

APPENDIX I:
TRAFFIC STUDY



Traffic Study

for the:

2245 W Valley Boulevard Project

In the City of Colton

November 2022

Kimley»»Horn

**TRAFFIC STUDY
FOR THE PROPOSED
2245 W. VALLEY BOULEVARD PROJECT
IN THE CITY OF COLTON**

Prepared by:

Kimley-Horn and Associates, Inc.
1100 W Town and Country Road, Suite 700
Orange, California 92868

November 2022

TABLE OF CONTENTS

Page

INTRODUCTION 1
 Purpose and Study Objectives 1
 Project Overview 1
ANALYSIS SCENARIOS AND METHODOLOGY 4
 Analysis Scenarios 4
 Study Area 4
 Intersection Analysis – HCM Methodology 4
 Level of Service Standards and Measure of Significance 6
AREA CONDITIONS 7
 Existing Street System 7
 Existing Transit Service 7
EXISTING CONDITIONS 11
 Existing Traffic Volumes 11
 Peak Hour Operation Conditions 11
FUTURE CONDITIONS 14
 Opening Year 2024 Cumulative 14
 Cumulative Projects 14
 Peak Hour Operating Conditions 14
PROJECT TRAFFIC 20
 Trip Generation 20
 Trip Distribution and Assignment 20
FUTURE CONDITIONS PLUS PROJECT 24
 Opening Year 2024 Cumulative Plus Project 24
 Peak Hour Operating Conditions 24
RECOMMENDED IMPROVEMENTS 24
SITE ACCESS 24
VEHICLE MILES TRAVELED (VMT) – SB 743 27
SUMMARY OF FINDINGS AND CONCLUSIONS 29

LIST OF FIGURES

Page

Figure 1 – Vicinity Map 2
Figure 2 – Project Site Plan..... 3
Figure 3 – Existing Lane Configuration and Traffic Control 8
Figure 4 – City of Colton Roadway Network 9
Figure 5 – City of Rialto Roadway Network..... 10
Figure 6 – Existing Traffic Volumes 12
Figure 7 – Location of Cumulative Projects 16
Figure 8 – Cumulative Projects Traffic Volumes 17
Figure 9 – Opening Year 2024 Cumulative Traffic Volumes..... 18
Figure 10 – Project Trip Distribution..... 22
Figure 11 – Project-Related Traffic Volumes 23
Figure 12 – Opening Year 2024 Cumulative Plus Project Traffic Volumes 25

LIST OF TABLES

Page

Table 1 – Summary of Intersection Operation – Existing Conditions 13
Table 2 – Summary of Cumulative Projects Trip Generation..... 15
Table 3 – Summary of Intersection Operation – Opening Year 2024 Cumulative..... 19
Table 4 – Summary of Project Trip Generation..... 21
Table 5 – Summary of Intersection Operation – Opening Year 2024 Cumulative Plus Project 26

APPENDICES

- APPENDIX A: APPROVED SCOPING AGREEMENT
- APPENDIX B: TRAFFIC COUNT DATA SHEETS
- APPENDIX C: PCE WORKSHEETS
- APPENDIX D: INTERSECTION ANALYSIS WORKSHEETS
- APPENDIX E: CUMULATIVE PROJECTS INFORMATION

**TRAFFIC STUDY
FOR THE PROPOSED
2245 W. VALLEY BOULEVARD PROJECT
IN THE CITY OF COLTON**

INTRODUCTION

Purpose and Study Objectives

This traffic study has been prepared to address the traffic-related effects of the proposed 2245 W. Valley Boulevard Project (“Project”) in the City of Colton. This traffic study has been conducted in accordance with the City of Colton *Vehicle Miles Traveled (VMT) Guidelines* (June 2020) and the San Bernardino Association of Governments (SANBAG) *Congestion Management Program (CMP)* (June 2016).

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 effects on the roadway system. Where necessary, circulation system improvements have been identified to address project-related effects at the study locations.

Project Overview

The project site is located on the north side of Valley Boulevard, approximately 1,000 feet east of the intersection of Riverside Avenue at Valley Boulevard in the City of Colton. The project site is approximately 9.0 acres and is bounded by vacant lots to the north and west, light industrial to the east, and Valley Boulevard to the south. The site is shown in its regional setting on **Figure 1**. The project site is currently occupied by a vacant warehouse building. The project consists of demolishing the existing building and constructing four warehouse buildings totaling approximately 189,890 square feet (SF). A copy of the project site plan is provided on **Figure 2**.

Direct vehicular access provisions for both passenger vehicles and trucks for the project site would consist of three full-movement driveways on Valley Boulevard. The western driveway would provide primary truck access for the southwestern building, the eastern driveway would provide primary truck access to the southeastern building, and the center driveway would provide primary access for both trucks and passenger vehicles to the two northern buildings. All three driveways would provide full circulation throughout the project site.



NOT TO SCALE



LEGEND:
 = Project Site

**FIGURE 1
VICINTY MAP**





FIGURE 2
PROJECT SITE PLAN

ANALYSIS SCENARIOS AND METHODOLOGY

Analysis Scenarios

Based on the City of Colton traffic study requirements, the project will be evaluated in the morning and evening peak hours for the following conditions:

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

Study Area

This traffic study includes documentation of existing conditions, future conditions, and identification of project-related effects at the following study intersections:

Intersections:

1. Riverside Avenue at Valley Boulevard (Rialto)
2. Riverside Avenue at I-10 Westbound Ramps (Rialto; Caltrans)
3. Riverside Avenue at I-10 Eastbound Ramps (Rialto; Caltrans)
4. Pepper Avenue at Valley Boulevard (Colton)
- D1. Valley Boulevard at Project Driveway 1 (Colton)
- D2. Valley Boulevard at Project Driveway 2 (Colton)
- D3. Valley Boulevard at Project Driveway 3 (Colton)

The study intersections were established in consultation with City of Colton staff through the Scoping Agreement process. A copy of the approved Scoping Agreement is provided in **Appendix A**.

Intersection Analysis – HCM Methodology

Peak hour intersection operations at signalized and unsignalized intersections were evaluated using the methods prescribed in the current Highway Capacity Manual (HCM), consistent with the City of Colton traffic study requirements. The intersection analysis for the proposed project has been accomplished using the Vistro software program and using the specified input parameters outlined in the San Bernardino County CMP.

For signalized intersections, the HCM methodology estimates the average delay (in average seconds per vehicle) for each of the movements through the intersection, considering a number of factors, including the number of lanes, volume of traffic, and the signal timing phasing.

For unsignalized intersections, the HCM methodology analysis determines the average total delay for each vehicle making any movement from the stop-controlled minor street, as well as left turns from the major street. Delay values are calculated based on the relationship between traffic on the major street and the availability of acceptable gaps in the traffic stream through which conflicting traffic movements can be made.

The HCM delay forecast translates to a Level of Service designation, ranging from LOS A to LOS F. A summary of each Level of Service and the corresponding delay is provided in the following chart:

LEVEL OF SERVICE DESCRIPTIONS HCM METHODOLOGY			
LOS	Average Delay (sec / vehicle)		Description
	Signalized¹	Unsignalized²	
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.

¹ Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 19-8.

² Source: Highway Capacity Manual (HCM 7th Edition), Exhibit 20-2.

Level of Service Standards and Measure of Significance

Below are the LOS standards and measures of significance to determine project-related effects by jurisdiction.

City of Colton

The Level of Service standard in the City of Colton for an intersection is LOS D or better, as outlined in the City of Colton's *Vehicle Miles Traveled (VMT) Guidelines* (June 2020) and the *City of Colton General Plan Mobility Element* (adopted August 20, 2013). The project is considered to create a significant effect when the addition of project-related trips causes a study facility to degrade from acceptable (LOS D or better) to unacceptable (LOS E or F).

City of Rialto

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 of Rialto requires that signalized intersections operate at LOS D or better during the morning and evening peak hours. The City of Rialto's *Traffic Impact Analysis Report Guidelines and Requirements (December 2013)* require new development 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 of Rialto's *Traffic Impact Analysis Report Guidelines and Requirements (December 2013)* require unsignalized intersections to operate with no vehicular movement having an average delay exceeding 120 seconds during the morning and evening peak hours.

AREA CONDITIONS

Existing Street System

Regional access to the site is provided primarily by the Interstate 10 (I-10) Freeway, located approximately 1,500 feet southwest of the project site. Local access to the project area is provided primarily via Valley Boulevard.

Existing lane configurations and intersection controls at the study intersections are shown on **Figure 3**. A copy of the City of Colton Roadway Network and City of Rialto Roadway Network are provided on **Figure 4** and **Figure 5**, respectively. The following provides a description of the roadways surrounding the project site.

Riverside Avenue is a north-south roadway with three lanes in each direction within the project vicinity. The posted speed limit is 40 miles per hour (mph), and on-street parking is prohibited on both sides. In the City of Rialto General Plan, Riverside Avenue is designated as a Modified Major Arterial II.

Valley Boulevard is an east-west roadway with two lanes in each direction. The posted speed limit is 40 mph. On-street parking is prohibited on the north side of the roadway and is allowed on the south side of the street for passenger vehicles. In the City of Colton General Plan and the City of Rialto General Plan, Valley Boulevard is designated as a Major Arterial.

Pepper Avenue is a north-south roadway with two to three lanes in each direction within the project vicinity. The posted speed limit is 45 mph, and on-street parking is prohibited on both sides. In the City of Colton General Plan, Pepper Avenue is designated as a Major Arterial.

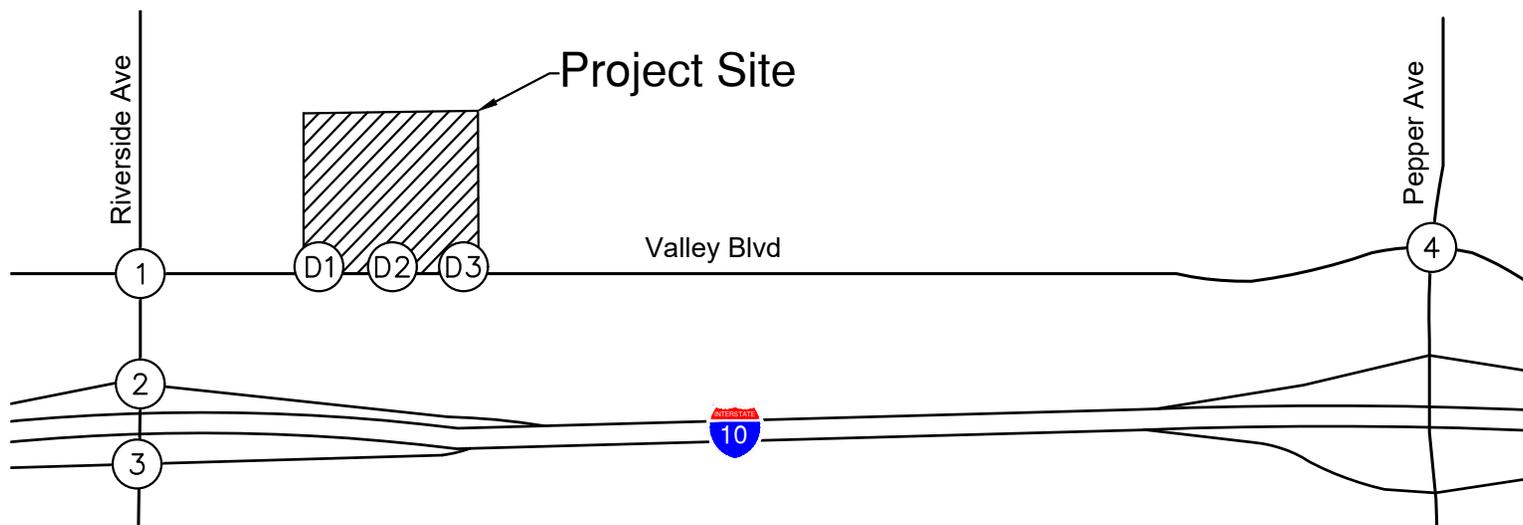
Existing Transit Service

Transit service to the project area is provided by OmniTrans, which serves San Bernardino County. The OmniTrans bus stop closest to the project site is located northwest of the intersection of Wildrose Avenue and Valley Boulevard. A description of the bus route serving the project is provided below.

OmniTrans Route 22 operates through the Cities of Rialto and Colton, traveling along Riverside Avenue and Valley Boulevard in the project vicinity. Route 22 operates weekdays from approximately 5:30 AM to 9:45 PM with approximately 1-hour headways, and weekends from approximately 7:30 AM to 7:00 PM with approximately 1-hour headways.



NOT TO SCALE



1. Riverside Ave at Valley Blvd	2. Riverside Ave at I-10 WB Ramps	3. Riverside Ave at I-10 EB Ramps	4. Pepper Ave at Valley Blvd	D1. Valley Blvd at Project Driveway 1	D2. Valley Blvd at Project Driveway 2	D3. Valley Blvd at Project Driveway 3
				FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION

LEGEND:

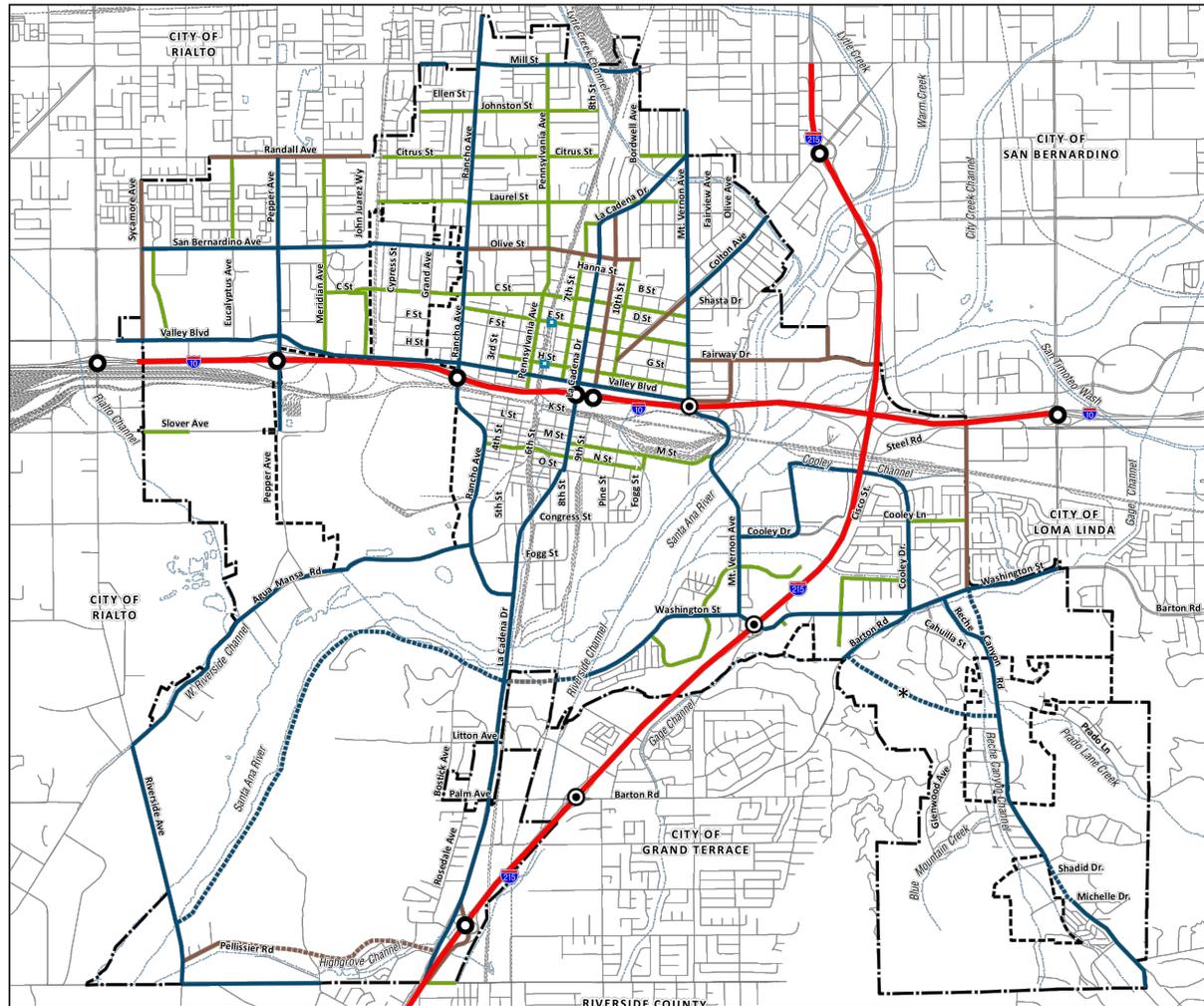
- = Study Intersection
- = Turn or Through Lane
- = Signal

FIGURE 3
EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL





NOT TO SCALE



Circulation Plan

- Freeway
- Major Arterial
- Planned Arterial
- Secondary Arterial
- Planned Secondary
- Collector Street
- Planned Collector
- Planned Roadway Located In Another City

* Conceptual roadway location. Final roadway location to be determined on proposed subdivision design.

Freeway Interchanges

- Interchanges
- Interchanges with Planned Improvements

Street Closure

- Street Closure (BSNF Quiet Zone Project)

Boundaries

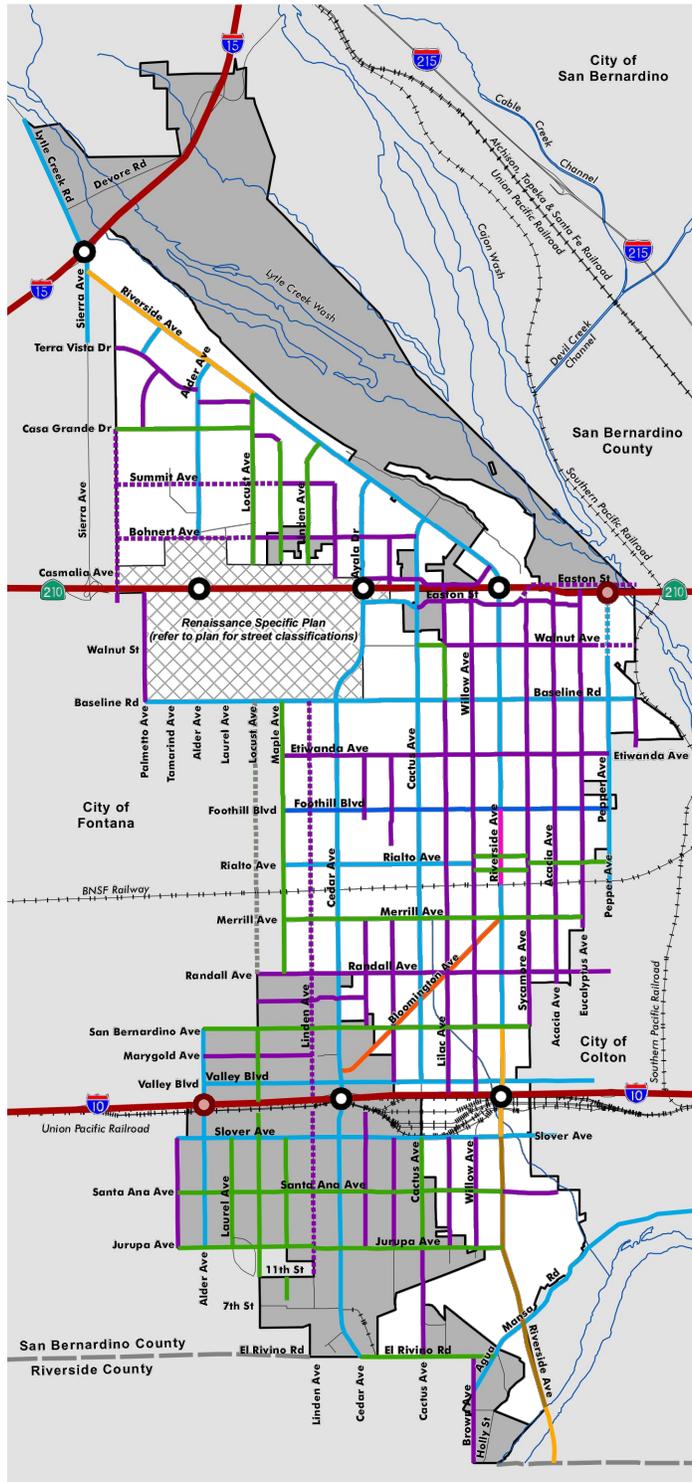
- City Boundary
- Sphere of Influence
- Railroad Tracks
- Watercourse

FIGURE 4
CITY OF COLTON ROADWAY NETWORK





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
CITY OF RIALTO ROADWAY NETWORK**



EXISTING CONDITIONS

Existing Traffic Volumes

Morning and evening peak hour turning movement counts for the study intersections were obtained in September 2022, while school was in session. Existing morning and evening peak hour intersection volumes are presented on **Figure 6**. Copies of the traffic data collection worksheets are provided in **Appendix B**.

The traffic counts included vehicle classifications for passenger cars, 2-axle trucks, 3-axle trucks, and 4+-axle trucks. The vehicle classification data was used to develop Passenger Car Equivalent (PCE) volumes by applying a PCE factor of 1.5 PCE for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 for 4+-axle trucks. PCE worksheets are provided in **Appendix C**.

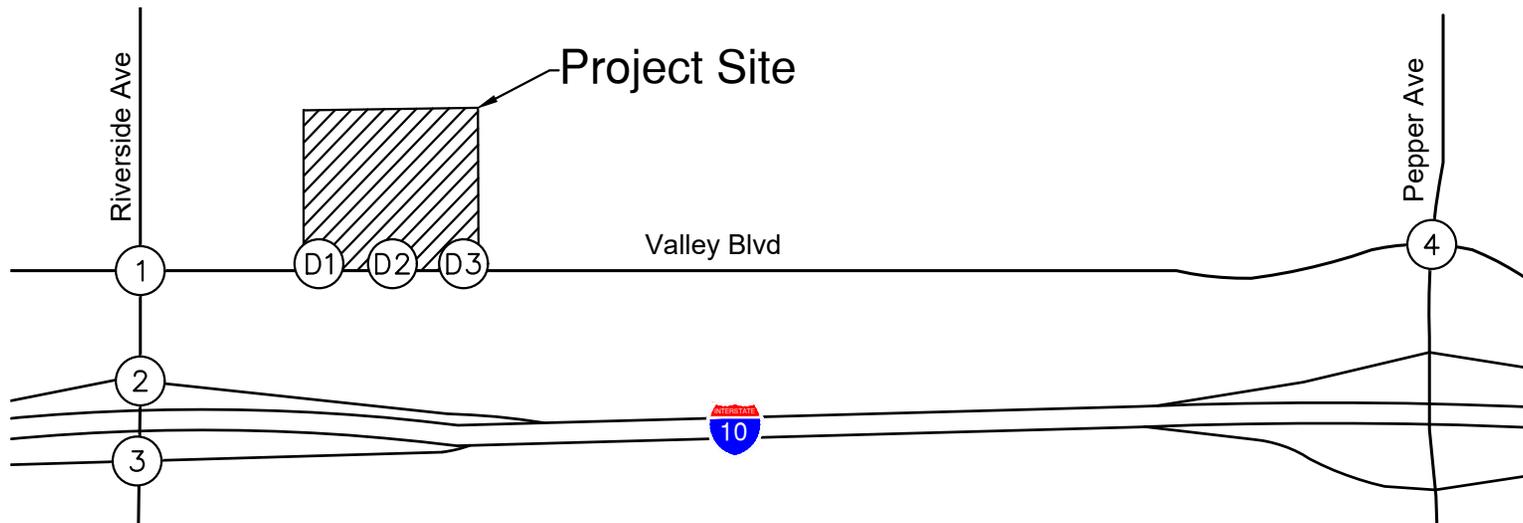
Peak Hour Operation Conditions

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**. Copies of Existing Conditions intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that all study intersections currently operate at an acceptable Level of Service.



