s)	3.6	4.4	3.6	4.4	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min
Act Effct Green (s)	6.6	15.9	6.7	15.9	7.0	16.6	6.5	14.0
Actuated g/C Ratio	0.13	0.31	0.13	0.31	0.14	0.32	0.13	0.27
v/c Ratio	0.14	0.50	0.16	0.40	0.19	0.40	0.13	0.28
Control Delay	30.4	18.7	30.1	17.9	29.7	18.2	30.5	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	18.7	30.1	17.9	29.7	18.2	30.5	19.8
LOS	C	B	C	B	C	B	C	B
Approach Delay		19.4		18.9		20.1		21.7
Approach LOS		B		B		C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 51.7
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 19.6
 Intersection LOS: B
 Intersection Capacity Utilization 51.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 11: Oleander Av. & Santa Ana Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

11: Oleander Av. & Santa Ana Av.

10/31/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	407	96	34	369	33	42	143	78	28	99	31
Future Volume (veh/h)	30	407	96	34	369	33	42	143	78	28	99	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	33	442	90	37	401	33	46	155	67	30	108	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	729	147	74	834	68	88	297	128	63	310	95
Arrive On Green	0.04	0.24	0.24	0.04	0.25	0.25	0.05	0.24	0.24	0.03	0.22	0.22
Sat Flow, veh/h	1810	2990	604	1810	3371	276	1810	1258	544	1810	1396	427
Grp Volume(v), veh/h	33	266	266	37	214	220	46	0	222	30	0	141
Grp Sat Flow(s),veh/h/ln	1810	1805	1790	1810	1805	1842	1810	0	1802	1810	0	1823
Q Serve(g_s), s	0.8	5.9	6.0	0.9	4.6	4.6	1.1	0.0	4.8	0.7	0.0	2.9
Cycle Q Clear(g_c), s	0.8	5.9	6.0	0.9	4.6	4.6	1.1	0.0	4.8	0.7	0.0	2.9
Prop In Lane	1.00		0.34	1.00		0.15	1.00		0.30	1.00		0.23
Lane Grp Cap(c), veh/h	68	440	436	74	446	455	88	0	425	63	0	405
V/C Ratio(X)	0.49	0.60	0.61	0.50	0.48	0.48	0.52	0.00	0.52	0.48	0.00	0.35
Avail Cap(c_a), veh/h	338	1187	1177	579	1428	1457	619	0	1866	378	0	1645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	15.1	15.1	21.1	14.5	14.5	20.9	0.0	15.0	21.3	0.0	14.8
Incr Delay (d2), s/veh	2.0	1.3	1.4	1.9	0.8	0.8	1.8	0.0	1.0	2.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.1	2.1	0.4	1.6	1.6	0.4	0.0	1.7	0.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.2	16.4	16.5	23.0	15.3	15.3	22.7	0.0	16.0	23.4	0.0	15.3
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	B
Approach Vol, veh/h		565			471			268				171
Approach Delay, s/veh		16.9			15.9			17.1				16.7
Approach LOS		B			B			B				B
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.2	16.0	6.5	16.4	6.8	15.4	6.3	16.5				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.4	4.6	5.4	4.6	5.4				
Max Green Setting (Gmax), s	9.4	46.6	14.4	29.6	15.4	40.6	8.4	35.6				
Max Q Clear Time (g_c+I1), s	2.7	6.8	2.9	8.0	3.1	4.9	2.8	6.6				
Green Ext Time (p_c), s	0.0	1.3	0.0	3.0	0.0	0.8	0.0	2.5				

Intersection Summary

HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	513	434	1	2	2
Future Vol, veh/h	1	513	434	1	2	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	2	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	558	472	1	2	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	473	0	-	0	754 237
Stage 1	-	-	-	-	473 -
Stage 2	-	-	-	-	281 -
Critical Hdwy	4.1	-	-	-	6.8 6.9
Critical Hdwy Stg 1	-	-	-	-	5.8 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1099	-	-	-	349 771
Stage 1	-	-	-	-	599 -
Stage 2	-	-	-	-	747 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1099	-	-	-	349 771
Mov Cap-2 Maneuver	-	-	-	-	522 -
Stage 1	-	-	-	-	598 -
Stage 2	-	-	-	-	747 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1099	-	-	-	623
HCM Lane V/C Ratio	0.001	-	-	-	0.007
HCM Control Delay (s)	8.3	-	-	-	10.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

**APPENDIX 6.3: HORIZON YEAR (2040) WITH PROJECT CONDITIONS
TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS**

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Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	HY 2040 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Citrus Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Major) <u>45</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes = <u>1</u>	lane		
Major Street Future ADT = <u>24,632</u>	vpd	Minor Street Future ADT = <u>82</u>	vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);	<input checked="" type="checkbox"/>		or		RURAL (R)
In built up area of isolated community of < 10,000 population	<input type="checkbox"/>				

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
XX					
XX					
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + 24,632	1 82	9,600	6,720 *	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
XX					
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + 24,632	1 82	14,400	10,080 *	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more					
	XX				
	A				
	5%				
	B				
	10%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	HY 2040 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u>	lane	Minor Street Approach Lanes: <u>1</u>	lane		
Major Street Future ADT = <u>11,027</u>	vpd	Minor Street Future ADT = <u>48</u>	vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);				<input type="checkbox"/>	
				or	RURAL (R)
In built up area of isolated community of < 10,000 population				<input type="checkbox"/>	

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u> XX	<u>RURAL</u>	Minimum Requirements EADT			
<u>CONDITION A - Minimum Vehicular Volume Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	8,000	5,600	2,400	1,680
2 + 11,027	1 48	9,600 *	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
<u>CONDITION B - Interruption of Continuous Traffic Satisfied</u>	<u>Not Satisfied</u> XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Major Street</u>	<u>Minor Street</u>	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1	1	12,000	8,400	1,200	850
2 + 11,027	1 48	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
<u>Combination of CONDITIONS A + B Satisfied</u>		2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more					
A 2%				B 4%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>HY 2040 WP</u>
Jurisdiction: <u>City of Fontana</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				<u>CHK CP</u>		<u>DATE 09/01/22</u>
Minor Street: <u>Driveway 3</u>					Critical Approach Speed (Major) <u>40 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	
Major Street Approach Lanes =	<u>2</u>	lane		Minor Street Approach Lanes:	<u>1</u>	lane
Major Street Future ADT =	<u>10,721</u>	vpd		Minor Street Future ADT =	<u>18</u>	vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
CONDITION A - Minimum Vehicular Volume Satisfied	Not Satisfied XX				
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + 10,721	1 18	9,600 *	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic Satisfied	Not Satisfied XX	Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + 10,721	1 18	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B Satisfied	Not Satisfied XX	2 CONDITIONS 80%		2 CONDITIONS 80%	
No one condition satisfied, but following conditions fulfilled 80% of more	A 1%			B 2%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>HY 2040 WP</u>
Jurisdiction: <u>City of Fontana</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Major Street: <u>Oleander Av.</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Minor Street: <u>Driveway 4</u>					Critical Approach Speed (Major) <u>40 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	

