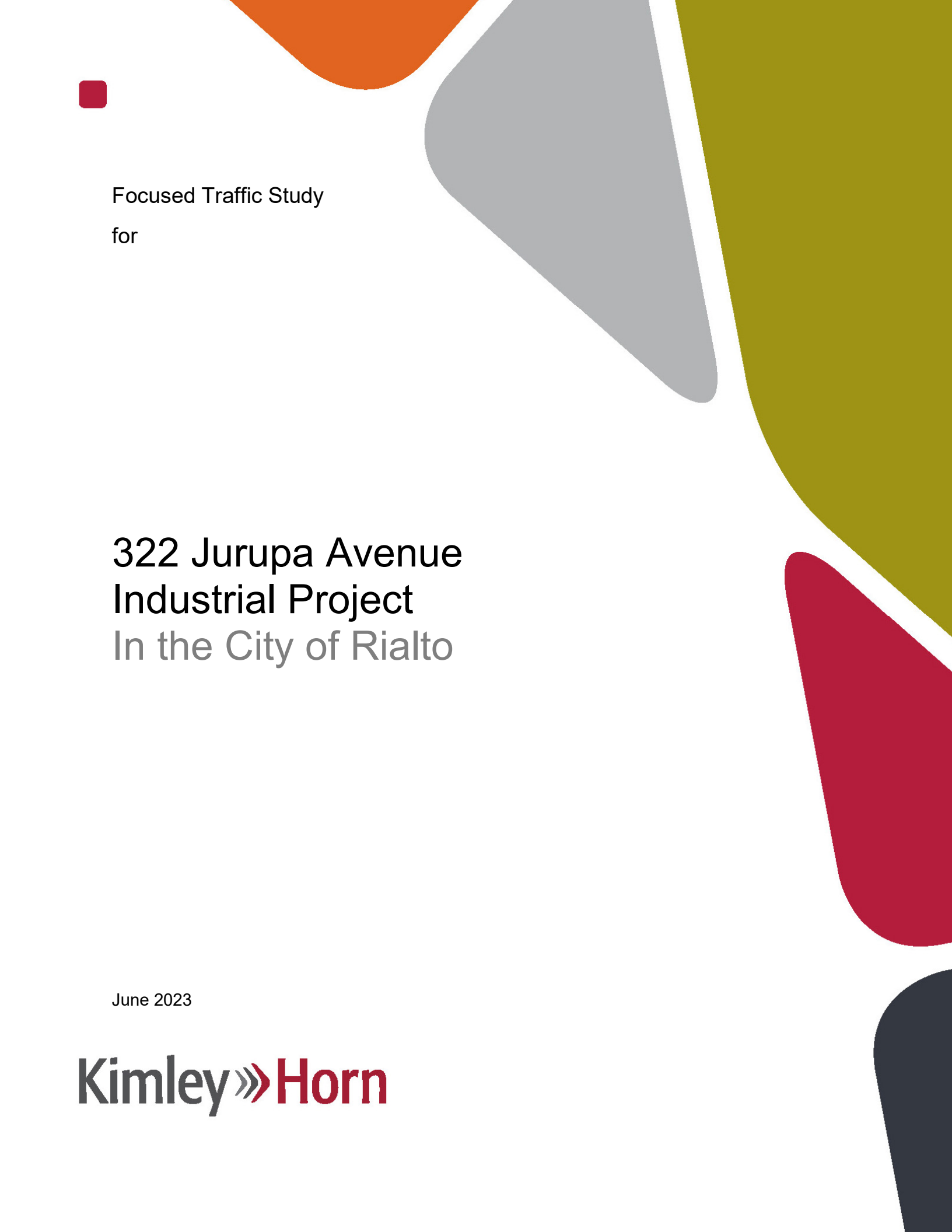




Appendix L

Focused Traffic Study



Focused Traffic Study
for

322 Jurupa Avenue
Industrial Project
In the City of Rialto

June 2023

Kimley»Horn

**FOCUSED TRAFFIC STUDY
FOR THE PROPOSED
322 JURUPA AVENUE INDUSTRIAL PROJECT
IN THE CITY OF RIALTO**

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June 2023

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APPENDIX B: TRAFFIC COUNT DATA SHEETS
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**FOCUSED TRAFFIC STUDY
FOR THE PROPOSED
322 JURUPA AVENUE INDUSTRIAL PROJECT
IN THE CITY OF RIALTO**

I. INTRODUCTION

A. Purpose of the TIA and Study Objectives

This Focused Traffic Study has been prepared to address the traffic-related effects of the proposed warehouse project located at 322 Jurupa Avenue in the City of Rialto.

This Focused Traffic Study has been conducted in accordance with the traffic study requirements of the City of Rialto, based on the City's *Traffic Impact Analysis Report Guidelines and Requirements* (October 2021), and in accordance with San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP) requirements.

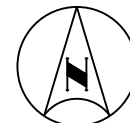
This report includes a description of existing traffic conditions in the surrounding area, estimated project trip generation and distribution, future traffic growth, and an assessment of project-related effect on the roadway system. Where necessary, circulation system improvements have been identified to achieve acceptable intersection operation within the vicinity of the project.

The project will be evaluated for the following study scenarios:

- Existing Conditions
- Opening Year 2024
- Opening Year 2024 Plus Project

B. Site Plan Location and Study Area

The project site is located at the northwest corner of the intersection of Jurupa Avenue and Willow Avenue in the City of Rialto. The project site is bounded by an industrial building to the north, residential housing to the west, Jurupa Avenue to the south, and Willow Avenue to the east. The project site is shown in its regional setting on **Figure 1**. The project site is currently vacant. The project will involve the construction of a 119,908 square-foot (SF) warehouse building. A copy of the project site plan is provided on **Figure 2**.



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**FIGURE 1
VICINITY MAP**



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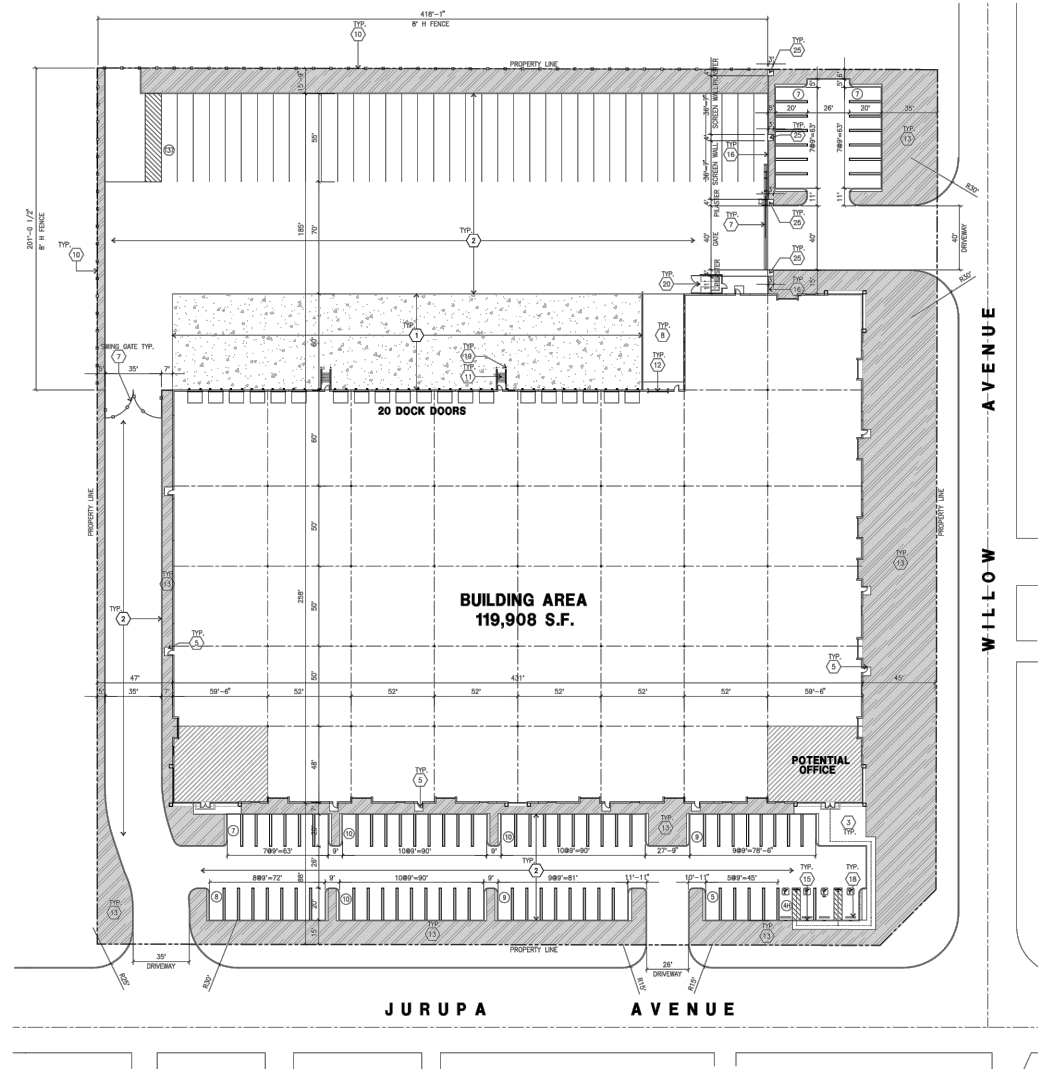


FIGURE 2
PROJECT SITE PLAN

C. Development Project Identification

Pending.

D. Development Project Description

The project will involve the construction of a 119,908 square-foot warehouse.

The City's General Plan land use designation for the project site is Light Industrial.

Vehicular access provisions for the project site would be provided via one full-movement driveway on Willow Avenue and two full-movement driveways on Jurupa Avenue. The driveway on Willow Avenue can be accessed by both passenger cars and trucks, the southwest driveway on Jurupa Avenue can be accessed by both passenger cars and trucks, and the southeast driveway on Jurupa Avenue can only be accessed by passenger cars.

The proposed opening year for the project is Year 2024. The project will be developed in a single project phase.

E. Analysis Methodology

1. Intersection Analysis – HCM Methodology

Peak hour intersection operations at unsignalized intersections were evaluated using the methods prescribed in the Highway Capacity Manual (HCM) 7th Edition, consistent with the requirements of the City of Rialto and the San Bernardino County CMP.

The City of Rialto guidelines require analysis of traffic operations to be based on the vehicular delay methodologies of the HCM (Transportation Research Board Special Report 209). Intersection analysis for the proposed project has been accomplished using the VISTRO software program and using the specified input parameters outlined in the City's *Traffic Impact Analysis Report Guidelines and Requirements*.

Per the HCM Methodology, Level of Service (LOS) for signalized intersections is defined in terms of average vehicle delay. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The chart on the following page provides a description of the operating characteristics of each Level of Service and define the LOS in terms of average seconds of delay for signalized and unsignalized intersections.

2. Level of Service Standards and Measure of Significance

The City of Rialto, per the City of Rialto 2010 General Plan Update, establishes minimum Level of Service standards. According to Policy 4-1.20 of the General Plan document, the City requires that signalized intersections operate at LOS D or better during the morning and evening peak hours. The City's Traffic Study Guidelines require new developments to mitigate effects that cause the Level of Service to fall below LOS D, or cause the peak hour delay to increase as follows:

- LOS A/B – by 10.0 seconds
- LOS C – by 8.0 seconds
- LOS D – by 5.0 seconds
- LOS E – by 2.0 seconds
- LOS F – by 1.0 second

The City's traffic study guidelines require unsignalized intersections to operate with no vehicular movement having an average delay exceeding 120 seconds during the morning and evening peak hours.

LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized	Unsignalized	
A	< 10.0	< 10.0	LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
B	> 10.0 - 20.0	> 10.0 - 15.0	LOS B represents stable flow, but the presence of others in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
C	> 20.0 - 35.0	> 15.0 - 25.0	LOS C is in the range of stable flow, but marks the beginning of operation in which individual users become affected by interaction with others in the traffic stream.
D	> 35.0 - 55.0	> 25.0 - 35.0	LOS D represents high-density, but stable flow. Speed and freedom to maneuver are restricted, and the driver experiences a generally poor level of comfort and convenience.
E	> 55.0 - 80.0	> 35.0 - 50.0	LOS E represents operating conditions at or near the capacity of the intersection. All speeds are reduced to a low, but relatively uniform level. Small increases in flow will cause breakdowns in traffic movement.
F	> 80.0	> 50.0	LOS F represents forced, or breakdown flow. This condition occurs when the amount of traffic approaching the intersection exceeds the volume which can pass through the intersection, resulting in queues and congestion.

II. AREA CONDITIONS

A. Identify Study Area and Intersections

This traffic study includes identification of project-related effects at the following study intersections:

1. Willow Avenue at Jurupa Avenue
2. Riverside Avenue at Jurupa Avenue
- D1. Jurupa Avenue at Project Driveway 1
- D2. Jurupa Avenue at Project Driveway 2
- D3. Willow Avenue at Project Driveway 3

The study locations were established in conjunction with City staff through the Scoping Agreement process (Exhibit B of the City of Rialto *Traffic Impact Analysis Report Guidelines and Requirements*). A copy of the approved Scoping Agreement is provided in **Appendix A**.

New traffic counts were collected for the intersection of Willow Avenue at Jurupa Avenue in December 2022. Due to current construction on Riverside Avenue, recent historical counts collected in April 2018 were used for the intersection of Riverside Avenue at Jurupa Avenue. An ambient annual growth rate of two (2) percent per year was applied to the historical count to develop existing year 2023 volumes. Copies of the traffic count data worksheets are provided in **Appendix B**.

B. Description of Existing Roads, Traffic Control, and Intersection Geometrics

Regional access to the site is provided primarily by Interstate 10 (I-10) Freeway, approximately 1.3 miles to the north of the project site. In addition, the Interstate 215 (I-215) Freeway is located approximately 4.0 miles to the east of the site, the Interstate 15 (I-15) Freeway is approximately 10.0 miles to the west of the site, and State Route 60 (SR 60) Highway is approximately 3.5 miles to the south.

Existing lane configurations and intersection controls at the study intersections are shown on **Figure 3**. The following provides a description of the roadways surrounding the project site.

Willow Avenue – Willow Avenue is a two lane north-south undivided roadway. The posted speed limit on Willow Avenue is 40 mph and on-street parking is permitted on the east side of the roadway. Willow Avenue is designated as a Collector Street in the City’s Circulation Element. The project site plan depicts one full-movement project driveway on Willow Avenue.

Riverside Avenue – Riverside Avenue is currently a four- to six-lane north-south roadway divided by a painted median through the study area. The posted speed limit is 55 mph and on-street parking is prohibited on both sides of the roadway. Riverside Avenue is designated as a Modified Major Arterial II between San Bernardino Avenue and Slover Avenue, and a Modified Arterial I between Slover Avenue and the southern City boundary in the City’s Circulation Element. The ultimate configuration will also accommodate a bike lane on each side of the roadway. Riverside Avenue is a designated truck route for its entire length within the Agua Mansa Specific Plan. Riverside Avenue provides direct access to the I-10 Freeway interchange to the north of the project site.

Jurupa Avenue – Jurupa Avenue is a two- to four-lane east-west roadway through the study area. The posted speed limit is 40 mph and on-street parking is prohibited on both sides of the roadway. Jurupa Avenue is designated as a Secondary Arterial in the City’s Circulation Element. The project site plan depicts two full-movement project driveways on Jurupa Avenue.

C. Existing Traffic Volumes

Traffic count data included vehicle classifications for passenger vehicles and trucks. Vehicle classifications are necessary to compute Passenger Car Equivalent (PCE) volumes, which are used in the traffic analysis to address the truck-related traffic effect on intersection and roadway operation.

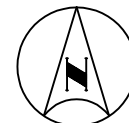
The PCE volumes were developed by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. These factors are consistent with the City of Rialto’s *Traffic Impact Analysis Guidelines and Requirements*. PCE adjusted volumes are provided in **Appendix B**, previously mentioned. Existing morning and evening peak hour volumes with the PCE factors applied are presented on **Figure 4**.

D. Existing Delay and Level of Service

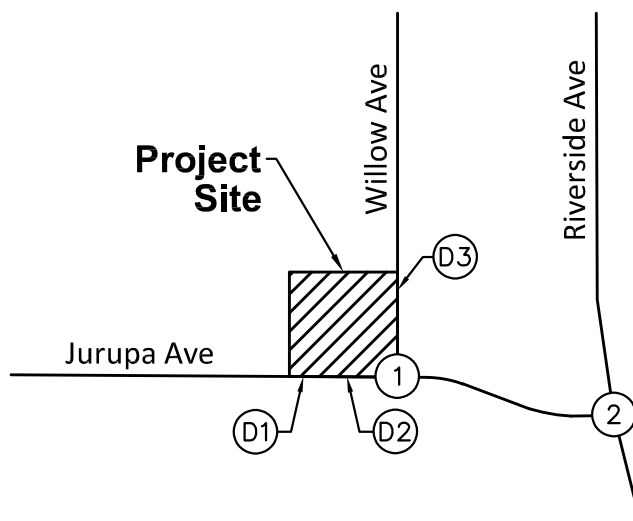
Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on **Table 1**.

Review of this table indicates that all study intersections are currently operating at an acceptable Level of Service. Copies of the intersection analysis worksheets are provided in **Appendix C**.



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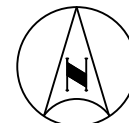


1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
		FUTURE INTERSECTION
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	
FUTURE INTERSECTION	FUTURE INTERSECTION	

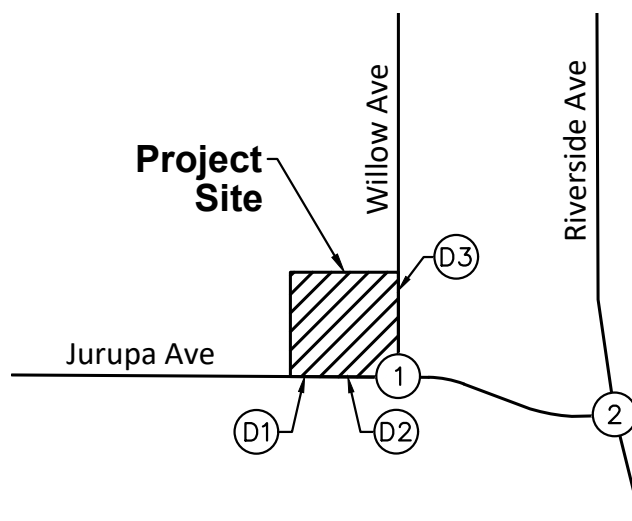
LEGEND:

- = Study Intersection
- = Turn or Through Lane
- = Stop Sign
- = Signal
- D = Defacto Right Turn

**FIGURE 3
EXISTING LANE CONFIGURATION
AND TRAFFIC CONTROL**



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1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
		FUTURE INTERSECTION
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	
FUTURE INTERSECTION	FUTURE INTERSECTION	

Note: Volumes reflect PCE adjustments.

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour
Turning Movement
Volumes

**FIGURE 4
EXISTING TRAFFIC VOLUMES**

TABLE 1
SUMMARY OF INTERSECTION OPERATION
EXISTING CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Willow Avenue at Jurupa Avenue	U	8.0	A	9.9	A
2	Riverside Avenue at Jurupa Avenue	S	10.2	B	14.9	B

Notes:

- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

U = Unsignalized; S = Signalized

E. General Plan Circulation Element

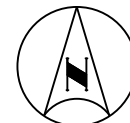
The General Plan Circulation Element provides street classifications near the project vicinity. A copy of the General Plan Street Classifications is provided on **Figure 5**. Designated truck routes in the City of Rialto General Plan are shown on **Figure 6**.

F. Transit Service

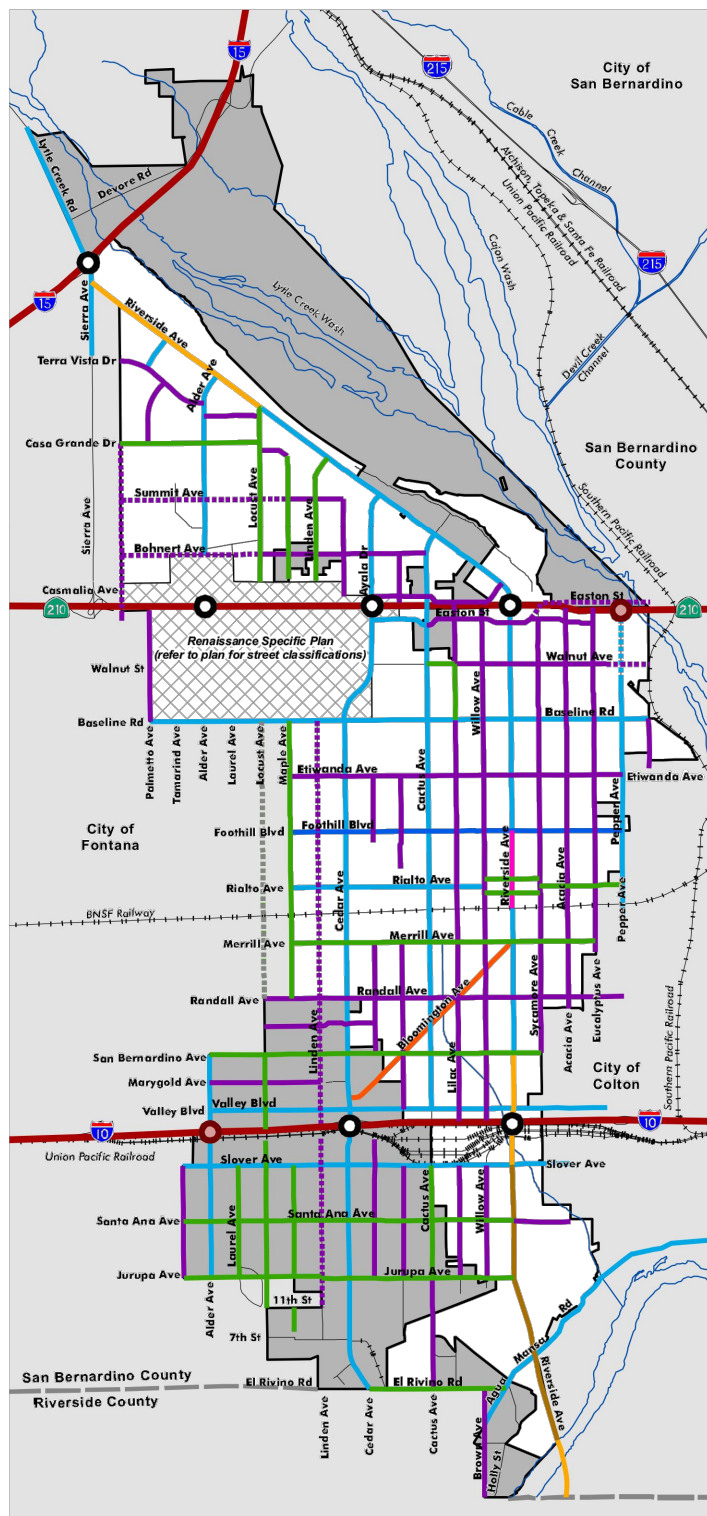
Transit service to the project area is provided via the OmniTrans transit lines and Riverside Transit Authority transit lines, which serve various cities in San Bernardino and Riverside. Bus stops in the project vicinity are located along Riverside Avenue and Valley Boulevard, approximately 1 mile to the north and Main Street approximately 2.5 mile to the south. A description of the bus routes serving the project area is provided below.