NOT TO SCALE



1. Riverside Ave at Valley Blvd		2. Riverside Ave at I-10 WB Ramps		3. Riverside Ave at I-10 EB Ramps		4. Pepper Ave at Valley Blvd		D1. Valley Blvd at Project Driveway 1	D2. Valley Blvd at Project Driveway 2	D3. Valley Blvd at Project Driveway 3
33/50 895/651 55/80 42/122 195/313 167/135		630/401 910/799		846/766 387/377 370/573 3/2 378/369		56/67 1166/783 156/118 62/131 219/267 290/187		FUTURE INTERSECTION	FUTURE INTERSECTION	FUTURE INTERSECTION
49/99 304/297 460/425 315/416 520/1089 81/140		241/196 589/1104		167/555 0/8 469/269 487/747 253/292		82/137 208/305 234/166 221/251 966/1067 100/175				

Note: Volumes reflect PCE adjustments.

LEGEND:



= Study Intersection

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

**FIGURE 6
 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	Riverside Avenue at Valley Boulevard	S	41.8	D	38.1	D
2	Riverside Avenue at I-10 Westbound Ramps	S	25.4	C	23.2	C
3	Riverside Avenue at I-10 Eastbound Ramps	S	26.4	C	27.4	C
4	Pepper Avenue at Valley Boulevard	S	32.8	C	31.4	C

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

S = Signalized

U = Unsignalized

FUTURE CONDITIONS

Opening Year 2024 Cumulative

The project Opening Year is anticipated to be Year 2024. Based on consultation with City staff, an ambient annual growth rate of 2.0% per year to Opening Year 2024 was applied to existing traffic volumes. Cumulative Project traffic was also added to Opening Year 2024 volumes and is detailed below.

Cumulative Projects

In addition to ambient growth, Cumulative Project traffic volumes are added to existing traffic volumes. Information regarding cumulative projects in the area was provided by the City of Colton. Cumulative Projects consist of development projects that have been approved but are not yet constructed/occupied, and projects that are in various stages of the application and approval process but have not yet been approved. 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**.

Trip generation information for the Cumulative Projects was obtained from approved traffic studies, where available; or was developed by Kimley-Horn if approved traffic studies were not available. Likewise, trip distribution and assignment for the Cumulative Projects were either obtained from approved traffic studies, where available; or were developed by Kimley-Horn if approved traffic studies were not available. Project information and trip distribution assumptions for Cumulative Projects are provided in **Appendix E**. Traffic volumes associated with Cumulative Projects were compiled for each of the study intersections and are shown on **Figure 8**.

The ambient growth and the traffic volumes from the Cumulative Projects were added to the Existing peak hour volumes to develop Opening Year 2024 Cumulative traffic forecasts. The resulting traffic volumes are shown on **Figure 9**.

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 Opening Year 2024 Cumulative conditions are shown on **Table 3**. Copies of Opening Year 2024 Cumulative intersection analysis worksheets are provided in **Appendix D**.

Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service.

TABLE 2 SUMMARY OF CUMULATIVE PROJECTS TRIP GENERATION											
Project #	Description/Location	Land Use	Quantity	Unit	Trip Generation Estimates						
					Daily	AM Peak Hour			PM Peak Hour		
						In	Out	Total	In	Out	Total
City of Colton											
1	CUSM (300 N. Pepper Ave)	University/College	150	Student	234	18	5	23	7	15	22
2	Valley Orange Ent. (1600 W. Valley Blvd)	Gasoline/Service Station	8	Fueling Position	1,376	41	41	82	56	56	112
City of Rialto											
3	Birtcher Logistics Center ¹ (North of Valley Blvd, West of Riverside Ave)	Warehousing			1,522	107	22	129	32	109	141
4	Warehouse (SWC of Cactus Ave and Slover Ave) ²	Fast-Food Restaurant w/ Drive-thru			587	45	12	57	16	48	64
5	Lilac Avenue Warehouse (South of Slover Ave, West of Lilac Ave)	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	Truck Yard (SWC of Riverside Ave and Santa Ana Ave) ²	Hotel			686	29	43	72	31	34	65
8	SEC of Riverside Ave and Santa Ana Ave	Convenience Store/Gasoline Station	18	Fueling Position	4,772	145	145	290	166	166	332
9	CapRock III (North of Jurupa Ave, West of Riverside Ave)	Warehousing	582.000	KSF	995	76	23	99	29	76	105
10	Lynn Trucking (North of Jurupa Ave, West of Riverside Ave)	Intermodal Truck Terminal	133.729	KSF	*	124	140	264	130	120	250
11	South of Santa Ana Ave, East of Riverside Ave	Warehousing	370.000	KSF	633	48	14	62	19	48	67
12	Riverside Pallet Yard (NWC of Riverside Ave and Jurupa Ave)	General Light Industrial	155.945	KSF	759	102	14	116	14	87	101
13	Truck Lot (South of Jurupa Ave, West of Riverside Ave) ²	Convenience Store/Gasoline Station			393	14	21	35	18	20	38
14	Angelus Black - Concrete Block (North of Agua Mansa Rd, East of Riverside Ave)	Manufacturing	178.475	KSF	848	92	29	121	41	91	132
County of San Bernardino											
15	Cedar/Slover Retail (SEC of Cedar Ave and Slover Ave)	Convenience Store/Gasoline Station	12	Fueling Position	3,181	96	96	192	111	111	222
		Fast-Food Restaurant w/ Drive-thru	9.907	KSF	4,631	225	217	442	170	157	327
16	Cactus and Slover Warehouse (SWC of Cactus Ave and Slover Ave)	Warehousing	257.855	KSF	441	34	10	44	13	34	47
17	Cedar Truck Yard (North of Santa Ana Ave, West of Cedar Ave)	Intermodal Truck Terminal	389	KSF	*	361	407	768	379	350	729
Total Project Trips					21,222	1,569	1,243	2,812	1,235	1,535	2,770
Notes: ¹ Source: Rialto Birtcher Logistics Center, Final Environmental Impact Report. ² Trip generation estimates provided by City staff. KSF = Thousand Square Feet, DU = Dwelling Units NEC = Northeast Corner, SEC = Southeast Corner, NWC = Northwest Corner, SWC = Southwest Corner											



NOT TO SCALE

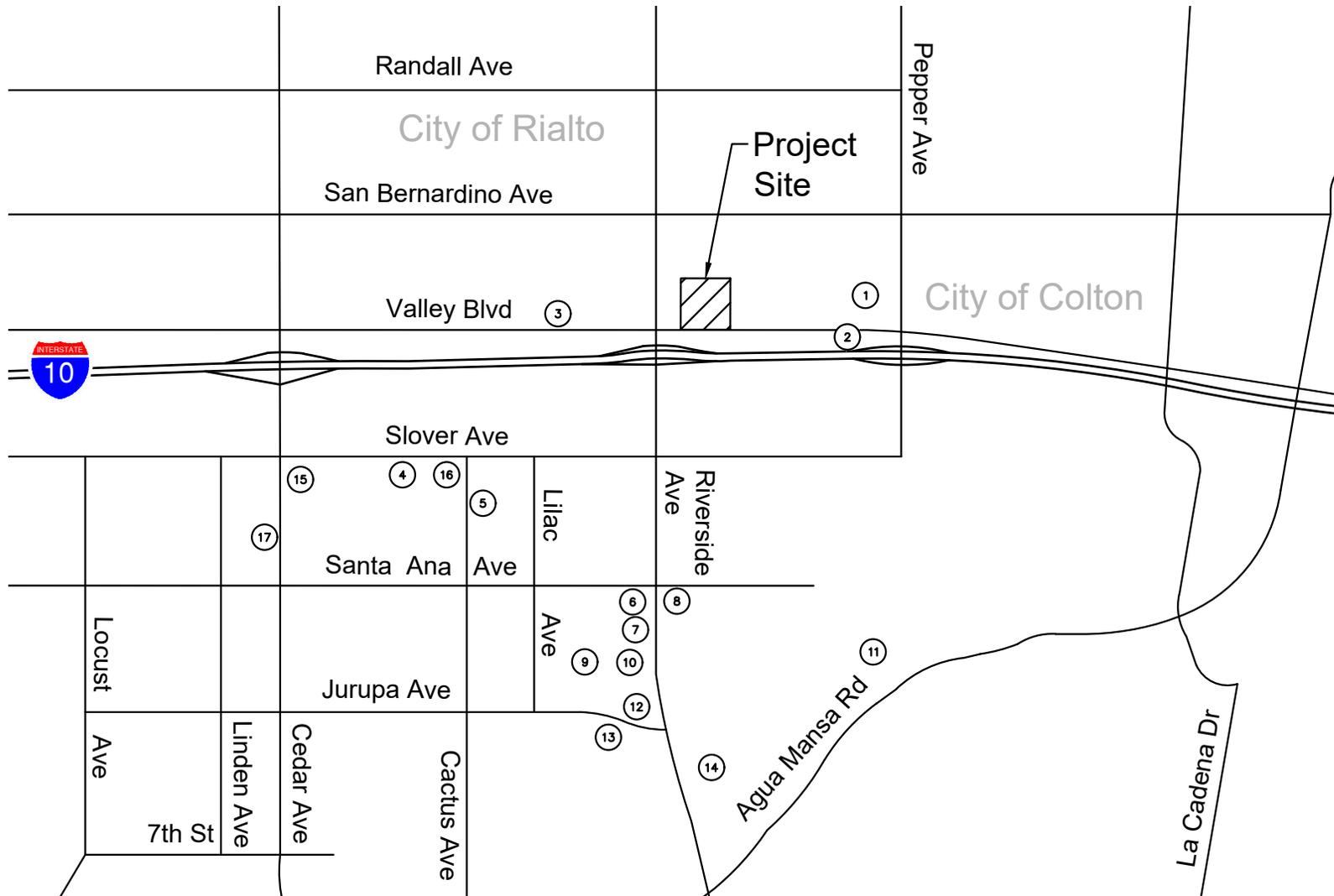


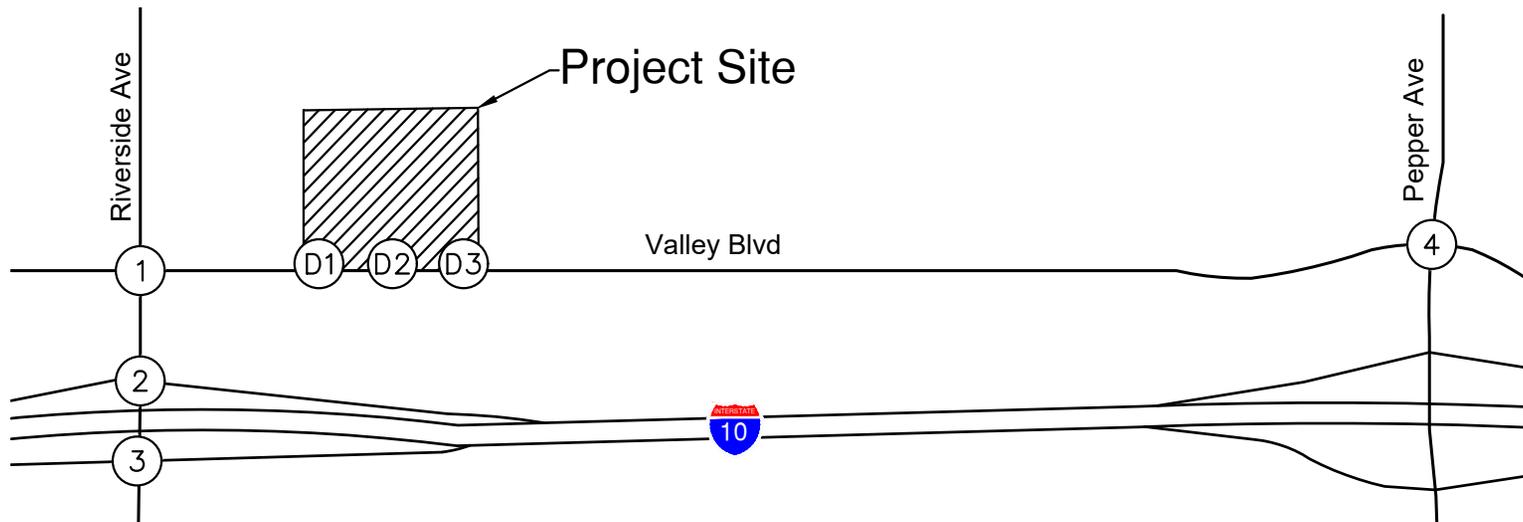
FIGURE 7
LOCATION OF CUMULATIVE PROJECTS

LEGEND:
⊗ = Other Project





NOT TO SCALE



1. Riverside Ave at Valley Blvd		2. Riverside Ave at I-10 WB Ramps		3. Riverside Ave at I-10 EB Ramps		4. Pepper Ave at Valley Blvd		D1. Valley Blvd at Project Driveway 1		D2. Valley Blvd at Project Driveway 2		D3. Valley Blvd at Project Driveway 3	
11/3 136/93 8/11	8/11 16/11 9/14	9/30 145/123	27/13 144/96	280/189 9/30		6/11 1/3							
2/11 8/18 9/44	43/13 88/139 12/12		91/148 115/152	27/13 144/96	179/285 91/148	9/8 12/17		28/41→		28/41→		28/41→	
								←33/36		←33/36		←33/36	

LEGEND:



= Study Intersection

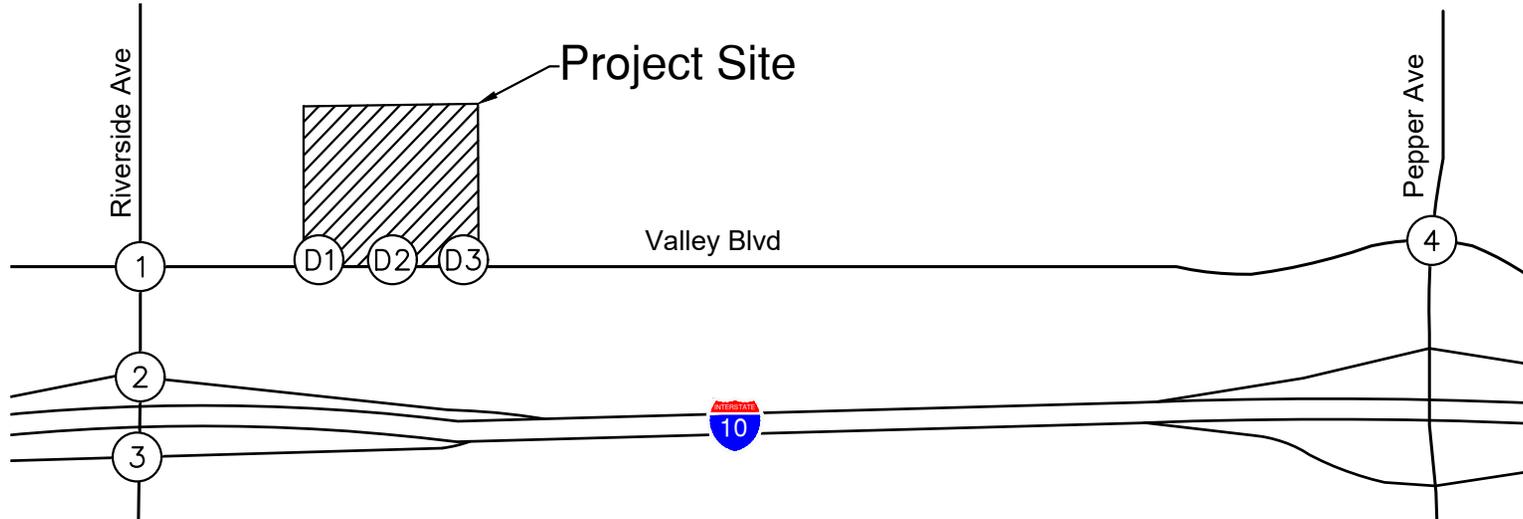
AM/PM Peak Hour
XX/YY = Turning Movement Volumes

FIGURE 8
CUMULATIVE PROJECTS TRAFFIC VOLUMES





NOT TO SCALE



1. Riverside Ave at Valley Blvd		2. Riverside Ave at I-10 WB Ramps		3. Riverside Ave at I-10 EB Ramps		4. Pepper Ave at Valley Blvd		D1. Valley Blvd at Project Driveway 1		D2. Valley Blvd at Project Driveway 2		D3. Valley Blvd at Project Driveway 3									
45/55 ←	1067/770 ←	65/94 ←	52/138 ←	219/337 ←	183/154 ←	664/447 ←	1091/954 ←	412/609 ←	3/2 ←	537/480 ←	1160/986 ←	411/422 ←	64/81 ←	1216/817 ←	162/123 ←	64/136 ←	228/278 ←	302/194 ←	←549/644	←549/644	←549/644
53/114 →	324/327 →	487/486 →	371/446 →	629/1272 →	96/158 →	342/352 →	728/1300 →	201/590 →	0/8 →	632/376 →	685/1062 →	354/452 →	94/150 →	216/317 →	255/190 →	242/278 →	1029/1111 →	104/162 →	573/673 →	573/673 →	573/673 →

Note: Volumes reflect PCE adjustments.

LEGEND:



= Study Intersection

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

FIGURE 9
OPENING YEAR 2024 CUMULATIVE TRAFFIC VOLUMES



**TABLE 3
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE**

Int. #	Intersection	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
1	Riverside Avenue at Valley Boulevard	49.3	D	42.7	D
2	Riverside Avenue at I-10 Westbound Ramps	37.8	D	26.2	C
3	Riverside Avenue at I-10 Eastbound Ramps	27.6	C	28.2	C
4	Pepper Avenue at Valley Boulevard	34.3	C	32.0	C

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.

PROJECT TRAFFIC

Trip Generation

Trip generation estimates for the proposed project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) for the following use:

- ITE Land Use 150: Warehousing

Passenger vehicle and truck mix assumptions were applied to the project land uses based on the ITE Trip Generation Manual (10th Edition, Supplement) and the City of Fontana Truck Trip Generation Study (2003). Passenger car equivalent (PCE) factors were then applied to the truck types, based on number of axles (1.5 PCE for 2-axle trucks, 2.0 PCE for 3-axle trucks, and 3.0 PCE for 4+-axle trucks) to determine the total PCE volumes to be generated by the project. The trip generation rates, PCE factors, and the resulting trip generation estimates for the project are summarized on **Table 4**. Based on Table 4, the total project is estimated to generate 447 daily PCE trips, with 44 PCE trips (34 inbound and 10 outbound) in the morning peak hour and 47 PCE trips (13 inbound and 34 outbound) in the evening peak hour.

Trip Distribution and Assignment

Project trip distribution assumptions for the project site were developed considering the proposed site use and routes to and from the freeway system. Trip distribution assumptions for the proposed project 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 are shown on **Figure 11**.

**TABLE 4
SUMMARY OF PROJECT TRIP GENERATION
2245 W VALLEY BOULEVARD PROJECT**

TRIP GENERATION RATES ¹

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.710	0.131	0.039	0.170	0.050	0.130	0.180

PROJECT TRIP GENERATION

Project Land Use		Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		189.890	KSF	325	25	7	32	9	25	34
Passenger Vehicles	73.00%			237	18	5	23	7	18	25
Trucks	27.00%			88	7	2	9	2	7	9

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ^{2,3}	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	73.00%	237	1.0	237	18	5	23	7	18	25
2-Axle Trucks	7.13%	23	1.5	35	3	1	4	1	3	4
3-Axle Trucks	6.17%	20	2.0	40	3	1	4	1	3	4
4+ Axle Trucks	13.70%	45	3.0	135	10	3	13	4	10	14
Total Truck PCE Trips				210	16	5	21	6	16	22
Total Project PCE Trips				447	34	10	44	13	34	47

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

² Passenger Vehicles and Truck splits taken from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition Supplement

³ Truck mix percentages were calculated based on a ratio between the ITE truck splits and the Truck Trip Generation Study - City of Fontana, August 2003

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet



NOT TO SCALE

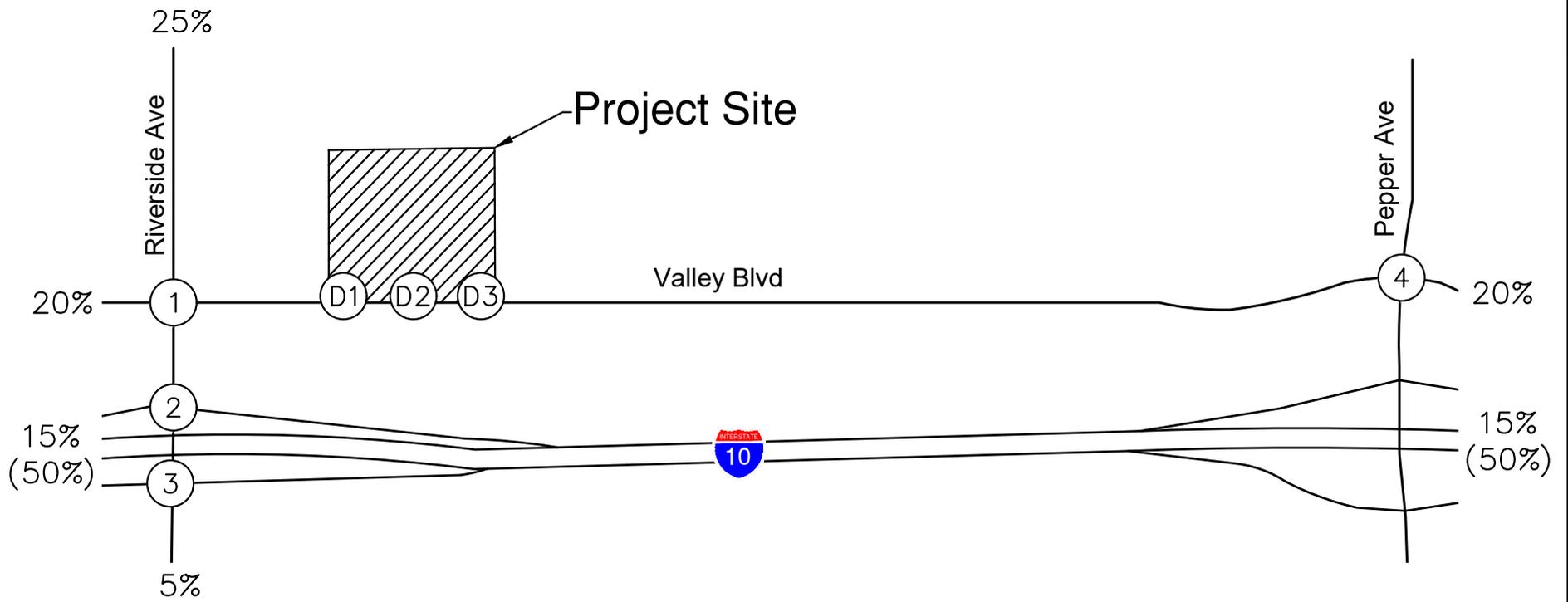


FIGURE 10
PROJECT TRIP DISTRIBUTION

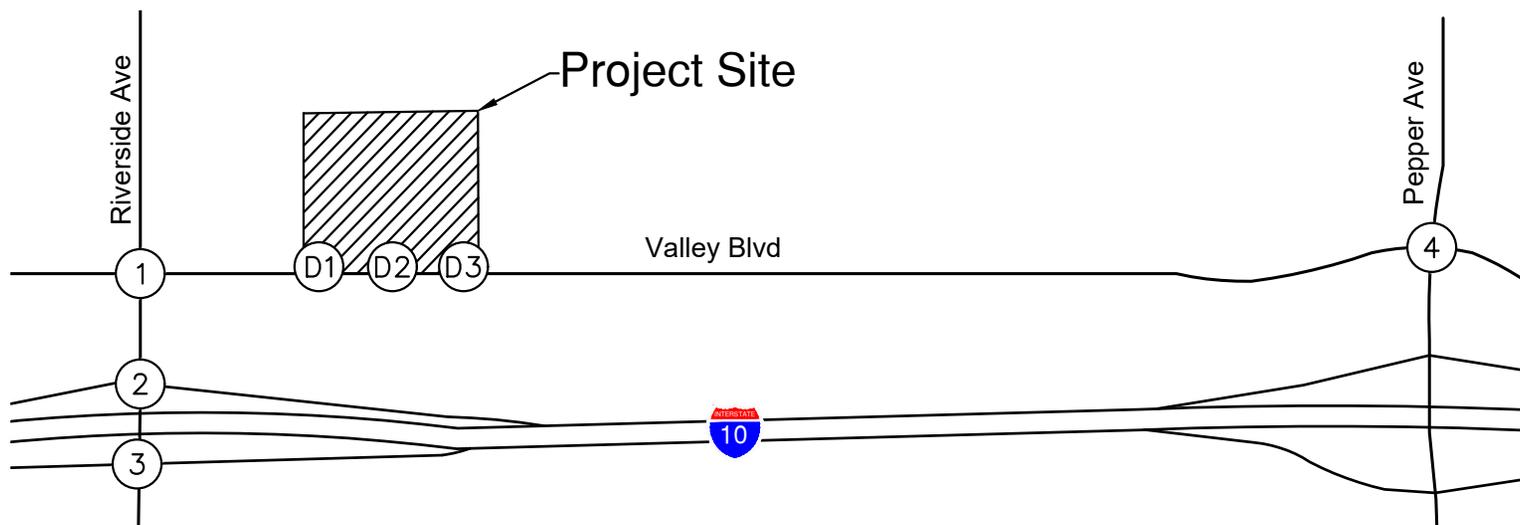
LEGEND:

- (X) = Study Intersection
- XX% = Passenger Cars Trip Distribution
- (YY%) = Trucks Trip Distribution





NOT TO SCALE



1. Riverside Ave at Valley Blvd		2. Riverside Ave at I-10 WB Ramps		3. Riverside Ave at I-10 EB Ramps		4. Pepper Ave at Valley Blvd		D1. Valley Blvd at Project Driveway 1		D2. Valley Blvd at Project Driveway 2		D3. Valley Blvd at Project Driveway 3	
↙ 5/2 ↖ 1/3 ↗ 1/4 ↘ 7/23		↙ 2/9 ↖ 5/14	↗ 11/4	↙ 1/3 ↖ 4/11		← 4/1		↙ 1/5 ↘ 8/25		↙ 7/22 ↘ 1/3		↙ 1/3 ↖ 1/4 ↘ 4/1	
4/1 →	↖ 23/8		↖ 12/4	↖ 9/3 ↖ 3/1		1/4 →		↖ 5/1 ↖ 27/10		↖ 24/9 ↖ 3/1		↖ 3/1	

Note: Volumes reflect PCE adjustments.