Major Street Approach Lanes = 1 lane Minor Street Approach Lanes: 1 lane

Major Street Future ADT = 3,828 vpd Minor Street Future ADT = 104 vpd

Speed limit or critical speed on major street traffic > 64 km/h (40 mph);

or

In built up area of isolated community of < 10,000 population **RURAL (R)**

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1 3,828	1 104	8,000	5,600	2,400	1,680
2 +	1	9,600	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
<u>Major Street</u>	<u>Minor Street</u>				
1 3,828	1 104	12,000	8,400	1,200	850
2 +	1	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more					
	<u>A</u>				
	4%				
	<u>B</u>				
	9%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>TRAFFIC CONDITIONS</u>	<u>HY 2040 WP</u>
Jurisdiction: <u>City of Fontana</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Major Street: <u>Oleander Av.</u>				<u>CP</u>		<u>DATE 09/01/22</u>
Minor Street: <u>Driveway 5</u>					Critical Approach Speed (Major) <u>40 mph</u>	
					Critical Approach Speed (Minor) <u>25 mph</u>	
Major Street Approach Lanes =		<u>1</u>	lane	Minor Street Approach Lanes =		<u>1</u> lane
Major Street Future ADT =		<u>3,976</u>	vpd	Minor Street Future ADT =		<u>45</u> vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						<input type="checkbox"/>
						or
In built up area of isolated community of < 10,000 population						<input type="checkbox"/>

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX	<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach				
<u>Major Street</u>	<u>Minor Street</u>				
1 3,976	1 45				
2 +	1				
2 +	2 +				
1	2 +				
		8,000	5,600	2,400	1,680
		9,600	6,720	2,400	1,680
		9,600	6,720	3,200	2,240
		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach	Number of lanes for moving traffic on each approach				
<u>Major Street</u>	<u>Minor Street</u>				
1 3,976	1 45				
2 +	1				
2 +	2 +				
1	2 +				
		12,000	8,400	1,200	850
		14,400	10,080	1,200	850
		14,400	10,080	1,600	1,120
		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more					
	<u>A</u>				
	2%				
	<u>B</u>				
	4%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	TRAFFIC CONDITIONS	HY 2040 WP
Jurisdiction: <u>City of Fontana</u>				CALC <u>CP</u>	DATE <u>09/01/22</u>
Major Street: <u>Santa Ana Av.</u>				CHK <u>CP</u>	DATE <u>09/01/22</u>
Minor Street: <u>Driveway 6</u>				Critical Approach Speed (Major) <u>40</u> mph	
				Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane	
Major Street Future ADT = <u>9,684</u> vpd				Minor Street Future ADT = <u>18</u> vpd	
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);				<input type="checkbox"/>	
				or	RURAL (R)
In built up area of isolated community of < 10,000 population				<input type="checkbox"/>	

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>	<u>RURAL</u>	Minimum Requirements EADT			
XX					
CONDITION A - Minimum Vehicular Volume		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>	<u>Minor Street</u>				
1	1	8,000	5,600	2,400	1,680
2 + 9,684	1 18	9,600 *	6,720	2,400	1,680
2 +	2 +	9,600	6,720	3,200	2,240
1	2 +	8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>	<u>Not Satisfied</u>				
	XX				
Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>	<u>Minor Street</u>				
1	1	12,000	8,400	1,200	850
2 + 9,684	1 18	14,400	10,080	1,200	850
2 +	2 +	14,400	10,080	1,600	1,120
1	2 +	12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>	<u>Not Satisfied</u>	80%		80%	
	XX				
No one condition satisfied, but following conditions fulfilled 80% of more					
	<u>A</u>				
	1%				
	<u>B</u>				
	2%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.



**APPENDIX 6.4: HORIZON YEAR (2040) WITHOUT PROJECT
CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	773	628	784	426	1182
v/c Ratio	0.94	0.45	0.34	0.46	0.74
Control Delay	46.3	13.5	26.3	8.7	26.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.3	13.5	26.3	8.7	26.7
Queue Length 50th (ft)	434	96	118	37	332
Queue Length 95th (ft)	#715	153	m130	m90	395
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	836	1419	2370	952	1649
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	0.92	0.44	0.33	0.45	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	314	919	1362	670	1352
v/c Ratio	0.27	1.60	0.85	0.88	0.67
Control Delay	25.4	302.0	34.7	52.9	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	302.0	34.7	52.9	12.1
Queue Length 50th (ft)	76	~847	263	227	199
Queue Length 95th (ft)	111	#1088	323	m276	m236
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	1180	576	1617	805	2093
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	1.60	0.84	0.83	0.65

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
- m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	502	556	1163	599	981
v/c Ratio	0.78	0.50	0.42	0.53	0.51
Control Delay	35.7	17.6	22.0	9.6	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.7	17.6	22.0	9.6	14.9
Queue Length 50th (ft)	248	97	228	100	180
Queue Length 95th (ft)	365	146	m242	m107	241
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	640	1107	3169	1199	2206
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.50	0.37	0.50	0.44

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	494	378	2116	580	798
v/c Ratio	0.74	0.76	1.03dr	0.81	0.32
Control Delay	41.0	24.1	30.4	36.0	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	24.1	30.4	36.0	5.4
Queue Length 50th (ft)	136	78	375	148	61
Queue Length 95th (ft)	184	179	#549	m174	103
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	778	538	2294	817	2517
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	0.63	0.70	0.92	0.71	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

**APPENDIX 6.5: HORIZON YEAR (2040) WITH PROJECT CONDITIONS
OFF-RAMP QUEUING ANALYSIS WORKSHEETS**

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Queues

1: Citrus Av. & I-10 WB Ramps



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	791	628	786	439	1189
v/c Ratio	0.93	0.44	0.35	0.47	0.76
Control Delay	45.0	13.0	26.5	8.4	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	45.0	13.0	26.5	8.4	28.2
Queue Length 50th (ft)	428	91	119	55	352
Queue Length 95th (ft)	#742	153	m128	m91	397
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	850	1438	2344	953	1631
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	0.93	0.44	0.34	0.46	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	314	976	1379	670	1376
v/c Ratio	0.27	1.71	0.86	0.88	0.68
Control Delay	25.5	350.8	35.2	53.9	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.1
Total Delay	25.5	350.8	35.2	53.9	11.9
Queue Length 50th (ft)	76	~927	268	233	200
Queue Length 95th (ft)	111	#1172	330	m275	m245
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	1175	572	1617	805	2093
Starvation Cap Reductn	0	0	0	0	115
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.27	1.71	0.85	0.83	0.70