OmniTrans Route 22 operates between the City of Rialto and the City of Colton through Rialto along Riverside Avenue in the project vicinity. Route 22 operates on weekdays from 5:00 AM to 9:40 PM with approximately 1-hour headways, on Saturdays from 7:15 AM to 6:30 PM with approximately 1-hour headways, and on Sundays from 7:30 AM to 6:40 PM with approximately 1-hour headways. Route 22 has a transfer point with Route 10 at the intersection of Riverside Avenue and Baseline Road.

Riverside Transit Authority Route 12 operates between the City of Riverside and the City of Corona. Route 12 operates on weekdays from 5:05 AM to 11:00 PM with approximately 1-hour headways and on Saturdays from 6:30 AM to 8:30 PM with approximately 1-hour headways.



NOT TO SCALE



Street Classification

Existing right-of-ways are indicated with a solid line, proposed right-of-ways are indicated with a dotted line, and right-of-ways outside the planning area are indicated with a gray line.

- Freeway
- Major Arterial Highway
- Major Arterial
- Major Arterial
- Modified Major Arterial I
- Modified Major Arterial II
- Modified Arterial I
- Modified Arterial II
- Secondary Arterial
- - - Secondary Arterial
- - - Secondary Arterial
- Collector Street
- - - Collector Street

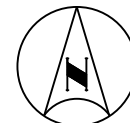
Freeway Interchanges

- Existing Interchange
- Planned Future Interchange

Base Map Features

- Rialto Incorporated Area
- Rialto Sphere of Influence
- County Boundary
- Local Road
- Railroad
- Hydrological Feature

**FIGURE 5
GENERAL PLAN STREET CLASSIFICATIONS**



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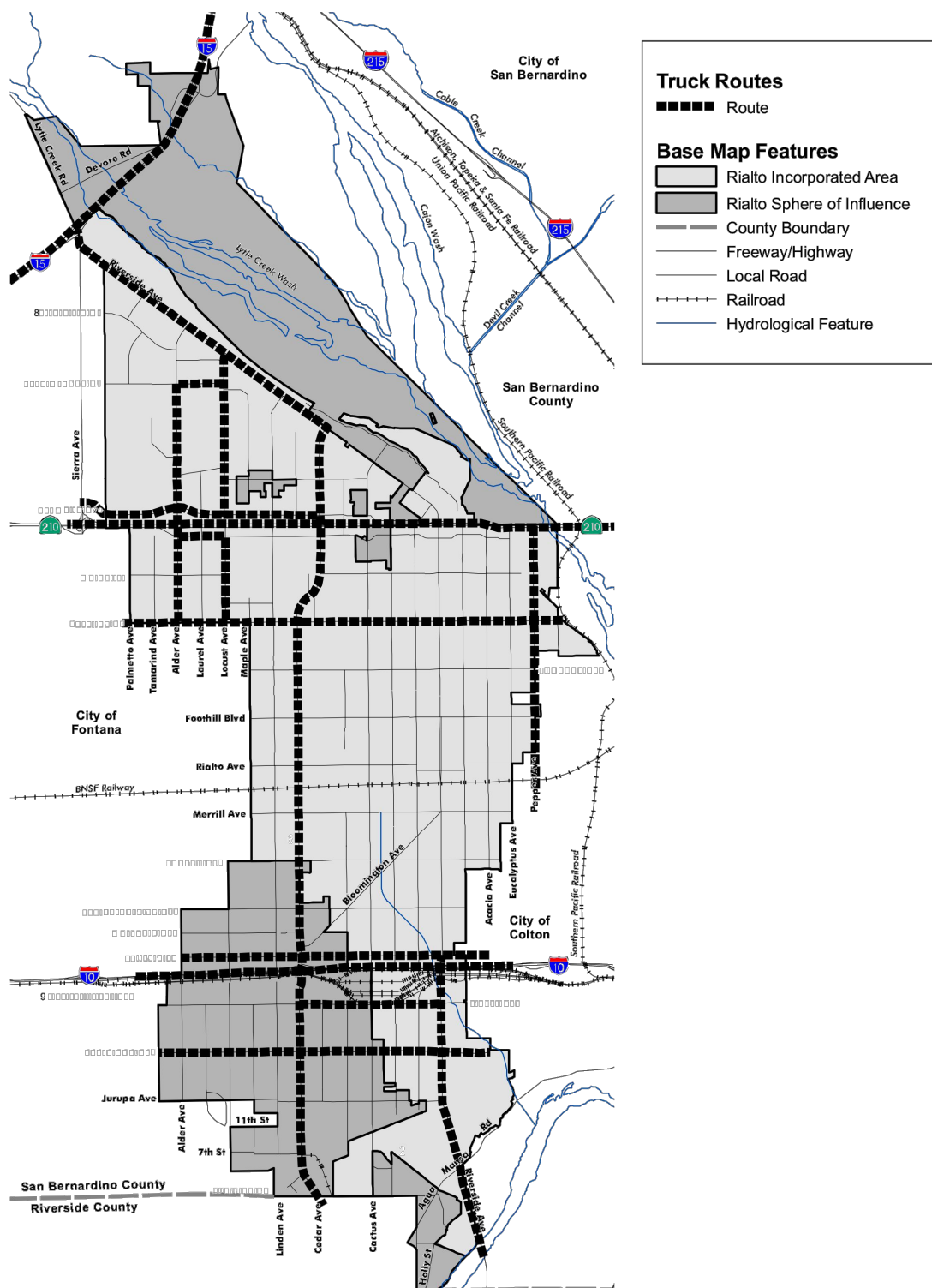


**FIGURE 6
GENERAL PLAN TRUCK ROUTES**

III. PROJECTED FUTURE TRAFFIC

A. Ambient Growth Rate

An ambient growth rate of 2.0% per year to Opening Year 2024 was applied to existing peak hour traffic volumes to develop Opening Year 2024 forecasts.

B. Cumulative Conditions

1. Cumulative Projects

In addition to ambient growth, traffic volumes for cumulative projects (approved and pending projects) were added to the Opening Year 2024 peak hour traffic volumes. Cumulative Projects consist of any project that has been approved and is not yet occupied, and projects that are in various stages of the application and approval process, but have not yet been approved.

2. Cumulative Projects Trip Generation

Trip generation information for the Cumulative Projects was derived either from approved traffic studies, where available; or developed by Kimley-Horn if approved traffic studies were not available. Project information and trip generation assumptions for Cumulative Projects are provided in **Appendix D**.

3. Cumulative Projects Trip Distribution and Assignment

Likewise, trip distribution and assignment for the Cumulative Projects were either derived from approved traffic studies, where available; or were developed by Kimley-Horn if approved traffic studies were not available. Trip distribution assumptions for Cumulative Projects are provided in **Appendix D**.

A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on **Table 2**. The locations of the Cumulative Projects are shown on **Figure 7**. Cumulative Project volumes are shown on **Figure 8**.

C. Opening Year 2024

Peak Hour Operating Conditions

Peak hour traffic volumes for Opening Year 2024 are shown on **Figure 9**. Intersection Level of Service analysis was conducted for Opening Year 2024 and the results are shown on **Table 3**. Intersection analysis worksheets for this scenario are provided in **Appendix C**.

Review of this table indicates that with the addition of Cumulative Projects and ambient growth, all study intersections would continue to operate at an acceptable Level of Service.

**TABLE 2
SUMMARY OF CUMULATIVE PROJECTS**

Project #	Location	Land Use	Quantity	Unit	Trip Generation Estimates ¹						
					Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
City of Rialto											
1	Rialto Village	Free Standing Discount Superstore	198.000	KSF	10,003	206	162	368	420	437	857
		Tire Store	9.861	KSF	273	16	9	25	16	21	37
		Shopping Center (>150k)	25.436	KSF	941	13	8	21	42	45	87
		Fast-Food Restaurant w/ Drive-thru	5.484	KSF	2,564	125	120	245	94	87	181
2	South of Santa Ana Ave, East of Riverside Ave	Warehousing	370.000	KSF	633	48	14	62	19	48	67
3	NWC of Riverside Ave and Santa Ana Ave	Warehousing	527.900	KSF	903	69	21	90	26	69	95
4	SEC of Riverside Ave and Santa Ana Ave	Convenience Store/Gasoline Station	16	FP	4,242	128	128	256	147	147	294
5	Lilac Avenue Warehouse	Warehousing	47.460	KSF	81	6	2	8	2	6	8
6	SC Fuels (19839 Santa Ana Ave)	Warehousing	48.302	KSF	83	6	2	8	2	6	8
7	Flyers Energy Addition	Warehousing	9.350	KSF	16	1	0	1	0	1	1
8	Angelus Black - Concrete Block	Manufacturing	178.475	KSF	848	92	29	121	41	91	132
9	Rialto Industrial Building ²	Warehousing	82.000	KSF	235	18	6	24	6	18	24
10	Birtcher Logistics Center	Warehousing	492.410	KSF	842	65	19	84	25	64	89
11	2720 Willow Avenue Warehouse ³	Warehousing	118.450	KSF	347	27	8	35	10	27	37
12	249 Santa Ana Avenue Truck Terminal ⁴	Truck Terminal	154	Parking Stalls	377	9	6	15	29	33	62
			280	Truck Docks	1,545	43	68	111	107	59	166
County of San Bernardino											
13	Cedar / Slover Retail	Convenience Store/Gasoline Station	12	FP	3,181	96	96	192	111	111	222
		Self-Service Car Wash	1	Wash Stall	108	0	0	0	3	3	6
		Fast-Food Restaurant w/ Drive-thru	9.907	KSF	4,631	225	217	442	170	157	327
14	Cactus and Slover Warehouse	Warehousing	257.855	KSF	441	34	10	44	13	34	47
Total Project Trips					32,294	1,227	925	2,152	1,283	1,464	2,747
KSF = Thousand Square Feet, FP = Fueling Positions Source: ¹ ITE Trip Generation Manual (11th Edition) ² Rialto Industrial Building Focused Traffic Study (Kimley-Horn; November 2022) ³ 2720 Willow Avenue Warehouse Project Focused Traffic Study (Kimley-Horn; January 2023) ⁴ 249 Santa Ana Avenue Truck Terminal Traffic Study (Kimley-Horn; April 2023)											



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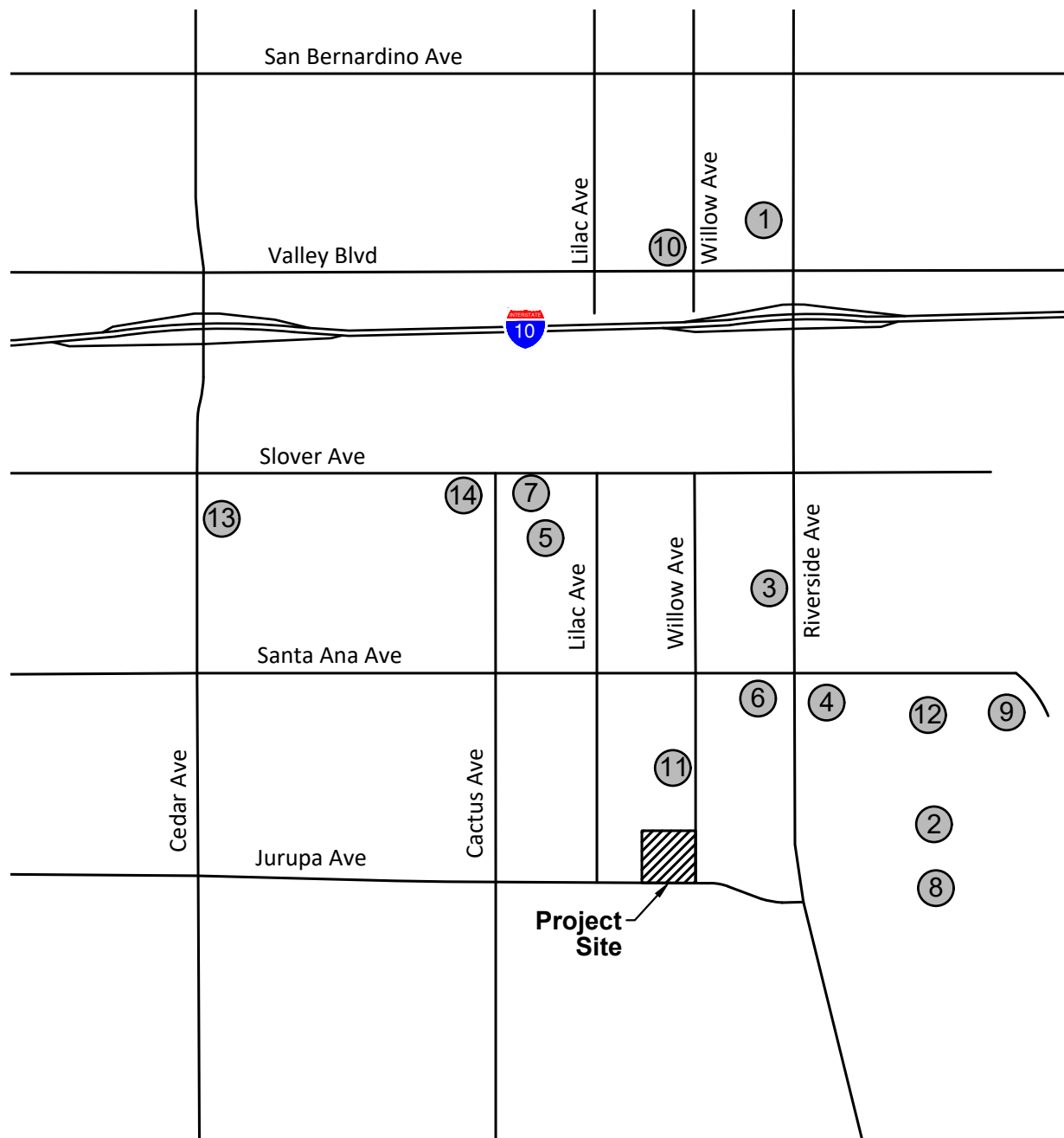


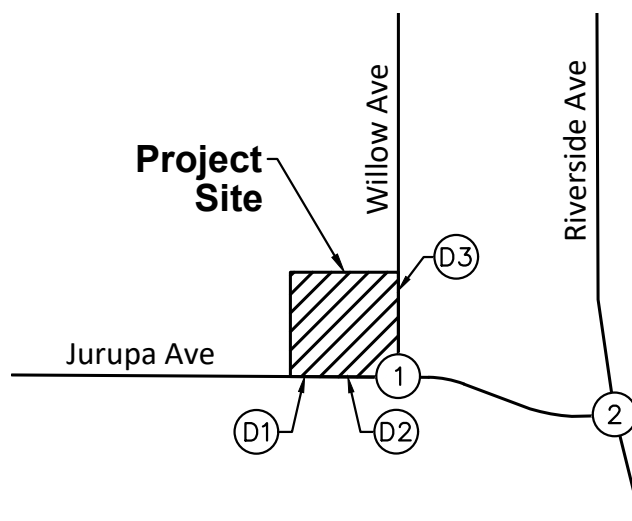
FIGURE 7
LOCATION OF CUMULATIVE PROJECTS

LEGEND:

(X) = Cumulative Project



NOT TO SCALE



1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	

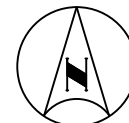
**FIGURE 8
CUMULATIVE PROJECTS TRAFFIC
VOLUMES**

LEGEND:

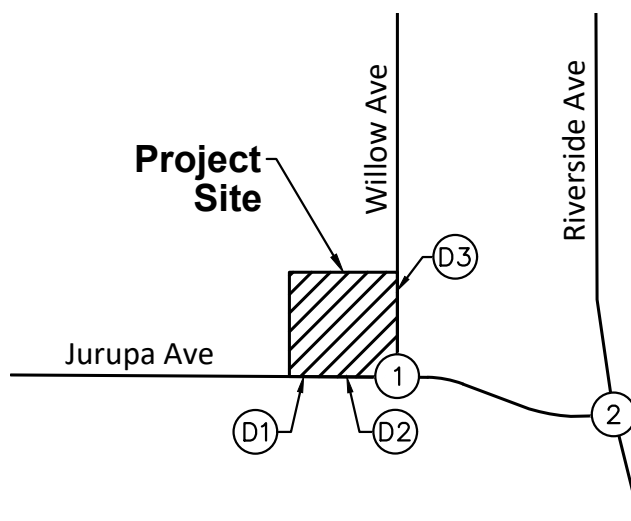


= Study Intersection

XX/YY = AM/PM Peak Hour
Turning Movement
Volumes



NOT TO SCALE



1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	

Note: Volumes reflect PCE adjustments.

LEGEND:

(X) = Study Intersection

XX/YY = AM/PM Peak Hour
Turning Movement
Volumes

**FIGURE 9
OPENING YEAR 2024
TRAFFIC VOLUMES**

TABLE 3
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CONDITIONS

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Willow Avenue at Jurupa Avenue	U	8.3	A	10.7	B
2	Riverside Avenue at Jurupa Avenue	S	11.9	B	17.7	B

Notes:

- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

U = Unsignalized; S = Signalized

D. Project Traffic

1. Project Trip Generation

A trip generation analysis has been prepared to determine the estimated traffic to be generated by the proposed project. Trip generation estimates are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) trip generation rates for Warehousing (ITE 150). Trip generation rates and the resulting trip generation estimates for the proposed project are summarized on **Table 4**. The project is estimated to generate 123 passenger car (PC) trips on a daily basis with 13 PC trips in the morning peak hour and 14 PC trips in the evening peak hour; and 82 truck trips on a daily basis with 8 truck trips in the morning peak hour and 8 truck trips in the evening peak hour.

Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (1.5 for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 for 4+ axle trucks) to determine the total PCE volumes generated by the project. The project is estimated to generate 343 daily PCE trips, with 35 PCE trips in the morning peak hour, and 37 PCE trips in the evening peak hour.

2. Trip Distribution and Assignment

Trip distribution assumptions for the project were developed by considering the proposed site use, and the routes to and from the freeway system for the warehouse trucks. Separate distribution patterns were assumed for passenger car trips and truck trips. Trip distribution patterns are shown on **Figure 10**. Trip distribution percentages at each study intersection were applied to the project trip generation to determine the project trips through each intersection. The resulting project-related peak hour trips at the study intersections are shown on Figure 10, previously mentioned.

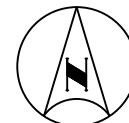
E. Opening Year 2024 Plus Project

Peak Hour Operating Conditions

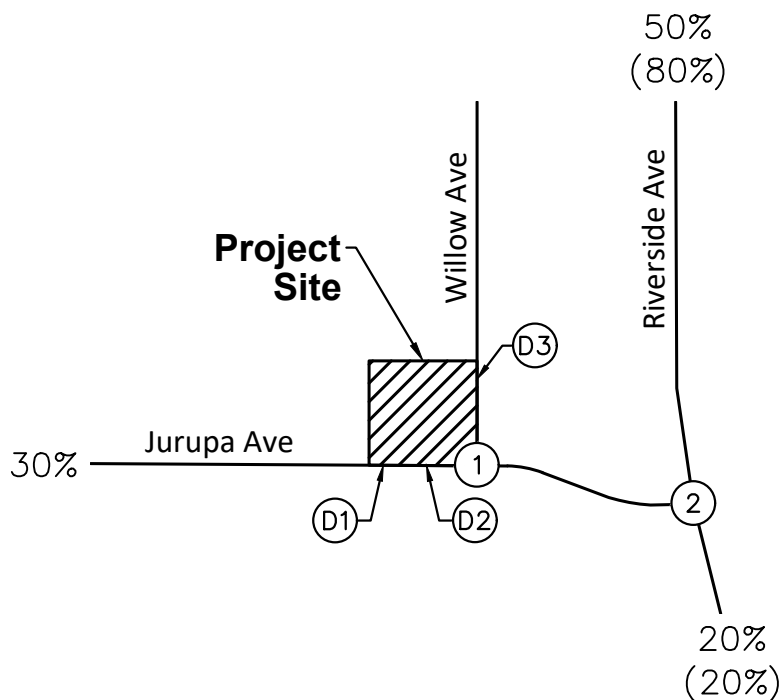
Project-related trips were added to Opening Year 2024 traffic volumes to develop forecasts for the Opening Year 2024 Plus Project scenario. The resulting peak hour traffic volumes are shown on **Figure 11**. Intersection Level of Service analysis was conducted for the Opening Year 2024 Plus Project conditions. The results of the intersection analysis are shown on **Table 5**. Intersection analysis worksheets for this scenario are provided in **Appendix C**.

Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service in both peak hours with the addition of Project traffic.

TABLE 4 SUMMARY OF PROJECT TRIP GENERATION										
Land Use		ITE Code	Unit	Trip Generation Rates ¹						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		150	KSF	1,710	0.131	0.039	0.17	0.050	0.130	0.18
Land Use		Quantity	Unit	Trip Generation Estimates						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		119,908	KSF	205	16	5	21	6	16	22
Passenger Vehicles	60.00%			123	10	3	13	4	10	14
Trucks	40.00%			82	6	2	8	2	6	8
WAREHOUSING PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)										
Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor ²	Daily ³	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	123	1.0	123	10	3	13	4	10	14
2-Axle Trucks	0.80%	2	1.5	3	0	0	0	0	0	0
3-Axle Trucks	11.20%	23	2.0	46	4	1	5	1	4	5
4+ Axle Trucks	28.00%	57	3.0	171	13	4	17	5	13	18
Total Truck PCE Trips				220	17	5	22	6	17	23
Total Project PCE Trips				343	27	8	35	10	27	37
¹ Source: Institute of Transportation Engineers (ITE) <u>Trip Generation Manual</u> , 11th Edition ² Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements ³ While trips based on the ITE 11th Edition trip generation rates are shown in this table, actual project trips are anticipated to be lower. With project design features such as preferred carpool/vanpool parking and end of trip bicycle facilities, it is expected that the daily project trips will be below the Vehicle Miles Traveled (VMT) thresholds of 110 daily vehicle trips.										



NOT TO SCALE



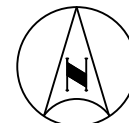
1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	

Note: Volumes reflect PCE adjustments.

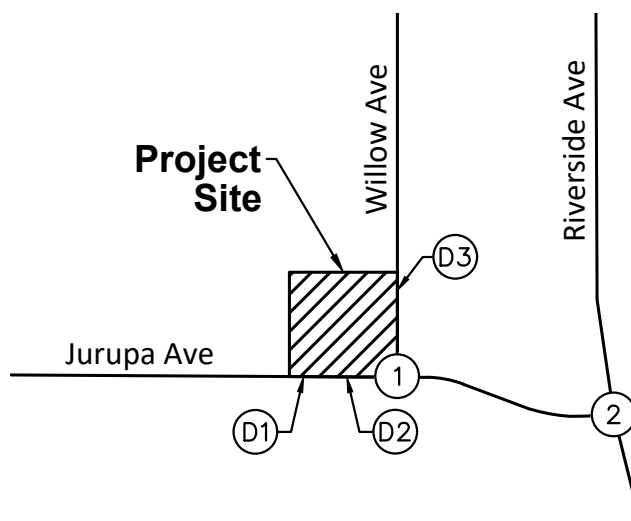
LEGEND:

- (X) = Study Intersection
- XX% = Passenger Car Distribution
- (YY%) = Truck Distribution
- xx/yy = AM/PM Peak Hour Turning Movement Volumes

**FIGURE 10
PROJECT TRIP DISTRIBUTION AND
PROJECT-RELATED TRAFFIC VOLUMES**



NOT TO SCALE



1. Willow Ave at Jurupa Ave	2. Riverside Ave at Jurupa Ave	D1. Jurupa Ave at Project Driveway 1
D2. Jurupa Ave at Project Driveway 2	D3. Willow Ave at Project Driveway 3	

Note: Volumes reflect PCE adjustments.

LEGEND:



= Study Intersection

XX/YY = AM/PM Peak Hour
Turning Movement
Volumes

**FIGURE 11
OPENING YEAR 2024 PLUS PROJECT
TRAFFIC VOLUMES**

**TABLE 5
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 PLUS PROJECT CONDITIONS**

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change Delay	Sig Effect?	Without Project		With Project		Change Delay	Sig Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Willow Avenue at Jurupa Avenue	S	8.3	A	8.4	A	0.1	No	10.7	B	11.1	B	0.4	No
2	Riverside Avenue at Jurupa Avenue	U	11.9	B	12.2	B	0.3	No	17.7	B	18.3	B	0.6	No
D1	Jurupa Avenue at Project Driveway 1	U	-	-	10.4	B	-	-	-	-	12.9	B	-	-
D2	Jurupa Avenue at Project Driveway 2	U	-	-	10.4	B	-	-	-	-	13.0	B	-	-
D3	Willow Avenue at Project Driveway 3	U	-	-	8.6	A	-	-	-	-	8.9	A	-	-

Notes:

- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
U = Unsignalized; S = Signalized

IV. SPECIFIC ISSUES

A. Queueing Analysis

Queue lengths were assessed at the following location:

- Willow Avenue at Jurupa Avenue (#1)
 - Southbound Approach (Shared Left-Through-Right)
 - Eastbound Approach (Shared Left-Through)
 - Westbound Right Turn

A summary of left-turn pocket storage capacity, 95th percentile queue lengths at the location noted above are summarized on **Table 6**. The table shows that all approaches would have adequate storage capacity to accommodate the 95th percentile queues under all scenarios. No queues are anticipated to block traffic entering or exiting the project site.

Queue length analysis for 95th percentile queues are provided in the intersection analysis worksheets in **Appendix C** of this report.

B. Signal Warrant

A signal warrant analysis was conducted to determine the potential need for a traffic signal at the intersection of Willow Avenue at Jurupa Avenue during the Opening Year 2024 Plus Project scenario. After conducting the signal warrant analysis, no signal warrants were satisfied. Signal warrant analysis worksheets can be found in **Appendix E**. Additionally, during the Opening Year 2024 Plus Project scenario, the intersection operates at an acceptable Level of Service. A traffic signal is not warranted at this intersection at this time.

TABLE 6 SUMMARY OF INTERSECTION QUEUING STORAGE CAPACITY 322 JURUPA AVENUE INDUSTRIAL PROJECT						
Intersection	Approach	Storage Capacity (ft/ln)	Peak Hour	95th Percentile Queue Length (ft/ln)		
				Existing	Opening Year 2024	Opening Year 2024 Plus Project
Willow Avenue at Jurupa Avenue	SBLTR	50	AM	7	8	9
			PM	17	19	22
	EBLT	80	AM	12	18	18
			PM	42	54	60
	WBR	135	AM	2	3	4
			PM	7	8	9

V. RECOMMENDED IMPROVEMENTS

A. Intersection Improvements

Based on the impact criteria in the City's *Traffic Impact Analysis Report Guidelines and Requirements* (Exhibit F), no improvements are required for the project.

VI. VEHICLE MILES TRAVELED ANALYSIS

A. Introduction

Senate Bill 743 (SB 743) was approved by California legislature in September 2013. SB 743 requires changes to California Environmental Quality Act (CEQA), specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "Level of Service" (LOS) for evaluating transportation projects. OPR has prepared a technical advisory ("OPR Technical Advisory") for evaluating transportation impacts in CEQA and has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts. The Natural Resources Agency has adopted updates to CEQA Guidelines to incorporate SB 743 that requires VMT for the purposes of determining a significant transportation impact under CEQA.

B. VMT Analysis

The City of Rialto Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment (October 2021) provide details on appropriate screening thresholds 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 level analysis. Screening thresholds are broken down into the following three criteria:

1. Transit Priority Area (TPA) Screening
2. Low VMT Area Screening
3. Project Type Screening

Land development projects that meet one or more of the above screening thresholds may be presumed to create a less-than-significant impact on transportation and circulation.

Transit Priority Area (TPA) Screening

A project would be considered to have a less-than-significant transportation impact if the project is located within a Transit Priority Area (TPA) as determined by the most recent SCAG RTP/SCS and the San Bernardino County Transportation Authority (SBCTA) VMT screening tool. Based on SBCTA VMT screening tool, the proposed project is not located within a TPA.

The Transit Priority Area Screening threshold is not met.

Low VMT Area Screening

A project would be considered to have a less-than-significant transportation impact if the project is located within a low VMT generating area as determined by the City of Rialto guidelines and the SBCTA VMT screening tool. Based on the City of Rialto VMT thresholds and the SBCTA VMT Screening Tool, the proposed project is not located within a low VMT area. Results of the SBCTA VMT Screening Tool are provided in the Scoping Agreement (*Appendix A*, previously mentioned).

The Low VMT Area Screening threshold is not met.

Project Type Screening

A project would be considered to have a less-than-significant transportation impact if the project generates less than 110 daily vehicle trips. The following uses would also be presumed to have a less-than-significant VMT impact:

- K-12 Schools
- Local-Serving retail less than 50,000 square feet
- Local parks
- Day care centers
- Local serving gas stations
- Local serving banks
- Student housing projects
- Local-serving hotels (e.g., non-destination hotels)
- Local-serving medical
- Student housing projects on or adjacent to college campuses
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (Public libraries, fire stations, local government)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Affordable or supportive housing
- Assisted living facilities
- Senior housing (as defined by HUD)

The project will involve the construction of a 119,908 square-foot industrial building that generates 123 daily passenger vehicle trips based on standard ITE rates and truck percentages per City guidelines. However, the project may provide actual employee arrival and departure data based on the actual tenancy of the site to show the daily employee commute trips is less than 110 trips. With project design features such as preferred carpool/vanpool parking and end of trip bicycle facilities, it is expected that the daily employee project trips will be below the threshold of 110 daily vehicle trips.

It is recommended that the project applicant coordinate with the City staff to provide driveway count data after building occupancy to confirm the daily employee trips are within 110 daily trip threshold. Counts could be collected, by the owner, for 3 weekdays every year for up to 5 years subject to approval of City Engineer. If the daily employee trips are found to be over 110 trips, City may require implementation of additional Transportation Demand Management (TDM) measures.

The Project Type Screening threshold is met.

VII. FINDINGS AND RECOMMENDATIONS

A. Improvements

Not Applicable.

B. Traffic Signal Warrant Analysis

A signal warrant analysis was conducted to determine the potential need for a traffic signal at the intersection of Jurupa Avenue and Willow Avenue. After conducting the signal warrant analysis, no signal warrants were satisfied. Signal warrant analysis worksheets can be found in **Appendix E**. A traffic signal is not warranted at the study intersection at this time.

C. Site Circulation

Vehicular access provisions for the project site would consist of three unsignalized driveways, one on Willow Avenue and two on Jurupa Avenue. The driveway on Willow Avenue can be accessed by both passenger cars and trucks, the southwest driveway on Jurupa Avenue can be accessed by both passenger cars and trucks. The southeast driveway on Jurupa Avenue can only be accessed by passenger cars.

D. Safety and Operational Improvements

The roadways serving the project site are generally straight and flat. A sight distance analysis of existing roadway conditions is not needed. The site driveways and project improvements must be designed so that adequate sight distance for drivers entering and exiting the site is maintained. The line of sight – a straight line between the driver’s eye and oncoming vehicles on the adjacent roadway defines the Limited Use Area. The Limited Use Area for each driveway must be kept clear of visual obstructions, including project signs, building structures, and landscaping, in order to maintain adequate sight distance.

E. Fair Share Calculations

Not Applicable.

F. Specific Plan Signalization

Not Applicable.

G. General Plan Conformance

The proposed 322 Jurupa Avenue Industrial Project is in conformance with the City of Rialto General Plan. The proposed use is permitted under the Light Industrial designation within the City of Rialto General Plan. A General Plan Amendment is not required for the project.

H. Regional Funding Mechanisms

The project is subject to the City's city-wide traffic impact fee program. The proposed project will pay applicable DIF fees toward the Riverside Avenue Widening project. The fees paid by the Developer will be collected by the City of Rialto and used toward the Riverside Avenue Widening Project, as identified in Measure I of the 2018 Nexus Study Item "Widen Riverside Avenue from South City Limit to Slover Avenue from 4 lanes to 6 lanes

APPENDIX A

APPROVED SCOPING AGREEMENT



Exhibit A

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

This following form shall be used to acknowledge preliminary approval of the scope for the traffic impact analysis (TIA) of the following project. The TIA must follow the City of Rialto Traffic Impact Analysis – Report Guidelines and Requirements, adopted by the City Council on _____.

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. _____

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: 322 Jurupa Avenue Industrial Project

Project Address: 322 Jurupa Avenue, Rialto CA 92316

Project Description: Construction of a 119,908 SF industrial building on a vacant parcel.

Consultant

Developer

Name: Kimley-Horn and Associates, Inc.

Donlon Builders

Address: 1100 W Town and Country Road, Suite 700
Orange, CA 92868

2681 Saturn Street
Brea, CA 92821

Telephone: (714) 780-2543

(714) 528-0800

Fax: N/A

N/A



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

Existing GP Land Use Vacant Proposed Land Use Warehousing (ITE 150)

Current Zoning: Light Industrial (M-1) Proposed Zoning: N/A

Total Daily Project Trips: 343 - See Attachment 2 - Trip Generation Table

Current Trip Generation			Proposed Trip Generation			
	In	Out	Total	In	Out	Total
AM Trips	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>27</u>	<u>8</u>	<u>35</u>
PM Trips	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>10</u>	<u>27</u>	<u>37</u>
Internal Trip Allowance	Yes	No	(_____ % Trip Discount)			
Pass-By Trip Allowance	Yes	No	(_____ % Trip Discount)			

For appropriate land uses, a pass-by trip discount may be allowed not to exceed 25%. Discount trips shall be indicated on a report figure for intersections and access locations.

See Attachment 3 - Study Area

2. Trip Geographic Distribution: N % S % E % W %

(Detailed exhibits of trip distribution must be attached with Trucks as a separate exhibit)

3. Background Growth Traffic

Project Completion Year: 2024 Annual Background Growth Rate: 2 %

Other Phase Years N/A

Other area projects to be considered: _____

(Contact Planning for Lists. Correlate projects to exhibit map and also indicate which projects have been included in study area forecasts for existing + background growth + project + cumulative)

Model/Forecast methodology: Existing plus Growth plus Cum. Project plus Project to Opening Year

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

- | | |
|--|-----------|
| 1. <u>S Willow Avenue at Jurupa Avenue</u> | 6. _____ |
| 2. <u>S Riverside Avenue at Jurupa Avenue</u> | 7. _____ |
| 3. <u>Jurupa Avenue at Project Driveway #1</u> | 8. _____ |
| 4. <u>Jurupa Avenue at Project Driveway #2</u> | 9. _____ |
| 5. <u>S Willow Avenue at Project Driveway #3</u> | 10. _____ |



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

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

6. Other Jurisdictional Impacts

Is this project within any other Agency's Sphere of Influence or within one-mile of another jurisdictional boundary?

☒ YES
☐ NO

If so, name of Jurisdiction: Fontana

7. Site Plan (please attach 11" x 17" legible copy) See Attachment 1 - Site Plan

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works 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 un-signalized 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.)

Signal Warrant Analysis for S Willow Avenue at Jurupa Avenue,
Recommend Improvements along Jurupa Avenue and S Willow Avenue.
Clearly illustrate planned improvements along the frontage of Jurupa Avenue

9. Existing Conditions

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

Date of counts: 12/1/2022

NOTE Fees are due and must be submitted with, or prior to submittal of this form. The City will not process the Scoping Agreement prior to the receipt of the processing fee.

Fees Paid: _____ Date _____



Recommended:

Scoping Agreement Submittal date 3/22/2023

Scoping Agreement Resubmittal date 6/27/2023

Kimley-Horn and Associates, Inc.

March 22, 2023

Applicant/Engineer

Date

Land Use Concurrence:

Development Services Department

Date

Approved by:

Justin P. Schlaepfer
6/9/23- Signed with comments

Public Works Department

Date

NOTE:

The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval.



VMT Analysis Project Scoping Form

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

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	322 Jurupa Avenue Industrial Project
Project Address:	322 Jurupa Avenue, Rialto CA 92316
Project Opening Year:	
Project Description:	Construction of a 119,908 SF industrial building on a vacant parcel.

	Consultant:	Developer:
Name:	Kimley-Horn and Associates, Inc.	Donlon Builders
Address:	1100 W Town and Country Road Suite 700, Orange, CA 92868	2681 Saturn Street Brea, CA 92821
Telephone:	(714) 780-2543	(714) 528-0800
Fax/Email:	N/A	N/A

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition (

Current General Plan Land Use:

Vacant

Proposed General Plan Land Use:

Warehousing (ITE 150)

Current Zoning:

Light Industrial (M-1)

Proposed Zoning:

N/A



	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	N/A	N/A	N/A	27	8	35
PM Trips	N/A	N/A	N/A	10	27	37

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

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

Potential Screening Checks

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

VMT screening justification <u>Project Type Screening (see attached VMT memo)</u> _____ _____ _____ _____

VMT Scoping

For projects that are not screened, identify the following:

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



Approved by:

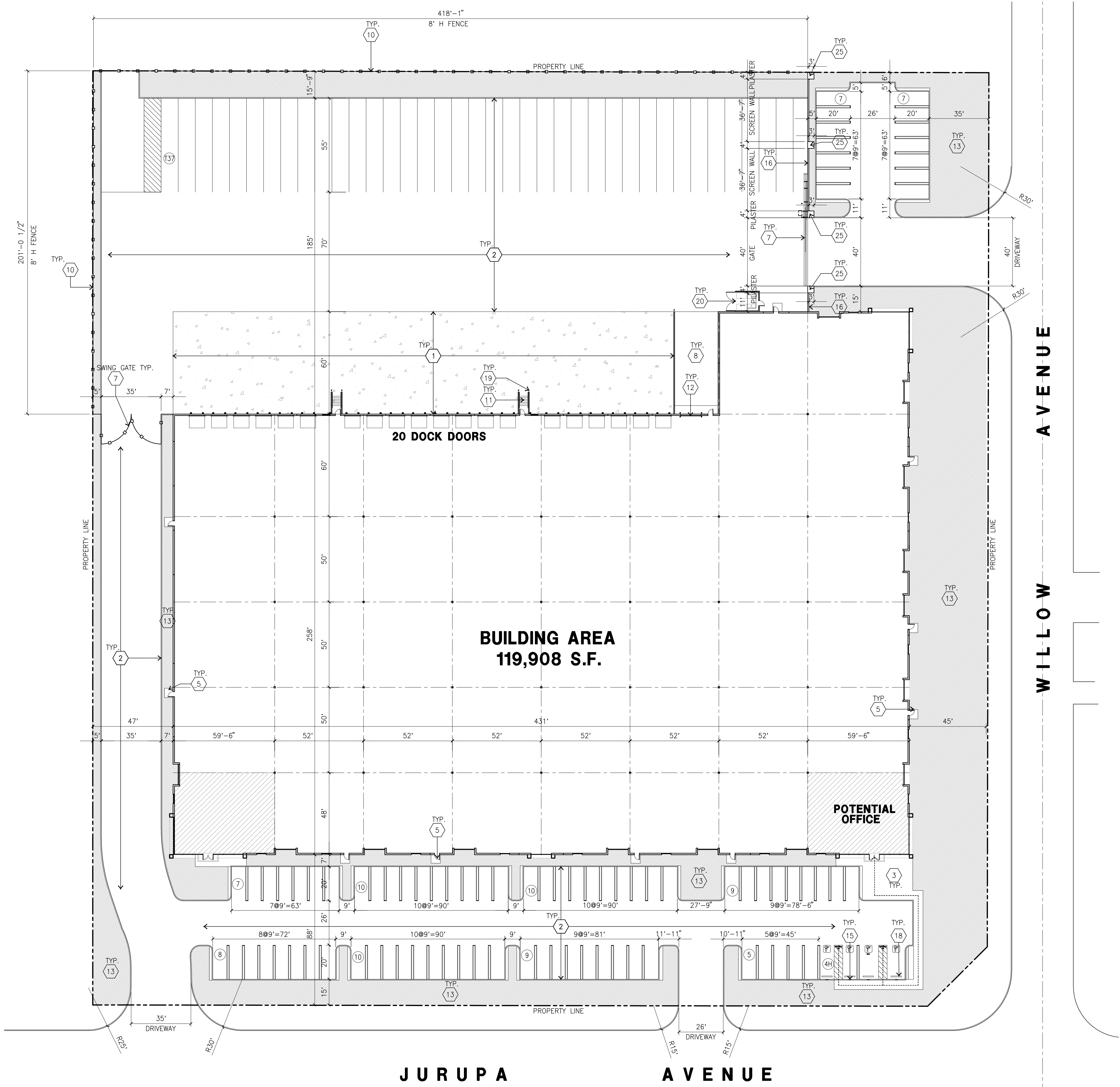
Public Works Department

Date

NOTE:

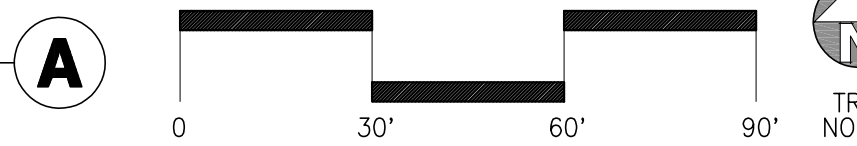
The Applicant/Engineer acknowledges that the Scoping Agreement is intended to assist in the preparation of any required TIA. It is preliminary in nature and the City does not have sufficient data to determine the ultimate conditions that may be imposed for the project. It does not provide nor limit the requirements imposed on the Project but is intended only to provide initial input into the parameters for review of the traffic generated by the Project and the initial areas to be considered and studied. Subsequent changes to scope of required analysis to be included in the TIA may be required by the Transportation Commission, Planning Commission, and/or the City Council upon Public Works Director/City Engineer review and approval