LEGEND:

(X) = Study Intersection

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

**FIGURE 11
PROJECT-RELATED TRAFFIC VOLUMES**



FUTURE CONDITIONS PLUS PROJECT

Opening Year 2024 Cumulative Plus Project

Project-related traffic was added to the Opening Year 2024 Cumulative traffic volumes. Opening Year 2024 Cumulative Plus Project traffic volumes at study intersections are shown on **Figure 12**.

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours for the Opening Year 2024 Cumulative Plus Project condition. The results are shown on **Table 5**. Intersection analysis worksheets for this scenario are provided in **Appendix D**.

Review of this table indicates that all study intersections would continue to operate at an acceptable Level of Service.

RECOMMENDED IMPROVEMENTS

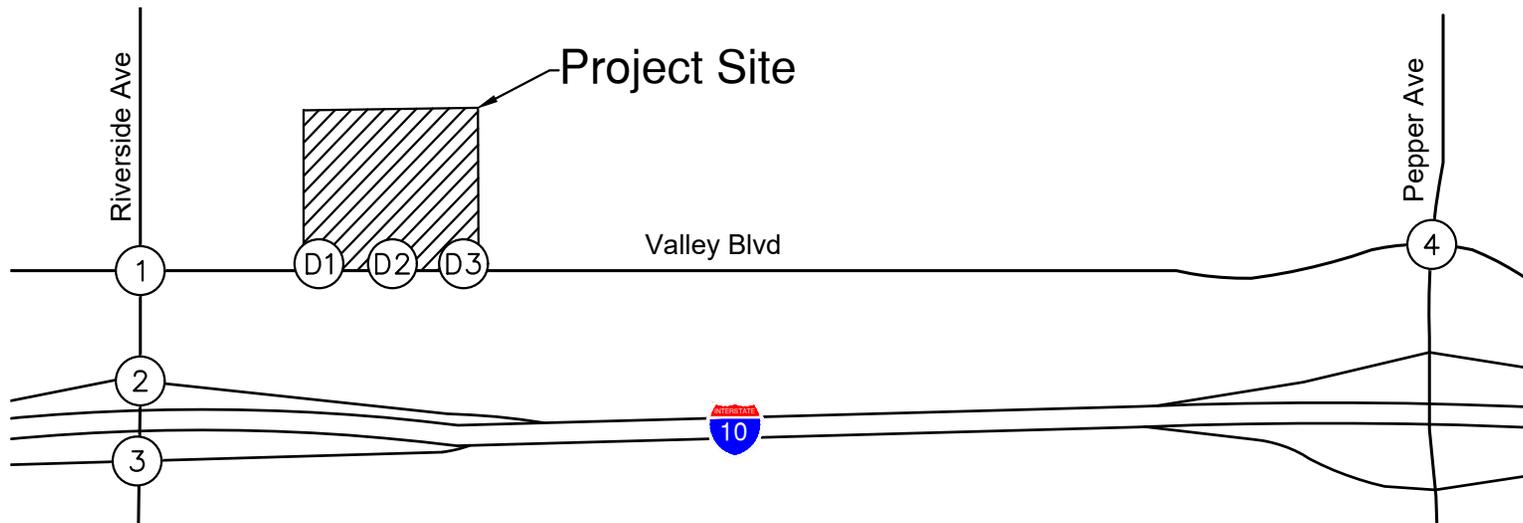
Based on the significance criteria presented earlier in the report (page 6), the project would not have a project-related effect on any of the study intersections. No improvements are required at any of the study intersections.

SITE ACCESS

Vehicular access for the project site for both passenger vehicles and trucks would be provided via three full-movement driveways on Valley Boulevard.



NOT TO SCALE



1. Riverside Ave at Valley Blvd	2. Riverside Ave at I-10 WB Ramps	3. Riverside Ave at I-10 EB Ramps	4. Pepper Ave at Valley Blvd	D1. Valley Blvd at Project Driveway 1	D2. Valley Blvd at Project Driveway 2	D3. Valley Blvd at Project Driveway 3
45/55 1067/770 70/96 53/141 220/341 190/177	666/456 1096/968 423/613 3/2 537/480	1161/989 415/433 64/81 1216/817 162/123 64/136 232/279 302/194	1/5 557/669	7/22 550/647	1/3 1/4 4/1 549/644	53/114 328/328 487/486 371/446 629/1272 119/166 342/352 740/1304 210/593 0/8 632/376 688/1063 354/452 94/150 217/321 255/190 242/278 1029/1111 104/162 5/1 600/683 24/9 576/674 3/1 573/673

Note: Volumes reflect PCE adjustments.

FIGURE 12
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES

LEGEND:



= Study Intersection

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



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

Int. #	Intersection	Traffic Control	AM Peak Hour						PM Peak Hour					
			Without Project		With Project		Change in Delay	Project-Related Effect?	Without Project		With Project		Change in Delay	Project-Related Effect?
			Delay	LOS	Delay	LOS			Delay	LOS	Delay	LOS		
1	Riverside Avenue at Valley Boulevard	S	49.3	D	49.8	D	0.5	No	42.7	D	45.3	D	2.6	No
2	Riverside Avenue at I-10 Westbound Ramps	S	37.8	D	37.9	D	0.1	No	26.2	C	26.2	C	0.0	No
3	Riverside Avenue at I-10 Eastbound Ramps	S	27.6	C	27.7	C	0.1	No	28.2	C	28.4	C	0.2	No
4	Pepper Avenue at Valley Boulevard	S	34.3	C	34.3	C	0.0	No	32.0	C	32.0	C	0.0	No
D1	Valley Boulevard at Project Driveway 1	U	-	-	10.1	B	-	-	-	-	10.6	B	-	-
D2	Valley Boulevard at Project Driveway 2	U	-	-	10.1	B	-	-	-	-	10.6	B	-	-
D3	Valley Boulevard at Project Driveway 3	U	-	-	17.6	C	-	-	-	-	20.8	C	-	-

Notes:

- **Bold** values indicate intersections operating at an unacceptable Level of Service
- Delay values for unsignalized intersections represent the average vehicle delay on the worst (highest delay) intersection approach.
- S = Signalized
- U = Unsignalized

VEHICLE MILES TRAVELED (VMT) – SB 743

Senate Bill (SB) 743 was approved by the 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 updated guidelines for CEQA and written a technical advisory for evaluating transportation impacts in CEQA and has set a deadline of July 1, 2020 for local agencies to update their CEQA transportation procedures. OPR has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts. The City of Colton has adopted new Transportation Impact Guidelines and now relies on VMT as the measure for determining a project significant transportation impact under the CEQA process.

The City of Colton’s *Vehicle Miles Traveled (VMT) Guidelines* (June 2020) 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 criteria:

1. Trip Screening
2. Land Use Types Screening
3. High Quality Transit Areas (HQTA) Screening
4. Low VMT Areas 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. The screening thresholds were reviewed and evaluated for this project.

Trip Screening

The City’s TIA Guidelines identify that a project with a net daily trip generation of less than 110 Average Daily Traffic (ADT) can be screened out. The Project is expected to generate 447 daily trips, surpassing the maximum 110 ADT screening limit.

The Trip Screening criteria is not met.

Land Use Type Screening

The City presumes certain local project types have a negligible impact upon the City’s VMT. The assumption is based upon local serving projects (e.g. local gas stations) redirecting and encouraging local traffic from traveling to further locations, lowering the VMT for the City. Project types falling under the screening criteria includes the following:

- 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 community colleges

The Land Use Type Screening threshold is not met.

High Quality Transit Area (HQTA) Screening

As described in the City's TIA Guidelines, projects located within a half (½) mile from an existing major transit stop or within half (½) of a mile from an existing stop along a high-quality transit corridor can be screened out. Based on the Southern California Association of Governments (SCAG) HQTA Map provided in the City's TIA Guidelines, the project site is located within a HQTA. The HQTA Map is provided in the approved Scoping Agreement in **Appendix A**.

The HQTA Screening criteria is met.

Low VMT Area Screening

The Project is located in TAZ number 53757501. Based on the SBCTA VMT Screening tool, the Project is not located in a Low VMT (15% below County Average) zone. The SBCTA VMT Screening tool results are provided in the approved Scoping Agreement in **Appendix A**.

The Low VMT Area Screening threshold is not met.

Based on review of the VMT screening thresholds, the project meets the HQTA Screening threshold. Therefore, the project would result in a less-than-significant VMT impact, and no additional VMT analysis is required.

SUMMARY OF FINDINGS AND CONCLUSIONS

- The project is located at 2245 W. Valley Boulevard in the City of Colton.
- The project involves the construction of four warehouse buildings totaling approximately 189,890 SF.
- The project is estimated to generate 447 daily PCE trips, with 44 PCE trips during the AM peak hour and 47 PCE trips during the PM peak hour.
- Under Existing conditions, all study intersections operate at an acceptable Level of Service.
- The project opening year is anticipated to be Year 2024. With the addition of ambient growth and Cumulative Projects, all study intersections would continue to operate at an acceptable Level of Service.
- Project-related traffic was added to the Opening Year 2024 Cumulative volumes to establish conditions for the Opening Year 2024 Cumulative Plus Project conditions. With the addition of project traffic, all study intersections would continue to operate at an acceptable Level of Service.
- Based on review of the VMT screening thresholds, the project meets the HQTAs Screening threshold. Therefore, the project would result in a less-than-significant VMT impact, and no additional VMT analysis is required.

APPENDIX A

**APPROVED SCOPING
AGREEMENT**

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This form acknowledges the City of Colton Engineering Division requirements for traffic impact analysis of the following project. The analysis must comply with SBCTA CMP TIA Guidelines, as applicable.

Case No. _____

Related Cases: _____

APN(S): 0254-041-04

Project Name: 2245 W. Valley Boulevard Project

Project Address: 2245 W. Valley Boulevard

Project Description: Four separate warehouse buildings

Project Size: Four warehouses totaling 189,890 square feet (SF)

	Traffic Consultant	Developer
Name:	<u>Kimley-Horn & Associates, Inc.</u>	<u>CAA Planning</u>
Address:	<u>1100 W Town and Country Rd, Suite 700</u> <u>Orange, CA 92868</u>	<u>65 Enterprise #130</u> <u>Aliso Viejo, CA 92656</u>
Telephone:	<u>(714) 939-1030</u>	<u>(949) 581-2888</u>
e-mail:	<u>Trevor.Briggs@Kimley-Horn.com</u>	<u>SSchaffner@CAAPlanning.com</u>

A. Technical Methodology

Technical methodology to comply with SBCTA CMP guidelines. However, mitigation on nonstate facilities to maintain Vehicle Miles Traveled (VMT) threshold. Traffic count data must be current or within previous 12 months. Provide traffic count dates.

B. Trip Generation Source: ITE Trip Generation Manual, 11th Edition

Current GP Land Use: Industrial Proposed Land Use: Warehousing

Current Zoning: Business Park Proposed Zoning: Business Park

Current Trip Generation

Proposed Trip Generation (PCE)

	In	Out	Total	In	Out	Total
AM Trips:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>34</u>	<u>10</u>	<u>44</u>
PM Trips:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>13</u>	<u>34</u>	<u>47</u>

Internal Trip Allowance:

Pass-By Trip Allowance:

[See Attachment A](#)

Traffic impact study to quantify change in project trip generation in comparison with pre-existing uses on project site when fully occupied.

C. Trip Geographic Distribution: To be submitted for approval by city staff. Cite source. Attach exhibit of detailed assignment.

[See Attachment B](#)

D. Scenario Analysis

Project year of completion: 2024

Phase Year(s) _____

Annual Ambient Growth rate: 2.0%

City staff to provide cumulative background projects list.

Scenarios:

- [Existing Conditions](#)
- [Opening Year 2024 Cumulative](#)
- [Opening Year 2024 Cumulative Plus Project](#)

E. Preliminary Study Intersections: (See SBCTA CMP guidelines or comments from other agencies.)

- | | |
|---|-----------|
| 1. <u>Riverside Ave at E Valley Blvd</u> | 6. _____ |
| 2. <u>Riverside Ave at I-10 WB Ramps</u> | 7. _____ |
| 3. <u>Riverside Ave at I-10 EB Ramps</u> | 8. _____ |
| 4. <u>W. Valley Blvd at N. Pepper Ave</u> | 9. _____ |
| 5. _____ | 10. _____ |

F. Preliminary Study Roadway Segments: (See SBCTA CMP guidelines or comments from other agencies.)

- | | |
|----------|----------|
| 1. _____ | 6. _____ |
|----------|----------|

2. _____

7. _____

3. _____

8. _____

4. _____

9. _____

5. _____

10. _____

G. Freeways - See SBCTA CMP guidelines.

H. Other Jurisdictional Impacts

Is this project within a one-mile radius of City or County boundaries? Yes No

If so, name of City Jurisdiction: City of Rialto

I. Site Plan (please attach reduced copy) [See Attachment C](#)

J. Specific issues to be addressed in the Study

Recommended by:

Approved Scoping Agreement:

Trevor Briggs, P.E.

11/04/2022

Consultant's Representative

Date

City of Colton
Engineering Division

Date

ATTACHMENT A
SUMMARY OF PROJECT TRIP GENERATION
2245 W. VALLEY BOULEVARD PROJECT

TRIP GENERATION RATES

ITE Land Use	ITE Code	Unit	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Warehousing	150	KSF	1.710	0.131	0.039	0.170	0.050	0.130	0.180

PROJECT TRIP GENERATION

Project Land Use		Quantity	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Warehousing		189.890	KSF	325	25	7	32	9	25	34
Passenger Vehicles	73.00%			237	18	5	23	7	18	25
Trucks	27.00%			88	7	2	9	2	7	9

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ^{1 2}	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	73.00%	237	1.0	237	18	5	23	7	18	25
2-Axle Trucks	7.13%	23	1.5	35	3	1	4	1	3	4
3-Axle Trucks	6.17%	20	2.0	40	3	1	4	1	3	4
4+ Axle Trucks	13.70%	45	3.0	135	10	3	13	4	10	14
Total Truck PCE Trips				210	16	5	21	6	16	22
Total Project PCE Trips				447	34	10	44	13	34	47

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

PCE = Passenger Car Equivalent

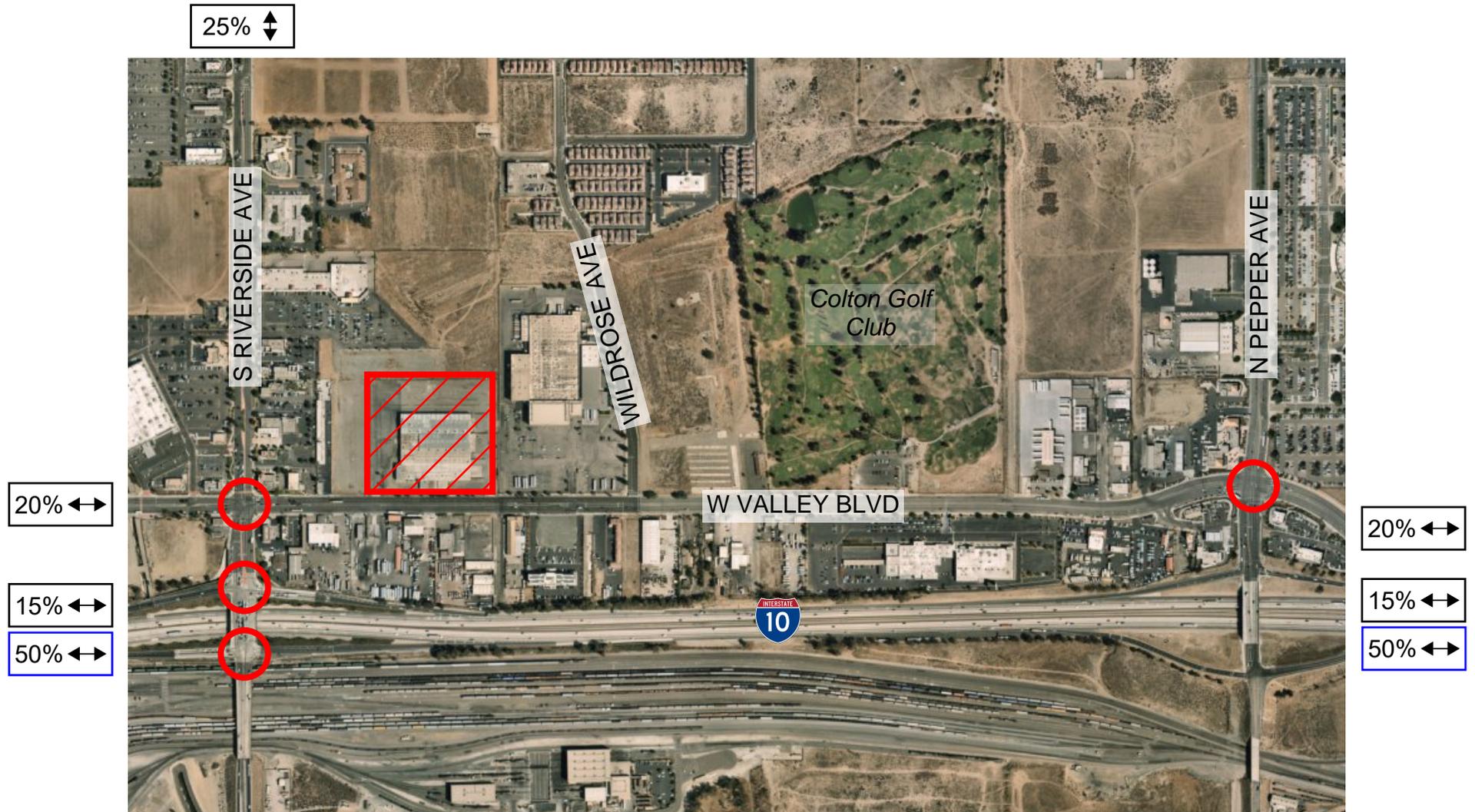
KSF = Thousand Square Feet

¹ Passenger Vehicle and Truck splits taken from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition Supplement

² Truck mix percentages were calculated based on a ratio between the ITE truck splits and the Truck Trip Generation Study - City of Fontana, August 2003

ATTACHMENT B

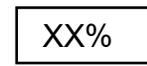
PROJECT TRIP DISTRIBUTION



PROJECT SITE



STUDY INTERSECTION



PASSENGER TRIP DISTRIBUTION



TRUCK TRIP DISTRIBUTION

**VEHICLE MILE TRAVELED ANALYSIS
FOR THE PROPOSED
2245 W VALLEY BOULEVARD PROJECT
IN THE CITY OF COLTON**

INTRODUCTION

Senate Bill (SB) 743 was approved by the 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 updated guidelines for CEQA and written a technical advisory for evaluating transportation impacts in CEQA and has set a deadline of July 1, 2020 for local agencies to update their CEQA transportation procedures. OPR has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts. The City of Colton has adopted new Transportation Impact Guidelines and now relies on VMT as the measure for determining a project significant transportation impact under the CEQA process.

This technical report was prepared to document the VMT analysis for the 2245 W Valley Boulevard Project following the *City of Colton VMT Guidelines* (June 2020).

VEHICLE MILES TRAVELED SCREENING

This section documents Vehicle Miles Traveled (VMT)/ SB 743 considerations for the Project. The City’s VMT Guidelines 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 into the following four steps:

1. Trip Screening
2. Land Use Types Screening
3. High Quality Transit Areas (HQTAs) Screening
4. Low VMT Areas Screening

A land use project needs only to meet one of the above screening thresholds to be presumed to result in a less-than-significant impact under CEQA pursuant to SB 743.

Trip Screening

The City’s TIA Guidelines identify that a project with a net daily trip generation of less than 110 ADT can be screened out. The Project is expected to generate 447 daily trips, surpassing the maximum 110 ADT screening limit.

The Trip Screening criteria is not met.

Land Use Type Screening

The City presumes certain local project types have a negligible impact upon the City's VMT. The assumption is based upon local serving projects (e.g. local gas stations) redirecting and encouraging local traffic from traveling to further locations, lowering the VMT for the City. Project types falling under the screening criteria includes the following:

- 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 community colleges

The Low Project Type screening threshold is not met.