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Queues

1: Citrus Av. & I-10 WB Ramps

09/01/2022



Lane Group	WBL	WBR	NBT	NBR	SBT
Lane Group Flow (vph)	508	556	1171	655	983
v/c Ratio	0.78	0.50	0.43	0.57	0.52
Control Delay	35.1	17.4	22.9	10.0	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	17.4	22.9	10.0	15.2
Queue Length 50th (ft)	251	97	242	106	182
Queue Length 95th (ft)	369	146	m235	m112	242
Internal Link Dist (ft)	671		623		656
Turn Bay Length (ft)		450		165	
Base Capacity (vph)	651	1122	3169	1221	2206
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.78	0.50	0.37	0.54	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	NBT	SBL	SBT
Lane Group Flow (vph)	494	395	2193	580	806
v/c Ratio	0.74	0.80	1.05dr	0.81	0.32
Control Delay	41.0	27.7	34.7	35.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	27.7	34.7	35.8	5.2
Queue Length 50th (ft)	136	91	404	144	55
Queue Length 95th (ft)	184	#203	#585	m177	104
Internal Link Dist (ft)		526	1147		623
Turn Bay Length (ft)	550			250	
Base Capacity (vph)	778	536	2292	817	2517
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	0.63	0.74	0.96	0.71	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

**APPENDIX 6.6: HORIZON YEAR (2040) WITH PROJECT CONDITIONS
INTERSECTION OPERATIONS ANALYSIS WITH IMPROVEMENTS
WORKSHEETS**

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Timings
2: Citrus Av. & I-10 EB Ramps

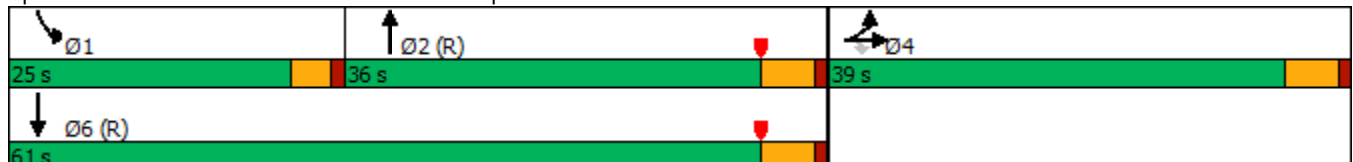


Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations	↙↘	↘	↙	↑↑↑	↙↘	↑↑
Traffic Volume (vph)	305	3	944	823	650	1335
Future Volume (vph)	305	3	944	823	650	1335
Turn Type	Split	NA	Perm	NA	Prot	NA
Protected Phases	4	4		2	1	6
Permitted Phases			4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	25.0	9.0	10.0
Total Split (s)	39.0	39.0	39.0	36.0	25.0	61.0
Total Split (%)	39.0%	39.0%	39.0%	36.0%	25.0%	61.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	32.5	32.5	32.5	32.6	20.9	57.5
Actuated g/C Ratio	0.32	0.32	0.32	0.33	0.21	0.58
v/c Ratio	0.28	0.93	0.90	0.81	0.92	0.66
Control Delay	25.4	56.5	48.7	32.3	60.5	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	25.4	56.5	48.7	32.3	60.5	11.0
LOS	C	E	D	C	E	B
Approach Delay		46.0		32.3		27.2
Approach LOS		D		C		C

Intersection Summary

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 33.8
 Intersection LOS: C
 Intersection Capacity Utilization 84.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↘	↗					↑↑↑		↗↘	↑↑	
Traffic Volume (veh/h)	305	3	944	0	0	0	0	823	515	650	1335	0
Future Volume (veh/h)	305	3	944	0	0	0	0	823	515	650	1335	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	314	0	853				0	848	417	670	1376	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	1059	0	942				0	1256	576	717	2193	0
Arrive On Green	0.29	0.00	0.29				0.00	0.36	0.36	0.41	1.00	0.00
Sat Flow, veh/h	3619	0	3220				0	3629	1585	3510	3705	0
Grp Volume(v), veh/h	314	0	853				0	848	417	670	1376	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1585	1755	1805	0
Q Serve(g_s), s	6.7	0.0	25.5				0.0	20.7	22.7	18.3	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	25.5				0.0	20.7	22.7	18.3	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	1059	0	942				0	1256	576	717	2193	0
V/C Ratio(X)	0.30	0.00	0.91				0.00	0.68	0.72	0.93	0.63	0.00
Avail Cap(c_a), veh/h	1230	0	1095				0	1256	576	737	2193	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.49	0.49	0.44	0.44	0.00
Uniform Delay (d), s/veh	27.4	0.0	34.0				0.0	26.9	27.5	28.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	9.0				0.0	1.4	3.9	9.9	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	10.5				0.0	8.2	8.6	6.4	0.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	43.0				0.0	28.3	31.4	38.8	0.6	0.0
LnGrp LOS	C	A	D				A	C	C	D	A	A
Approach Vol, veh/h		1167						1265			2046	
Approach Delay, s/veh		38.8						29.3			13.1	
Approach LOS		D						C			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	24.4	41.3	34.3	65.7								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	21.0	31.0	34.0	56.0								
Max Q Clear Time (g_c+I1), s	20.3	24.7	27.5	2.0								
Green Ext Time (p_c), s	0.2	3.0	1.8	7.6								

Intersection Summary

HCM 6th Ctrl Delay	24.4
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
3: Citrus Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