ATTACHMENT 1



OVERALL SITE PLAN

scale: 1" = 30'-0"



PROPERTY OWNER

DONLON BUILDERS
2681 SATURN STREET
BREA, CA 92821
CONTACT: DESMOND DONNELLAN
TEL: 714-528-0800

ADDRESS OF THE PROPERTY

TO BE DETERMINED

ASSESSOR'S PARCEL NUMBER

ZONING

LIGHT INDUSTRIAL (M-1)

LEGAL DESCRIPTION

SEE CIVIL

APPLICANT

DONLON BUILDERS
2681 SATURN STREET
BREA, CA 92821
CONTACT: DESMOND DONNELLAN
TEL: 714-528-0800

APPLICANT'S REPRESENTATIVE

HPA, INC.
18831 BARDEEN AVENUE, -STE.#100
IRVINE, CA 92612
ATTN: INKON KIM
TEL: 949-863-1770
EMAIL: INKON@HPARCHS.COM

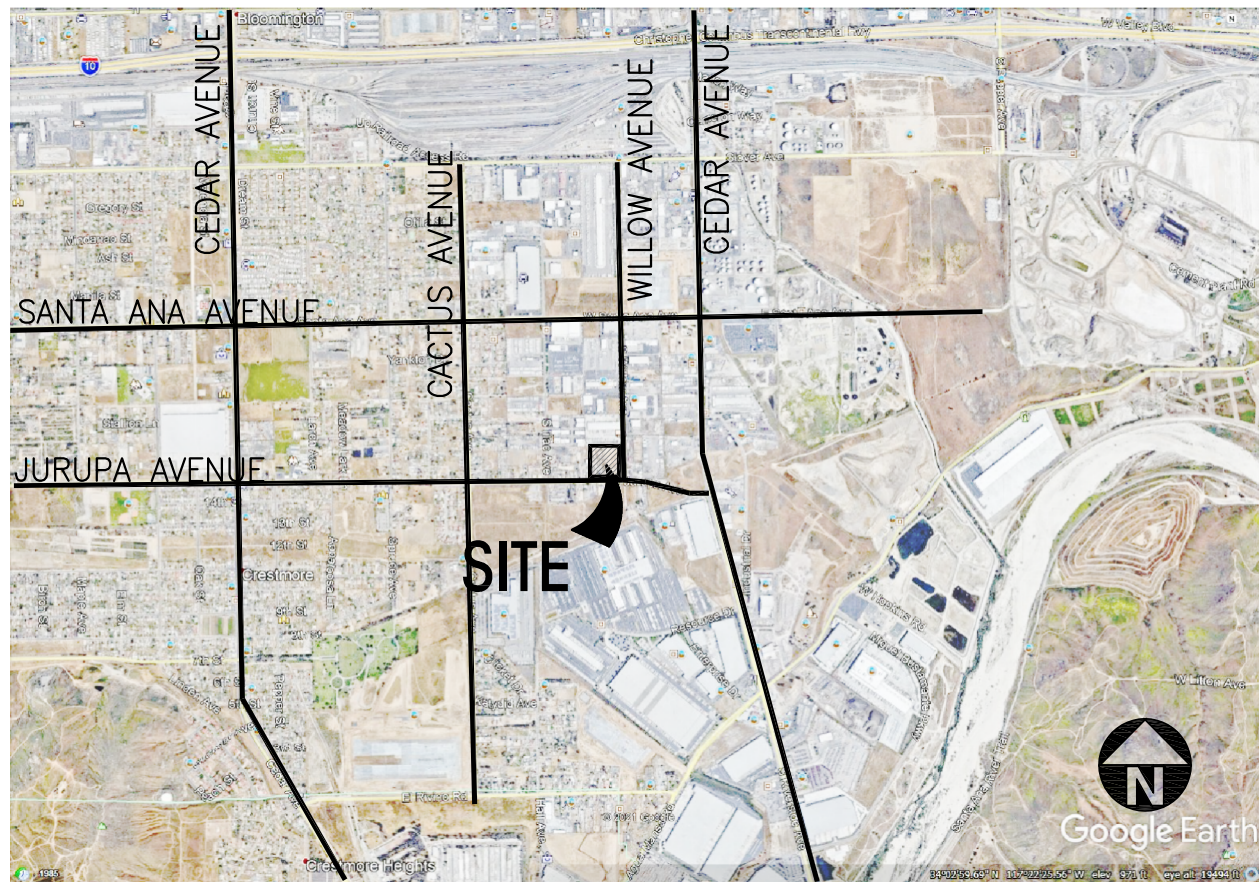
SITE PLAN KEYNOTES

- HEAVY BROOM FINISH CONCRETE PAVEMENT.
- ASPHALT CONCRETE
- CONCRETE WALKWAY, MEDIUM BROOM FINISH
- DRIVEWAY APRONS WITH DECORATIVE PAVEMENT.
- 5'-6"x5'-6"x4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAIN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FINISH PROVIDE WALK TO PUBLIC WAY OR DRIVE WAY AS REQ. BY CITY INSPECTOR.
- APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E..
- 8" HIGH LOUVERED METAL GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY. CONTRACTOR TO DESIGN & DETAIL GATES. DRAWINGS AND CALCULATIONS PRIOR TO FABRICATION. PROVIDE CONDUIT FOR FUTURE.
- CONCRETE RAMP
- BIKE RACK TYPICAL.
- 8"H TUBULAR STEEL FENCE
- EXTERIOR CONCRETE STAIR.
- 12' X 14' DRIVE-IN DOOR
- LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING
- 8"H TUBULAR STEEL SWING GATE
- HANDICAP PARKING STALL SIGN
- 14' HIGH CONCRETE SCREEN WALL
- RETAINING WALL
- PRE-CAST CONC. WHEEL STOP.
- CONC. FILLED GUARD POST "6 DIA. U.N.O. 42" H.
- TRASH ENCLOSURE.
- NO RIGHT TURN SIGN
- PUMP HOUSE
- MONUMENT SIGN
- 8"H TUBULAR STEEL SLIDING GATE
- CONCRETE PLASTERS

SITE PLAN GENERAL NOTES

- THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY TBD
- IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE
- ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GRID LINE U.N.O.
- SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
- THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM AS REQUIRED
- SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
- PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
- CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STARTING LAYOUT POINTS.
- SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
- CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12' EA. WAY. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH U.N.O.
- ALL BUILDINGS OF 5,000 S.F. IN SIZE WILL HAVE FIRE SPRINKLERS INSTALLED.
- PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
- CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND IRRIGATION OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
- PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
- KNOX BOXES WILL BE INSTALLED FOR ALL LEASE SPACES.
- ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN GUIDELINES OR AS OBTAINED FROM PUBLIC FACILITIES DEVELOPMENT.
- NOT USED.
- ALL VERTICAL MOUNTING POLES OF CHAIN LINK FENCING SHALL BE CAPPED.
- LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB

VICINITY MAP



PROJECT DATA

SITE AREA	
In s.f.	285,472 s.f.
In acres	6.55 ac
BUILDING AREA	
Office	2,500 s.f.
Mezzanine	2,500 s.f.
Warehouse	114,908 s.f.
TOTAL	119,908 s.f.
FLOOR AREA RATIO	
Maximum Allow ed	to be verified
Actual	0.420
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	10 stalls
Mezz: 1/250 s.f.	10 stalls
Whse: 1st 10K @ 1/1,000 s.f.	10 stalls
above 10K @ 1/2,000 s.f.	53 stalls
TOTAL	83 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	86 stalls
TRAILER PARKING REQUIRED	
100K to 160K	3 stalls
TRAILER PARKING PROVIDED	
Trailer (10' x 55')	37 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Light Industrial (M-1)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 75'	
LANDSCAPE REQUIREMENT	
Percentage - 10% of total parking area	
LANDSCAPE PROVIDED	
Percentage	16.4%
In s.f.	46,684 s.f.
SETBACKS	
Building	Landscape
Front / Street side- 25'	15' (t.b.v.)
Side - none, siding on R zone - 5'	
Rear - none, siding on R zone - 15'	

SITE PLAN GENERAL NOTES

- | | |
|---|-----------------|
| CONCRETE PAVING - SEE "C" DRWS. FOR THICKNESS | PATH OF TRAVEL |
| STANDARD PARKING STALL 8.5' X 18.5' | LANDSCAPE AREAS |
| HANDICAP PARKING STALL, 9' X 18.5' + 5' W/ ACCESSIBLE AISLE | HARDSCAPE |
| VAN ACCESSIBLE HANDICAP STALL, 12' X 18.5' + 5' W/ ACCESSIBLE AISLE | |



hpa, inc.
18831 bardeen avenue, - ste.#100
irvine, ca 92612
tel: 949-863-1770
fax: 949-863-0851
email: hpa@hparchs.com

Owner:

DONLON BUILDERS

2681 Saturn Street
Brea, CA 92821
tel: (714) 528-0800

Project:

322 JURUPA AVE.

RIALTO, CA

Consultants:

Civil:
Structural:
Mechanical:
Plumbing:
Electrical:
Landscape:
Fire Protection:
Soils Engineer:

Title: OVERALL SITE PLAN

Project Number: 22524
Drawn by: G.V.
Date: 10/18/2022
Revision:

Sheet:

DAB-A1.1

**ATTACHMENT 2
SUMMARY OF PROJECT TRIP GENERATION**

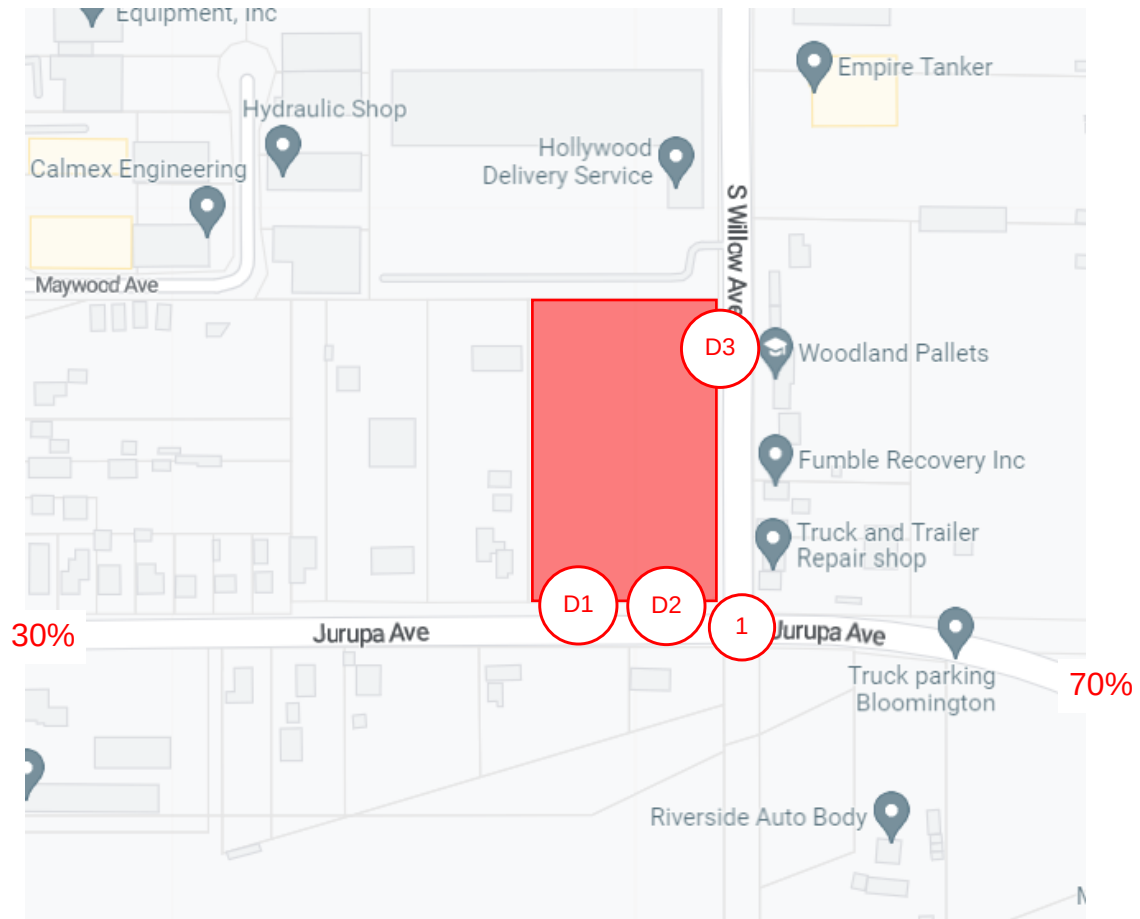
Land Use		ITE Code	Unit	Trip Generation Rates ¹						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		150	KSF	1.710	0.131	0.039	0.17	0.050	0.130	0.18
Land Use		Quantity	Unit	Trip Generation Estimates						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		119.908	KSF	205	16	5	21	6	16	22
Passenger Vehicles	60.00%			123	10	3	13	4	10	14
Trucks	40.00%			82	6	2	8	2	6	8
WAREHOUSING PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)										
Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor ²	Daily ³	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	123	1.0	123	10	3	13	4	10	14
2-Axle Trucks	0.80%	2	1.5	3	0	0	0	0	0	0
3-Axle Trucks	11.20%	23	2.0	46	4	1	5	1	4	5
4+ Axle Trucks	28.00%	57	3.0	171	13	4	17	5	13	18
Total Truck PCE Trips				220	17	5	22	6	17	23
Total Project PCE Trips				343	27	8	35	10	27	37

¹ Source: Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition

² Source: City of Rialto Traffic Impact Analysis Report Guidelines and Requirements

³ While trips based on the ITE 11th Edition trip generation rates are shown in this table, actual project trips are anticipated to be lower. With project design features such as preferred carpool/vanpool parking and end of trip bicycle facilities, it is expected that the daily project trips will be below the Vehicle Miles Traveled (VMT) thresholds of 110 daily vehicle trips.

ATTACHMENT 3A - PASSENGER CAR DISTRIBUTION



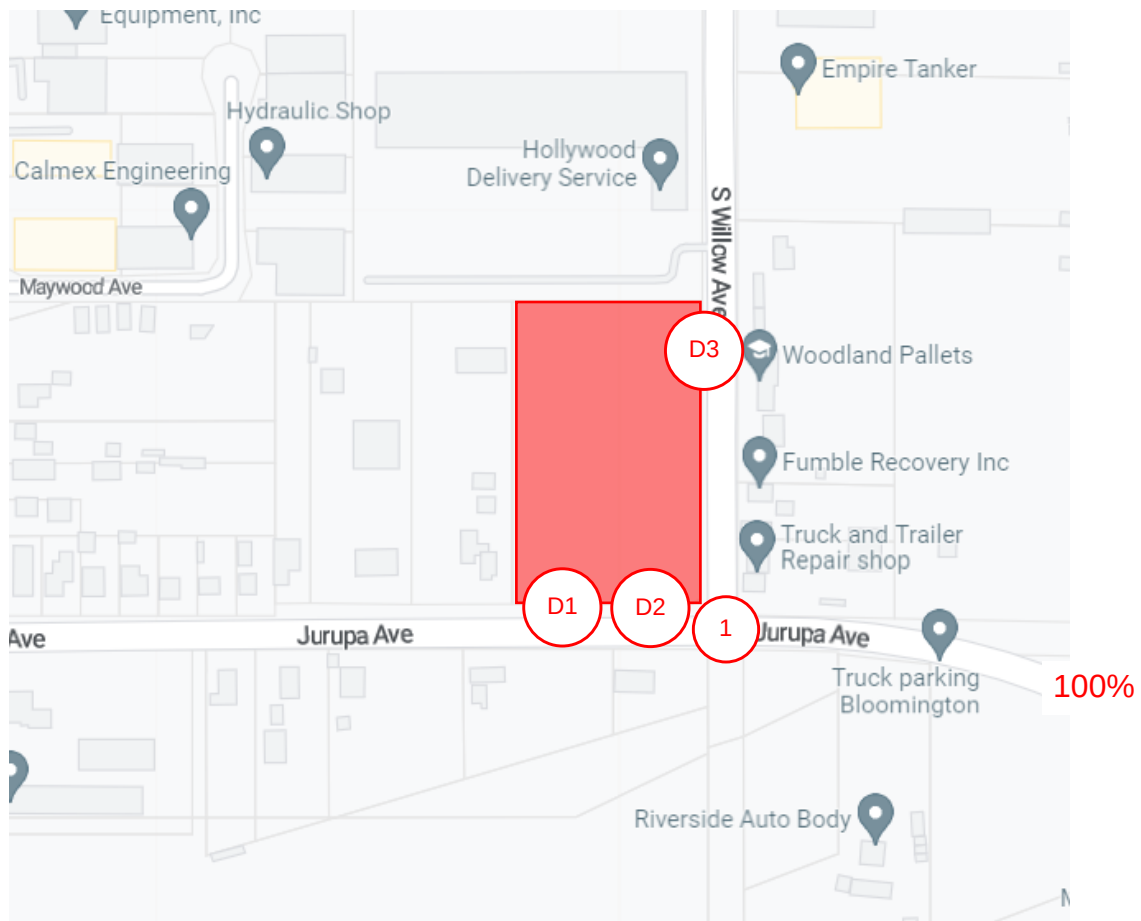
Legend:

- Project Site
- X Study Intersection
- D# Project Driveway
- YY% Passenger Car Distribution

Study Intersections:

- 1. S Willow Avenue at Jurupa Avenue
- D1. Jurupa Avenue at Project Driveway #1
- D2. Jurupa Avenue at Project Driveway #2
- D3. S Willow Avenue at Project Driveway #3

ATTACHMENT 3B - TRUCK DISTRIBUTION



Legend:

-  Project Site
-  Study Intersection
-  Project Driveway
-  Passenger Car Distribution

Study Intersections:

- 1. S Willow Avenue at Jurupa Avenue
- D1. Jurupa Avenue at Project Driveway #1
- D2. Jurupa Avenue at Project Driveway #2
- D3. S Willow Avenue at Project Driveway #3



March 17, 2023

Justin Schlaefli, P.E.
TKE Engineering
2305 Chicago Avenue
Riverside, CA 92507

Subject: *Vehicle Miles Traveled Memorandum for 322 Jurupa Ave Industrial Project in the City of Rialto*

Dear Mr. Schlaefli:

Kimley-Horn and Associates, Inc. has prepared a Vehicle Miles Traveled (VMT) memorandum, per request from the City of Rialto staff, for the proposed 322 Jurupa Ave Industrial Project. The City has requested submittal of this memorandum based on the City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment* (October 2021).

PROJECT DESCRIPTION

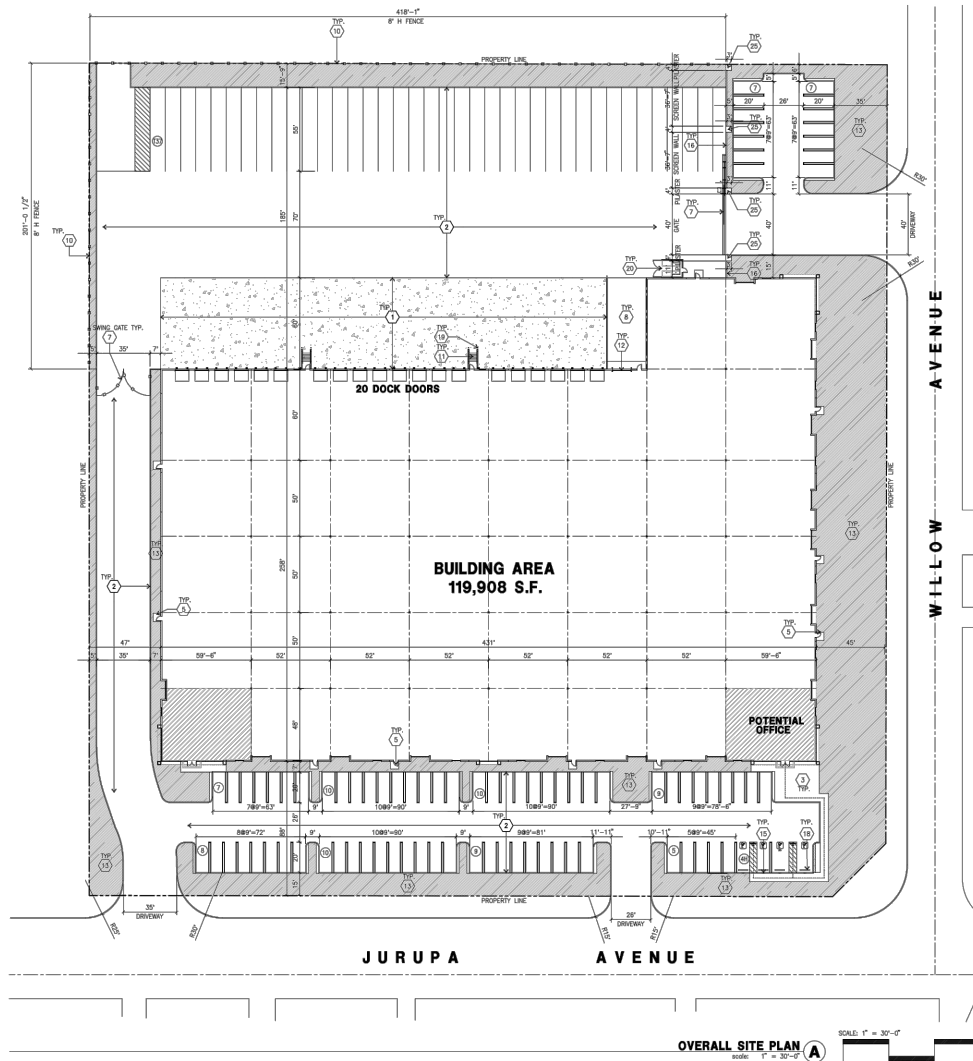
The project site is located at the northwest corner of Jurupa Avenue and Willow Avenue in the City of Rialto. The project site is bounded by industrial uses to the north, residential and commercial uses to the west, Willow Avenue to the east and Jurupa Avenue to the south. The project site is currently vacant. The project will involve the construction of a 119,908 square-foot (SF) industrial building. A copy of the project site plan is provided on Figure 1.