High Quality Transit Area (HQTA) Screening

As described in the City's TIA Guidelines, projects located within a half (½) mile from an existing major transit stop or within half (½) of a mile from an existing stop along a high-quality transit corridor can be screened out. Based on the Southern California Association of Governments (SCAG) HQTA Map provided in the City's TIA Guidelines, the project site is located within a HQTA. The HQTA Map is provided on **Figure 1**.

The HQTA screening criteria is met.

Low VMT Area Screening

The Project is located in TAZ number 53757501. Based on the SBCTA VMT Screening tool, the Project is not located in a Low VMT (15% below County Average) zone. The SBCTA VMT Screening tool results are provided on **Figure 2**.

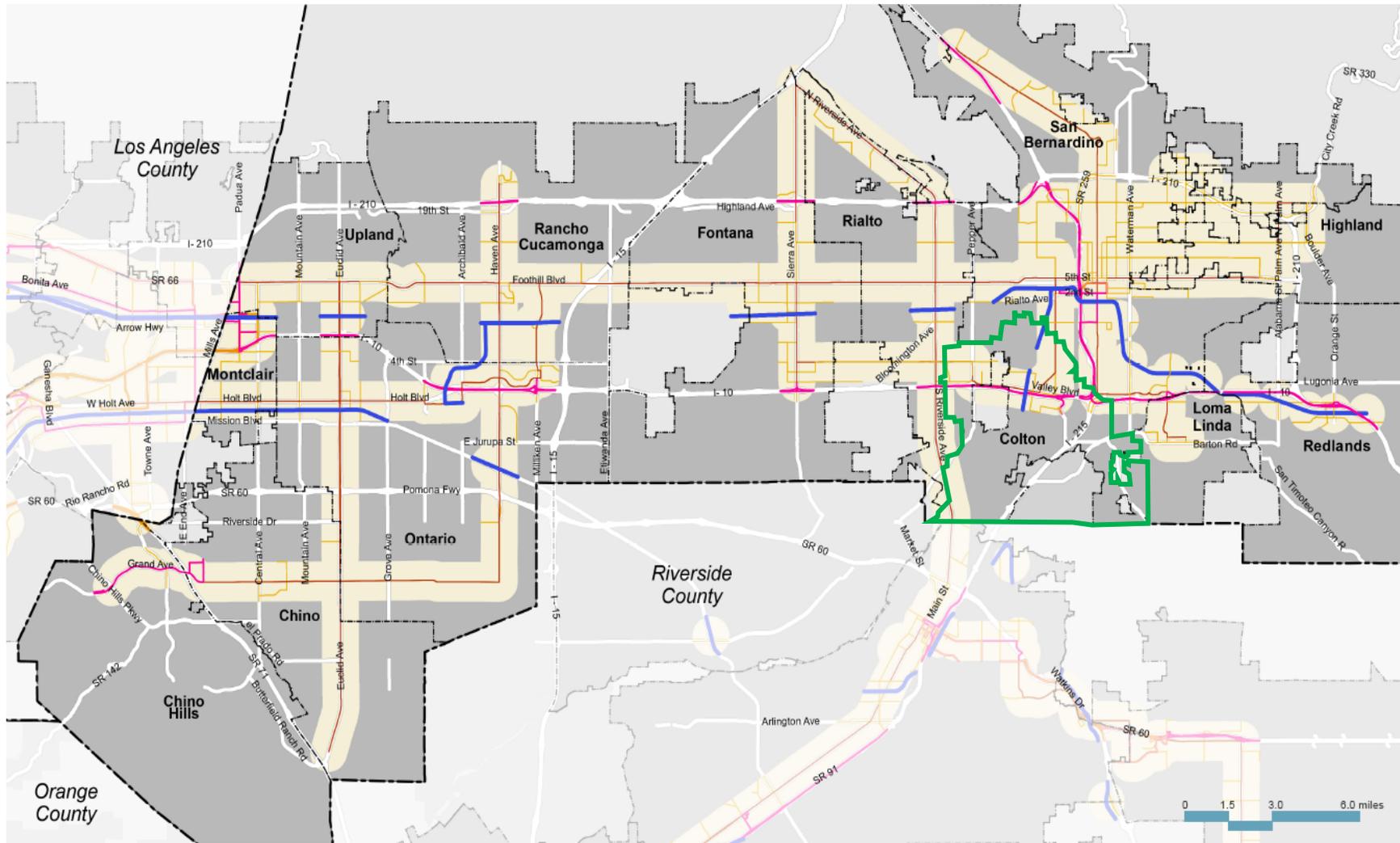
The Low VMT Area screening threshold is not met.

CONCLUSION

The Project was evaluated based on the City of Colton *VMT Guidelines* (June 2020) and by using the SBCTA VMT Screening Tool. The proposed project meets the HQTA screening threshold and screens out for VMT. Therefore, the Project's transportation impact is presumed to have a less than significant impact and no further VMT analysis is required.



Figure 1 - HQTA Map



Eligible SCAG HQTA (2040) Communities
San Bernardino County South San Bernardino County
September 2017

Legend

- County Boundary
- SCAG HQTA Eligible Jurisdiction
- HQTA (2040)
- Highway / Principal Arterial
- High Speed Rail
- Commuter Rail
- Local Rail
- Bus Rapid Transit
- Transitway Bus
- Express Bus
- Rapid Bus
- Local Bus
- City of Colton Boundaries

Scale: 0, 1.5, 3.0, 6.0 miles

Figure 10: Southern California Association of Governments (SCAG) High Quality Transit Area (HQTA) Map



Figure 2 – SBCTA VMT Screening Tool

The screenshot displays the SBCTA VMT Screening Tool interface. At the top, the header includes the SBCTA logo, the title "SBCTA VMT Screening Tool", and the text "Powered by Fehr & Peers" and "User's Guide". A search bar with the placeholder "Find address or place" is located in the top left. Below the search bar is a printer icon. The main map area shows a street grid with a blue-shaded project area. A red dashed line outlines a specific area on the map, labeled "E VALLEY BLVD".

On the left side, there is a configuration panel titled "Complete #1 - 4, Then Click 'Run'". It contains three sections:

- #2. Select the VMT Metric.** Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Dropdown menu: OD VMT Per Service Population
- #3. Select the Baseline Year.** The years available for analysis are from 2016 to 2040.*
Dropdown menu: 2016
- #4. Select the Threshold (% reduction from baseline year).** Note each jurisdiction may have adopted a different metric by which they measure VMT. Please consult with the jurisdiction to verify which metric to use for your analysis.*
Dropdown menu: Below County Baseline (-15%)

At the bottom left, there is a zoom control with a "+" sign and a scale bar showing 0, 100, and 200 feet.

On the right side, a popup window titled "Project Area VMT (2 of 2)" displays the following data:

Assessor Parcel Number (APN)	025404104
Traffic Analysis Zone (TAZ)	53757501
TAZ VMT	61.2
Jurisdiction VMT	32.7
% Difference	87.49%
VMT Metric	OD VMT Per Service Population
Threshold	27.8

At the bottom of the popup window, there is a "Zoom to" button and a three-dot menu icon.



MINAGAR & ASSOCIATES, INC.

Traffic Engineering – Transportation Planning – Intelligent Transportation Systems (ITS) – Civil/Electrical Engineering & CEM Consultants



October 21, 2022

Mr. Moises Peralta
Associate Engineer
City of Colton
Public Works Department
160 S. 10th Street
Colton, CA 92324

Subject: TO#310 – Revised 2nd & Final Review of Scoping Agreement for the Butterfly Equity Partners’ Proposed Four (4) Warehouse Buildings on Four Separate Lots at 2245 W. Valley Blvd., APN#0254-041-04 - Trip Generation & VMT Analysis, Colton, CA

Dear Moises,

We have completed our revised 2nd & final review of the subject project’s Scoping Agreement and it is approved for the applicant to proceed with the field data collection and the subsequent traffic analysis. It should be noted that the VMT has already been approved and no further assessment will be needed for the CEQA VMT aspect of the project.

Should you have any questions, I can be contacted conveniently via e-mail at minagarf@minagrinc.com.

Thank you.

Sincerely,

MINAGAR & ASSOCIATES, INC.
(A California Corporation)

Fred Minagar, MS, RCE, PE, FITE
President/Contract City Traffic Engineer



APPENDIX B

**TRAFFIC COUNT
DATA SHEETS**

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

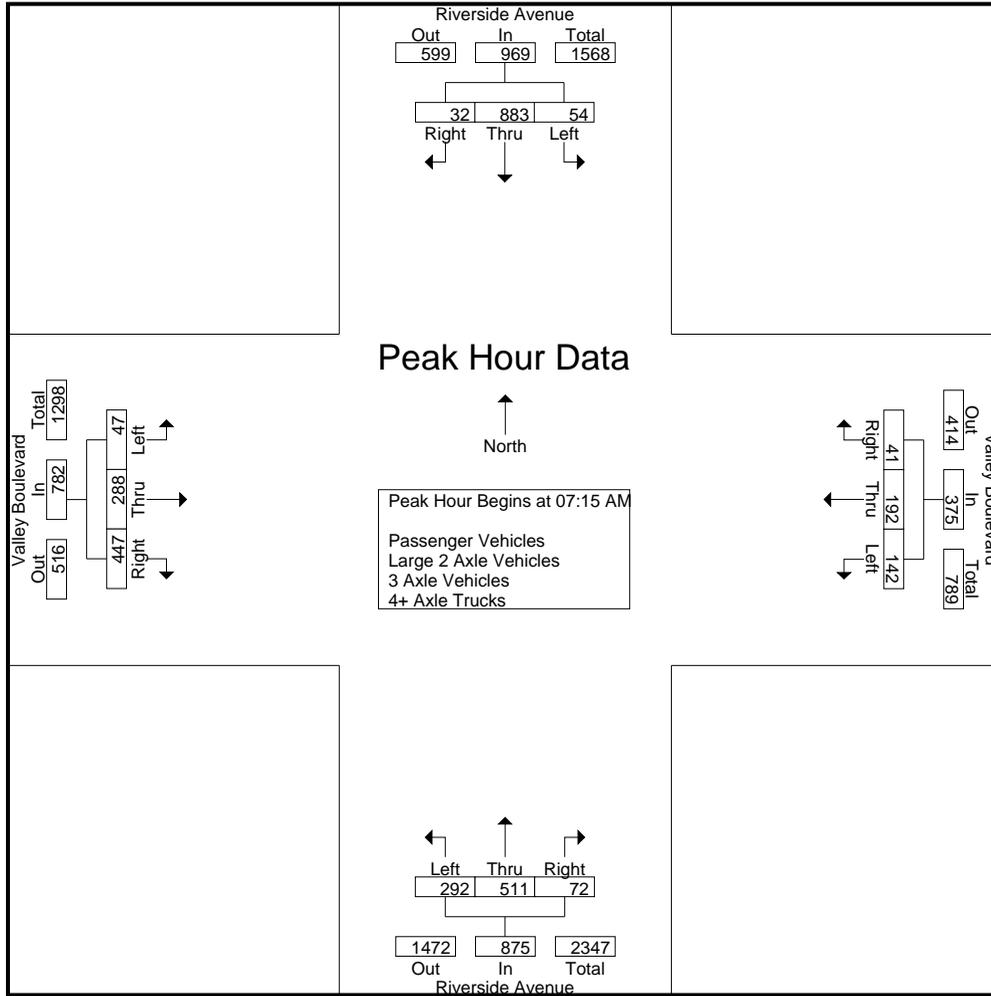
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	231	5	244	24	26	10	60	64	100	24	188	12	42	93	147	639
07:15 AM	5	231	6	242	45	54	6	105	73	118	16	207	8	45	128	181	735
07:30 AM	15	233	9	257	41	55	11	107	80	141	12	233	13	72	152	237	834
07:45 AM	14	222	5	241	29	43	10	82	85	111	27	223	11	64	101	176	722
Total	42	917	25	984	139	178	37	354	302	470	79	851	44	223	474	741	2930
08:00 AM	20	197	12	229	27	40	14	81	54	141	17	212	15	107	66	188	710
08:15 AM	19	183	3	205	22	34	10	66	51	109	21	181	7	61	109	177	629
08:30 AM	18	149	7	174	26	61	13	100	54	138	25	217	8	42	89	139	630
08:45 AM	16	112	9	137	32	42	14	88	35	164	24	223	15	34	69	118	566
Total	73	641	31	745	107	177	51	335	194	552	87	833	45	244	333	622	2535
Grand Total	115	1558	56	1729	246	355	88	689	496	1022	166	1684	89	467	807	1363	5465
Apprch %	6.7	90.1	3.2		35.7	51.5	12.8		29.5	60.7	9.9		6.5	34.3	59.2		
Total %	2.1	28.5	1	31.6	4.5	6.5	1.6	12.6	9.1	18.7	3	30.8	1.6	8.5	14.8	24.9	
Passenger Vehicles	106	1531	52	1689	217	340	84	641	460	976	137	1573	84	433	775	1292	5195
% Passenger Vehicles	92.2	98.3	92.9	97.7	88.2	95.8	95.5	93	92.7	95.5	82.5	93.4	94.4	92.7	96	94.8	95.1
Large 2 Axle Vehicles	7	19	2	28	8	11	4	23	12	37	13	62	4	26	19	49	162
% Large 2 Axle Vehicles	6.1	1.2	3.6	1.6	3.3	3.1	4.5	3.3	2.4	3.6	7.8	3.7	4.5	5.6	2.4	3.6	3
3 Axle Vehicles	2	3	1	6	4	4	0	8	10	5	6	21	0	3	4	7	42
% 3 Axle Vehicles	1.7	0.2	1.8	0.3	1.6	1.1	0	1.2	2	0.5	3.6	1.2	0	0.6	0.5	0.5	0.8
4+ Axle Trucks	0	5	1	6	17	0	0	17	14	4	10	28	1	5	9	15	66
% 4+ Axle Trucks	0	0.3	1.8	0.3	6.9	0	0	2.5	2.8	0.4	6	1.7	1.1	1.1	1.1	1.1	1.2

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	5	231	6	242	45	54	6	105	73	118	16	207	8	45	128	181	735
07:30 AM	15	233	9	257	41	55	11	107	80	141	12	233	13	72	152	237	834
07:45 AM	14	222	5	241	29	43	10	82	85	111	27	223	11	64	101	176	722
08:00 AM	20	197	12	229	27	40	14	81	54	141	17	212	15	107	66	188	710
Total Volume	54	883	32	969	142	192	41	375	292	511	72	875	47	288	447	782	3001
% App. Total	5.6	91.1	3.3		37.9	51.2	10.9		33.4	58.4	8.2		6	36.8	57.2		
PHF	.675	.947	.667	.943	.789	.873	.732	.876	.859	.906	.667	.939	.783	.673	.735	.825	.900

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:00 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	8	231	5	244	45	54	6	105	73	118	16	207	8	45	128	181
+15 mins.	5	231	6	242	41	55	11	107	80	141	12	233	13	72	152	237
+30 mins.	15	233	9	257	29	43	10	82	85	111	27	223	11	64	101	176
+45 mins.	14	222	5	241	27	40	14	81	54	141	17	212	15	107	66	188
Total Volume	42	917	25	984	142	192	41	375	292	511	72	875	47	288	447	782
% App. Total	4.3	93.2	2.5		37.9	51.2	10.9		33.4	58.4	8.2		6	36.8	57.2	
PHF	.700	.984	.694	.957	.789	.873	.732	.876	.859	.906	.667	.939	.783	.673	.735	.825

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	228	4	240	22	23	8	53	56	95	20	171	12	41	88	141	605
07:15 AM	5	229	6	240	37	53	6	96	67	115	15	197	6	39	124	169	702
07:30 AM	14	229	9	252	39	53	11	103	75	137	10	222	12	66	148	226	803
07:45 AM	14	217	5	236	25	42	10	77	79	107	24	210	10	62	97	169	692
Total	41	903	24	968	123	171	35	329	277	454	69	800	40	208	457	705	2802
08:00 AM	19	191	11	221	23	39	13	75	50	137	14	201	15	100	63	178	675
08:15 AM	16	180	2	198	19	32	9	60	48	101	18	167	6	56	105	167	592
08:30 AM	16	145	6	167	23	56	13	92	50	133	21	204	8	37	85	130	593
08:45 AM	14	112	9	135	29	42	14	85	35	151	15	201	15	32	65	112	533
Total	65	628	28	721	94	169	49	312	183	522	68	773	44	225	318	587	2393
Grand Total	106	1531	52	1689	217	340	84	641	460	976	137	1573	84	433	775	1292	5195
Apprch %	6.3	90.6	3.1		33.9	53	13.1		29.2	62	8.7		6.5	33.5	60		
Total %	2	29.5	1	32.5	4.2	6.5	1.6	12.3	8.9	18.8	2.6	30.3	1.6	8.3	14.9	24.9	

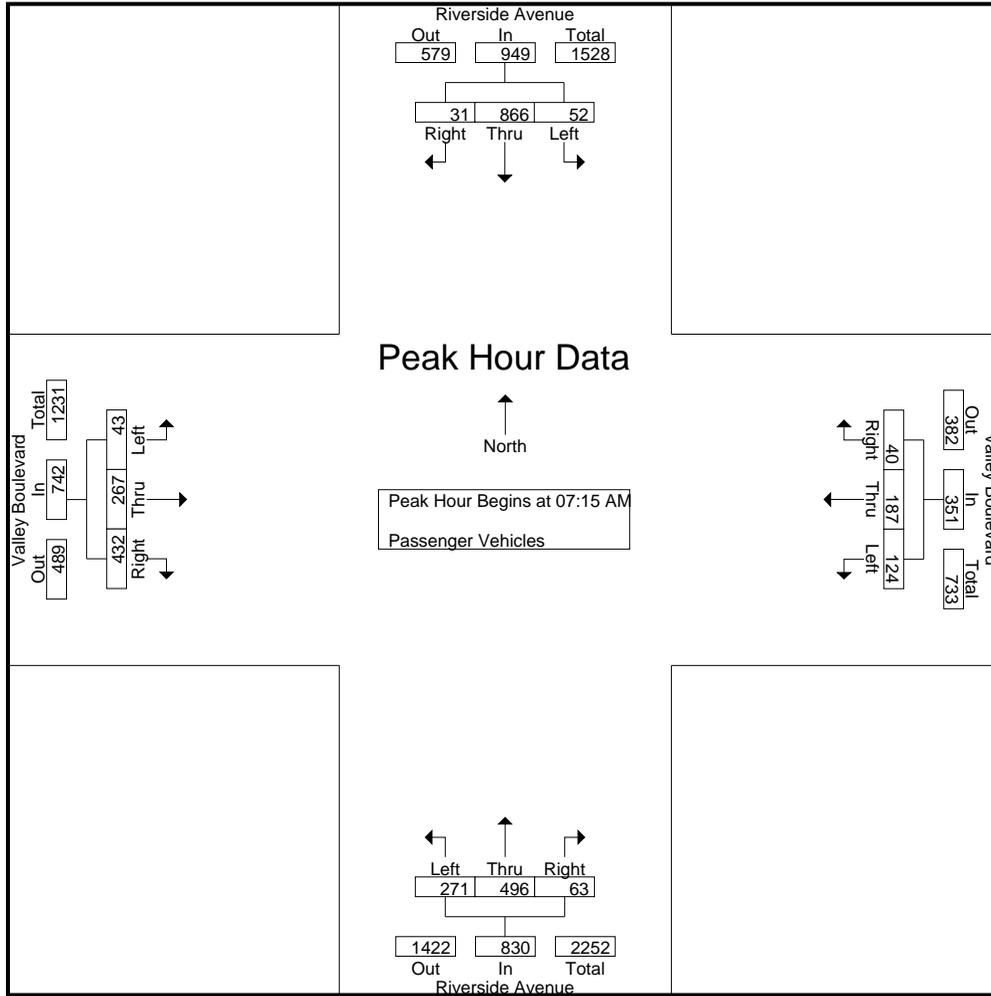
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	5	229	6	240	37	53	6	96	67	115	15	197	6	39	124	169	702
07:30 AM	14	229	9	252	39	53	11	103	75	137	10	222	12	66	148	226	803
07:45 AM	14	217	5	236	25	42	10	77	79	107	24	210	10	62	97	169	692
08:00 AM	19	191	11	221	23	39	13	75	50	137	14	201	15	100	63	178	675
Total Volume	52	866	31	949	124	187	40	351	271	496	63	830	43	267	432	742	2872
% App. Total	5.5	91.3	3.3		35.3	53.3	11.4		32.7	59.8	7.6		5.8	36	58.2		
PHF	.684	.945	.705	.941	.795	.882	.769	.852	.858	.905	.656	.935	.717	.668	.730	.821	.894

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	5	229	6	240	37	53	6	96	67	115	15	197	6	39	124	169
+15 mins.	14	229	9	252	39	53	11	103	75	137	10	222	12	66	148	226
+30 mins.	14	217	5	236	25	42	10	77	79	107	24	210	10	62	97	169
+45 mins.	19	191	11	221	23	39	13	75	50	137	14	201	15	100	63	178
Total Volume	52	866	31	949	124	187	40	351	271	496	63	830	43	267	432	742
% App. Total	5.5	91.3	3.3		35.3	53.3	11.4		32.7	59.8	7.6		5.8	36	58.2	
PHF	.684	.945	.705	.941	.795	.882	.769	.852	.858	.905	.656	.935	.717	.668	.730	.821

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	1	0	1	1	2	2	5	2	3	2	7	0	1	3	4	17
07:15 AM	0	2	0	2	3	1	0	4	3	2	1	6	2	6	2	10	22
07:30 AM	1	4	0	5	0	2	0	2	1	3	1	5	1	4	3	8	20
07:45 AM	0	3	0	3	2	1	0	3	3	4	2	9	1	2	2	5	20
Total	1	10	0	11	6	6	2	14	9	12	6	27	4	13	10	27	79
08:00 AM	1	5	0	6	1	0	1	2	2	3	2	7	0	5	3	8	23
08:15 AM	3	1	1	5	1	2	1	4	1	7	1	9	0	4	1	5	23
08:30 AM	1	3	1	5	0	3	0	3	0	4	2	6	0	2	3	5	19
08:45 AM	1	0	0	1	0	0	0	0	0	11	2	13	0	2	2	4	18
Total	6	9	2	17	2	5	2	9	3	25	7	35	0	13	9	22	83
Grand Total	7	19	2	28	8	11	4	23	12	37	13	62	4	26	19	49	162
Apprch %	25	67.9	7.1		34.8	47.8	17.4		19.4	59.7	21		8.2	53.1	38.8		
Total %	4.3	11.7	1.2	17.3	4.9	6.8	2.5	14.2	7.4	22.8	8	38.3	2.5	16	11.7	30.2	