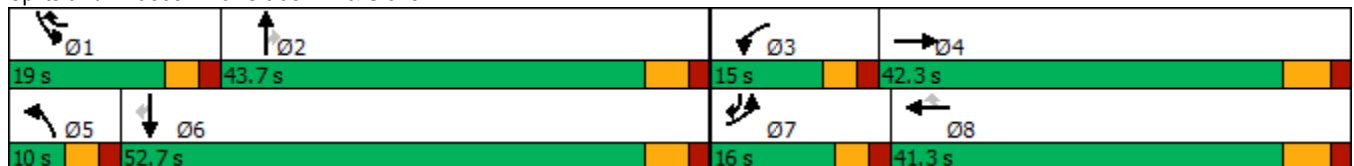


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Traffic Volume (vph)	408	616	73	506	245	84	763	92	549	1234	657
Future Volume (vph)	408	616	73	506	245	84	763	92	549	1234	657
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2		1	6	7
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	1	5	2	2	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	10.0	38.3	10.0	41.3	12.0	10.0	41.9	41.9	12.0	36.9	10.0
Total Split (s)	16.0	42.3	15.0	41.3	19.0	10.0	43.7	43.7	19.0	52.7	16.0
Total Split (%)	13.3%	35.3%	12.5%	34.4%	15.8%	8.3%	36.4%	36.4%	15.8%	43.9%	13.3%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.0	3.0	3.9	3.9	3.0	3.9	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.0	5.0	5.9	5.9	5.0	5.9	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	11.1	30.4	8.0	24.8	40.3	5.1	34.6	34.6	14.2	43.7	55.7
Actuated g/C Ratio	0.10	0.28	0.07	0.23	0.38	0.05	0.32	0.32	0.13	0.41	0.52
v/c Ratio	1.22	0.75	0.59	0.66	0.41	0.55	0.71	0.16	1.29	0.91	0.82
Control Delay	162.4	41.1	68.6	41.3	17.3	66.5	36.6	0.8	184.7	41.2	26.3
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	162.4	41.1	68.6	41.3	17.3	66.5	36.6	0.8	184.7	41.2	26.3
LOS	F	D	E	D	B	E	D	A	F	D	C
Approach Delay		85.7		36.6			35.8			69.5	
Approach LOS		F		D			D			E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 107.2
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.29
 Intersection Signal Delay: 61.8
 Intersection LOS: E
 Intersection Capacity Utilization 83.6%
 ICU Level of Service E
 Analysis Period (min) 15
































Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	
Traffic Volume (veh/h)	408	616	84	73	506	245	84	763	92	549	1234	657
Future Volume (veh/h)	408	616	84	73	506	245	84	763	92	549	1234	657
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	443	670	90	79	550	201	91	829	70	597	1341	586
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	393	799	107	102	700	537	164	1173	516	501	1520	850
Arrive On Green	0.11	0.25	0.25	0.06	0.19	0.19	0.05	0.33	0.33	0.14	0.42	0.42
Sat Flow, veh/h	3510	3198	429	1810	3610	1587	3510	3610	1588	3510	3610	1590
Grp Volume(v), veh/h	443	378	382	79	550	201	91	829	70	597	1341	586
Grp Sat Flow(s),veh/h/ln	1755	1805	1822	1810	1805	1587	1755	1805	1588	1755	1805	1590
Q Serve(g_s), s	11.0	19.5	19.5	4.2	14.2	9.4	2.5	19.7	3.1	14.0	33.6	26.7
Cycle Q Clear(g_c), s	11.0	19.5	19.5	4.2	14.2	9.4	2.5	19.7	3.1	14.0	33.6	26.7
Prop In Lane	1.00		0.24	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	393	451	455	102	700	537	164	1173	516	501	1520	850
V/C Ratio(X)	1.13	0.84	0.84	0.78	0.79	0.37	0.56	0.71	0.14	1.19	0.88	0.69
Avail Cap(c_a), veh/h	393	662	668	184	1288	796	179	1391	612	501	1722	939
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.6	34.9	34.9	45.7	37.6	24.7	45.8	29.0	23.4	42.1	26.2	16.9
Incr Delay (d2), s/veh	84.2	4.1	4.1	4.7	0.7	0.2	1.3	0.9	0.0	104.8	4.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	8.6	8.7	2.0	6.0	3.4	1.1	8.1	1.1	13.1	14.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.7	39.0	39.1	50.4	38.4	24.9	47.1	30.0	23.4	146.9	31.0	18.4
LnGrp LOS	F	D	D	D	D	C	D	C	C	F	C	B
Approach Vol, veh/h		1203			830			990			2524	
Approach Delay, s/veh		71.7			36.2			31.1			55.5	
Approach LOS		E			D			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	37.8	10.5	30.8	9.6	47.2	16.0	25.3				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	14.0	37.8	10.0	36.0	5.0	46.8	11.0	35.0				
Max Q Clear Time (g_c+I1), s	16.0	21.7	6.2	21.5	4.5	35.6	13.0	16.2				
Green Ext Time (p_c), s	0.0	3.3	0.0	2.4	0.0	5.7	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay				51.8								
HCM 6th LOS				D								

Timings
2: Citrus Av. & I-10 EB Ramps



Lane Group	EBL	EBT	EBR	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	479	19	364	1251	563	782
Future Volume (vph)	479	19	364	1251	563	782
Turn Type	Split	NA	Perm	NA	Prot	NA
Protected Phases	4	4		2	1	6
Permitted Phases			4			
Detector Phase	4	4	4	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	10.0	10.0	25.0	9.0	10.0
Total Split (s)	21.0	21.0	21.0	47.0	22.0	69.0
Total Split (%)	23.3%	23.3%	23.3%	52.2%	24.4%	76.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	4.0	5.0
Lead/Lag				Lag	Lead	
Lead-Lag Optimize?				Yes	Yes	
Recall Mode	None	None	None	C-Min	None	C-Min
Act Effct Green (s)	15.3	15.3	15.3	43.4	17.2	64.7
Actuated g/C Ratio	0.17	0.17	0.17	0.48	0.19	0.72
v/c Ratio	0.83	0.48	0.46	0.98dr	0.87	0.31
Control Delay	49.0	11.3	8.9	24.6	43.6	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.0	11.3	8.9	24.6	43.6	3.9
LOS	D	B	A	C	D	A
Approach Delay		31.7		24.6		20.5
Approach LOS		C		C		C

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 24.7
 Intersection LOS: C
 Intersection Capacity Utilization 85.2%
 ICU Level of Service E
 Analysis Period (min) 15
 dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Splits and Phases: 2: Citrus Av. & I-10 EB Ramps