Vehicular access to the project site would be provided via three full-movement driveways: two on Jurupa Avenue and one on Willow Avenue. All project driveways would be unsignalized.

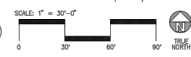
PROJECT TRAFFIC

A trip generation analysis has been prepared to determine the estimated traffic to be generated by the proposed project. Trip generation estimates are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) trip generation rates for Warehousing (ITE 150). Trip generation rates and the resulting trip generation estimates for the proposed project are summarized on Table 1. The project is estimated to generate 123 passenger vehicle trips on a daily basis with 13 passenger vehicle trips in the morning peak hour and 14 passenger vehicle trips in the evening peak hour; and 82 truck trips on a daily basis with 8 truck trips in the morning peak hour and 8 truck trips in the evening peak hour.

Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (1.5 for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 for 4+ axle trucks) to determine the total PCE volumes generated by the project. The project is estimated to generate 343 daily PCE trips, with 35 PCE trips in the morning peak hour, and 37 PCE trips in the evening peak hour.



OVERALL SITE PLAN



ASSESSOR'S PARCEL NUMBER

ZONING
LIGHT INDUSTRIAL (M-1)

LEGAL DESCRIPTION
SEE CIVIL

APPLICANT
SCOLLON BUILDERS
2881 SATURN STREET
IRVINE, CA 92611
CONTACT: DEBORAH DONNELLAN
TEL: 714-528-0800

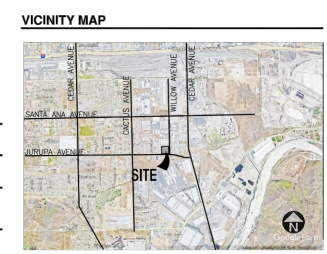
APPLICANT'S REPRESENTATIVE
HSA, INC.
18341 RIVERVIEW AVENUE, -STE.#100
IRVINE, CA 92614
KATHY KIM, P.E.
TEL: 949-862-2122
EMAIL: INFO@HSAARCH.COM

SITE PLAN KEYNOTES

1. HEAVY BROOM FRESH CONCRETE PAVEMENT.
2. ASPHALT CONCRETE.
3. CONCRETE WALKWAY, MEDIUM BROOM FINISH.
4. DRIVEWAY APRONS WITH DECORATIVE PAVEMENT.
5. 4"x10"-4"x4" THICK CONCRETE EXTERIOR LANDING PAD TYP. AT ALL EXTERIOR MAIN DOORS TO LANDSCAPED AREAS. FINISH TO BE MEDIUM BROOM FRESH PRODUCE WALK TO PUBLIC WAY OR DRIVE WAY & REQ. BY CITY REPLICATION.
6. APPROXIMATE LOCATION OF TRANSFORMER. CONTRACTOR TO VERIFY WITH S.C.E.
7. 8" HIGH COVERED METAL GATE W/ KNOX-BOX PER FIRE DEPARTMENT STANDARDS PER DRIVEWAY. CONTRACTOR TO DESIGN & DETAIL GATES. DIMENSIONS AND CALCULATIONS PRIOR TO SUBMITTAL. PROVIDE CONDUIT FOR FIRE.
8. CONCRETE RAMP.
9. BRICK PAVEMENT TYPICAL.
10. 8" H TUBULAR STEEL FENCE.
11. EXTERIOR CONCRETE STAIR.
12. 12" X 14" DRIVE-IN DOOR.
13. LANDSCAPE. ALL LANDSCAPE AREAS INDICATED BY SHADING.
14. 8" H TUBULAR STEEL SWING GATE.
15. HANDICAP PARKING STALL SIGN.
16. 14" HIGH CONCRETE SCREEN WALL.
17. RETAINING WALL.
18. PRE-CAST CONC. WHEEL STOP.
19. CONC. FILLED GUARD POST "6 DIA. U.S.A. 42" H.
20. TRASH ENCLOSURE.
21. NO RIGHT TURN SIGN.
22. PUMP HOUSE.
23. MONUMENT SIGN.
24. 8" H TUBULAR STEEL SLIDING GATE.
25. CONCRETE PLASTERS.

SITE PLAN GENERAL NOTES

1. THE SITE PLAN BASED ON THE SOILS REPORT PREPARED BY TRD.
2. IF SOILS ARE EXPANSIVE IN NATURE, USE STEEL REINFORCING FOR ALL SITE CONCRETE.
3. ALL DIMENSIONS ARE TO THE FACE OF CONCRETE WALL, FACE OF CONCRETE CURB OR GROUND LINE UNLESS NOTED.
4. SEE "C" PLANS FOR ALL CONCRETE CURBS, GUTTERS AND SWALES.
5. THE ENTIRE PROJECT SHALL BE PERMANENTLY MAINTAINED WITH AN AUTOMATIC IRRIGATION SYSTEM AS REQUIRED.
6. SEE "C" DRAWINGS FOR POINT OF CONNECTIONS TO OFF-SITE UTILITIES. CONTRACTOR SHALL VERIFY ACTUAL UTILITY LOCATIONS.
7. PROVIDE POSITIVE DRAINAGE AWAY FROM BLDG. SEE "C" DRAWINGS.
8. CONTRACTOR TO REFER TO "C" DRAWINGS FOR ALL HORIZONTAL CONTROL DIMENSIONS. SITE PLANS ARE FOR GUIDANCE AND STAFFING LAYOUT PURPOSES.
9. SEE "C" DRAWINGS FOR FINISH GRADE ELEVATIONS.
10. CONCRETE SIDEWALKS TO BE A MINIMUM OF 4" THICK W/ TOOLED JOINTS AT 6' O.C. EXPANSION/CONSTRUCTION JOINTS SHALL BE A MAXIMUM 12" EA. MAX. EXPANSION JOINTS TO HAVE COMPRESSIVE EXPANSION FILLER MATERIAL OF 1/4". FINISH TO BE A MEDIUM BROOM FINISH UNLESS NOTED.
11. ALL BUILDINGS OF 5,000 S.F. IN SIZE WILL HAVE FIRE SPRINKLERS INSTALLED.
12. PAINT CURBS AND PROVIDE SIGNS TO INFORM OF FIRE LANES AS REQUIRED BY FIRE DEPARTMENT.
13. CONSTRUCTION DOCUMENTS PERTAINING TO THE LANDSCAPE AND SIGNAGE OF THE ENTIRE PROJECT SITE SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND APPROVED BY PUBLIC FACILITIES DEVELOPMENT PRIOR TO ISSUANCE OF BUILDING PERMITS.
14. PRIOR TO FINAL CITY INSPECTION, THE LANDSCAPE ARCHITECT SHALL SUBMIT A CERTIFICATE OF COMPLETION TO PUBLIC FACILITIES DEVELOPMENT.
15. KNOX BOXES WILL BE INSTALLED FOR ALL LEASE SPACES.
16. ALL LANDSCAPE AND IRRIGATION DESIGNS SHALL MEET CURRENT CITY STANDARDS AS LISTED IN ORDINANCES OR AS DERIVED FROM PUBLIC FACILITIES DEVELOPMENT.
17. NOT USED.
18. ALL VERTICAL MOUNTING POLES OF CHAIN LINK FENCING SHALL BE CAPPED.
19. LANDSCAPED AREAS SHALL BE DELINEATED WITH A MINIMUM SIX INCHES (6") HIGH CURB.



PROJECT DATA

SITE AREA	285,472 s.f.
in acres	6.55 ac
BUILDING AREA	
Office	2,500 s.f.
Mezzanine	2,500 s.f.
Warehouse	114,908 s.f.
TOTAL	119,908 s.f.
FLOOR AREA RATIO	
Maximum Allowed	to be verified
Actual	0.420
AUTO PARKING REQUIRED	
Office: 1/250 s.f.	10 stalls
Mezz: 1/250 s.f.	10 stalls
Whse: 1st 10K @ 1/1,000 s.f.	10 stalls
above 10K @ 1/2,000 s.f.	53 stalls
TOTAL	83 stalls
AUTO PARKING PROVIDED	
Standard (9' x 20')	86 stalls
TRAILER PARKING REQUIRED	
100K TO 160K	3 stalls
TRAILER PARKING PROVIDED	
Trailer (10' x 55')	37 stalls
ZONING ORDINANCE FOR CITY	
Zoning Designation - Light Industrial (M-1)	
MAXIMUM BUILDING HEIGHT ALLOWED	
Height - 75'	
LANDSCAPE REQUIREMENT	
Percentage - 10% of total parking area	
LANDSCAPE PROVIDED	
Percentage	16.4%
in s.f.	46,684 s.f.
SETBACKS	
Building	Landscaping
Front / Street side - 25'	15' (L.B.V.)
Side - none, siding on R zone - 5'	
Rear - none, siding on R zone - 15'	

SITE PLAN GENERAL NOTES

CONCRETE PAVING - SEE "C" DRAWING FOR THICKNESS

SHADING CONCRETE STALL 8.5' X 18.5'

HANDICAP PARKING STALL 9' X 18.5' + 5' W/ ACCESSIBLE AISLE

WVA ACCESSIBLE HANDICAP STALL 12' X 18.5' + 5' W/ ACCESSIBLE AISLE

PATH OF TRAVEL

LANDSCAPE AREAS

HANDSCAPE

NOT TO SCALE

FIGURE 1
PROJECT SITE PLAN

APPENDIX B

TRAFFIC COUNT WORKSHEETS

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Dec 1, 22

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Rialto
Willow
Jurupa

PROJECT #:
LOCATION #:
CONTROL:

SC3741
3
STOP ALL

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

☒ Add U-Turns to Left Turns

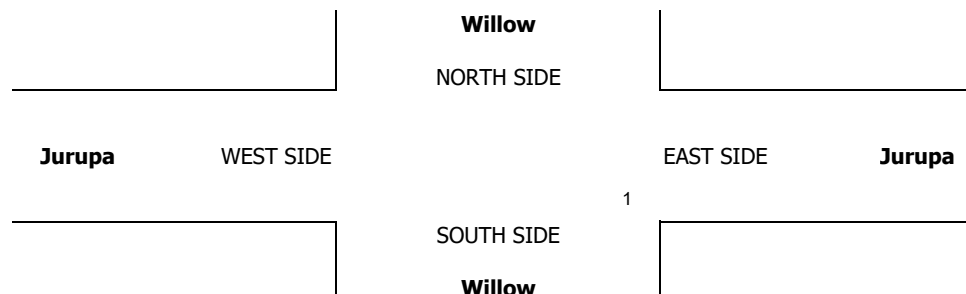
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Willow			Willow			Jurupa			Jurupa			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	0	X	0	0	1	X	X	1	1	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	

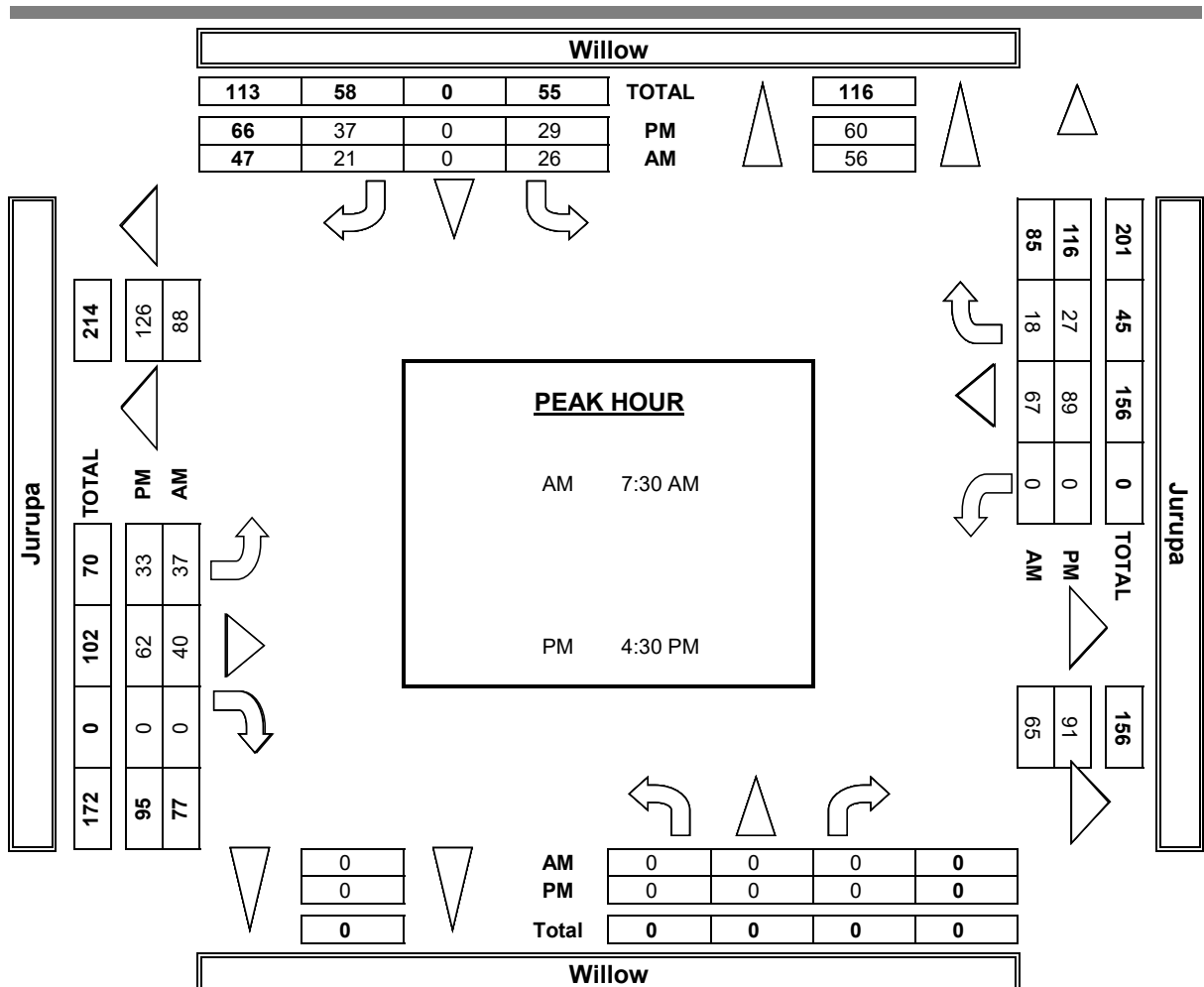
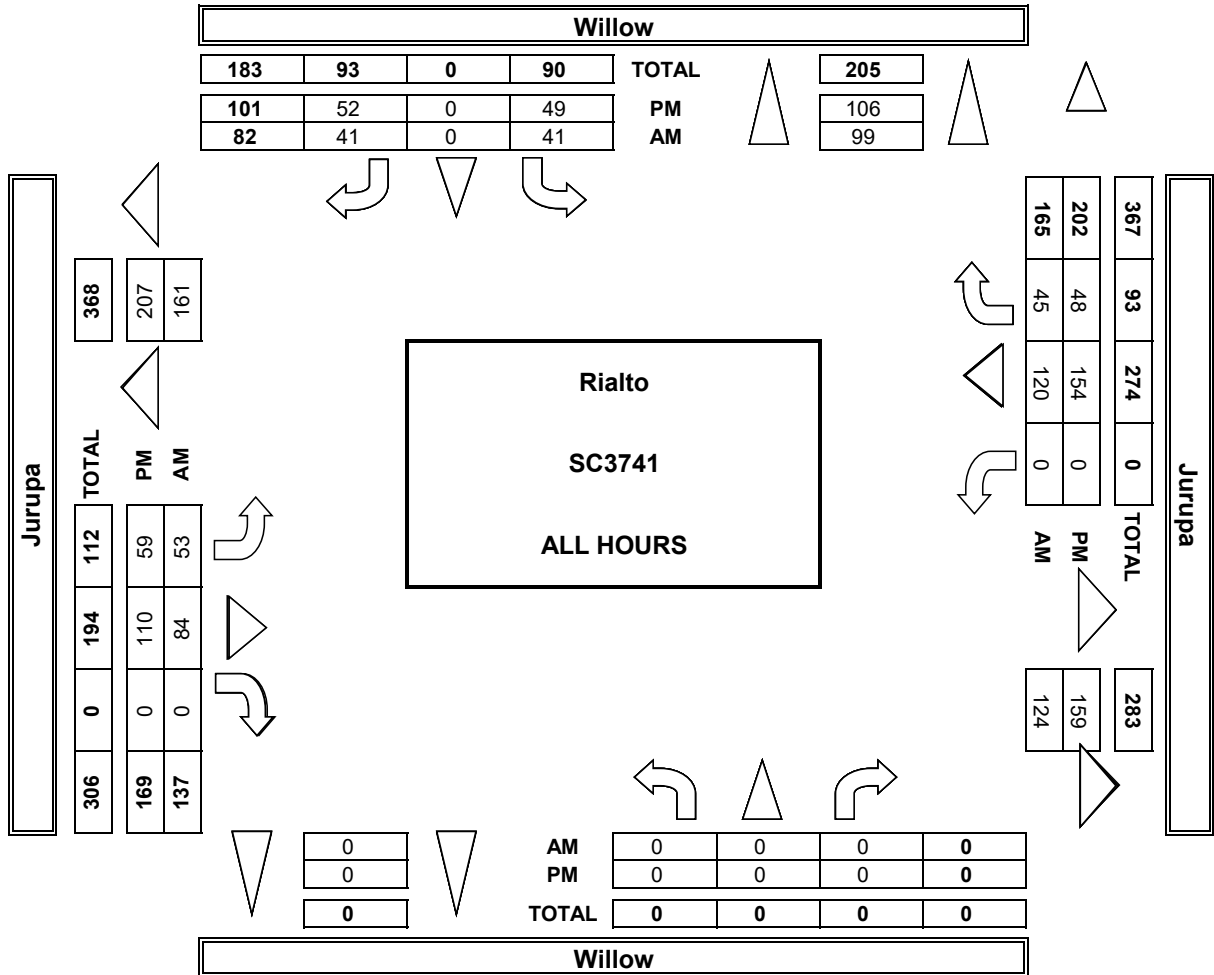
AM	7:00 AM	0	0	0	6	0	4	7	11	0	0	11	6	45
	7:15 AM	0	0	0	2	0	5	5	9	0	0	7	11	39
	7:30 AM	0	0	0	3	0	6	11	14	0	0	19	3	56
	7:45 AM	0	0	0	6	0	4	12	14	0	0	11	6	53
	8:00 AM	0	0	0	8	0	6	9	5	0	0	18	5	51
	8:15 AM	0	0	0	9	0	5	5	7	0	0	19	4	49
	8:30 AM	0	0	0	2	0	4	1	13	0	0	17	4	41
	8:45 AM	0	0	0	5	0	7	3	11	0	0	18	6	50
	VOLUMES	0	0	0	41	0	41	53	84	0	0	120	45	384
	APPROACH %	0%	0%	0%	50%	0%	50%	39%	61%	0%	0%	73%	27%	
	APP/DEPART	0	/	99	82	/	0	137	/	124	165	/	161	0
PM	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	26	0	21	37	40	0	0	67	18	209
	APPROACH %	0%	0%	0%	55%	0%	45%	48%	52%	0%	0%	79%	21%	
	PEAK HR FACTOR	0.000			0.839			0.740			0.924			0.933
	APP/DEPART	0	/	56	47	/	0	77	/	65	85	/	88	0
	4:00 PM	0	0	0	8	0	1	12	15	0	0	15	3	54
	4:15 PM	0	0	0	4	0	5	9	15	0	0	14	7	54
	4:30 PM	0	0	0	8	0	7	9	9	0	0	25	13	71
	4:45 PM	0	0	0	6	0	7	4	15	0	0	22	5	59
	5:00 PM	0	0	0	7	0	11	7	17	0	0	16	7	65
	5:15 PM	0	0	0	8	0	12	13	21	0	0	26	2	82
	5:30 PM	0	0	0	4	0	5	3	11	0	0	20	5	48
	5:45 PM	0	0	0	4	0	4	2	7	0	0	16	6	39
	VOLUMES	0	0	0	49	0	52	59	110	0	0	154	48	472
	APPROACH %	0%	0%	0%	49%	0%	51%	35%	65%	0%	0%	76%	24%	
	APP/DEPART	0	/	106	101	/	0	169	/	159	202	/	207	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	29	0	37	33	62	0	0	89	27	277
	APPROACH %	0%	0%	0%	44%	0%	56%	35%	65%	0%	0%	77%	23%	
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	APP/DEPART	0	/	60	66	/	0	95	/	91	116	/	126	0

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0	1	0	0	1
0	0	0	0	0
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0	1	0	0	1

0	0	1	0	1
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0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1



AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
12/1/22
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Rialto
Willow
Jurupa

PROJECT #:
LOCATION #:
CONTROL:

SC3741
3
STOP ALL

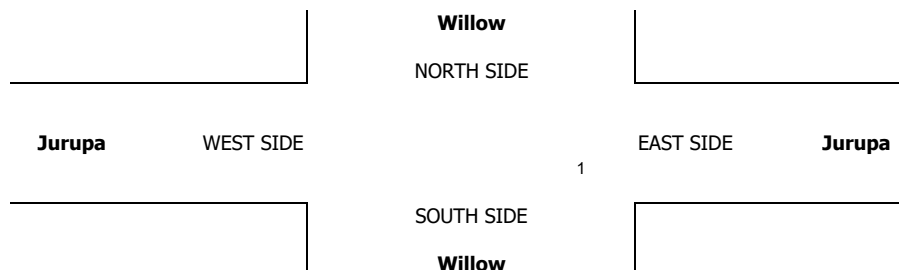
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	Class	1	2	3	4	5	6		PM		N	
	Factor	1	1.5	2	3	2	2		MD	◀ W		E ▶
									OTHER		S	
									OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Willow			Willow			Jurupa			Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	9	0	7	10	12	0	0	12	11	60
	7:15 AM	0	0	0	2	0	8	5	12	0	0	10	11	47
	7:30 AM	0	0	0	6	0	8	15	17	0	0	24	5	73
	7:45 AM	0	0	0	9	0	7	19	19	0	0	21	7	80
	8:00 AM	0	0	0	12	0	9	9	9	0	0	25	6	69
	8:15 AM	0	0	0	13	0	8	8	12	0	0	29	6	75
	8:30 AM	0	0	0	3	0	8	1	16	0	0	20	6	53
	8:45 AM	0	0	0	6	0	10	4	14	0	0	27	12	72
	VOLUMES	0	0	0	58	0	62	70	109	0	0	166	63	527
	APPROACH %	0%	0%	0%	48%	0%	52%	39%	61%	0%	0%	73%	27%	
	APP/DEPART	0	/	133	120	/	0	179	/	167	229	/	228	0
	BEGIN PEAK HR	7:30 AM												
PM	VOLUMES	0	0	0	38	0	31	51	56	0	0	99	23	297
	APPROACH %	0%	0%	0%	55%	0%	45%	47%	53%	0%	0%	81%	19%	
	PEAK HR FACTOR	0.000			0.835			0.710			0.868			0.927
	APP/DEPART	0	/	74	69	/	0	107	/	94	122	/	129	0
	4:00 PM	0	0	0	8	0	1	21	19	0	0	23	3	75
	4:15 PM	0	0	0	5	0	6	18	17	0	0	15	12	71
	4:30 PM	0	0	0	8	0	7	15	10	0	0	32	17	88
	4:45 PM	0	0	0	8	0	10	8	21	0	0	30	7	83
	5:00 PM	0	0	0	8	0	12	11	19	0	0	23	8	81
	5:15 PM	0	0	0	10	0	16	16	27	0	0	33	3	103
	5:30 PM	0	0	0	6	0	5	5	18	0	0	24	7	65
	5:45 PM	0	0	0	5	0	6	5	8	0	0	19	7	49
	VOLUMES	0	0	0	57	0	61	98	137	0	0	198	63	612
	APPROACH %	0%	0%	0%	48%	0%	52%	42%	58%	0%	0%	76%	24%	
	APP/DEPART	0	/	160	118	/	0	234	/	194	260	/	259	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	34	0	44	50	76	0	0	118	34	354
	APPROACH %	0%	0%	0%	43%	0%	57%	39%	61%	0%	0%	78%	22%	
	PEAK HR FACTOR	0.000			0.760			0.738			0.778			0.859
	APP/DEPART	0	/	83	78	/	0	126	/	110	151	/	162	0

					0
					0
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					0
					0
					0
					0
0	0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: SC3741 LOCATION #: 3 CONTROL: STOP ALL
-------------------------------------	--	----------------------------	---

CLASS 1: PASSENGER VEHICLES	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
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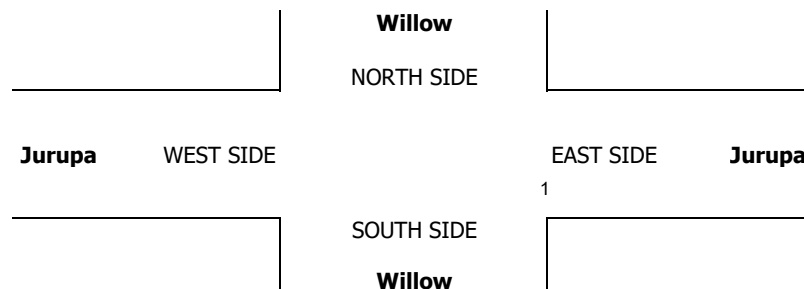
	NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND Jurupa			WESTBOUND Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	4	0	1	5	9	0	0	10	3	32
	7:15 AM	0	0	0	2	0	3	5	7	0	0	4	11	32
	7:30 AM	0	0	0	1	0	4	9	12	0	0	16	2	44
	7:45 AM	0	0	0	4	0	2	7	11	0	0	5	5	34
	8:00 AM	0	0	0	4	0	1	9	1	0	0	11	4	30
	8:15 AM	0	0	0	5	0	3	3	3	0	0	12	3	29
	8:30 AM	0	0	0	0	0	0	1	10	0	0	15	3	29
	8:45 AM	0	0	0	3	0	2	2	9	0	0	12	3	31
	VOLUMES	0	0	0	23	0	16	41	62	0	0	85	34	261
	APPROACH %	0%	0%	0%	59%	0%	41%	40%	60%	0%	0%	71%	29%	
	APP/DEPART	0	/	75	39	/	0	103	/	85	119	/	101	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	14	0	10	28	27	0	0	44	14	137
	APPROACH %	0%	0%	0%	58%	0%	42%	51%	49%	0%	0%	76%	24%	
	PEAK HR FACTOR	0.000			0.750			0.655			0.806			0.778
	APP/DEPART	0	/	42	24	/	0	55	/	41	58	/	54	0
PM	4:00 PM	0	0	0	8	0	1	6	11	0	0	10	3	39
	4:15 PM	0	0	0	3	0	4	3	13	0	0	13	2	38
	4:30 PM	0	0	0	8	0	7	4	8	0	0	19	9	55
	4:45 PM	0	0	0	5	0	5	1	12	0	0	16	3	42
	5:00 PM	0	0	0	6	0	9	2	14	0	0	12	5	48
	5:15 PM	0	0	0	5	0	8	10	17	0	0	20	1	61
	5:30 PM	0	0	0	3	0	5	2	5	0	0	15	4	34
	5:45 PM	0	0	0	3	0	2	0	6	0	0	14	4	29
	VOLUMES	0	0	0	41	0	41	28	86	0	0	119	31	346
	APPROACH %	0%	0%	0%	50%	0%	50%	25%	75%	0%	0%	79%	21%	
	APP/DEPART	0	/	58	82	/	0	114	/	127	150	/	161	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	24	0	29	17	51	0	0	67	18	206
	APPROACH %	0%	0%	0%	45%	0%	55%	25%	75%	0%	0%	79%	21%	
	PEAK HR FACTOR	0.000			0.883			0.630			0.759			0.844
	APP/DEPART	0	/	35	53	/	0	68	/	75	85	/	96	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: LOCATION #: CONTROL:	SC3741 3 STOP ALL
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶
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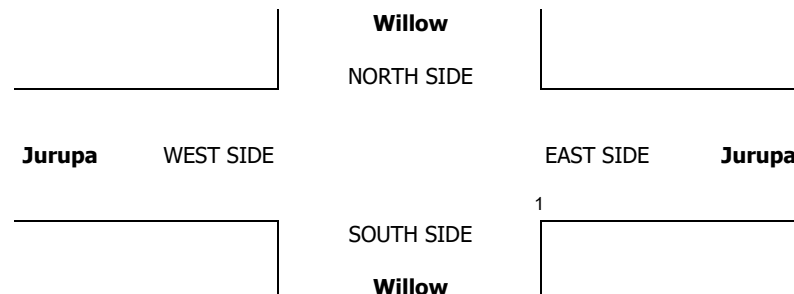
	NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND Jurupa			WESTBOUND Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	1	0	2	1	2	0	0	0	1	7
	7:15 AM	0	0	0	0	0	1	0	1	0	0	1	0	3
	7:30 AM	0	0	0	1	0	1	0	1	0	0	1	0	4
	7:45 AM	0	0	0	1	0	1	2	1	0	0	0	1	6
	8:00 AM	0	0	0	3	0	4	0	2	0	0	2	1	12
	8:15 AM	0	0	0	3	0	1	1	2	0	0	2	0	9
	8:30 AM	0	0	0	2	0	3	0	2	0	0	1	0	8
	8:45 AM	0	0	0	2	0	5	0	1	0	0	1	0	9
	VOLUMES	0	0	0	13	0	18	4	12	0	0	8	3	58
	APPROACH %	0%	0%	0%	42%	0%	58%	25%	75%	0%	0%	73%	27%	
	APP/DEPART	0	/	7	31	/	0	16	/	25	11	/	26	0
PM	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	8	0	7	3	6	0	0	5	2	31
	APPROACH %	0%	0%	0%	53%	0%	47%	33%	67%	0%	0%	71%	29%	
	PEAK HR FACTOR	0.000			0.536			0.750			0.583			0.646
	APP/DEPART	0	/	5	15	/	0	9	/	14	7	/	12	0
	4:00 PM	0	0	0	0	0	0	2	3	0	0	0	0	5
	4:15 PM	0	0	0	1	0	1	1	1	0	0	1	2	7
	4:30 PM	0	0	0	0	0	0	2	1	0	0	2	3	8
	4:45 PM	0	0	0	0	0	1	1	0	0	0	2	1	5
	5:00 PM	0	0	0	1	0	2	4	2	0	0	0	2	11
	5:15 PM	0	0	0	2	0	3	2	1	0	0	3	1	12
	5:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
	5:45 PM	0	0	0	0	0	1	1	0	0	0	1	2	5
	VOLUMES	0	0	0	4	0	8	13	11	0	0	11	11	58
	APPROACH %	0%	0%	0%	33%	0%	67%	54%	46%	0%	0%	50%	50%	
	APP/DEPART	0	/	24	12	/	0	24	/	15	22	/	19	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	3	0	6	9	4	0	0	7	7	36
	APPROACH %	0%	0%	0%	33%	0%	67%	69%	31%	0%	0%	50%	50%	
	PEAK HR FACTOR	0.000			0.450			0.542			0.700			0.750
	APP/DEPART	0	/	16	9	/	0	13	/	7	14	/	13	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: LOCATION #: CONTROL:	SC3741 3 STOP ALL
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CLASS 3: 3-AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶
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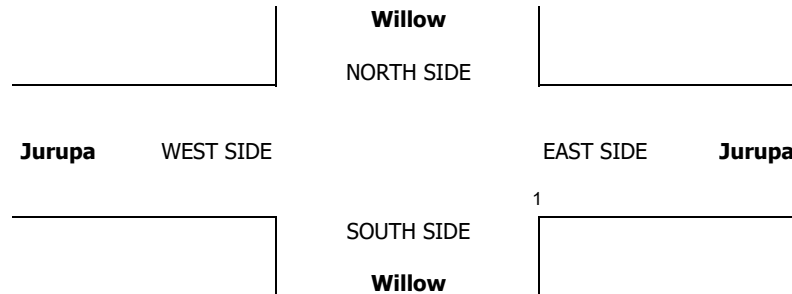
	NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND Jurupa			WESTBOUND Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
	7:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
	8:00 AM	0	0	0	0	0	1	0	0	0	0	3	0	4
	8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	1	0	0	0	2	0	3
	VOLUMES	0	0	0	0	0	2	1	0	0	0	11	0	14
	APPROACH %	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	1	2	/	0	1	/	0	11	/	13	0
	BEGIN PEAK HR	7:30 AM												
VOLUMES	0	0	0	0	0	2	0	0	0	0	6	0	8	
APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.500			0.000			0.500			0.500	
APP/DEPART	0	/	0	2	/	0	0	/	0	6	/	8	0	
PM	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	2	1	0	0	0	1	4
	4:30 PM	0	0	0	0	0	0	1	0	0	0	2	0	3
	4:45 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
	5:00 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	5:15 PM	0	0	0	1	0	0	0	1	0	0	1	0	3
	5:30 PM	0	0	0	0	0	0	0	1	0	0	3	0	4
	5:45 PM	0	0	0	1	0	1	0	1	0	0	0	0	3
	VOLUMES	0	0	0	2	0	1	4	5	0	0	10	2	24
	APPROACH %	0%	0%	0%	67%	0%	33%	44%	56%	0%	0%	83%	17%	
	APP/DEPART	0	/	6	3	/	0	9	/	7	12	/	11	0
	BEGIN PEAK HR	4:30 PM												
VOLUMES	0	0	0	1	0	0	2	2	0	0	5	1	11	
APPROACH %	0%	0%	0%	100%	0%	0%	50%	50%	0%	0%	83%	17%		
PEAK HR FACTOR	0.000			0.250			1.000			0.750			0.917	
APP/DEPART	0	/	3	1	/	0	4	/	3	6	/	5	0	

0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0

0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: LOCATION #: CONTROL:	SC3741 3 STOP ALL
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▶ E ▼
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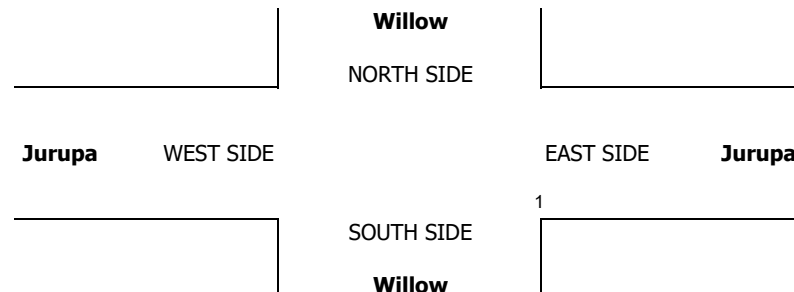
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Willow			Willow			Jurupa			Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	0	0	0	1	0	1	1	0	0	0	0	2	5
	7:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
	7:30 AM	0	0	0	1	0	0	2	1	0	0	2	1	7
	7:45 AM	0	0	0	1	0	1	3	2	0	0	4	0	11
	8:00 AM	0	0	0	1	0	0	0	1	0	0	1	0	3
	8:15 AM	0	0	0	1	0	1	1	2	0	0	4	1	10
	8:30 AM	0	0	0	0	0	1	0	1	0	0	1	1	4
	8:45 AM	0	0	0	0	0	0	0	1	0	0	3	3	7
	VOLUMES	0	0	0	5	0	5	7	9	0	0	15	8	49
	APPROACH %	0%	0%	0%	50%	0%	50%	44%	56%	0%	0%	65%	35%	
PM	APP/DEPART	0	/	16	10	/	0	16	/	13	23	/	20	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	3	0	2	6	6	0	0	11	2	31
	APPROACH %	0%	0%	0%	50%	0%	33%	50%	50%	0%	0%	85%	15%	
	PEAK HR FACTOR	0.000			0.750			0.600			0.650			0.705
	APP/DEPART	0	/	9	6	/	0	12	/	9	13	/	13	0
	4:00 PM	0	0	0	0	0	0	4	1	0	0	3	0	8
	4:15 PM	0	0	0	0	0	0	3	0	0	0	0	1	4
	4:30 PM	0	0	0	0	0	0	2	0	0	0	2	1	5
	4:45 PM	0	0	0	1	0	1	1	3	0	0	3	0	9
	5:00 PM	0	0	0	0	0	0	1	0	0	0	3	0	4
	5:15 PM	0	0	0	0	0	1	1	2	0	0	2	0	6
	5:30 PM	0	0	0	1	0	0	1	2	0	0	0	1	5
	5:45 PM	0	0	0	0	0	0	1	0	0	0	1	0	2
	VOLUMES	0	0	0	2	0	2	14	8	0	0	14	3	43
	APPROACH %	0%	0%	0%	50%	0%	50%	64%	36%	0%	0%	82%	18%	
	APP/DEPART	0	/	17	4	/	0	22	/	10	17	/	16	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	1	0	2	5	5	0	0	10	1	24
	APPROACH %	0%	0%	0%	33%	0%	67%	50%	50%	0%	0%	91%	9%	
	PEAK HR FACTOR	0.000			0.375			0.625			0.917			0.667
	APP/DEPART	0	/	6	3	/	0	10	/	6	11	/	12	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: LOCATION #: CONTROL:	SC3741 3 STOP ALL
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CLASS 5:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶
RV				

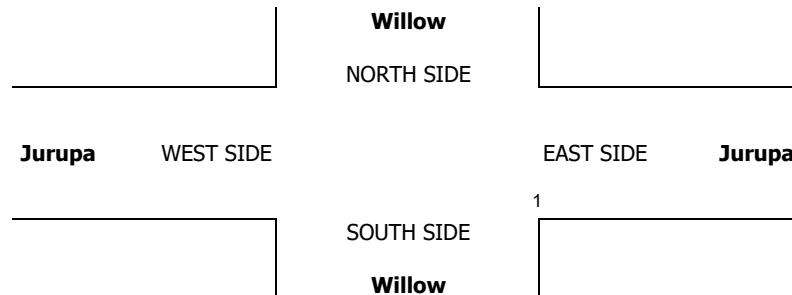
	NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND Jurupa			WESTBOUND Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.000
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
PM	4:00 PM	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	1	1
	4:30 PM	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
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0
	APP/DEPART	0	/	1	0	/	0	0	/	0	1	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.000
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0

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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE: 12/1/22 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	Rialto Willow Jurupa	PROJECT #: LOCATION #: CONTROL:	SC3741 3 STOP ALL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N S ▼	◀ W E ▶
BUSES				

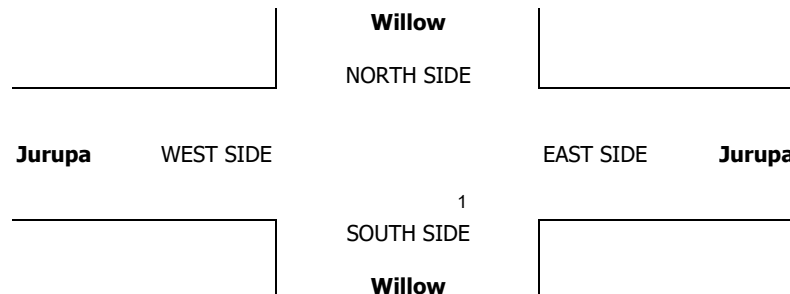
	NORTHBOUND Willow			SOUTHBOUND Willow			EASTBOUND Jurupa			WESTBOUND Jurupa			
LANES:	NL X	NT X	NR X	SL 0	ST X	SR 0	EL 0	ET 1	ER X	WL X	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	0	0	0	0	0	0	1	0	0	1	0	2
	8:15 AM	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
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.250		
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0



National Data & Surveying Services

Intersection Turning Movement Count

Location: S Riverside Ave & S Jurupa Ave
City: Bloomington
Control: Signalized

Project ID: 18-06047-007
Date: 4/12/2018

Total

NS/EW Streets:	S Riverside Ave				S Riverside Ave				S Jurupa Ave				S Jurupa Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	19	178	0	0	0	174	9	0	5	0	20	0	0	0	0	0	405
7:15 AM	22	161	0	0	0	207	12	0	4	0	13	0	0	0	0	0	419
7:30 AM	21	181	0	2	0	227	11	0	6	0	18	0	0	0	0	0	466
7:45 AM	16	197	0	1	0	225	10	0	9	0	19	0	0	0	0	0	477
8:00 AM	16	165	0	0	0	220	11	0	13	0	29	0	0	0	0	0	454
8:15 AM	14	138	0	0	0	218	7	0	9	0	13	0	0	0	0	0	399
8:30 AM	17	155	0	0	0	192	8	0	7	0	26	0	0	0	0	0	405
8:45 AM	17	192	0	0	0	165	9	0	15	0	23	0	0	0	0	0	421
TOTAL VOLUMES :	NL 142	NT 1367	NR 0	NU 3	SL 0	ST 1628	SR 77	SU 0	EL 68	ET 0	ER 161	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 3446
APPROACH %'s :	9.39%	90.41%	0.00%	0.20%	0.00%	95.48%	4.52%	0.00%	29.69%	0.00%	70.31%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	75	704	0	3	0	879	44	0	32	0	79	0	0	0	0	0	1816
PEAK HR FACTOR :	0.852	0.893	0.000	0.375	0.000	0.968	0.917	0.000	0.615	0.000	0.681	0.000	0.000	0.000	0.000	0.000	0.952
	0.914				0.970				0.661								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	23	239	0	2	0	261	14	0	14	0	36	0	0	0	0	0	589
4:15 PM	17	208	0	2	0	265	14	0	17	0	46	0	0	0	0	0	569
4:30 PM	11	186	0	0	0	258	9	0	9	0	42	0	0	0	0	0	515
4:45 PM	20	226	0	0	0	246	15	0	10	0	22	0	0	0	0	0	539
5:00 PM	22	238	0	0	0	289	8	0	12	0	39	0	0	0	0	0	608
5:15 PM	14	291	0	1	0	364	13	0	4	0	31	0	0	0	0	0	718
5:30 PM	22	252	0	1	0	355	8	0	4	0	41	0	0	0	0	0	683
5:45 PM	20	242	0	0	0	282	10	0	9	0	26	0	0	0	0	0	589
TOTAL VOLUMES :	NL 149	NT 1882	NR 0	NU 6	SL 0	ST 2320	SR 91	SU 0	EL 79	ET 0	ER 283	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 4810
APPROACH %'s :	7.31%	92.39%	0.00%	0.29%	0.00%	96.23%	3.77%	0.00%	21.82%	0.00%	78.18%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	78	1023	0	2	0	1290	39	0	29	0	137	0	0	0	0	0	2598
PEAK HR FACTOR :	0.886	0.879	0.000	0.500	0.000	0.886	0.750	0.000	0.604	0.000	0.835	0.000	0.000	0.000	0.000	0.000	0.905
	0.901				0.881				0.814								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Riverside Ave & S Jurupa Ave
City: Bloomington
Control: Signalized