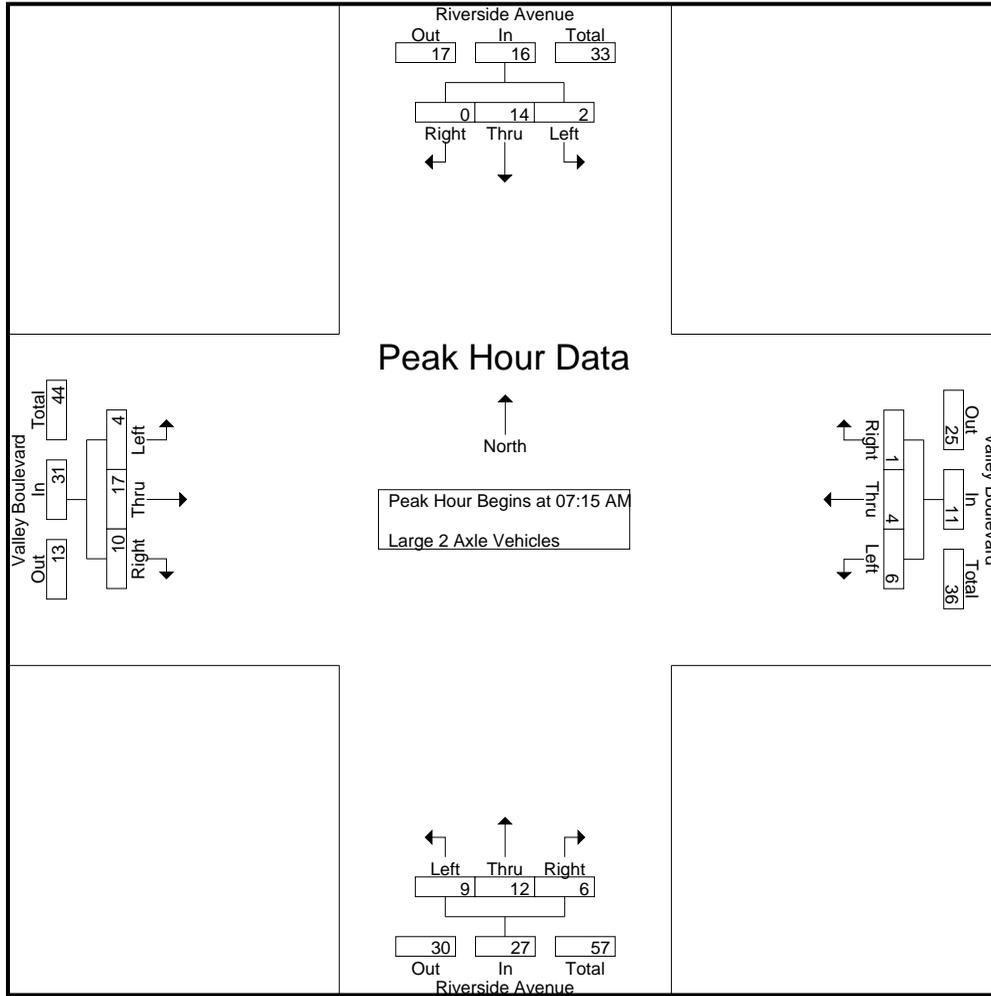
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	2	0	2	3	1	0	4	3	2	1	6	2	6	2	10	22
07:30 AM	1	4	0	5	0	2	0	2	1	3	1	5	1	4	3	8	20
07:45 AM	0	3	0	3	2	1	0	3	3	4	2	9	1	2	2	5	20
08:00 AM	1	5	0	6	1	0	1	2	2	3	2	7	0	5	3	8	23
Total Volume	2	14	0	16	6	4	1	11	9	12	6	27	4	17	10	31	85
% App. Total	12.5	87.5	0		54.5	36.4	9.1		33.3	44.4	22.2		12.9	54.8	32.3		
PHF	.500	.700	.000	.667	.500	.500	.250	.688	.750	.750	.750	.750	.500	.708	.833	.775	.924

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	3	1	0	4	3	2	1	6	2	6	2	10
+15 mins.	1	4	0	5	0	2	0	2	1	3	1	5	1	4	3	8
+30 mins.	0	3	0	3	2	1	0	3	3	4	2	9	1	2	2	5
+45 mins.	1	5	0	6	1	0	1	2	2	3	2	7	0	5	3	8
Total Volume	2	14	0	16	6	4	1	11	9	12	6	27	4	17	10	31
% App. Total	12.5	87.5	0		54.5	36.4	9.1		33.3	44.4	22.2		12.9	54.8	32.3	
PHF	.500	.700	.000	.667	.500	.500	.250	.688	.750	.750	.750	.750	.500	.708	.833	.775

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	0	0	0	1	1	0	2	3	1	0	4	0	0	0	0	6
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	3
07:30 AM	0	0	0	0	1	0	0	1	2	1	0	3	0	1	1	2	6
07:45 AM	0	1	0	1	0	0	0	0	2	0	0	2	0	0	0	0	3
Total	0	1	0	1	2	1	0	3	8	3	0	11	0	1	2	3	18
08:00 AM	0	0	1	1	1	1	0	2	1	1	0	2	0	0	0	0	5
08:15 AM	0	2	0	2	0	0	0	0	1	1	2	4	0	1	0	1	7
08:30 AM	1	0	0	1	1	2	0	3	0	0	2	2	0	1	0	1	7
08:45 AM	1	0	0	1	0	0	0	0	0	0	2	2	0	0	2	2	5
Total	2	2	1	5	2	3	0	5	2	2	6	10	0	2	2	4	24
Grand Total	2	3	1	6	4	4	0	8	10	5	6	21	0	3	4	7	42
Apprch %	33.3	50	16.7		50	50	0		47.6	23.8	28.6		0	42.9	57.1		
Total %	4.8	7.1	2.4	14.3	9.5	9.5	0	19	23.8	11.9	14.3	50	0	7.1	9.5	16.7	

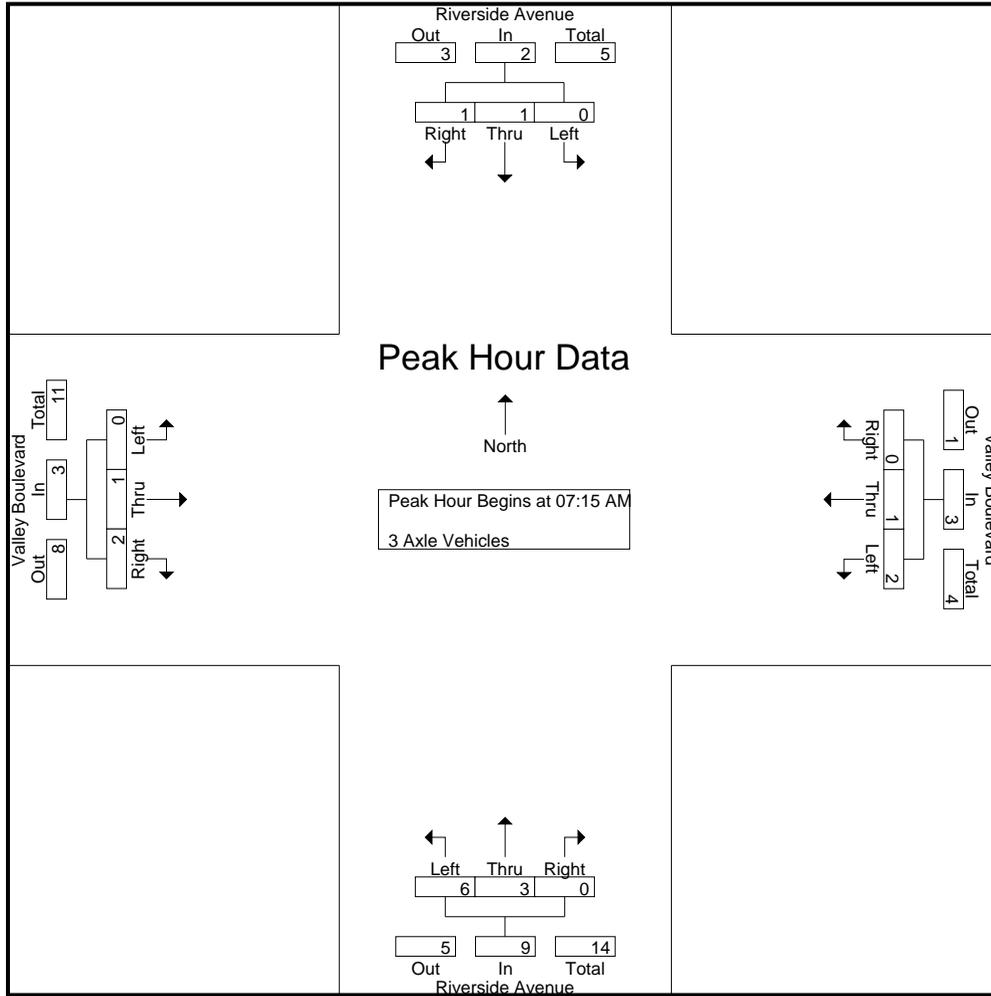
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1	3
07:30 AM	0	0	0	0	1	0	0	1	2	1	0	3	0	1	1	2	6
07:45 AM	0	1	0	1	0	0	0	0	2	0	0	2	0	0	0	0	3
08:00 AM	0	0	1	1	1	1	0	2	1	1	0	2	0	0	0	0	5
Total Volume	0	1	1	2	2	1	0	3	6	3	0	9	0	1	2	3	17
% App. Total	0	50	50		66.7	33.3	0		66.7	33.3	0		0	33.3	66.7		
PHF	.000	.250	.250	.500	.500	.250	.000	.375	.750	.750	.000	.750	.000	.250	.500	.375	.708

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	1	0	2	0	0	1	1
+15 mins.	0	0	0	0	1	0	0	1	2	1	0	3	0	1	1	2
+30 mins.	0	1	0	1	0	0	0	0	2	0	0	2	0	0	0	0
+45 mins.	0	0	1	1	1	1	0	2	1	1	0	2	0	0	0	0
Total Volume	0	1	1	2	2	1	0	3	6	3	0	9	0	1	2	3
% App. Total	0	50	50		66.7	33.3	0		66.7	33.3	0		0	33.3	66.7	
PHF	.000	.250	.250	.500	.500	.250	.000	.375	.750	.750	.000	.750	.000	.250	.500	.375

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	2	1	3	0	0	0	0	3	1	2	6	0	0	2	2	11
07:15 AM	0	0	0	0	5	0	0	5	2	0	0	2	0	0	1	1	8
07:30 AM	0	0	0	0	1	0	0	1	2	0	1	3	0	1	0	1	5
07:45 AM	0	1	0	1	2	0	0	2	1	0	1	2	0	0	2	2	7
Total	0	3	1	4	8	0	0	8	8	1	4	13	0	1	5	6	31
08:00 AM	0	1	0	1	2	0	0	2	1	0	1	2	0	2	0	2	7
08:15 AM	0	0	0	0	2	0	0	2	1	0	0	1	1	0	3	4	7
08:30 AM	0	1	0	1	2	0	0	2	4	1	0	5	0	2	1	3	11
08:45 AM	0	0	0	0	3	0	0	3	0	2	5	7	0	0	0	0	10
Total	0	2	0	2	9	0	0	9	6	3	6	15	1	4	4	9	35
Grand Total	0	5	1	6	17	0	0	17	14	4	10	28	1	5	9	15	66
Apprch %	0	83.3	16.7		100	0	0		50	14.3	35.7		6.7	33.3	60		
Total %	0	7.6	1.5	9.1	25.8	0	0	25.8	21.2	6.1	15.2	42.4	1.5	7.6	13.6	22.7	

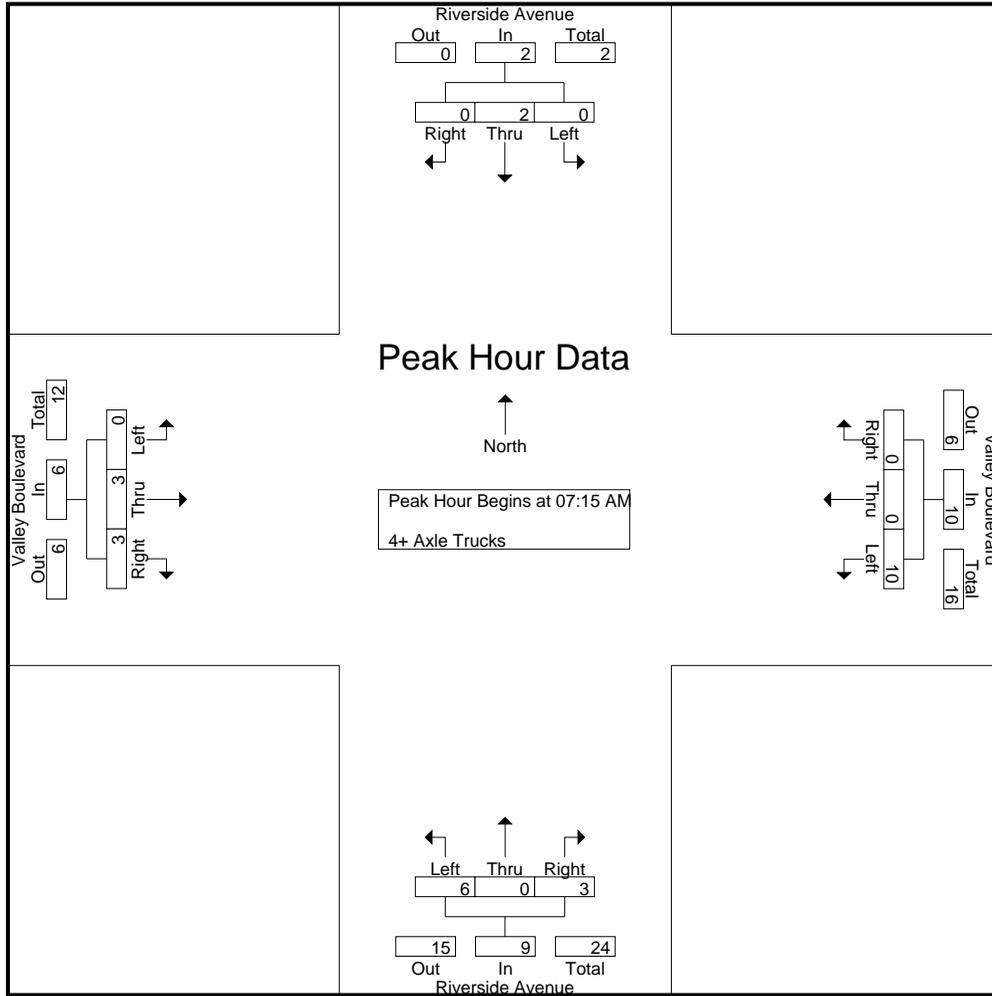
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	0	0	0	5	0	0	5	2	0	0	2	0	0	1	1	8
07:30 AM	0	0	0	0	1	0	0	1	2	0	1	3	0	1	0	1	5
07:45 AM	0	1	0	1	2	0	0	2	1	0	1	2	0	0	2	2	7
08:00 AM	0	1	0	1	2	0	0	2	1	0	1	2	0	2	0	2	7
Total Volume	0	2	0	2	10	0	0	10	6	0	3	9	0	3	3	6	27
% App. Total	0	100	0		100	0	0		66.7	0	33.3		0	50	50		
PHF	.000	.500	.000	.500	.500	.000	.000	.500	.750	.000	.750	.750	.000	.375	.375	.750	.844

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	5	0	0	5	2	0	0	2	0	0	1	1
+15 mins.	0	0	0	0	1	0	0	1	2	0	1	3	0	1	0	1
+30 mins.	0	1	0	1	2	0	0	2	1	0	1	2	0	0	2	2
+45 mins.	0	1	0	1	2	0	0	2	1	0	1	2	0	2	0	2
Total Volume	0	2	0	2	10	0	0	10	6	0	3	9	0	3	3	6
% App. Total	0	100	0	0	100	0	0	0	66.7	0	33.3	0	0	50	50	0
PHF	.000	.500	.000	.500	.500	.000	.000	.500	.750	.000	.750	.750	.000	.375	.375	.750

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

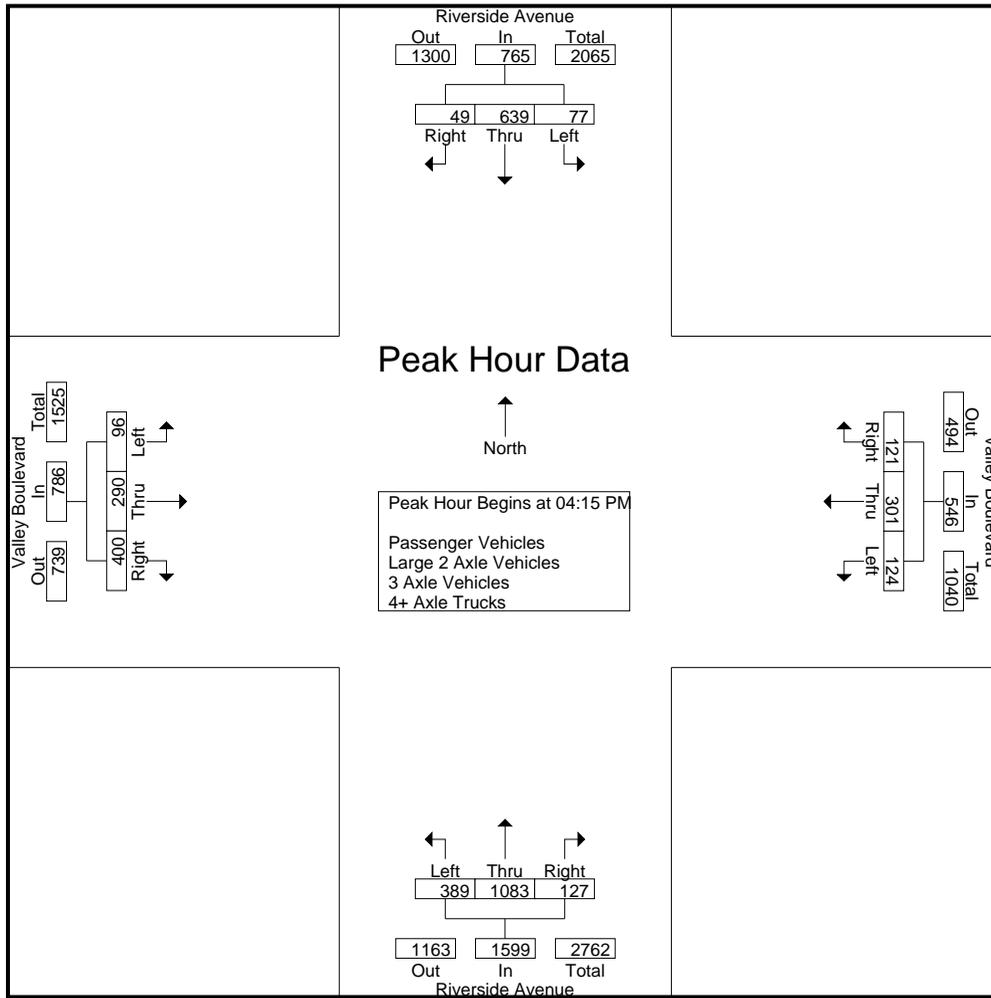
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	15	180	13	208	33	77	15	125	87	291	34	412	16	59	78	153	898
04:15 PM	17	146	14	177	29	103	27	159	104	268	26	398	28	66	92	186	920
04:30 PM	16	153	14	183	32	60	35	127	91	284	38	413	24	66	111	201	924
04:45 PM	22	153	10	185	38	77	26	141	93	249	26	368	26	83	108	217	911
Total	70	632	51	753	132	317	103	552	375	1092	124	1591	94	274	389	757	3653
05:00 PM	22	187	11	220	25	61	33	119	101	282	37	420	18	75	89	182	941
05:15 PM	18	170	16	204	22	70	26	118	112	213	25	350	16	76	106	198	870
05:30 PM	14	193	11	218	32	64	33	129	102	258	21	381	21	46	80	147	875
05:45 PM	22	169	10	201	34	69	25	128	121	246	27	394	14	73	79	166	889
Total	76	719	48	843	113	264	117	494	436	999	110	1545	69	270	354	693	3575
Grand Total	146	1351	99	1596	245	581	220	1046	811	2091	234	3136	163	544	743	1450	7228
Apprch %	9.1	84.6	6.2		23.4	55.5	21		25.9	66.7	7.5		11.2	37.5	51.2		
Total %	2	18.7	1.4	22.1	3.4	8	3	14.5	11.2	28.9	3.2	43.4	2.3	7.5	10.3	20.1	
Passenger Vehicles	142	1322	95	1559	226	564	215	1005	775	2071	214	3060	160	525	713	1398	7022
% Passenger Vehicles	97.3	97.9	96	97.7	92.2	97.1	97.7	96.1	95.6	99	91.5	97.6	98.2	96.5	96	96.4	97.1
Large 2 Axle Vehicles	3	22	4	29	8	6	4	18	10	14	5	29	2	12	11	25	101
% Large 2 Axle Vehicles	2.1	1.6	4	1.8	3.3	1	1.8	1.7	1.2	0.7	2.1	0.9	1.2	2.2	1.5	1.7	1.4
3 Axle Vehicles	0	5	0	5	5	3	1	9	9	4	3	16	0	3	6	9	39
% 3 Axle Vehicles	0	0.4	0	0.3	2	0.5	0.5	0.9	1.1	0.2	1.3	0.5	0	0.6	0.8	0.6	0.5
4+ Axle Trucks	1	2	0	3	6	8	0	14	17	2	12	31	1	4	13	18	66
% 4+ Axle Trucks	0.7	0.1	0	0.2	2.4	1.4	0	1.3	2.1	0.1	5.1	1	0.6	0.7	1.7	1.2	0.9

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	17	146	14	177	29	103	27	159	104	268	26	398	28	66	92	186	920
04:30 PM	16	153	14	183	32	60	35	127	91	284	38	413	24	66	111	201	924
04:45 PM	22	153	10	185	38	77	26	141	93	249	26	368	26	83	108	217	911
05:00 PM	22	187	11	220	25	61	33	119	101	282	37	420	18	75	89	182	941
Total Volume	77	639	49	765	124	301	121	546	389	1083	127	1599	96	290	400	786	3696
% App. Total	10.1	83.5	6.4		22.7	55.1	22.2		24.3	67.7	7.9		12.2	36.9	50.9		
PHF	.875	.854	.875	.869	.816	.731	.864	.858	.935	.953	.836	.952	.857	.873	.901	.906	.982

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	05:00 PM				04:00 PM				04:15 PM				04:30 PM			
+0 mins.	22	187	11	220	33	77	15	125	104	268	26	398	24	66	111	201
+15 mins.	18	170	16	204	29	103	27	159	91	284	38	413	26	83	108	217
+30 mins.	14	193	11	218	32	60	35	127	93	249	26	368	18	75	89	182
+45 mins.	22	169	10	201	38	77	26	141	101	282	37	420	16	76	106	198
Total Volume	76	719	48	843	132	317	103	552	389	1083	127	1599	84	300	414	798
% App. Total	9	85.3	5.7		23.9	57.4	18.7		24.3	67.7	7.9		10.5	37.6	51.9	
PHF	.864	.931	.750	.958	.868	.769	.736	.868	.935	.953	.836	.952	.808	.904	.932	.919