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

2: Citrus Av. & I-10 EB Ramps

09/01/2022



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔	↔					↑↑↑		↔↔	↑↑	
Traffic Volume (veh/h)	479	19	364	0	0	0	0	1251	876	563	782	0
Future Volume (veh/h)	479	19	364	0	0	0	0	1251	876	563	782	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		0.99	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
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900				0	1900	1900	1900	1900	0
Adj Flow Rate, veh/h	494	0	310				0	1290	696	580	806	0
Peak Hour Factor	0.97	0.97	0.97				0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	0	0	0				0	0	0	0	0	0
Cap, veh/h	580	0	516				0	1735	798	640	2630	0
Arrive On Green	0.16	0.00	0.16				0.00	0.50	0.50	0.36	1.00	0.00
Sat Flow, veh/h	3619	0	3220				0	3629	1590	3510	3705	0
Grp Volume(v), veh/h	494	0	310				0	1290	696	580	806	0
Grp Sat Flow(s),veh/h/ln	1810	0	1610				0	1729	1590	1755	1805	0
Q Serve(g_s), s	11.9	0.0	8.0				0.0	26.7	34.9	14.1	0.0	0.0
Cycle Q Clear(g_c), s	11.9	0.0	8.0				0.0	26.7	34.9	14.1	0.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	580	0	516				0	1735	798	640	2630	0
V/C Ratio(X)	0.85	0.00	0.60				0.00	0.74	0.87	0.91	0.31	0.00
Avail Cap(c_a), veh/h	643	0	573				0	1735	798	702	2630	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	0.09	0.09	0.76	0.76	0.00
Uniform Delay (d), s/veh	36.7	0.0	35.1				0.0	17.8	19.9	27.9	0.0	0.0
Incr Delay (d2), s/veh	9.0	0.0	0.8				0.0	0.3	1.4	11.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	3.0				0.0	9.2	11.3	5.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	0.0	35.9				0.0	18.1	21.2	39.0	0.2	0.0
LnGrp LOS	D	A	D				A	B	C	D	A	A
Approach Vol, veh/h		804						1986			1386	
Approach Delay, s/veh		41.9						19.2			16.4	
Approach LOS		D						B			B	
Timer - Assigned Phs	1	2	4	6								
Phs Duration (G+Y+Rc), s	20.4	50.2	19.4	70.6								
Change Period (Y+Rc), s	4.0	5.0	5.0	5.0								
Max Green Setting (Gmax), s	18.0	42.0	16.0	64.0								
Max Q Clear Time (g_c+I1), s	16.1	36.9	13.9	2.0								
Green Ext Time (p_c), s	0.3	3.7	0.5	3.6								

Intersection Summary

HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

Timings
3: Citrus Av. & Slover Av.

Oleander & Santa Ana Warehouses TA (JN:14581)

09/01/2022

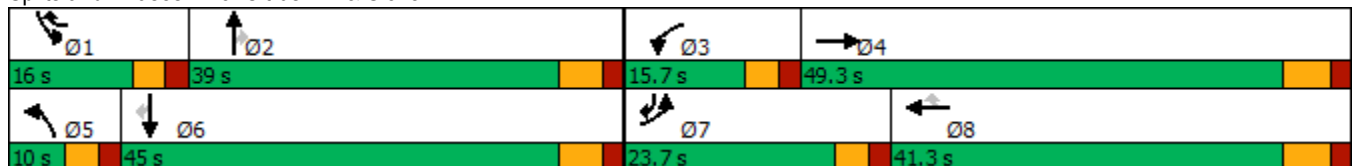


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕	↖	↕↕	↖	↖↗	↕↕	↖	↖↗	↕↕	↖
Traffic Volume (vph)	649	1191	106	418	449	61	1019	93	375	680	255
Future Volume (vph)	649	1191	106	418	449	61	1019	93	375	680	255
Turn Type	Prot	NA	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2		1	6	7
Permitted Phases					8			2			6
Detector Phase	7	4	3	8	1	5	2	2	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	5.0	10.0	10.0	5.0	10.0	5.0
Minimum Split (s)	10.0	38.3	10.0	41.3	12.0	10.0	41.9	41.9	12.0	36.9	10.0
Total Split (s)	23.7	49.3	15.7	41.3	16.0	10.0	39.0	39.0	16.0	45.0	23.7
Total Split (%)	19.8%	41.1%	13.1%	34.4%	13.3%	8.3%	32.5%	32.5%	13.3%	37.5%	19.8%
Yellow Time (s)	3.0	4.3	3.0	4.3	3.0	3.0	3.9	3.9	3.0	3.9	3.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.3	5.0	6.3	5.0	5.0	5.9	5.9	5.0	5.9	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	None	None	None	None
Act Effct Green (s)	18.7	43.0	9.7	34.0	46.3	5.0	33.1	33.1	11.0	41.1	60.7
Actuated g/C Ratio	0.16	0.36	0.08	0.29	0.39	0.04	0.28	0.28	0.09	0.35	0.51
v/c Ratio	1.24	1.01	0.77	0.43	0.68	0.44	1.07	0.16	1.22	0.57	0.30
Control Delay	165.7	65.9	84.9	36.0	25.2	65.6	90.2	0.6	169.4	34.8	7.7
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	165.7	65.9	84.9	36.0	25.2	65.6	90.2	0.6	169.4	34.8	7.7
LOS	F	E	F	D	C	E	F	A	F	C	A
Approach Delay		100.1		36.4			81.8			68.1	
Approach LOS		F		D			F			E	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 119
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 76.7
 Intersection LOS: E
 Intersection Capacity Utilization 97.9%
 ICU Level of Service F
 Analysis Period (min) 15































Splits and Phases: 3: Citrus Av. & Slover Av.



HCM 6th Signalized Intersection Summary Oleander & Santa Ana Warehouses TA (JN:14581)

3: Citrus Av. & Slover Av.

09/01/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	649	1191	55	106	418	449	61	1019	93	375	680	255
Future Volume (veh/h)	649	1191	55	106	418	449	61	1019	93	375	680	255
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		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adj Flow Rate, veh/h	683	1254	50	112	440	420	64	1073	76	395	716	229
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	555	1286	51	138	1016	602	130	1010	444	326	1212	795
Arrive On Green	0.16	0.36	0.36	0.08	0.28	0.28	0.04	0.28	0.28	0.09	0.34	0.34
Sat Flow, veh/h	3510	3536	141	1810	3610	1607	3510	3610	1585	3510	3610	1609
Grp Volume(v), veh/h	683	640	664	112	440	420	64	1073	76	395	716	229
Grp Sat Flow(s),veh/h/ln	1755	1805	1872	1810	1805	1607	1755	1805	1585	1755	1805	1609
Q Serve(g_s), s	18.7	41.3	41.4	7.2	11.8	26.2	2.1	33.1	4.3	11.0	19.4	9.9
Cycle Q Clear(g_c), s	18.7	41.3	41.4	7.2	11.8	26.2	2.1	33.1	4.3	11.0	19.4	9.9
Prop In Lane	1.00		0.08	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	555	656	681	138	1016	602	130	1010	444	326	1212	795
V/C Ratio(X)	1.23	0.97	0.98	0.81	0.43	0.70	0.49	1.06	0.17	1.21	0.59	0.29
Avail Cap(c_a), veh/h	555	656	681	164	1068	625	148	1010	444	326	1212	795
HCM Platoon Ratio	1.00	1.00	1.00	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	49.8	37.1	37.1	53.8	34.8	31.3	55.9	42.6	32.2	53.6	32.6	17.7
Incr Delay (d2), s/veh	118.9	28.6	28.4	19.5	0.1	2.7	1.1	46.4	0.1	119.6	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	22.4	23.2	3.9	5.0	10.1	0.9	20.6	1.6	10.1	8.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.7	65.7	65.6	73.3	34.9	34.0	56.9	89.0	32.3	173.2	33.1	17.7
LnGrp LOS	F	E	E	E	C	C	E	F	C	F	C	B
Approach Vol, veh/h		1987			972			1213			1340	
Approach Delay, s/veh		101.1			38.9			83.7			71.8	
Approach LOS		F			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	39.0	14.0	49.3	9.4	45.6	23.7	39.6				
Change Period (Y+Rc), s	5.0	5.9	5.0	6.3	5.0	5.9	5.0	6.3				
Max Green Setting (Gmax), s	11.0	33.1	10.7	43.0	5.0	39.1	18.7	35.0				
Max Q Clear Time (g_c+I1), s	13.0	35.1	9.2	43.4	4.1	21.4	20.7	28.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.1	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay				79.2								
HCM 6th LOS				E								