Project ID: 18-06047-007
Date: 4/12/2018

Cars

NS/EW Streets:	S Riverside Ave				S Riverside Ave				S Jurupa Ave				S Jurupa Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	19	141	0	0	0	143	9	0	4	0	15	0	0	0	0	0	331
7:15 AM	20	127	0	0	0	178	12	0	3	0	10	0	0	0	0	0	350
7:30 AM	17	152	0	0	0	198	10	0	6	0	14	0	0	0	0	0	397
7:45 AM	14	152	0	1	0	194	10	0	7	0	15	0	0	0	0	0	393
8:00 AM	13	129	0	0	0	191	9	0	11	0	23	0	0	0	0	0	376
8:15 AM	12	97	0	0	0	171	6	0	8	0	10	0	0	0	0	0	304
8:30 AM	15	103	0	0	0	148	8	0	5	0	12	0	0	0	0	0	291
8:45 AM	16	147	0	0	0	122	8	0	11	0	14	0	0	0	0	0	318
TOTAL VOLUMES :	NL 126	NT 1048	NR 0	NU 1	SL 0	ST 1345	SR 72	SU 0	EL 55	ET 0	ER 113	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 2760
APPROACH %'s :	10.72%	89.19%	0.00%	0.09%	0.00%	94.92%	5.08%	0.00%	32.74%	0.00%	67.26%	0.00%	0	0	0	0	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	64	560	0	1	0	761	41	0	27	0	62	0	0	0	0	0	1516
PEAK HR FACTOR :	0.80	0.921	0.000	0.250	0.000	0.961	0.854	0.000	0.614	0.000	0.674	0.000	0.000	0.000	0.000	0.000	0.955
	0.925				0.964				0.654								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	20	215	0	2	0	224	14	0	13	0	31	0	0	0	0	0	519
4:15 PM	12	179	0	2	0	224	12	0	17	0	41	0	0	0	0	0	487
4:30 PM	7	166	0	0	0	226	8	0	9	0	38	0	0	0	0	0	454
4:45 PM	16	197	0	0	0	219	12	0	9	0	21	0	0	0	0	0	474
5:00 PM	18	218	0	0	0	258	8	0	12	0	36	0	0	0	0	0	550
5:15 PM	13	270	0	1	0	329	9	0	4	0	27	0	0	0	0	0	653
5:30 PM	19	230	0	1	0	319	8	0	4	0	41	0	0	0	0	0	622
5:45 PM	18	217	0	0	0	243	8	0	9	0	26	0	0	0	0	0	521
TOTAL VOLUMES :	NL 123	NT 1692	NR 0	NU 6	SL 0	ST 2042	SR 79	SU 0	EL 77	ET 0	ER 261	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 4280
APPROACH %'s :	6.75%	92.92%	0.00%	0.33%	0.00%	96.28%	3.72%	0.00%	22.78%	0.00%	77.22%	0.00%	0	0	0	0	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	68	935	0	2	0	1149	33	0	29	0	130	0	0	0	0	0	2346
PEAK HR FACTOR :	0.89	0.866	0.000	0.500	0.000	0.873	0.917	0.000	0.604	0.000	0.793	0.000	0.000	0.000	0.000	0.000	0.898
	0.885				0.874				0.828								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Riverside Ave & S Jurupa Ave
City: Bloomington
Control: Signalized

Project ID: 18-06047-007
Date: 4/12/2018

2axle

NS/EW Streets:	S Riverside Ave				S Riverside Ave				S Jurupa Ave				S Jurupa Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	10	0	0	0	6	0	0	0	0	3	0	0	0	0	0	19
7:15 AM	1	7	0	0	0	4	0	0	1	0	1	0	0	0	0	0	14
7:30 AM	2	8	0	2	0	7	0	0	0	0	2	0	0	0	0	0	21
7:45 AM	0	10	0	0	0	7	0	0	1	0	2	0	0	0	0	0	20
8:00 AM	1	5	0	0	0	6	1	0	0	0	0	0	0	0	0	0	13
8:15 AM	1	6	0	0	0	8	1	0	0	0	1	0	0	0	0	0	17
8:30 AM	1	7	0	0	0	8	0	0	0	0	6	0	0	0	0	0	22
8:45 AM	1	11	0	0	0	6	0	0	3	0	6	0	0	0	0	0	27
TOTAL VOLUMES :	NL 7	NT 64	NR 0	NU 2	SL 0	ST 52	SR 2	SU 0	EL 5	ET 0	ER 21	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 153
APPROACH %'s :	9.59%	87.67%	0.00%	2.74%	0.00%	96.30%	3.70%	0.00%	19.23%	0.00%	80.77%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	4	30	0	2	0	24	1	0	2	0	5	0	0	0	0	0	68
PEAK HR FACTOR :	0.500	0.750	0.000	0.250	0.000	0.857	0.250	0.000	0.500	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.810
	0.750				0.893				0.583								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	3	0	0	0	7	0	0	1	0	0	0	0	0	0	0	11
4:15 PM	1	4	0	0	0	7	1	0	0	0	2	0	0	0	0	0	15
4:30 PM	1	4	0	0	0	4	1	0	0	0	2	0	0	0	0	0	12
4:45 PM	3	5	0	0	0	3	3	0	0	0	1	0	0	0	0	0	15
5:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	1	5	0	0	0	3	3	0	0	0	0	0	0	0	0	0	12
5:30 PM	0	3	0	0	0	5	0	0	0	0	0	0	0	0	0	0	8
5:45 PM	0	3	0	0	0	4	1	0	0	0	0	0	0	0	0	0	8
TOTAL VOLUMES :	NL 6	NT 29	NR 0	NU 0	SL 0	ST 33	SR 9	SU 0	EL 1	ET 0	ER 5	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 83
APPROACH %'s :	17.14%	82.86%	0.00%	0.00%	0.00%	78.57%	21.43%	0.00%	16.67%	0.00%	83.33%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	13	0	0	0	12	4	0	0	0	0	0	0	0	0	0	30
PEAK HR FACTOR :	0.25	0.650	0.000	0.000	0.000	0.600	0.333	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
	0.583				0.667												

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Riverside Ave & S Jurupa Ave
City: Bloomington
Control: Signalized

Project ID: 18-06047-007
Date: 4/12/2018

3axle

NS/EW Streets:	S Riverside Ave				S Riverside Ave				S Jurupa Ave				S Jurupa Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	5	0	0	0	4	0	0	1	0	1	0	0	0	0	0	11
7:15 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	0	0	10
7:30 AM	1	6	0	0	0	5	0	0	0	0	1	0	0	0	0	0	13
7:45 AM	0	6	0	0	0	5	0	0	0	0	1	0	0	0	0	0	12
8:00 AM	1	8	0	0	0	7	0	0	2	0	1	0	0	0	0	0	19
8:15 AM	0	2	0	0	0	11	0	0	0	0	2	0	0	0	0	0	15
8:30 AM	1	8	0	0	0	6	0	0	0	0	2	0	0	0	0	0	17
8:45 AM	0	9	0	0	0	7	0	0	1	0	1	0	0	0	0	0	18
TOTAL VOLUMES :	NL 3	NT 49	NR 0	NU 0	SL 0	ST 50	SR 0	SU 0	EL 4	ET 0	ER 9	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 115
APPROACH %'s :	5.77%	94.23%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	30.77%	0.00%	69.23%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	25	0	0	0	22	0	0	2	0	3	0	0	0	0	0	54
PEAK HR FACTOR :	0.500	0.781	0.000	0.000	0.000	0.786	0.000	0.000	0.250	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.711
	0.750				0.786				0.417								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	4	0	0	0	6	0	0	0	0	3	0	0	0	0	0	13
4:15 PM	0	10	0	0	0	13	0	0	0	0	1	0	0	0	0	0	24
4:30 PM	0	4	0	0	0	7	0	0	0	0	0	0	0	0	0	0	11
4:45 PM	0	10	0	0	0	4	0	0	0	0	0	0	0	0	0	0	14
5:00 PM	1	4	0	0	0	10	0	0	0	0	1	0	0	0	0	0	16
5:15 PM	0	4	0	0	0	13	0	0	0	0	1	0	0	0	0	0	18
5:30 PM	1	6	0	0	0	10	0	0	0	0	0	0	0	0	0	0	17
5:45 PM	1	3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	13
TOTAL VOLUMES :	NL 3	NT 45	NR 0	NU 0	SL 0	ST 72	SR 0	SU 0	EL 0	ET 0	ER 6	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 126
APPROACH %'s :	6.25%	93.75%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	3	17	0	0	0	42	0	0	0	0	2	0	0	0	0	0	64
PEAK HR FACTOR :	0.75	0.708	0.000	0.000	0.000	0.808	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.889
	0.714				0.808				0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: S Riverside Ave & S Jurupa Ave
City: Bloomington
Control: Signalized

Project ID: 18-06047-007
Date: 4/12/2018

4axle

NS/EW Streets:	S Riverside Ave				S Riverside Ave				S Jurupa Ave				S Jurupa Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	22	0	0	0	21	0	0	0	0	1	0	0	0	0	0	44
7:15 AM	1	22	0	0	0	20	0	0	0	0	2	0	0	0	0	0	45
7:30 AM	1	15	0	0	0	17	1	0	0	0	1	0	0	0	0	0	35
7:45 AM	2	29	0	0	0	19	0	0	1	0	1	0	0	0	0	0	52
8:00 AM	1	23	0	0	0	16	1	0	0	0	5	0	0	0	0	0	46
8:15 AM	1	33	0	0	0	28	0	0	1	0	0	0	0	0	0	0	63
8:30 AM	0	37	0	0	0	30	0	0	2	0	6	0	0	0	0	0	75
8:45 AM	0	25	0	0	0	30	1	0	0	0	2	0	0	0	0	0	58
TOTAL VOLUMES :	NL 6	NT 206	NR 0	NU 0	SL 0	ST 181	SR 3	SU 0	EL 4	ET 0	ER 18	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 418
APPROACH %'s :	2.83%	97.17%	0.00%	0.00%	0.00%	98.37%	1.63%	0.00%	18.18%	0.00%	81.82%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	5	89	0	0	0	72	2	0	1	0	9	0	0	0	0	0	178
PEAK HR FACTOR :	0.625	0.767	0.000	0.000	0.000	0.900	0.500	0.000	0.250	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.856
	0.758				0.925				0.500								

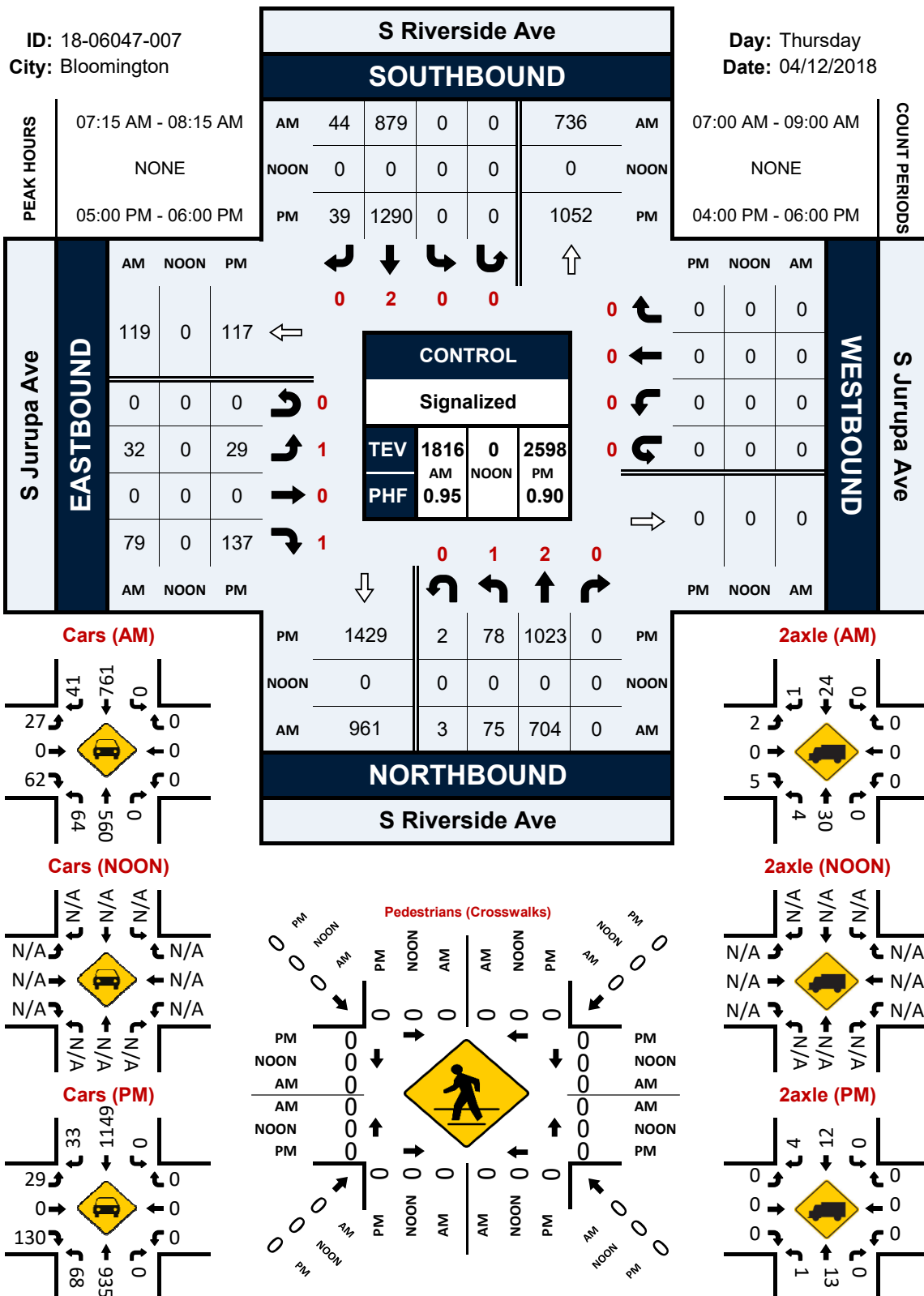
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	3	17	0	0	0	24	0	0	0	0	2	0	0	0	0	0	46
4:15 PM	4	15	0	0	0	21	1	0	0	0	2	0	0	0	0	0	43
4:30 PM	3	12	0	0	0	21	0	0	0	0	2	0	0	0	0	0	38
4:45 PM	1	14	0	0	0	20	0	0	1	0	0	0	0	0	0	0	36
5:00 PM	3	14	0	0	0	21	0	0	0	0	2	0	0	0	0	0	40
5:15 PM	0	12	0	0	0	19	1	0	0	0	3	0	0	0	0	0	35
5:30 PM	2	13	0	0	0	21	0	0	0	0	0	0	0	0	0	0	36
5:45 PM	1	19	0	0	0	26	1	0	0	0	0	0	0	0	0	0	47
TOTAL VOLUMES :	NL 17	NT 116	NR 0	NU 0	SL 0	ST 173	SR 3	SU 0	EL 1	ET 0	ER 11	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 321
APPROACH %'s :	12.78%	87.22%	0.00%	0.00%	0.00%	98.30%	1.70%	0.00%	8.33%	0.00%	91.67%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	6	58	0	0	0	87	2	0	0	0	5	0	0	0	0	0	158
PEAK HR FACTOR :	0.50	0.763	0.000	0.000	0.000	0.837	0.500	0.000	0.000	0.000	0.417	0.000	0.000	0.000	0.000	0.000	0.840
	0.800				0.824				0.417								

National Data & Surveying Services

Intersection Turning Movement Count

S Riverside Ave & S Jurupa Ave

Peak Hour Turning Movement Count



Existing Peak Hour Volumes - Classification Counts

2

Riverside Ave and Jurupa Ave

	AM Peak Hour Volumes									PM Peak Hour Volumes									
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE			
NL	72	7	2	6	15	17.2%	33	2.2	105	77	1	3	7	11	12.5%	29	2.6	106	
NT	616	33	28	98	159	20.5%	400	2.5	1,016	1,029	14	19	64	97	8.6%	251	2.6	1,280	
NR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
SL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
ST	837	26	24	79	129	13.4%	324	2.5	1,161	1,264	13	46	96	155	10.9%	400	2.6	1,664	
SR	45	1	0	2	3	6.3%	8	2.7	53	36	4	0	2	6	14.3%	12	2.0	48	
EL	30	2	2	1	5	14.3%	10	2.0	40	32	0	0	0	0	0.0%	0	0.0	32	
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
ER	68	6	3	10	19	21.8%	45	2.4	113	143	0	2	6	8	5.3%	22	2.8	165	
WL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
WT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
2,488										3,295									
North Leg Volumes																			
Approach	882	27	24	81	132		332		1,214	1,300	17	46	98	161		412		1,712	
Depart	646	35	30	99	164		410		1,056	1,061	14	19	64	97		251		1,312	
Total	1,528	62	54	180	296	16.2%	742	2.5	2,270	2,361	31	65	162	258	9.9%	663	2.6	3,024	
South Leg Volumes																			
Approach	688	40	30	104	174		433		1,121	1,106	15	22	71	108		280		1,386	
Depart	905	32	27	89	148		369		1,274	1,407	13	48	102	163		422		1,829	
Total	1,593	72	57	193	322	16.8%	802	2.5	2,395	2,513	28	70	173	271	9.7%	702	2.6	3,215	
East Leg Volumes																			
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
West Leg Volumes																			
Approach	98	8	5	11	24		55		153	175	0	2	6	8		22		197	
Depart	117	8	2	8	18		41		158	113	5	3	9	17		41		154	
Total	215	16	7	19	42	16.3%	96	2.3	311	288	5	5	15	25	8.0%	63	2.5	351	
All Legs																			
Approach	1,668	75	59	196	330		820		2,488	2,581	32	70	175	277		714		3,295	
Depart	1,668	75	59	196	330		820		2,488	2,581	32	70	175	277		714		3,295	
Total	3,336	150	118	392	660	16.5%	1,640	2.5	4,976	5,162	64	140	350	554	9.7%	1,428	2.6	6,590	

APPENDIX C

INTERSECTION ANALYSIS WORKSHEETS

322 Jurupa Avenue Industrial Project

Vistro File: \\...\\322 Jurupa_AM.vistro

Scenario 1 EX AM

Report File: \\...\\1. EX AM.pdf

6/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	WB Thru	0.141	8.0	A
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.524	10.2	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	8.0
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	38	31	51	56	99	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	38	31	51	56	99	23
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	8	14	15	27	6
Total Analysis Volume [veh/h]	41	33	55	60	107	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	837	817	757	888
Degree of Utilization, x	0.09	0.14	0.14	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.29	0.49	0.49	0.09
95th-Percentile Queue Length [ft]	7.25	12.23	12.28	2.17
Approach Delay [s/veh]	7.72	8.13	7.98	
Approach LOS	A	A	A	
Intersection Delay [s/veh]	7.97			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.524

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	105	1016	1161	53	40	113
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	105	1016	1161	53	40	113
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	267	305	14	11	30
Total Analysis Volume [veh/h]	110	1067	1220	56	42	119
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	19	64	45	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	73	61	61	9	9
g / C, Green / Cycle	0.08	0.81	0.68	0.68	0.10	0.10
(v / s)_i Volume / Saturation Flow Rate	0.07	0.33	0.37	0.04	0.03	0.08
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	137	2628	2208	986	169	151
d1, Uniform Delay [s]	40.46	2.49	7.45	4.85	37.08	39.34
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.19	0.47	1.00	0.11	0.75	8.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.80	0.41	0.55	0.06	0.25	0.79
d, Delay for Lane Group [s/veh]	50.65	2.96	8.45	4.96	37.83	48.04
Lane Group LOS	D	A	A	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.75	1.70	5.33	0.33	0.88	2.90
50th-Percentile Queue Length [ft/ln]	68.75	42.58	133.20	8.25	21.93	72.40
95th-Percentile Queue Length [veh/ln]	4.95	3.07	9.11	0.59	1.58	5.21
95th-Percentile Queue Length [ft/ln]	123.75	76.65	227.84	14.84	39.47	130.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.65	2.96	8.45	4.96	37.83	48.04
Movement LOS	D	A	A	A	D	D
d_A, Approach Delay [s/veh]	7.42		8.30		45.38	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	10.19					
Intersection LOS	B					
Intersection V/C	0.524					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.792	0.000	2.048
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	911	489
d_b, Bicycle Delay [s]	5.00	13.34	25.69
I_b,int, Bicycle LOS Score for Intersection	2.531	2.612	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



322 Jurupa Avenue Industrial Project

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Scenario 1 EX PM

Report File: \\...\\1. EX PM.pdf

6/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	EB Thru	0.364	9.9	A
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.727	14.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	57	61	98	137	198	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	57	61	98	137	198	63
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	18	29	40	58	18
Total Analysis Volume [veh/h]	66	71	114	159	231	73
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	720	750	704	817
Degree of Utilization, x	0.19	0.36	0.33	0.09

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.70	1.67	1.43	0.29
95th-Percentile Queue Length [ft]	17.47	41.77	35.77	7.34
Approach Delay [s/veh]	9.17	10.52	9.63	
Approach LOS	A	B	A	
Intersection Delay [s/veh]	9.89			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	14.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	106	1280	1664	48	32	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	106	1280	1664	48	32	165
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	337	438	13	8	43
Total Analysis Volume [veh/h]	112	1347	1752	51	34	174
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	64	52	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	69	58	58	13	13
g / C, Green / Cycle	0.08	0.77	0.64	0.64	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.07	0.41	0.54	0.04	0.02	0.12
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	138	2499	2079	928	234	209
d1, Uniform Delay [s]	40.50	4.15	12.72	6.09	33.71	37.50
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	10.95	0.84	4.36	0.11	0.28	8.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.54	0.84	0.05	0.15	0.83
d, Delay for Lane Group [s/veh]	51.45	4.99	17.09	6.20	33.99	45.91
Lane Group LOS	D	A	B	A	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.82	3.63	12.88	0.35	0.66	4.15
50th-Percentile Queue Length [ft/ln]	70.61	90.69	321.98	8.82	16.56	103.85
95th-Percentile Queue Length [veh/ln]	5.08	6.53	18.76	0.64	1.19	7.48
95th-Percentile Queue Length [ft/ln]	127.10	163.25	469.12	15.88	29.81	186.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	51.45	4.99	17.09	6.20	33.99	45.91
Movement LOS	D	A	B	A	C	D
d_A, Approach Delay [s/veh]	8.55		16.78		43.96	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	14.95					
Intersection LOS	B					
Intersection V/C	0.727					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.961	0.000	2.062
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	1067	489
d_b, Bicycle Delay [s]	5.00	9.80	25.69
I_b,int, Bicycle LOS Score for Intersection	2.763	3.047	1.560
Bicycle LOS	C	C	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