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

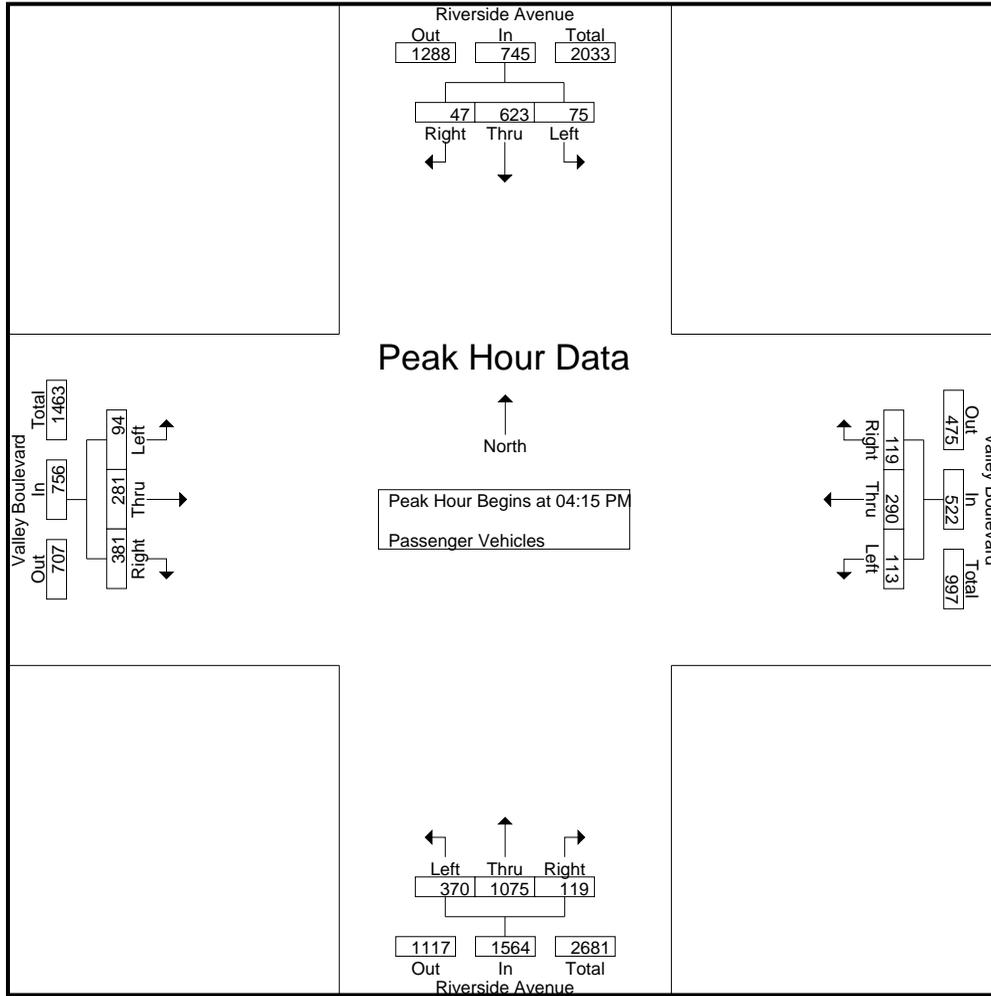
Groups Printed- Passenger Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	14	172	13	199	28	76	14	118	80	287	27	394	16	55	77	148	859
04:15 PM	16	143	13	172	24	94	26	144	98	266	25	389	26	62	88	176	881
04:30 PM	16	150	14	180	28	60	35	123	82	283	34	399	24	65	106	195	897
04:45 PM	21	149	9	179	36	76	26	138	92	246	24	362	26	82	100	208	887
Total	67	614	49	730	116	306	101	523	352	1082	110	1544	92	264	371	727	3524
05:00 PM	22	181	11	214	25	60	32	117	98	280	36	414	18	72	87	177	922
05:15 PM	18	168	15	201	20	70	26	116	104	211	24	339	16	74	103	193	849
05:30 PM	14	191	11	216	31	64	33	128	102	256	21	379	21	45	77	143	866
05:45 PM	21	168	9	198	34	64	23	121	119	242	23	384	13	70	75	158	861
Total	75	708	46	829	110	258	114	482	423	989	104	1516	68	261	342	671	3498
Grand Total	142	1322	95	1559	226	564	215	1005	775	2071	214	3060	160	525	713	1398	7022
Apprch %	9.1	84.8	6.1		22.5	56.1	21.4		25.3	67.7	7		11.4	37.6	51		
Total %	2	18.8	1.4	22.2	3.2	8	3.1	14.3	11	29.5	3	43.6	2.3	7.5	10.2	19.9	

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	16	143	13	172	24	94	26	144	98	266	25	389	26	62	88	176	881
04:30 PM	16	150	14	180	28	60	35	123	82	283	34	399	24	65	106	195	897
04:45 PM	21	149	9	179	36	76	26	138	92	246	24	362	26	82	100	208	887
05:00 PM	22	181	11	214	25	60	32	117	98	280	36	414	18	72	87	177	922
Total Volume	75	623	47	745	113	290	119	522	370	1075	119	1564	94	281	381	756	3587
% App. Total	10.1	83.6	6.3		21.6	55.6	22.8		23.7	68.7	7.6		12.4	37.2	50.4		
PHF	.852	.860	.839	.870	.785	.771	.850	.906	.944	.950	.826	.944	.904	.857	.899	.909	.973

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	16	143	13	172	24	94	26	144	98	266	25	389	26	62	88	176
+15 mins.	16	150	14	180	28	60	35	123	82	283	34	399	24	65	106	195
+30 mins.	21	149	9	179	36	76	26	138	92	246	24	362	26	82	100	208
+45 mins.	22	181	11	214	25	60	32	117	98	280	36	414	18	72	87	177
Total Volume	75	623	47	745	113	290	119	522	370	1075	119	1564	94	281	381	756
% App. Total	10.1	83.6	6.3		21.6	55.6	22.8		23.7	68.7	7.6		12.4	37.2	50.4	
PHF	.852	.860	.839	.870	.785	.771	.850	.906	.944	.950	.826	.944	.904	.857	.899	.909

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	1	7	0	8	2	0	1	3	2	1	2	5	0	3	1	4	20
04:15 PM	0	2	1	3	1	3	1	5	1	2	0	3	1	3	2	6	17
04:30 PM	0	3	0	3	1	0	0	1	3	1	2	6	0	1	0	1	11
04:45 PM	1	3	1	5	2	1	0	3	0	3	0	3	0	0	4	4	15
Total	2	15	2	19	6	4	2	12	6	7	4	17	1	7	7	15	63
05:00 PM	0	3	0	3	0	1	1	2	1	1	0	2	0	3	1	4	11
05:15 PM	0	2	1	3	1	0	0	1	3	2	0	5	0	1	1	2	11
05:30 PM	0	1	0	1	1	0	0	1	0	2	0	2	0	0	1	1	5
05:45 PM	1	1	1	3	0	1	1	2	0	2	1	3	1	1	1	3	11
Total	1	7	2	10	2	2	2	6	4	7	1	12	1	5	4	10	38
Grand Total	3	22	4	29	8	6	4	18	10	14	5	29	2	12	11	25	101
Apprch %	10.3	75.9	13.8		44.4	33.3	22.2		34.5	48.3	17.2		8	48	44		
Total %	3	21.8	4	28.7	7.9	5.9	4	17.8	9.9	13.9	5	28.7	2	11.9	10.9	24.8	

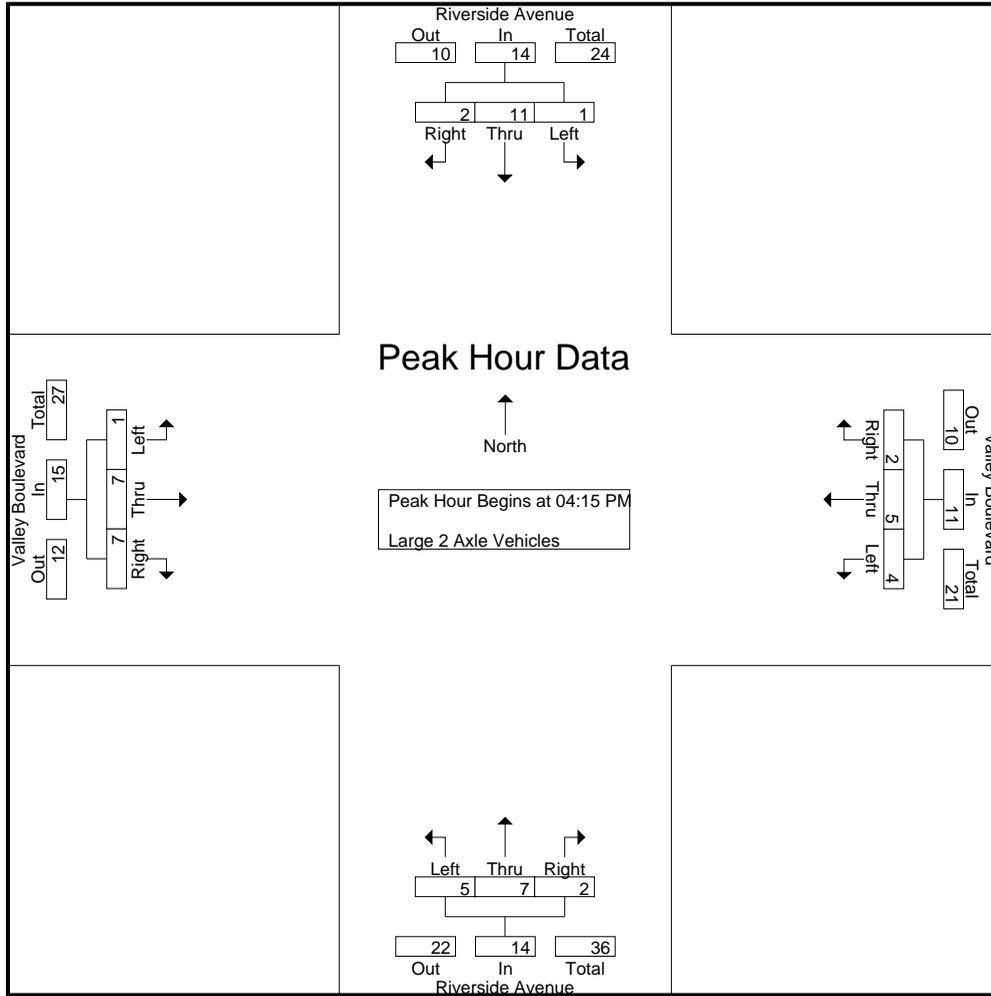
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	2	1	3	1	3	1	5	1	2	0	3	1	3	2	6	17
04:30 PM	0	3	0	3	1	0	0	1	3	1	2	6	0	1	0	1	11
04:45 PM	1	3	1	5	2	1	0	3	0	3	0	3	0	0	4	4	15
05:00 PM	0	3	0	3	0	1	1	2	1	1	0	2	0	3	1	4	11
Total Volume	1	11	2	14	4	5	2	11	5	7	2	14	1	7	7	15	54
% App. Total	7.1	78.6	14.3		36.4	45.5	18.2		35.7	50	14.3		6.7	46.7	46.7		
PHF	.250	.917	.500	.700	.500	.417	.500	.550	.417	.583	.250	.583	.250	.583	.438	.625	.794

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	2	1	3	1	3	1	5	1	2	0	3	1	3	2	6
+15 mins.	0	3	0	3	1	0	0	1	3	1	2	6	0	1	0	1
+30 mins.	1	3	1	5	2	1	0	3	0	3	0	3	0	0	4	4
+45 mins.	0	3	0	3	0	1	1	2	1	1	0	2	0	3	1	4
Total Volume	1	11	2	14	4	5	2	11	5	7	2	14	1	7	7	15
% App. Total	7.1	78.6	14.3		36.4	45.5	18.2		35.7	50	14.3		6.7	46.7	46.7	
PHF	.250	.917	.500	.700	.500	.417	.500	.550	.417	.583	.250	.583	.250	.583	.438	.625

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	0	1	0	0	0	0	2	3	1	6	0	1	0	1	8
04:15 PM	0	1	0	1	3	3	0	6	0	0	0	0	0	1	2	3	10
04:30 PM	0	0	0	0	2	0	0	2	2	0	0	2	0	0	1	1	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	5	3	0	8	4	3	1	8	0	2	3	5	24
05:00 PM	0	2	0	2	0	0	0	0	2	0	0	2	0	0	0	0	4
05:15 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	1	0	1	3
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:45 PM	0	0	0	0	0	0	1	1	1	1	2	4	0	0	2	2	7
Total	0	2	0	2	0	0	1	1	5	1	2	8	0	1	3	4	15
Grand Total	0	5	0	5	5	3	1	9	9	4	3	16	0	3	6	9	39
Apprch %	0	100	0		55.6	33.3	11.1		56.2	25	18.8		0	33.3	66.7		
Total %	0	12.8	0	12.8	12.8	7.7	2.6	23.1	23.1	10.3	7.7	41	0	7.7	15.4	23.1	

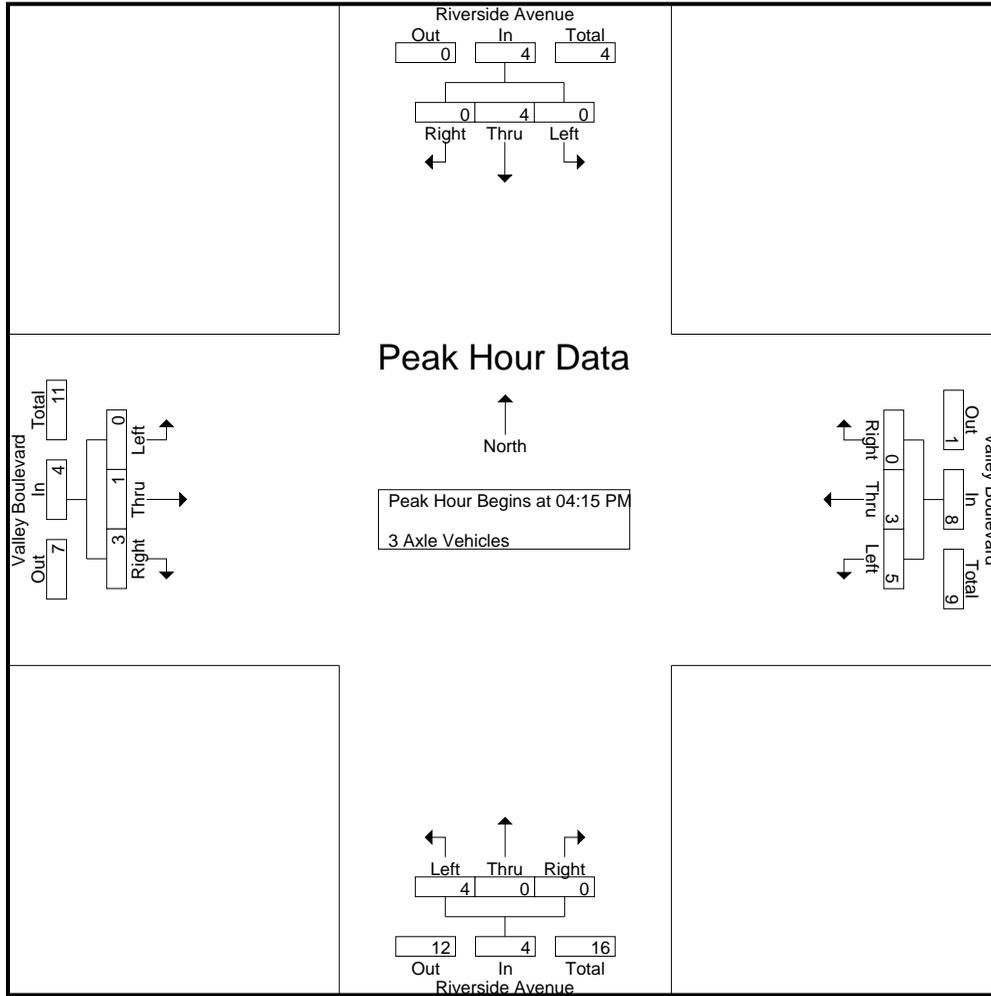
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	1	0	1	3	3	0	6	0	0	0	0	0	1	2	3	10
04:30 PM	0	0	0	0	2	0	0	2	2	0	0	2	0	0	1	1	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	2	0	2	0	0	0	0	2	0	0	2	0	0	0	0	4
Total Volume	0	4	0	4	5	3	0	8	4	0	0	4	0	1	3	4	20
% App. Total	0	100	0		62.5	37.5	0		100	0	0		0	25	75		
PHF	.000	.500	.000	.500	.417	.250	.000	.333	.500	.000	.000	.500	.000	.250	.375	.333	.500

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	1	0	1	3	3	0	6	0	0	0	0	0	1	2	3
+15 mins.	0	0	0	0	2	0	0	2	2	0	0	2	0	0	1	1
+30 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	2	0	0	2	0	0	0	0
Total Volume	0	4	0	4	5	3	0	8	4	0	0	4	0	1	3	4
% App. Total	0	100	0		62.5	37.5	0		100	0	0		0	25	75	
PHF	.000	.500	.000	.500	.417	.250	.000	.333	.500	.000	.000	.500	.000	.250	.375	.333

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	0	0	0	3	1	0	4	3	0	4	7	0	0	0	0	11
04:15 PM	1	0	0	1	1	3	0	4	5	0	1	6	1	0	0	1	12
04:30 PM	0	0	0	0	1	0	0	1	4	0	2	6	0	0	4	4	11
04:45 PM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	4	5	8
Total	1	0	0	1	5	4	0	9	13	0	9	22	1	1	8	10	42
05:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1	4
05:15 PM	0	0	0	0	1	0	0	1	3	0	1	4	0	0	2	2	7
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
05:45 PM	0	0	0	0	0	4	0	4	1	1	1	3	0	2	1	3	10
Total	0	2	0	2	1	4	0	5	4	2	3	9	0	3	5	8	24
Grand Total	1	2	0	3	6	8	0	14	17	2	12	31	1	4	13	18	66
Apprch %	33.3	66.7	0		42.9	57.1	0		54.8	6.5	38.7		5.6	22.2	72.2		
Total %	1.5	3	0	4.5	9.1	12.1	0	21.2	25.8	3	18.2	47	1.5	6.1	19.7	27.3	

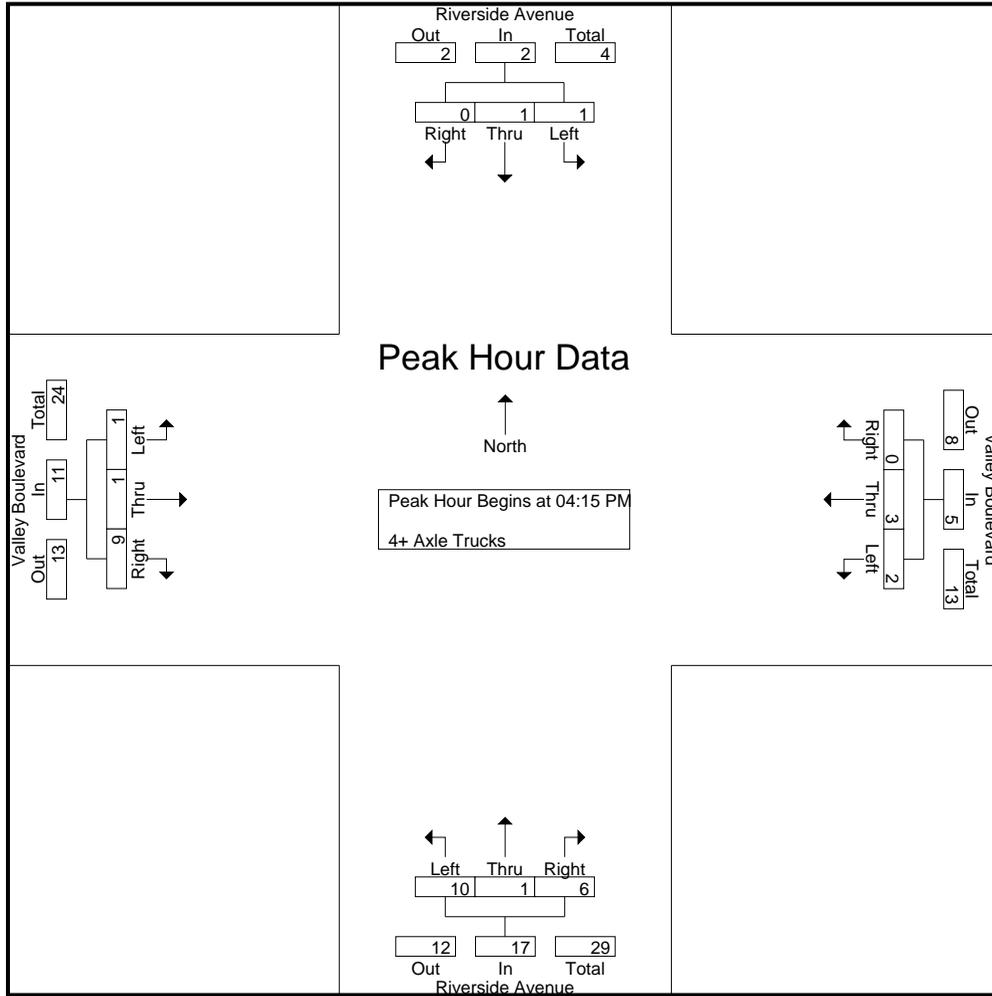
Start Time	Riverside Avenue Southbound				Valley Boulevard Westbound				Riverside Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	1	0	0	1	1	3	0	4	5	0	1	6	1	0	0	1	12
04:30 PM	0	0	0	0	1	0	0	1	4	0	2	6	0	0	4	4	11
04:45 PM	0	0	0	0	0	0	0	0	1	0	2	3	0	1	4	5	8
05:00 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1	4
Total Volume	1	1	0	2	2	3	0	5	10	1	6	17	1	1	9	11	35
% App. Total	50	50	0		40	60	0		58.8	5.9	35.3		9.1	9.1	81.8		
PHF	.250	.250	.000	.500	.500	.250	.000	.313	.500	.250	.750	.708	.250	.250	.563	.550	.729

Peak Hour Analysis From 04:15 PM to 05:00 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Colton
 N/S: Riverside Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 01_COL_River_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	1	0	0	1	1	3	0	4	5	0	1	6	1	0	0	1
+15 mins.	0	0	0	0	1	0	0	1	4	0	2	6	0	0	4	4
+30 mins.	0	0	0	0	0	0	0	0	1	0	2	3	0	1	4	5
+45 mins.	0	1	0	1	0	0	0	0	0	1	1	2	0	0	1	1
Total Volume	1	1	0	2	2	3	0	5	10	1	6	17	1	1	9	11
% App. Total	50	50	0		40	60	0		58.8	5.9	35.3		9.1	9.1	81.8	
PHF	.250	.250	.000	.500	.500	.250	.000	.313	.500	.250	.750	.708	.250	.250	.563	.550