APPENDIX 8.1: VMT MEMO

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February 17, 2023

Ms. Tracy Zinn
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

OLEANDER AND SANTA ANA VEHICLE MILES TRAVELED (VMT) ANALYSIS

Ms. Tracy Zinn,

Urban Crossroads, Inc. is pleased to provide the following vehicle miles traveled (VMT) Analysis for the Oleander and Santa Ana industrial development (**Project**), which is located north of Santa Ana Avenue, at the northeast corner of Citrus Avenue and Santa Ana Avenue, and on either side of Oleander Avenue in the City of Fontana.

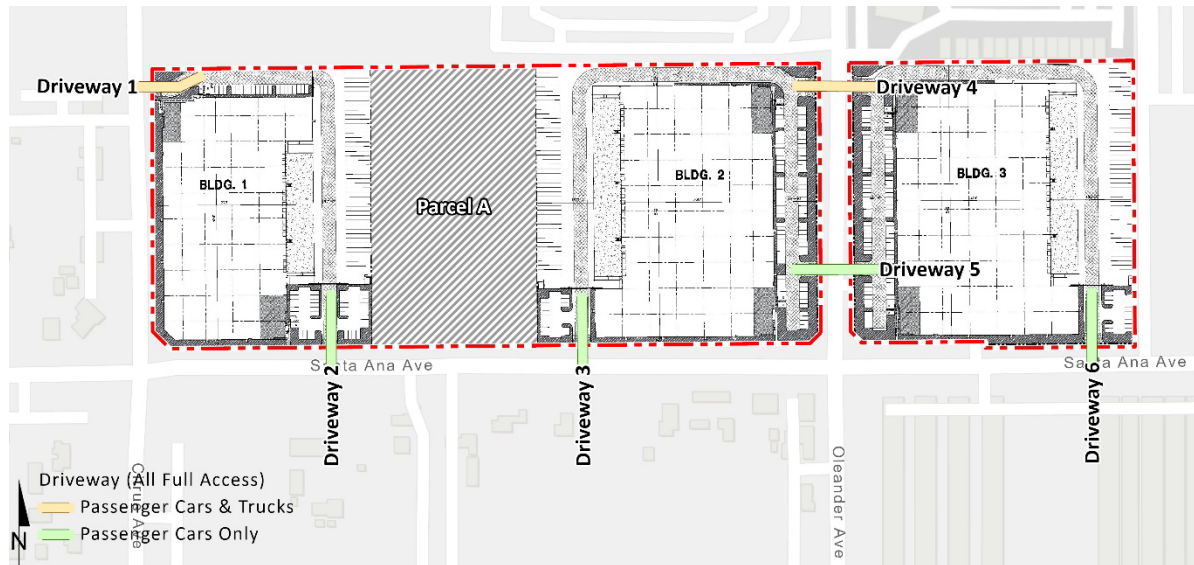
PROJECT OVERVIEW

It is our understanding that the Project is to consist of 3 industrial warehouse buildings. Although not part of the proposed Project, the 5.03-acre parcel (Parcel A) located between Building 1 and Building 2 has been evaluated as part of this VMT analysis with the proposed zoning and land use changes and assumes potential future development of up to 131,464 square feet of general light industrial use (assumes the maximum 0.60 floor-to-area ratio for the 5.03-acre parcel). A preliminary site plan can be found in Exhibit 1.

- Building 1 = 151,618 square feet
- Building 2 = 196,336 square feet
- Building 3 = 192,895 square feet
- Parcel A = 131,464 square feet

Total = 682,572 square feet

EXHIBIT 1: PRELIMINARY SITE PLAN



BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide mandate went into effect July 1, 2020. To aid in this transition, the Governor's Office of Planning and Research (OPR) released a [Technical Advisory on Evaluating Transportation Impacts in CEQA](#) (December of 2018) (**Technical Advisory**) (1). Based on OPR's Technical Advisory, specific procedures for complying with the new CEQA requirements for VMT analysis, the City of Fontana adopted [Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment](#) (**City Guidelines**) (2), which documents the City's VMT analysis methodology and approved impact thresholds. This VMT analysis has been prepared based on the adopted City Guidelines.

VMT SCREENING

City Guidelines describe specific screening criteria that can be used to identify when a proposed land development project is anticipated to result in a less than significant impact without the need to conduct a project level analysis. For the purposes of this analysis, the initial VMT screening process has been conducted with the SBCTA VMT Screening Tool (**Screening Tool**), which uses screening criteria consistent with the screening thresholds recommended in the City Guidelines. Screening thresholds are described in the following four steps:

- Step 1: Transit Priority Area (TPA) Screening
- Step 2: Low VMT Area Screening
- Step 3: Project Type Screening

- Step 4: Project net daily trips less than 500 ADT

Consistent with City Guidelines, a land use project needs to only satisfy one of the above screening thresholds to result in a less than significant impact.

STEP 1: TPA SCREENING

Consistent with City Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing “major transit stop”¹ or an existing stop along a “high-quality transit corridor”²) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Based on the Screening Tool results presented in Attachment A, the Project site is not located within ½ mile of an existing major transit stop, or along a high-quality transit corridor.

TPA screening criteria is not met.