322 Jurupa Avenue Industrial Project

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Scenario 2 OY AM

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	WB Thru	0.191	8.3	A
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.562	11.9	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	8.3
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.191

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	38	31	51	56	99	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	0	0	35	29	5
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	40	32	52	92	130	28
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	11	9	14	25	35	8
Total Analysis Volume [veh/h]	43	35	56	99	140	30
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	805	810	749	877
Degree of Utilization, x	0.10	0.19	0.19	0.03

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.32	0.70	0.68	0.11
95th-Percentile Queue Length [ft]	8.02	17.60	17.08	2.65
Approach Delay [s/veh]	7.95	8.49	8.31	
Approach LOS	A	A	A	
Intersection Delay [s/veh]	8.31			
Intersection LOS	A			

Intersection Level Of Service Report

Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	11.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.562

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	105	1016	1161	53	40	113
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	23	1	1	11	19	17
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	130	1037	1185	65	60	132
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	34	272	311	17	16	35
Total Analysis Volume [veh/h]	137	1089	1245	68	63	139
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	19	64	45	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	9	71	58	58	11	11
g / C, Green / Cycle	0.10	0.79	0.64	0.64	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.08	0.33	0.38	0.05	0.04	0.10
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	168	2577	2096	936	195	174
d1, Uniform Delay [s]	39.52	2.94	9.24	5.99	36.27	38.56
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.23	0.51	1.25	0.15	0.95	8.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.42	0.59	0.07	0.32	0.80
d, Delay for Lane Group [s/veh]	48.75	3.45	10.49	6.14	37.22	46.71
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.35	2.08	6.41	0.47	1.31	3.34
50th-Percentile Queue Length [ft/ln]	83.86	51.95	160.20	11.68	32.64	83.38
95th-Percentile Queue Length [veh/ln]	6.04	3.74	10.56	0.84	2.35	6.00
95th-Percentile Queue Length [ft/ln]	150.94	93.50	263.99	21.02	58.75	150.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.75	3.45	10.49	6.14	37.22	46.71
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	8.51		10.26		43.75	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	11.95					
Intersection LOS	B					
Intersection V/C	0.562					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.810	0.000	2.074
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	911	489
d_b, Bicycle Delay [s]	5.00	13.34	25.69
I_b,int, Bicycle LOS Score for Intersection	2.571	2.643	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



322 Jurupa Avenue Industrial Project

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Scenario 2 OY PM

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Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	EB Thru	0.427	10.7	B
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.766	17.7	B

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	10.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	57	61	98	137	198	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	2	0	0	31	37	2
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	60	62	100	171	239	66
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	18	29	50	70	19
Total Analysis Volume [veh/h]	70	72	116	199	278	77
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	689	737	694	803
Degree of Utilization, x	0.21	0.43	0.40	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.77	2.15	1.93	0.32
95th-Percentile Queue Length [ft]	19.26	53.81	48.37	7.93
Approach Delay [s/veh]	9.58	11.48	10.53	
Approach LOS	A	B	B	
Intersection Delay [s/veh]	10.73			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.766

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	106	1280	1664	48	32	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	17	4	5	22	15	18
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	125	1310	1702	71	48	186
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	345	448	19	13	49
Total Analysis Volume [veh/h]	132	1379	1792	75	51	196
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	64	52	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	68	56	56	14	14
g / C, Green / Cycle	0.09	0.75	0.62	0.62	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.42	0.55	0.05	0.03	0.13
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	145	2449	2015	900	259	231
d1, Uniform Delay [s]	40.65	4.79	14.53	6.89	32.87	36.81
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	18.84	0.94	6.36	0.18	0.37	8.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.56	0.89	0.08	0.20	0.85
d, Delay for Lane Group [s/veh]	59.49	5.73	20.89	7.07	33.24	45.25
Lane Group LOS	E	A	C	A	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.62	4.26	14.98	0.57	0.98	4.66
50th-Percentile Queue Length [ft/ln]	90.38	106.41	374.50	14.23	24.57	116.40
95th-Percentile Queue Length [veh/ln]	6.51	7.64	21.33	1.02	1.77	8.19
95th-Percentile Queue Length [ft/ln]	162.68	191.00	533.18	25.62	44.23	204.87

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.49	5.73	20.89	7.07	33.24	45.25
Movement LOS	E	A	C	A	C	D
d_A, Approach Delay [s/veh]	10.43		20.33		42.77	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	17.73					
Intersection LOS	B					
Intersection V/C	0.766					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.984	0.000	2.089
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	1067	489
d_b, Bicycle Delay [s]	5.00	9.80	25.69
I_b,int, Bicycle LOS Score for Intersection	2.806	3.100	1.560
Bicycle LOS	C	C	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



322 Jurupa Avenue Industrial Project

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Scenario 3 OY WP AM

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6/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	WB Thru	0.208	8.4	A
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.567	12.2	B
3	Jurupa Avenue at Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.005	10.4	B
4	Jurupa Avenue at Project Driveway 2	Two-way stop	HCM 7th Edition	SB Left	0.002	10.4	B
5	Willow Avenue at Project Driveway 3	Two-way stop	HCM 7th Edition	EB Right	0.004	8.6	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	8.4
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.208

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	38	31	51	56	99	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	0	0	35	29	5
Site-Generated Trips [veh/h]	4	0	0	4	14	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	44	32	52	96	144	39
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	12	9	14	26	39	11
Total Analysis Volume [veh/h]	47	35	56	104	155	42
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	790	803	746	873
Degree of Utilization, x	0.10	0.20	0.21	0.05

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.35	0.74	0.78	0.15
95th-Percentile Queue Length [ft]	8.66	18.49	19.46	3.78
Approach Delay [s/veh]	8.09	8.60	8.41	
Approach LOS	A	A	A	
Intersection Delay [s/veh]	8.42			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.567

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	105	1016	1161	53	40	113
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	23	1	1	11	19	17
Site-Generated Trips [veh/h]	5	0	0	19	5	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	1037	1185	84	65	134
Peak Hour Factor	0.9520	0.9520	0.9520	0.9520	0.9520	0.9520
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	272	311	22	17	35
Total Analysis Volume [veh/h]	142	1089	1245	88	68	141
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	19	64	45	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	71	58	58	11	11
g / C, Green / Cycle	0.11	0.79	0.64	0.64	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.09	0.33	0.38	0.06	0.04	0.10
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	173	2572	2081	929	197	176
d1, Uniform Delay [s]	39.37	2.99	9.49	6.24	36.26	38.48
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.16	0.51	1.28	0.20	1.03	8.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.42	0.60	0.09	0.34	0.80
d, Delay for Lane Group [s/veh]	48.53	3.50	10.77	6.44	37.29	46.58
Lane Group LOS	D	A	B	A	D	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.47	2.11	6.54	0.63	1.41	3.38
50th-Percentile Queue Length [ft/ln]	86.72	52.76	163.44	15.64	35.30	84.47
95th-Percentile Queue Length [veh/ln]	6.24	3.80	10.73	1.13	2.54	6.08
95th-Percentile Queue Length [ft/ln]	156.09	94.98	268.27	28.15	63.53	152.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.53	3.50	10.77	6.44	37.29	46.58
Movement LOS	D	A	B	A	D	D
d_A, Approach Delay [s/veh]	8.69		10.49		43.56	
Approach LOS	A		B		D	
d_I, Intersection Delay [s/veh]	12.18					
Intersection LOS	B					
Intersection V/C	0.567					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.812	0.000	2.084
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	911	489
d_b, Bicycle Delay [s]	5.00	13.34	25.69
I_b,int, Bicycle LOS Score for Intersection	2.575	2.659	1.560
Bicycle LOS	B	B	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Jurupa Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name			Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	0	0	0	107	130	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	35	29	0
Site-Generated Trips [veh/h]	3	1	3	0	0	9
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	1	3	144	162	9
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	1	38	43	2
Total Analysis Volume [veh/h]	3	1	3	152	171	9
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.45	9.15	7.56	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.01	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.43	0.43	0.13	0.13	0.00	0.00
d_A, Approach Delay [s/veh]	10.13		0.15		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.19					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Jurupa Avenue at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

Intersection Setup

Name	Southbound		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Southbound		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	0	0	0	107	130	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	35	29	0
Site-Generated Trips [veh/h]	1	0	0	3	9	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	0	0	147	171	5
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	39	45	1
Total Analysis Volume [veh/h]	1	0	0	155	180	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.44	9.17	7.57	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.44		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.03					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Willow Avenue at Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	8.6
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Willow Avenue		Willow Avenue			
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Willow Avenue		Willow Avenue			
Base Volume Input [veh/h]	0	74	69	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	5	1	0	0	0
Site-Generated Trips [veh/h]	11	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	11	80	71	0	0	4
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	21	19	0	0	1
Total Analysis Volume [veh/h]	12	84	75	0	0	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	7.36	0.00	0.00	0.00	9.49	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.01	0.01
95th-Percentile Queue Length [ft/ln]	0.50	0.50	0.00	0.00	0.30	0.30
d_A, Approach Delay [s/veh]	0.92		0.00		8.64	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	A					

322 Jurupa Avenue Industrial Project

Vistro File: \\...\\322 Jurupa_PM.vistro

Scenario 3 OY WP PM

Report File: \\...\\3. OY WP PM.pdf

6/14/2023

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Willow Avenue at Jurupa Avenue	All-way stop	HCM 7th Edition	EB Thru	0.455	11.1	B
2	Riverside Avenue at Jurupa Avenue	Signalized	HCM 7th Edition	NB Left	0.771	18.3	B
3	Jurupa Avenue at Project Driveway 1	Two-way stop	HCM 7th Edition	SB Left	0.019	12.9	B
4	Jurupa Avenue at Project Driveway 2	Two-way stop	HCM 7th Edition	SB Left	0.011	13.0	B
5	Willow Avenue at Project Driveway 3	Two-way stop	HCM 7th Edition	EB Right	0.012	8.9	A

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report

Intersection 1: Willow Avenue at Jurupa Avenue

Control Type:	All-way stop	Delay (sec / veh):	11.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.455

Intersection Setup

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Willow Avenue		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	57	61	98	137	198	63
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	2	0	0	31	37	2
Site-Generated Trips [veh/h]	11	0	0	14	5	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	71	62	100	185	244	70
Peak Hour Factor	0.8590	0.8590	0.8590	0.8590	0.8590	0.8590
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	18	29	54	71	20
Total Analysis Volume [veh/h]	83	72	116	215	284	81
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	676	728	685	790
Degree of Utilization, x	0.23	0.45	0.42	0.10

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.88	2.39	2.05	0.34
95th-Percentile Queue Length [ft]	22.04	59.70	51.13	8.53
Approach Delay [s/veh]	9.91	12.01	10.78	
Approach LOS	A	B	B	
Intersection Delay [s/veh]	11.10			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 2: Riverside Avenue at Jurupa Avenue

Control Type:	Signalized	Delay (sec / veh):	18.3
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.771

Intersection Setup

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	Riverside Avenue		Riverside Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	106	1280	1664	48	32	165
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00					
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	17	4	5	22	15	18
Site-Generated Trips [veh/h]	2	0	0	7	19	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	127	1310	1702	78	67	191
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	33	345	448	21	18	50
Total Analysis Volume [veh/h]	134	1379	1792	82	71	201
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing m	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	1	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	10	10	0	5	0
Maximum Green [s]	30	30	30	0	30	0
Amber [s]	3.0	3.0	3.0	0.0	3.0	0.0
All red [s]	1.0	1.0	1.0	0.0	1.0	0.0
Split [s]	12	64	52	0	26	0
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	0.0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	17	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall	No	No	No		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	8	67	55	55	15	15
g / C, Green / Cycle	0.09	0.75	0.62	0.62	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.42	0.55	0.06	0.04	0.14
s, saturation flow rate [veh/h]	1629	3256	3256	1454	1629	1454
c, Capacity [veh/h]	145	2437	2003	894	265	236
d1, Uniform Delay [s]	40.70	4.94	14.82	7.06	33.00	36.62
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.67	0.96	6.69	0.20	0.54	8.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.93	0.57	0.89	0.09	0.27	0.85
d, Delay for Lane Group [s/veh]	61.38	5.89	21.51	7.26	33.53	44.96
Lane Group LOS	E	A	C	A	C	D
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.74	4.37	15.25	0.63	1.38	4.76
50th-Percentile Queue Length [ft/ln]	93.40	109.35	381.27	15.86	34.52	119.05
95th-Percentile Queue Length [veh/ln]	6.72	7.80	21.66	1.14	2.49	8.34
95th-Percentile Queue Length [ft/ln]	168.12	195.10	541.39	28.55	62.14	208.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	61.38	5.89	21.51	7.26	33.53	44.96
Movement LOS	E	A	C	A	C	D
d_A, Approach Delay [s/veh]	10.81		20.88		41.98	
Approach LOS	B		C		D	
d_I, Intersection Delay [s/veh]	18.29					
Intersection LOS	B					
Intersection V/C	0.771					

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	36.45
I_p,int, Pedestrian LOS Score for Intersection	2.985	0.000	2.100
Crosswalk LOS	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	1067	489
d_b, Bicycle Delay [s]	5.00	9.80	25.69
I_b,int, Bicycle LOS Score for Intersection	2.808	3.106	1.560
Bicycle LOS	C	C	A

Sequence

Ring 1	1	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Jurupa Avenue at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name			Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name			Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	0	0	0	235	259	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	31	37	0
Site-Generated Trips [veh/h]	9	3	1	0	0	3
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	9	3	1	271	301	3
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	1	0	71	79	1
Total Analysis Volume [veh/h]	9	3	1	285	317	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.94	10.12	7.88	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.81	1.81	0.04	0.04	0.00	0.00
d_A, Approach Delay [s/veh]	12.24		0.03		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.25					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 4: Jurupa Avenue at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	13.0
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Southbound		Jurupa Avenue		Jurupa Avenue	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Southbound		Jurupa Avenue		Jurupa Avenue	
Base Volume Input [veh/h]	0	0	0	235	259	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	31	37	0
Site-Generated Trips [veh/h]	5	0	0	9	3	2
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	0	0	280	304	2
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	74	80	1
Total Analysis Volume [veh/h]	5	0	0	295	320	2
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.96	10.06	7.88	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.83	0.83	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.96		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.10					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 5: Willow Avenue at Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 7th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.012

Intersection Setup

Name	Willow Avenue		Willow Avenue		Eastbound	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Willow Avenue		Willow Avenue		Eastbound	
Base Volume Input [veh/h]	0	161	118	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	2	2	0	0	0
Site-Generated Trips [veh/h]	4	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	4	166	122	0	0	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	42	31	0	0	3
Total Analysis Volume [veh/h]	4	166	122	0	0	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	7.44	0.00	0.00	0.00	10.21	8.90
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.04	0.04
95th-Percentile Queue Length [ft/ln]	0.17	0.17	0.00	0.00	0.89	0.89
d_A, Approach Delay [s/veh]	0.18		0.00		8.90	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.42					
Intersection LOS	A					

APPENDIX D

CUMULATIVE PROECTS WORKSHEETS

CUMULATIVE PROJECTS - DISTRIBUTION

TOTAL OF ALL CUMULATIVE PROJECTS

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	0	0	0	0	34	0	0	28	0
2	Riverside Avenue at Jurupa Avenue	18	0	0	0	0	10	18	0	16	0	0	0

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	0	0	0	0	28	0	0	34	0
2	Riverside Avenue at Jurupa Avenue	15	0	0	0	0	19	12	0	16	0	0	0

CUMULATIVE PROJECTS - HAND ENTERED FROM TRAFFIC STUDIES

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	1	0	0	0	1	0	0	1	5
2	Riverside Avenue at Jurupa Avenue	5	1	0	0	1	1	1	0	1	0	0	0

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	2	0	0	0	3	0	0	3	2
2	Riverside Avenue at Jurupa Avenue	2	4	0	0	5	3	3	0	2	0	0	0

TOTAL CUMULATIVE PROJECTS TRAFFIC

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	1	0	0	0	35	0	0	29	5
2	Riverside Avenue at Jurupa Avenue	23	1	0	0	1	11	19	0	17	0	0	0
3	Jurupa Avenue at Project Driveway 1	0	0	0	0	0	0	0	35	0	0	29	0
4	Jurupa Avenue at Project Driveway 2	0	0	0	0	0	0	0	35	0	0	29	0
5	Jurupa Avenue at Project Driveway 3	0	5	0	0	1	0	0	0	0	0	0	0

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Willow Ave at Jurupa Ave	0	0	0	2	0	0	0	31	0	0	37	2
2	Riverside Avenue at Jurupa Avenue	17	4	0	0	5	22	15	0	18	0	0	0
3	Jurupa Avenue at Project Driveway 1	0	0	0	0	0	0	0	31	0	0	37	0
4	Jurupa Avenue at Project Driveway 2	0	0	0	0	0	0	0	31	0	0	37	0
5	Jurupa Avenue at Project Driveway 3	0	2	0	0	2	0	0	0	0	0	0	0

Yellow cells calculate

Willow Ave at Jurupa Ave

Entire Intersection

Mirror distribution?

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	0	0	0	18	0	0	18	0
AM Out		0	0	0	0	0	0	0	16	0	0	10	0
AM Tot		0	0	0	0	0	0	0	34	0	0	28	0
PM In		0	0	0	0	0	0	0	12	0	0	15	0
PM Out		0	0	0	0	0	0	0	16	0	0	19	0
PM Tot		0	0	0	0	0	0	0	28	0	0	34	0

CP #1,10

[illegible][illegible]

CP #5,7,13,14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In											5%	
Y	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	362	0	0	0	0	0	0	0	0	0	0	18	0
AM Out	325	0	0	0	0	0	0	0	16	0	0	0	0
PM In	299	0	0	0	0	0	0	0	0	0	0	15	0
PM Out	312	0	0	0	0	0	0	0	16	0	0	0	0

CP #3,4,6,9

[illegible][illegible]

CP #2,8

[illegible][illegible]

Enter only in blue cells Yellow cells calculate

Int. #: 2 Riverside Avenue at Jurupa Avenue

Y

Zone # 1 CP #1,10

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In												
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Zone # 2 CP #5,7,13,14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	5%											
Y	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%
AM Out												
PM In	5%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%

Zone # 3 CP #3,4,6,9

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							5%					
Y	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%

Zone # 4 CP #2,8

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							5%					
Y	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		18	0	0	0	0	0	18	0	0	0	0	0
AM Out		0	0	0	0	0	10	0	0	16	0	0	0
AM Tot		18	0	0	0	0	10	18	0	16	0	0	0
PM In		15	0	0	0	0	0	12	0	0	0	0	0
PM Out		0	0	0	0	0	19	0	0	16	0	0	0
PM Tot		15	0	0	0	0	19	12	0	16	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	425	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	318	0	0	0	0	0	0	0	0	0	0	0	0
PM In	597	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	654	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	362	18	0	0	0	0	0	0	0	0	0	0	0
AM Out	325	0	0	0	0	0	0	0	0	16	0	0	0
PM In	299	15	0	0	0	0	0	0	0	0	0	0	0
PM Out	312	0	0	0	0	0	0	0	0	16	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	221	0	0	0	0	0	0	11	0	0	0	0	0
AM Out	157	0	0	0	0	0	8	0	0	0	0	0	0
PM In	181	0	0	0	0	0	0	9	0	0	0	0	0
PM Out	240	0	0	0	0	0	12	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	140	0	0	0	0	0	0	7	0	0	0	0	0
AM Out	43	0	0	0	0	0	2	0	0	0	0	0	0
PM In	60	0	0	0	0	0	0	3	0	0	0	0	0
PM Out	139	0	0	0	0	0	7	0	0	0	0	0	0

APPENDIX E

SIGNAL WARRANT WORKSHEETS

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET:

Jurupa Ave

EB

WB

 # OF APPROACH LANES:

1

MINOR STREET:

Willow Ave

NB

SB

 # OF APPROACH LANES:

1

CITY, STATE:

Rialto, CA

COMMENTS:

Opening Year 2024 Plus Project

0

ISOLATED COMMUNITY WITH POPULATION LESS THAN 10,000 (Y OR N):

N

85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

N

			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
					MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET		
THRESHOLD VALUES					500	150		750	75		400	120		600	60			
06:00 AM	TO	07:00 AM	0	0														
07:00 AM	TO	08:00 AM	0	0														
08:00 AM	TO	09:00 AM	331	76					Y						Y			
09:00 AM	TO	10:00 AM	0	0														
10:00 AM	TO	11:00 AM	0	0														
11:00 AM	TO	12:00 PM	0	0														
12:00 PM	TO	01:00 PM	0	0														
01:00 PM	TO	02:00 PM	0	0														
02:00 PM	TO	03:00 PM	0	0														
03:00 PM	TO	04:00 PM	0	0														
04:00 PM	TO	05:00 PM	0	0														
05:00 PM	TO	06:00 PM	599	133	Y				Y		Y	Y	Y		Y			
06:00 PM	TO	07:00 PM	0	0														
07:00 PM	TO	08:00 PM	0	0														
08:00 PM	TO	09:00 PM	0	0														
09:00 PM	TO	10:00 PM	0	0														
			930	209	1	0	0	0	2	0	1	1	1	0	2	0	0	0
					8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
					NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	NOT SATISFIED