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

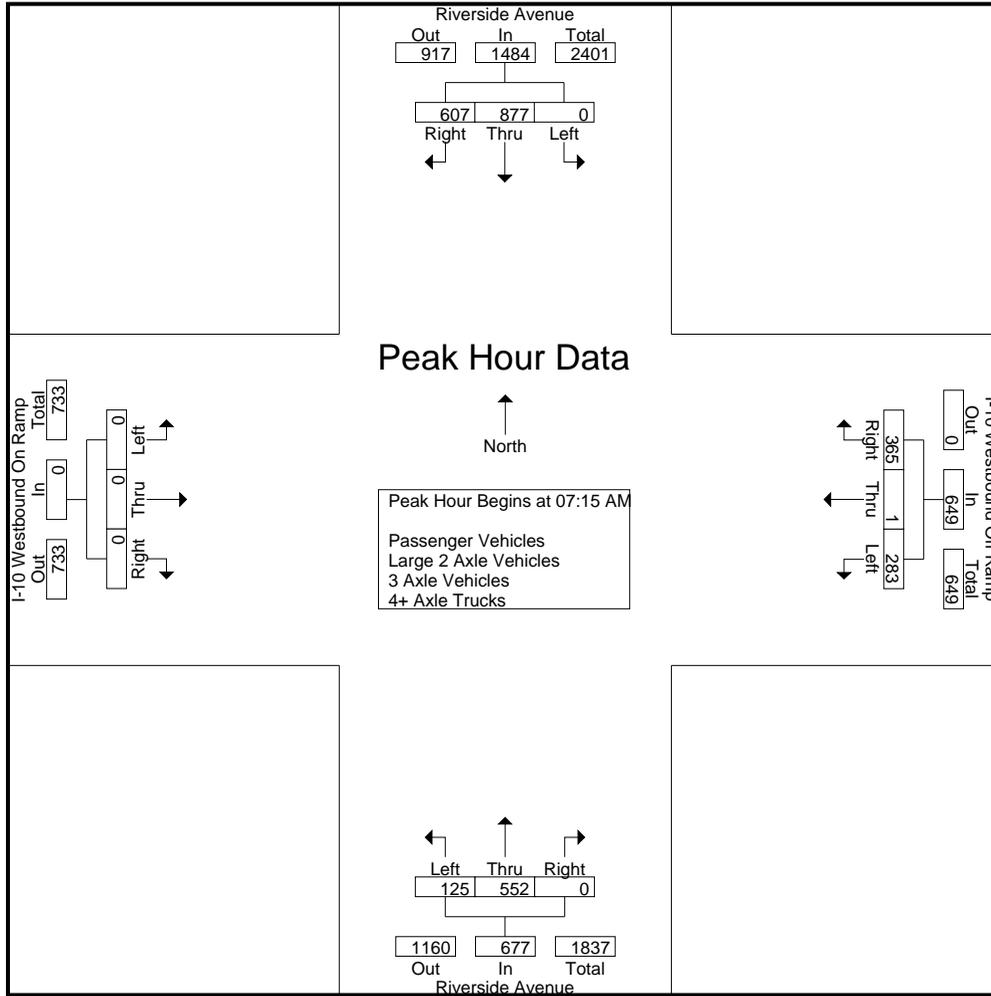
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	182	152	334	64	0	81	145	33	106	0	139	0	0	0	0	618
07:15 AM	0	233	178	411	64	0	88	152	27	127	0	154	0	0	0	0	717
07:30 AM	0	264	155	419	82	0	106	188	32	159	0	191	0	0	0	0	798
07:45 AM	0	210	127	337	72	1	97	170	31	126	0	157	0	0	0	0	664
Total	0	889	612	1501	282	1	372	655	123	518	0	641	0	0	0	0	2797
08:00 AM	0	170	147	317	65	0	74	139	35	140	0	175	0	0	0	0	631
08:15 AM	0	166	130	296	73	0	68	141	27	110	0	137	0	0	0	0	574
08:30 AM	0	151	112	263	77	1	76	154	38	112	0	150	0	0	0	0	567
08:45 AM	0	128	78	206	89	2	81	172	37	127	0	164	0	0	0	0	542
Total	0	615	467	1082	304	3	299	606	137	489	0	626	0	0	0	0	2314
Grand Total	0	1504	1079	2583	586	4	671	1261	260	1007	0	1267	0	0	0	0	5111
Apprch %	0	58.2	41.8		46.5	0.3	53.2		20.5	79.5	0		0	0	0		
Total %	0	29.4	21.1	50.5	11.5	0.1	13.1	24.7	5.1	19.7	0	24.8	0	0	0	0	
Passenger Vehicles	0	1441	1043	2484	426	1	640	1067	98	936	0	1034	0	0	0	0	4585
% Passenger Vehicles	0	95.8	96.7	96.2	72.7	25	95.4	84.6	37.7	92.9	0	81.6	0	0	0	0	89.7
Large 2 Axle Vehicles	0	33	21	54	14	0	19	33	22	31	0	53	0	0	0	0	140
% Large 2 Axle Vehicles	0	2.2	1.9	2.1	2.4	0	2.8	2.6	8.5	3.1	0	4.2	0	0	0	0	2.7
3 Axle Vehicles	0	9	5	14	39	0	5	44	52	12	0	64	0	0	0	0	122
% 3 Axle Vehicles	0	0.6	0.5	0.5	6.7	0	0.7	3.5	20	1.2	0	5.1	0	0	0	0	2.4
4+ Axle Trucks	0	21	10	31	107	3	7	117	88	28	0	116	0	0	0	0	264
% 4+ Axle Trucks	0	1.4	0.9	1.2	18.3	75	1	9.3	33.8	2.8	0	9.2	0	0	0	0	5.2

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	233	178	411	64	0	88	152	27	127	0	154	0	0	0	0	717
07:30 AM	0	264	155	419	82	0	106	188	32	159	0	191	0	0	0	0	798
07:45 AM	0	210	127	337	72	1	97	170	31	126	0	157	0	0	0	0	664
08:00 AM	0	170	147	317	65	0	74	139	35	140	0	175	0	0	0	0	631
Total Volume	0	877	607	1484	283	1	365	649	125	552	0	677	0	0	0	0	2810
% App. Total	0	59.1	40.9		43.6	0.2	56.2		18.5	81.5	0		0	0	0		
PHF	.000	.830	.853	.885	.863	.250	.861	.863	.893	.868	.000	.886	.000	.000	.000	.000	.880

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:00 AM				07:00 AM				07:15 AM				07:00 AM			
+0 mins.	0	182	152	334	64	0	81	145	27	127	0	154	0	0	0	0
+15 mins.	0	233	178	411	64	0	88	152	32	159	0	191	0	0	0	0
+30 mins.	0	264	155	419	82	0	106	188	31	126	0	157	0	0	0	0
+45 mins.	0	210	127	337	72	1	97	170	35	140	0	175	0	0	0	0
Total Volume	0	889	612	1501	282	1	372	655	125	552	0	677	0	0	0	0
% App. Total	0	59.2	40.8		43.1	0.2	56.8		18.5	81.5	0		0	0	0	
PHF	.000	.842	.860	.896	.860	.250	.877	.871	.893	.868	.000	.886	.000	.000	.000	.000

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	174	150	324	46	0	75	121	14	95	0	109	0	0	0	0	554
07:15 AM	0	226	170	396	52	0	86	138	8	121	0	129	0	0	0	0	663
07:30 AM	0	255	149	404	67	0	106	173	10	148	0	158	0	0	0	0	735
07:45 AM	0	201	122	323	54	0	94	148	14	116	0	130	0	0	0	0	601
Total	0	856	591	1447	219	0	361	580	46	480	0	526	0	0	0	0	2553
08:00 AM	0	160	143	303	50	0	70	120	15	135	0	150	0	0	0	0	573
08:15 AM	0	161	126	287	44	0	63	107	10	101	0	111	0	0	0	0	505
08:30 AM	0	141	107	248	58	0	72	130	14	104	0	118	0	0	0	0	496
08:45 AM	0	123	76	199	55	1	74	130	13	116	0	129	0	0	0	0	458
Total	0	585	452	1037	207	1	279	487	52	456	0	508	0	0	0	0	2032
Grand Total	0	1441	1043	2484	426	1	640	1067	98	936	0	1034	0	0	0	0	4585
Apprch %	0	58	42		39.9	0.1	60		9.5	90.5	0		0	0	0		
Total %	0	31.4	22.7	54.2	9.3	0	14	23.3	2.1	20.4	0	22.6	0	0	0	0	

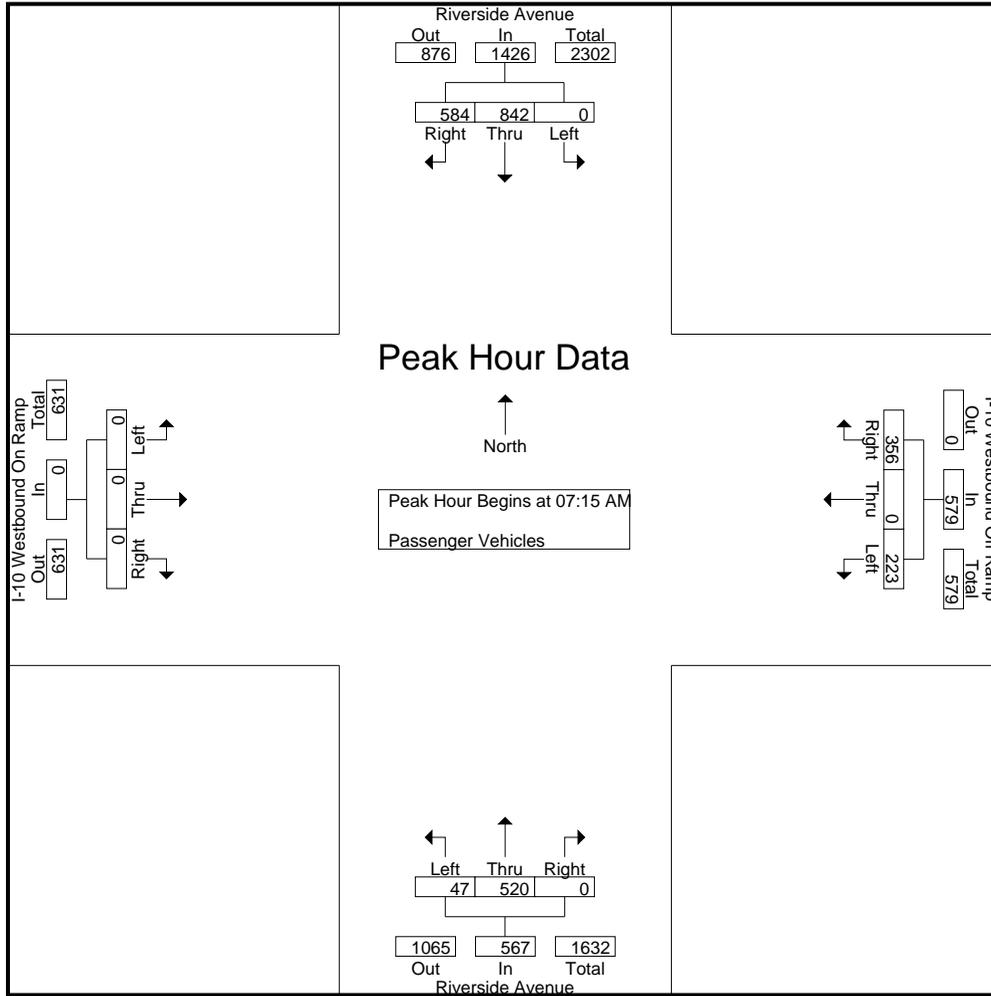
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	226	170	396	52	0	86	138	8	121	0	129	0	0	0	0	663
07:30 AM	0	255	149	404	67	0	106	173	10	148	0	158	0	0	0	0	735
07:45 AM	0	201	122	323	54	0	94	148	14	116	0	130	0	0	0	0	601
08:00 AM	0	160	143	303	50	0	70	120	15	135	0	150	0	0	0	0	573
Total Volume	0	842	584	1426	223	0	356	579	47	520	0	567	0	0	0	0	2572
% App. Total	0	59	41		38.5	0	61.5		8.3	91.7	0		0	0	0		
PHF	.000	.825	.859	.882	.832	.000	.840	.837	.783	.878	.000	.897	.000	.000	.000	.000	.875

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	226	170	396	52	0	86	138	8	121	0	129	0	0	0	0
+15 mins.	0	255	149	404	67	0	106	173	10	148	0	158	0	0	0	0
+30 mins.	0	201	122	323	54	0	94	148	14	116	0	130	0	0	0	0
+45 mins.	0	160	143	303	50	0	70	120	15	135	0	150	0	0	0	0
Total Volume	0	842	584	1426	223	0	356	579	47	520	0	567	0	0	0	0
% App. Total	0	59	41		38.5	0	61.5		8.3	91.7	0		0	0	0	
PHF	.000	.825	.859	.882	.832	.000	.840	.837	.783	.878	.000	.897	.000	.000	.000	.000

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	3	2	5	1	0	2	3	0	5	0	5	0	0	0	0	13
07:15 AM	0	3	6	9	1	0	2	3	4	4	0	8	0	0	0	0	20
07:30 AM	0	8	3	11	2	0	0	2	3	5	0	8	0	0	0	0	21
07:45 AM	0	5	2	7	2	0	2	4	4	4	0	8	0	0	0	0	19
Total	0	19	13	32	6	0	6	12	11	18	0	29	0	0	0	0	73
08:00 AM	0	5	3	8	1	0	4	5	1	2	0	3	0	0	0	0	16
08:15 AM	0	2	1	3	2	0	4	6	3	4	0	7	0	0	0	0	16
08:30 AM	0	5	3	8	4	0	0	4	5	3	0	8	0	0	0	0	20
08:45 AM	0	2	1	3	1	0	5	6	2	4	0	6	0	0	0	0	15
Total	0	14	8	22	8	0	13	21	11	13	0	24	0	0	0	0	67
Grand Total	0	33	21	54	14	0	19	33	22	31	0	53	0	0	0	0	140
Apprch %	0	61.1	38.9		42.4	0	57.6		41.5	58.5	0		0	0	0		
Total %	0	23.6	15	38.6	10	0	13.6	23.6	15.7	22.1	0	37.9	0	0	0	0	

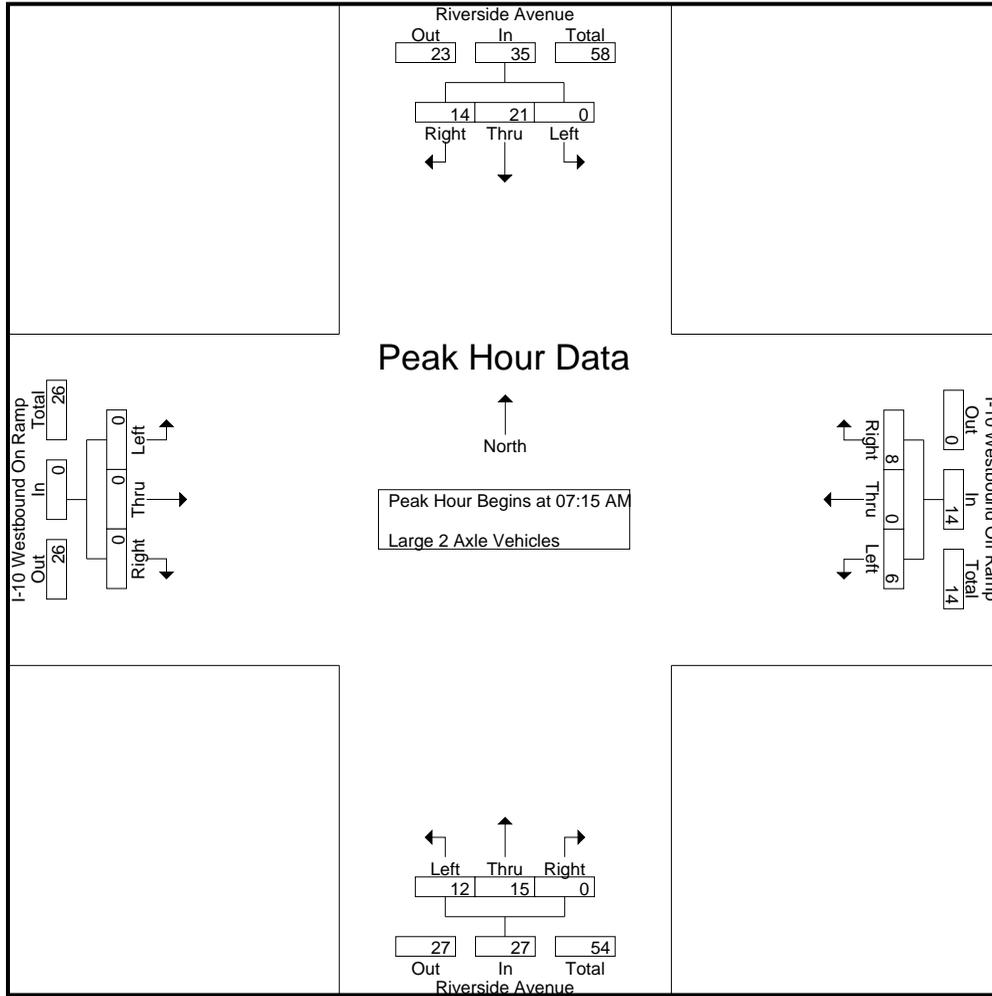
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	6	9	1	0	2	3	4	4	0	8	0	0	0	0	20
07:30 AM	0	8	3	11	2	0	0	2	3	5	0	8	0	0	0	0	21
07:45 AM	0	5	2	7	2	0	2	4	4	4	0	8	0	0	0	0	19
08:00 AM	0	5	3	8	1	0	4	5	1	2	0	3	0	0	0	0	16
Total Volume	0	21	14	35	6	0	8	14	12	15	0	27	0	0	0	0	76
% App. Total	0	60	40		42.9	0	57.1		44.4	55.6	0		0	0	0		
PHF	.000	.656	.583	.795	.750	.000	.500	.700	.750	.750	.000	.844	.000	.000	.000	.000	.905

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	6	9	1	0	2	3	4	4	0	8	0	0	0	0
+15 mins.	0	8	3	11	2	0	0	2	3	5	0	8	0	0	0	0
+30 mins.	0	5	2	7	2	0	2	4	4	4	0	8	0	0	0	0
+45 mins.	0	5	3	8	1	0	4	5	1	2	0	3	0	0	0	0
Total Volume	0	21	14	35	6	0	8	14	12	15	0	27	0	0	0	0
% App. Total	0	60	40		42.9	0	57.1		44.4	55.6	0		0	0	0	
PHF	.000	.656	.583	.795	.750	.000	.500	.700	.750	.750	.000	.844	.000	.000	.000	.000

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

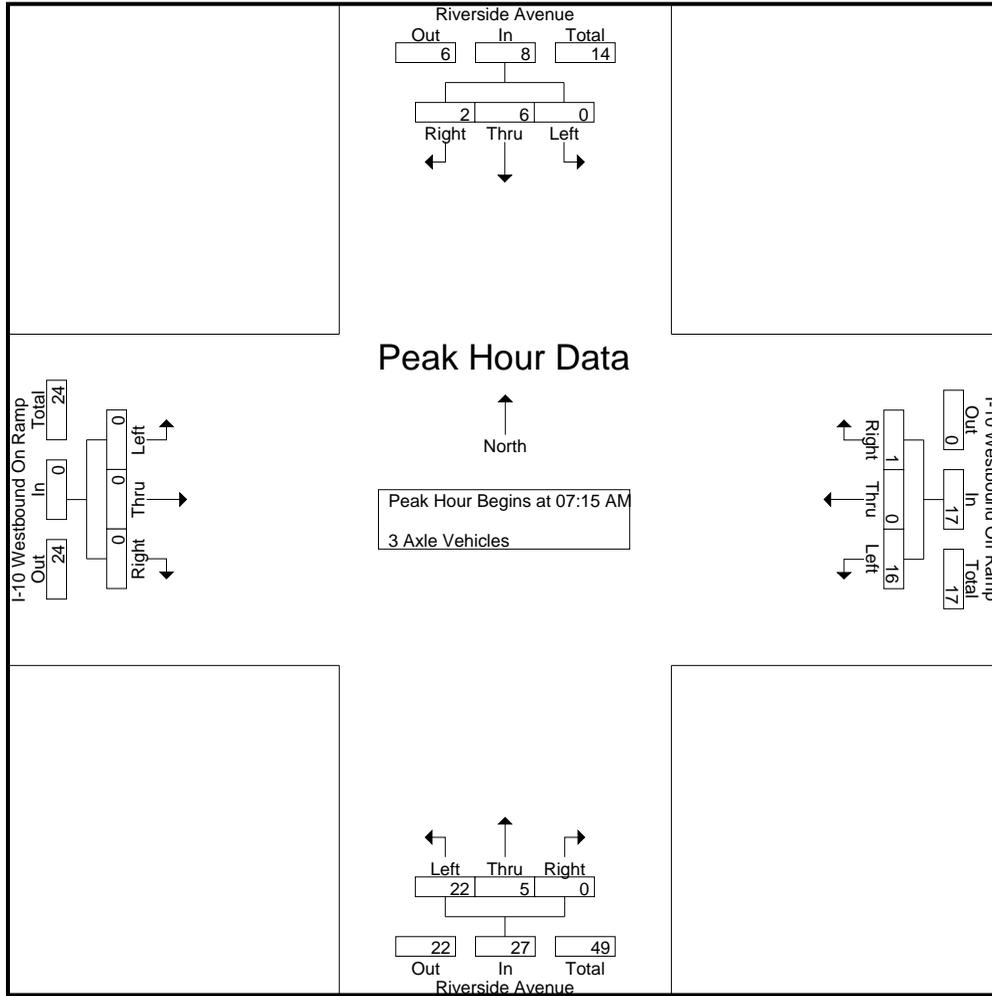
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	2	0	2	7	0	1	8	7	3	0	10	0	0	0	0	20
07:15 AM	0	1	0	1	3	0	0	3	5	0	0	5	0	0	0	0	9
07:30 AM	0	1	1	2	5	0	0	5	6	2	0	8	0	0	0	0	15
07:45 AM	0	2	0	2	3	0	1	4	7	1	0	8	0	0	0	0	14
Total	0	6	1	7	18	0	2	20	25	6	0	31	0	0	0	0	58
08:00 AM	0	2	1	3	5	0	0	5	4	2	0	6	0	0	0	0	14
08:15 AM	0	1	1	2	6	0	1	7	7	3	0	10	0	0	0	0	19
08:30 AM	0	0	1	1	4	0	0	4	8	0	0	8	0	0	0	0	13
08:45 AM	0	0	1	1	6	0	2	8	8	1	0	9	0	0	0	0	18
Total	0	3	4	7	21	0	3	24	27	6	0	33	0	0	0	0	64
Grand Total	0	9	5	14	39	0	5	44	52	12	0	64	0	0	0	0	122
Apprch %	0	64.3	35.7		88.6	0	11.4		81.2	18.8	0		0	0	0		
Total %	0	7.4	4.1	11.5	32	0	4.1	36.1	42.6	9.8	0	52.5	0	0	0	0	

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	1	0	1	3	0	0	3	5	0	0	5	0	0	0	0	9
07:30 AM	0	1	1	2	5	0	0	5	6	2	0	8	0	0	0	0	15
07:45 AM	0	2	0	2	3	0	1	4	7	1	0	8	0	0	0	0	14
08:00 AM	0	2	1	3	5	0	0	5	4	2	0	6	0	0	0	0	14
Total Volume	0	6	2	8	16	0	1	17	22	5	0	27	0	0	0	0	52
% App. Total	0	75	25		94.1	0	5.9		81.5	18.5	0		0	0	0		
PHF	.000	.750	.500	.667	.800	.000	.250	.850	.786	.625	.000	.844	.000	.000	.000	.000	.867

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

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	1	0	1	3	0	0	3	5	0	0	5	0	0	0	0
+15 mins.	0	1	1	2	5	0	0	5	6	2	0	8	0	0	0	0
+30 mins.	0	2	0	2	3	0	1	4	7	1	0	8	0	0	0	0
+45 mins.	0	2	1	3	5	0	0	5	4	2	0	6	0	0	0	0
Total Volume	0	6	2	8	16	0	1	17	22	5	0	27	0	0	0	0
% App. Total	0	75	25		94.1	0	5.9		81.5	18.5	0		0	0	0	
PHF	.000	.750	.500	.667	.800	.000	.250	.850	.786	.625	.000	.844	.000	.000	.000	.000

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	3	0	3	10	0	3	13	12	3	0	15	0	0	0	0	31
07:15 AM	0	3	2	5	8	0	0	8	10	2	0	12	0	0	0	0	25
07:30 AM	0	0	2	2	8	0	0	8	13	4	0	17	0	0	0	0	27
07:45 AM	0	2	3	5	13	1	0	14	6	5	0	11	0	0	0	0	30
Total	0	8	7	15	39	1	3	43	41	14	0	55	0	0	0	0	113
08:00 AM	0	3	0	3	9	0	0	9	15	1	0	16	0	0	0	0	28
08:15 AM	0	2	2	4	21	0	0	21	7	2	0	9	0	0	0	0	34
08:30 AM	0	5	1	6	11	1	4	16	11	5	0	16	0	0	0	0	38
08:45 AM	0	3	0	3	27	1	0	28	14	6	0	20	0	0	0	0	51
Total	0	13	3	16	68	2	4	74	47	14	0	61	0	0	0	0	151
Grand Total	0	21	10	31	107	3	7	117	88	28	0	116	0	0	0	0	264
Apprch %	0	67.7	32.3		91.5	2.6	6		75.9	24.1	0		0	0	0		
Total %	0	8	3.8	11.7	40.5	1.1	2.7	44.3	33.3	10.6	0	43.9	0	0	0	0	