STEP 2: LOW VMT AREA SCREENING

As noted in the City Guidelines, “Residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use land use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per resident, per worker, or per service population that is similar to the existing land uses in the low VMT area.”³ The Screening Tool uses the sub-regional San Bernardino County Transportation Analysis Model (SBTAM) to measure VMT performance within San Bernardino County for individual traffic analysis zones (TAZ’s) within each city. The Project’s physical location based on APN is input into the Screening Tool to determine the VMT generated within the respective TAZ as compared to the jurisdictional average inclusive of a particular threshold (i.e., 15% below baseline County of San Bernardino VMT per employee). Based on the Screening Tool results, the Project is not located within a low VMT generating zone as compared to the City’s adopted

¹ Pub. Resources Code, § 21064.3 (“Major transit stop” means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”).

² Pub. Resources Code, § 21155 (“For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.”).

³ City Guidelines; Page 12.

threshold of 15% below baseline County of San Bernardino VMT per employee. (See Attachment A).

Low VMT Area screening criteria is not met.

STEP 3: PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail with buildings less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, medical/dental office buildings, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. The proposed Project is not considered a local serving use based on the examples provided in the City Guidelines.⁴

Low Project Type screening criteria is not met.

STEP 4: PROJECT NET DAILY TRIPS LESS THAN 500 ADT SCREENING

Projects that generate fewer than 500 net average daily trips (ADT) (stated in actual vehicles) are deemed to not cause a substantial increase in the total citywide or regional VMT and are therefore presumed to have a less than significant impact on VMT. Substantial evidence in support of this daily trip threshold is documented in the City Guidelines.⁵ The trip generation rates used for this analysis are based on the trip generation statistics published in the Institute of Transportation Engineer (ITE) Trip Generation Manual (11th Edition, 2021) (3). The proposed Project is estimated to generate 928 vehicle trip-ends per day, which would exceed the City's screening threshold of 500 ADT (See Attachment B).

Project net daily trips less than 500 ADT screening criteria is not met.

As the Project was not found to meet any of the aforementioned VMT screening criteria, a project level VMT analysis is prepared to assess the Project's potential impact to VMT.

VMT ANALYSIS

VMT MODELING

City Guidelines identifies SBTAM as the appropriate tool for conducting VMT analysis for land use projects in San Bernardino County area. SBTAM is a useful tool to estimate VMT as it considers interactions between different land uses based on socio-economic data such as population, households, and employment. The calculation of VMT for land use projects is based on the total number of trips generated and the average trip length of each vehicle. SBTAM is also consistent with the model used to develop the City's VMT impact thresholds listed by the City Guidelines. Therefore, the vehicle trips and average daily trip length for project-related vehicle trips are model derived from SBTAM.

⁴ City Guidelines; Page 13.

⁵ City Guidelines; Appendix B.

PRODUCTION/ATTRACTION METHOD

The Production/Attraction (PA) method for calculating VMT sums all weekday VMT generated by HB and HBW trips with at least one trip-end in the study area (i.e., City Boundary or Project Traffic Analysis Zone) by trip purpose. Productions are land use types that generate trips (residences), and attractions are land use types that attract trips (employment). The PA method allows project VMT to be evaluated based on trip purpose, which is consistent with the Office of Planning and Research's (OPR's) Technical Advisory. It should be noted that the PA matrices do not include external trips that have one trip outside of the model boundary or truck trips.

BOUNDARY VMT METHOD

The boundary method is the sum of all weekday VMT on the roadway network within a designated boundary (i.e., City boundary or other designated geographic area). The boundary method estimates VMT by multiplying vehicle trips on each roadway segment within the boundary by that segment's length. This approach consists of all trips, including those trips that do not begin or end in the designated boundary. Consistent with City VMT Guidelines, the City of Fontana was used as the boundary for this assessment.

CITY OF FONTANA VMT IMPACT CRITERIA

Based on consultation with City Staff, industrial land development projects in the City of Fontana should use VMT per employee as the appropriate metric for VMT impact analysis. City Guidelines identifies the following recommended thresholds:

- The baseline project generated VMT per employee exceeds 15% below the baseline County of San Bernardino VMT per employee, or
- The cumulative project generated VMT per employee exceeds 15% below the baseline County of San Bernardino VMT per employee.

Additionally, the project's effect on VMT would be considered significant if it results in either of the following conditions to be satisfied:

- The baseline link-level boundary VMT per service population (City boundary) to increase under the plus project condition compared to the no project condition), or
- The cumulative link-level boundary VMT per service population (City boundary) to increase under the plus project condition compared to the no project condition).

SBCTA provides VMT calculations for each of its member agencies and for the County of San Bernardino region. Urban Crossroads has obtained this published data from SBCTA, which for the County of San Bernardino is 17.1 VMT per employee. As outlined in the City Guidelines, a threshold of 15 percent below the regional baseline is 14.54 VMT per employee ($17.1 \times 0.85 = 14.54$)

PROJECT VMT ESTIMATES

To estimate Project generated VMT, standard land use information must first be converted into a SBTAM compatible dataset. The SBTAM model utilizes socio-economic data (SED) (e.g.,

employment information) instead of land use information to estimate vehicle trips. Project building square footage has been converted to employment data for input into the SBTAM model and has been isolated within the Project TAZ (TAZ 53724101). For purposes of this analysis, employment estimates were calculated using average employment density factors from Southern California Association of Governments (SCAG) Employment Density Study (October 2001) (4). SCAG reports that commerce center buildings in San Bernardino County employ an average of 1 worker for every 1,195 SF of building area, which would yield 453 jobs (540,849 SF ÷ 1,195 SF/employee = 453 employees) for proposed Buildings 1, 2, and 3. (SCAG, 2001, p. 15). Although no development is currently proposed on 5.0 acres of the Project Site (Parcel A), should those 5.0 acres be developed in the future with up to 131,464 SF of building space, an additional 110 jobs could be generated (131,464 SF ÷ 1,195 SF/employee = 110 employees). Table 1 presents the estimated number of Project employees by land use type used to populate the SBTAM model for the proposed Project.

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Quantity (SF)	Employment Density Factor ⁶	Estimated Employees
Warehouse	682,572	1,195 SF per employee	563

PROJECT VMT ESTIMATES

The VMT estimates calculated for the Project are presented in Table 2 and Table 3. As shown in Table 2, the proposed Project is forecast to generate home-based work (HBW) VMT per employee above the City's adopted impact threshold for both baseline and cumulative traffic conditions and is considered to have a potentially significant Project generated VMT impact .

TABLE 2: PROJECT VMT PER EMPLOYEE

	Baseline (2022)	Cumulative Year (2040)
Employees	563	563
HBW VMT	9,444	9,088
HBW VMT Per Employee	16.77	16.14
City Threshold	14.54	14.54
Percent Above Threshold	15.34%	11.00%
Potentially Significant?	Yes	Yes

Table 3 presents boundary VMT and boundary VMT per service population estimates for baseline and cumulative conditions. The boundary VMT per service population remains unchanged under the With Project scenario for both baseline and cumulative conditions. The Project's cumulative effect on VMT is considered less than significant.

⁶ Table II-B of the SCAG Employment Density Study.

TABLE 3: BOUNDARY VMT

Scenario	Baseline		Cumulative	
	No Project	With Project	No Project	With Project
Service Population	290,488	291,051	352,559	353,122
Boundary VMT	3,753,385	3,756,829	4,643,981	4,650,713
VMT per SP ⁷	12.92	12.91	13.17	13.17
Change in VMT per SP ⁷		-0.01		0.0
Potentially Significant?		No		No

POTENTIAL REDUCTIONS TO VMT

Trip reduction measures that have the potential to reduce project generated VMT are described in the Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA, 2021) (**2021 Handbook**). Locational context is a major factor relevant to the potential application and effectiveness of VMT reduction measures. The three locational contexts identified by the 2021 Handbook are suburban, urban, and rural.⁸ The locational context of the Project is characteristically suburban, which further limits the effectiveness of a particular trip reduction measure as compared to an urban/city center with high accessibility to transit and other modes of transportation beyond the single occupancy automobile. In addition to limitations related to locational context, as future building tenants are not known for the Project, the ultimate effectiveness of certain trip reduction measures cannot be guaranteed.

Potential trip reduction measures that may be relevant to the proposed Project as described within the 2021 Handbook are listed below.

- Provide pedestrian and bicycle network improvements within the development connecting to existing off-site facilities.
- Commute trip reduction (CTR) programs offered to encourage the use of vanpools, carpooling, public transit, and biking.
- CTR programs may also provide for alternative work or compressed work schedules to reduce the number of days an employee commutes to work.
- Provision of on-site facilities to provide end of trip services for bicycling such as secure bike parking and storage lockers.
- Provide reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles.

⁷ SP refers to Service Population

⁸ 2021 Handbook; Page 43

As noted previously, the effectiveness of some of the aforementioned measures is dependent on as yet unknown tenant(s) and employee participation. Conservatively, this analysis assumes no reduction in VMT that may result from implementation of such measures.

CONCLUSION

Based on the results of this analysis the following findings are made:

- The Project was evaluated against VMT screening criteria as outlined in the City Guidelines. The Project was not found to screen from the need to perform a VMT analysis, and a model based VMT analysis was performed.
- The was found to exceed the City's VMT per employee threshold by 15.34% in baseline conditions and 11.00% in cumulative conditions. The Project is determined to have a potentially significant transportation impact.
- The Project's effect on VMT was found to remain unchanged or reduce in the With Project scenario as compared to the No Project scenario for both the Baseline and Cumulative conditions. In other words, the Project's effect on VMT was found to be less than significant.
- Since future building tenants are unknown at this time, implementation of trip reduction measures cannot be guaranteed to reduce Project generated HBW VMT to a level of less than significant; the Project's VMT impact is therefore considered significant and unavoidable.

If you have any questions, please contact me directly at aso@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.



Alexander So
Senior Associate

REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **City of Fontana Traffic Engineering Division.** *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* City of Fontana : s.n., October 2020.
3. **Institute of Transportation Engineers.** *Trip Generation Manual.* 11th Edition. 2021.
4. **Southern California Association of Governments.** *Employment Density Study.* October 2001.

ATTACHMENT A
WRCOG SCREENING TOOL

SBCTA VMT Screening Tool Powered by Fehr & Peers User's Guide

Santa Ana Ave & Citrus Ave, Fon X

Show search results for Santa Ana Av...

Complete #1 - 4, Then Click 'Run'

VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*

PA VMT Per Worker

#3. Select the Baseline Year. The years available for analysis are from 2016 to 2040.*

2022

#4. Select the Threshold (% reduction from baseline year). Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*

Below County Baseline (-15%)

[Help](#) Run

Project Area VMT (1 of 2)

Assessor Parcel Number (APN)	025501132
Traffic Analysis Zone (TAZ)	53724101
TAZ VMT	18.3
Jurisdiction VMT	16.9
% Difference	8.11%
VMT Metric	PA VMT Per Worker
Threshold	14.4

[Zoom to](#)

Map Layers

- Project Area VMT
- Screening Results
- Low VMT Generating TAZs
- Parcels
- Jurisdiction Boundaries
- TAZ
- Transit Priority Area

ATTACHMENT C
PROJECT TRIP GENERATION

TABLE 1: TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
Warehousing ³	TSF	150	0.131	0.039	0.170	0.050	0.130	0.180	1.710
Passenger Cars (AM=88.2%, PM=83.3%, Daily=64.9%)			0.120	0.030	0.150	0.034	0.116	0.150	1.110
2-Axle Trucks (AM=1.97%, PM=2.79%, Daily=5.86%)			0.002	0.001	0.003	0.003	0.002	0.005	0.100
3-Axle Trucks (AM=2.44%, PM=3.46%, Daily=7.27%)			0.002	0.002	0.004	0.003	0.003	0.006	0.124
4+-Axle Trucks (AM=7.39%, PM=10.45%, Daily=21.97%)			0.007	0.006	0.013	0.010	0.009	0.019	0.376

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

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

TABLE 2: TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
Building 1: Warehousing	151.618 TSF							
Passenger Cars:		18	5	23	5	18	23	168
2-axle Trucks:		0	0	0	0	0	0	16
3-axle Trucks:		0	0	0	0	0	0	20
4+-axle Trucks:		1	1	2	2	1	3	58
Total Truck Trips (Actual Vehicles):		1	1	2	2	1	3	94
Total Trips (Actual Vehicles) ²		19	6	25	7	19	26	262
Building 2: Warehousing	196.336 TSF							
Passenger Cars:		24	6	30	7	23	30	218
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	24
4+-axle Trucks:		1	1	2	2	2	4	74
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	118
Total Trips (Actual Vehicles) ²		25	7	32	11	26	37	336
Building 3: Warehousing	192.895 TSF							
Passenger Cars:		23	6	29	7	22	29	214
2-axle Trucks:		0	0	0	1	0	1	20
3-axle Trucks:		0	0	0	1	1	2	24
4+-axle Trucks:		1	1	2	2	2	4	72
Total Truck Trips (Actual Vehicles):		1	1	2	4	3	7	116
Total Trips (Actual Vehicles) ²		24	7	31	11	25	36	330
Passenger Cars		65	17	82	19	63	82	600
Trucks		3	3	6	10	7	17	328
Total Trips (Actual Vehicles)²		68	20	88	29	70	99	928

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.