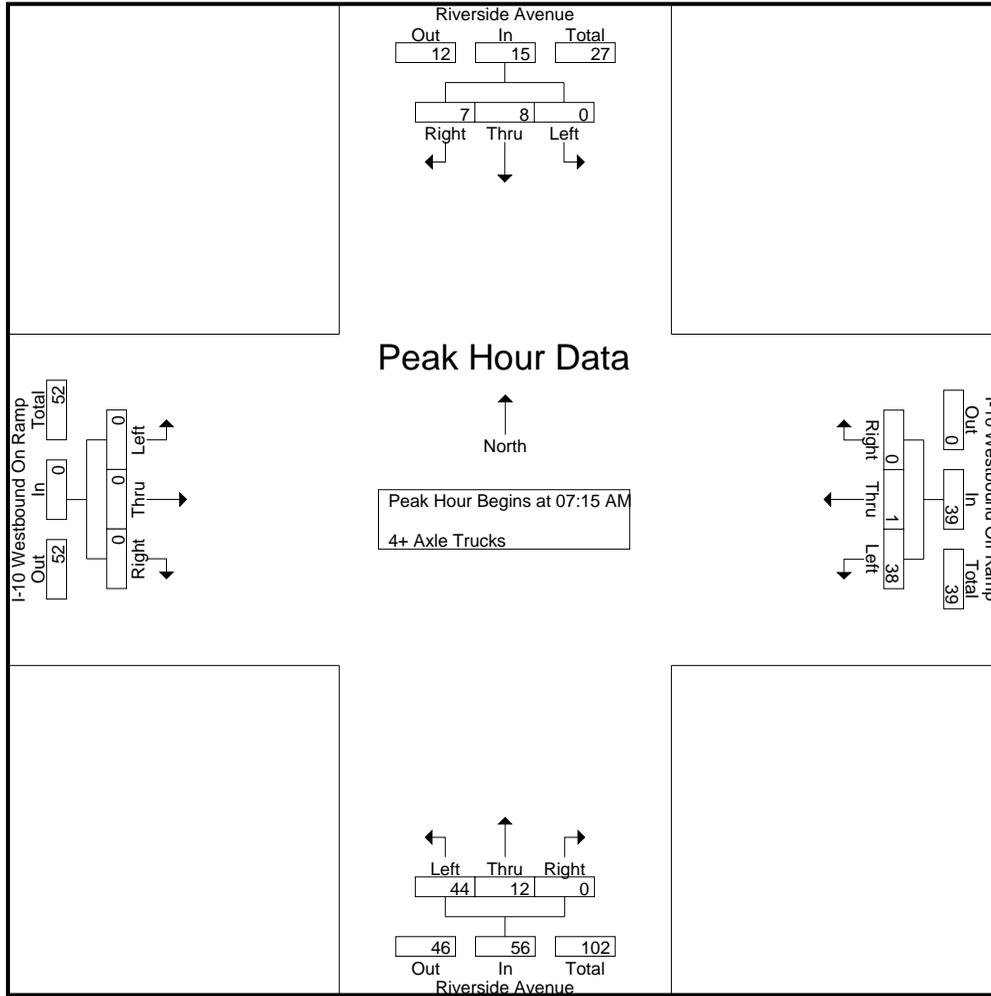
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	2	5	8	0	0	8	10	2	0	12	0	0	0	0	25
07:30 AM	0	0	2	2	8	0	0	8	13	4	0	17	0	0	0	0	27
07:45 AM	0	2	3	5	13	1	0	14	6	5	0	11	0	0	0	0	30
08:00 AM	0	3	0	3	9	0	0	9	15	1	0	16	0	0	0	0	28
Total Volume	0	8	7	15	38	1	0	39	44	12	0	56	0	0	0	0	110
% App. Total	0	53.3	46.7		97.4	2.6	0		78.6	21.4	0		0	0	0		
PHF	.000	.667	.583	.750	.731	.250	.000	.696	.733	.600	.000	.824	.000	.000	.000	.000	.917

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

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

File Name : 02_COL_River_10W AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	2	5	8	0	0	8	10	2	0	12	0	0	0	0
+15 mins.	0	0	2	2	8	0	0	8	13	4	0	17	0	0	0	0
+30 mins.	0	2	3	5	13	1	0	14	6	5	0	11	0	0	0	0
+45 mins.	0	3	0	3	9	0	0	9	15	1	0	16	0	0	0	0
Total Volume	0	8	7	15	38	1	0	39	44	12	0	56	0	0	0	0
% App. Total	0	53.3	46.7		97.4	2.6	0		78.6	21.4	0		0	0	0	
PHF	.000	.667	.583	.750	.731	.250	.000	.696	.733	.600	.000	.824	.000	.000	.000	.000

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

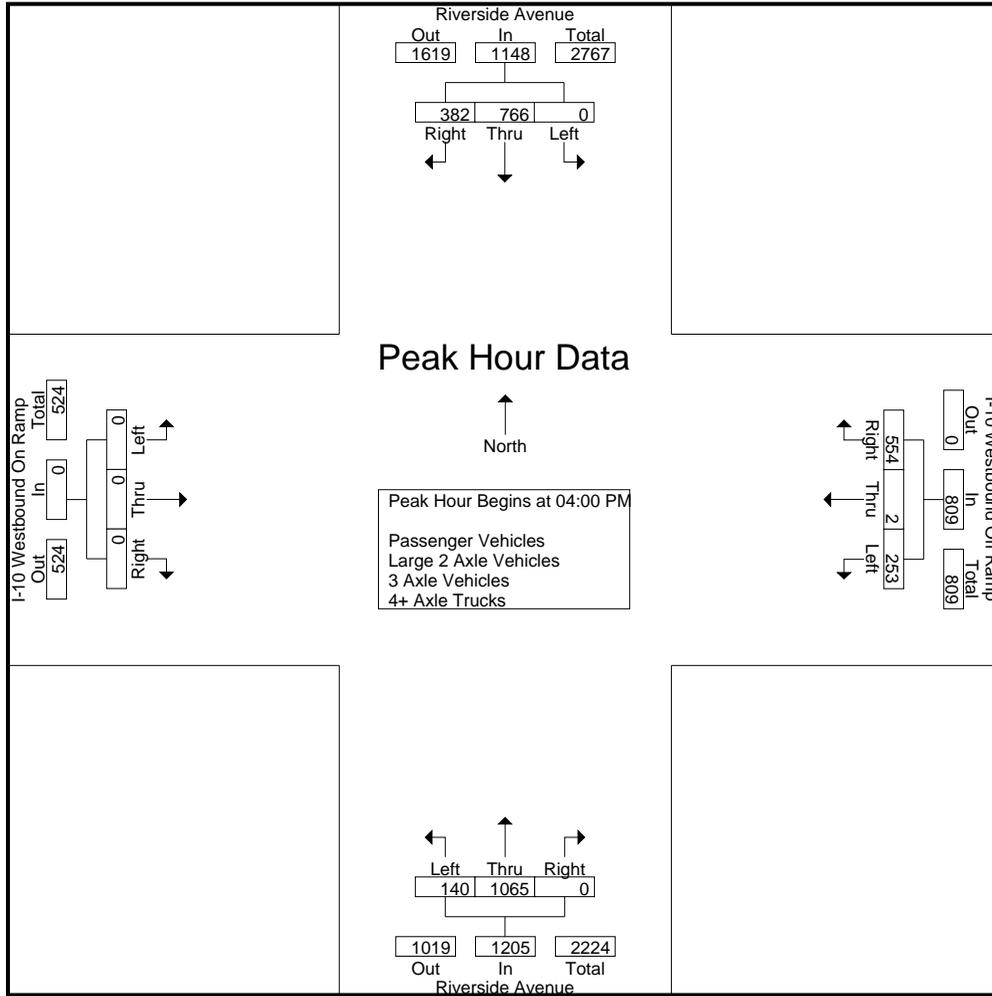
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	193	106	299	61	0	140	201	34	262	0	296	0	0	0	0	796
04:15 PM	0	178	83	261	66	1	140	207	40	266	0	306	0	0	0	0	774
04:30 PM	0	201	92	293	64	0	136	200	29	277	0	306	0	0	0	0	799
04:45 PM	0	194	101	295	62	1	138	201	37	260	0	297	0	0	0	0	793
Total	0	766	382	1148	253	2	554	809	140	1065	0	1205	0	0	0	0	3162
05:00 PM	0	198	110	308	37	0	132	169	42	271	0	313	0	0	0	0	790
05:15 PM	0	198	90	288	77	1	150	228	29	215	0	244	0	0	0	0	760
05:30 PM	0	195	108	303	56	0	118	174	22	263	0	285	0	0	0	0	762
05:45 PM	0	172	91	263	39	1	129	169	31	250	0	281	0	0	0	0	713
Total	0	763	399	1162	209	2	529	740	124	999	0	1123	0	0	0	0	3025
Grand Total	0	1529	781	2310	462	4	1083	1549	264	2064	0	2328	0	0	0	0	6187
Apprch %	0	66.2	33.8		29.8	0.3	69.9		11.3	88.7	0		0	0	0		
Total %	0	24.7	12.6	37.3	7.5	0.1	17.5	25	4.3	33.4	0	37.6	0	0	0	0	
Passenger Vehicles	0	1469	758	2227	301	4	1062	1367	189	2012	0	2201	0	0	0	0	5795
% Passenger Vehicles	0	96.1	97.1	96.4	65.2	100	98.1	88.3	71.6	97.5	0	94.5	0	0	0	0	93.7
Large 2 Axle Vehicles	0	37	11	48	43	0	8	51	9	19	0	28	0	0	0	0	127
% Large 2 Axle Vehicles	0	2.4	1.4	2.1	9.3	0	0.7	3.3	3.4	0.9	0	1.2	0	0	0	0	2.1
3 Axle Vehicles	0	10	5	15	33	0	4	37	30	14	0	44	0	0	0	0	96
% 3 Axle Vehicles	0	0.7	0.6	0.6	7.1	0	0.4	2.4	11.4	0.7	0	1.9	0	0	0	0	1.6
4+ Axle Trucks	0	13	7	20	85	0	9	94	36	19	0	55	0	0	0	0	169
% 4+ Axle Trucks	0	0.9	0.9	0.9	18.4	0	0.8	6.1	13.6	0.9	0	2.4	0	0	0	0	2.7

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	193	106	299	61	0	140	201	34	262	0	296	0	0	0	0	796
04:15 PM	0	178	83	261	66	1	140	207	40	266	0	306	0	0	0	0	774
04:30 PM	0	201	92	293	64	0	136	200	29	277	0	306	0	0	0	0	799
04:45 PM	0	194	101	295	62	1	138	201	37	260	0	297	0	0	0	0	793
Total Volume	0	766	382	1148	253	2	554	809	140	1065	0	1205	0	0	0	0	3162
% App. Total	0	66.7	33.3		31.3	0.2	68.5		11.6	88.4	0		0	0	0		
PHF	.000	.953	.901	.960	.958	.500	.989	.977	.875	.961	.000	.984	.000	.000	.000	.000	.989

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:45 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	0	194	101	295	61	0	140	201	40	266	0	306	0	0	0	0
+15 mins.	0	198	110	308	66	1	140	207	29	277	0	306	0	0	0	0
+30 mins.	0	198	90	288	64	0	136	200	37	260	0	297	0	0	0	0
+45 mins.	0	195	108	303	62	1	138	201	42	271	0	313	0	0	0	0
Total Volume	0	785	409	1194	253	2	554	809	148	1074	0	1222	0	0	0	0
% App. Total	0	65.7	34.3		31.3	0.2	68.5		12.1	87.9	0		0	0	0	
PHF	.000	.991	.930	.969	.958	.500	.989	.977	.881	.969	.000	.976	.000	.000	.000	.000

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	183	103	286	40	0	134	174	19	249	0	268	0	0	0	0	728
04:15 PM	0	166	82	248	44	1	137	182	30	260	0	290	0	0	0	0	720
04:30 PM	0	196	86	282	38	0	131	169	21	269	0	290	0	0	0	0	741
04:45 PM	0	180	98	278	44	1	138	183	30	254	0	284	0	0	0	0	745
Total	0	725	369	1094	166	2	540	708	100	1032	0	1132	0	0	0	0	2934
05:00 PM	0	192	105	297	19	0	130	149	31	264	0	295	0	0	0	0	741
05:15 PM	0	194	88	282	50	1	148	199	23	209	0	232	0	0	0	0	713
05:30 PM	0	190	106	296	41	0	118	159	14	262	0	276	0	0	0	0	731
05:45 PM	0	168	90	258	25	1	126	152	21	245	0	266	0	0	0	0	676
Total	0	744	389	1133	135	2	522	659	89	980	0	1069	0	0	0	0	2861
Grand Total	0	1469	758	2227	301	4	1062	1367	189	2012	0	2201	0	0	0	0	5795
Apprch %	0	66	34		22	0.3	77.7		8.6	91.4	0		0	0	0		
Total %	0	25.3	13.1	38.4	5.2	0.1	18.3	23.6	3.3	34.7	0	38	0	0	0	0	

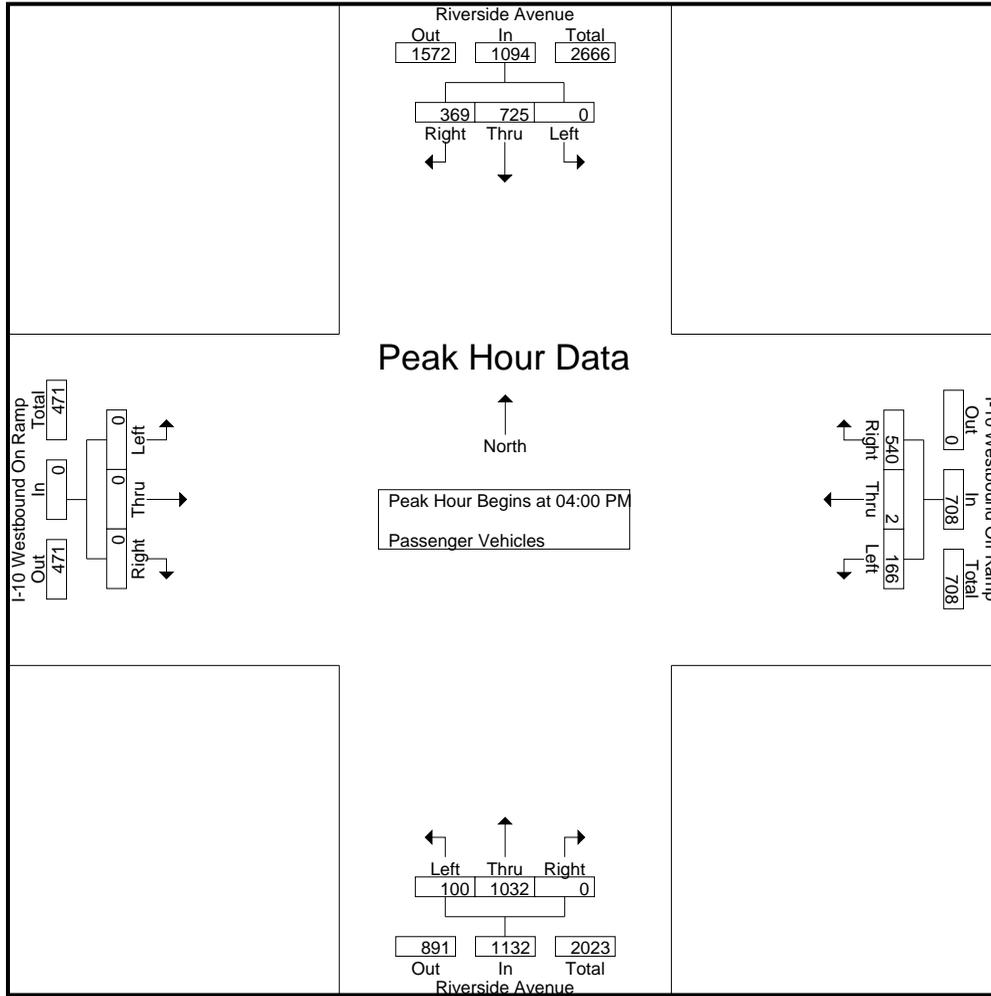
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	183	103	286	40	0	134	174	19	249	0	268	0	0	0	0	728
04:15 PM	0	166	82	248	44	1	137	182	30	260	0	290	0	0	0	0	720
04:30 PM	0	196	86	282	38	0	131	169	21	269	0	290	0	0	0	0	741
04:45 PM	0	180	98	278	44	1	138	183	30	254	0	284	0	0	0	0	745
Total Volume	0	725	369	1094	166	2	540	708	100	1032	0	1132	0	0	0	0	2934
% App. Total	0	66.3	33.7		23.4	0.3	76.3		8.8	91.2	0		0	0	0		
PHF	.000	.925	.896	.956	.943	.500	.978	.967	.833	.959	.000	.976	.000	.000	.000	.000	.985

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	183	103	286	40	0	134	174	19	249	0	268	0	0	0	0
+15 mins.	0	166	82	248	44	1	137	182	30	260	0	290	0	0	0	0
+30 mins.	0	196	86	282	38	0	131	169	21	269	0	290	0	0	0	0
+45 mins.	0	180	98	278	44	1	138	183	30	254	0	284	0	0	0	0
Total Volume	0	725	369	1094	166	2	540	708	100	1032	0	1132	0	0	0	0
% App. Total	0	66.3	33.7		23.4	0.3	76.3		8.8	91.2	0		0	0	0	
PHF	.000	.925	.896	.956	.943	.500	.978	.967	.833	.959	.000	.976	.000	.000	.000	.000

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

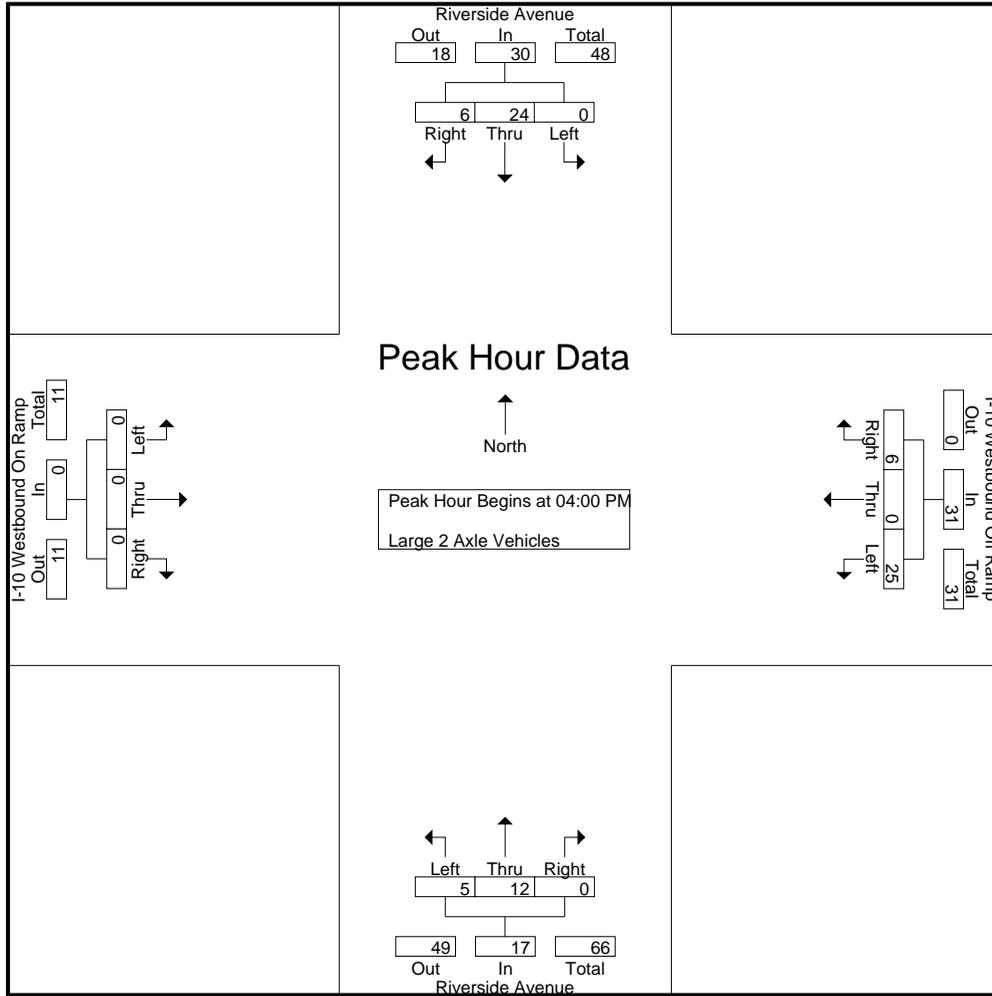
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	5	2	7	8	0	3	11	0	4	0	4	0	0	0	0	22
04:15 PM	0	6	0	6	8	0	1	9	3	3	0	6	0	0	0	0	21
04:30 PM	0	3	2	5	5	0	2	7	1	3	0	4	0	0	0	0	16
04:45 PM	0	10	2	12	4	0	0	4	1	2	0	3	0	0	0	0	19
Total	0	24	6	30	25	0	6	31	5	12	0	17	0	0	0	0	78
05:00 PM	0	4	3	7	5	0	0	5	1	3	0	4	0	0	0	0	16
05:15 PM	0	4	0	4	8	0	0	8	1	3	0	4	0	0	0	0	16
05:30 PM	0	2	1	3	3	0	0	3	1	1	0	2	0	0	0	0	8
05:45 PM	0	3	1	4	2	0	2	4	1	0	0	1	0	0	0	0	9
Total	0	13	5	18	18	0	2	20	4	7	0	11	0	0	0	0	49
Grand Total	0	37	11	48	43	0	8	51	9	19	0	28	0	0	0	0	127
Apprch %	0	77.1	22.9		84.3	0	15.7		32.1	67.9	0		0	0	0		
Total %	0	29.1	8.7	37.8	33.9	0	6.3	40.2	7.1	15	0	22	0	0	0	0	

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	5	2	7	8	0	3	11	0	4	0	4	0	0	0	0	22
04:15 PM	0	6	0	6	8	0	1	9	3	3	0	6	0	0	0	0	21
04:30 PM	0	3	2	5	5	0	2	7	1	3	0	4	0	0	0	0	16
04:45 PM	0	10	2	12	4	0	0	4	1	2	0	3	0	0	0	0	19
Total Volume	0	24	6	30	25	0	6	31	5	12	0	17	0	0	0	0	78
% App. Total	0	80	20		80.6	0	19.4		29.4	70.6	0		0	0	0		
PHF	.000	.600	.750	.625	.781	.000	.500	.705	.417	.750	.000	.708	.000	.000	.000	.000	.886

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

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	5	2	7	8	0	3	11	0	4	0	4	0	0	0	0
+15 mins.	0	6	0	6	8	0	1	9	3	3	0	6	0	0	0	0
+30 mins.	0	3	2	5	5	0	2	7	1	3	0	4	0	0	0	0
+45 mins.	0	10	2	12	4	0	0	4	1	2	0	3	0	0	0	0
Total Volume	0	24	6	30	25	0	6	31	5	12	0	17	0	0	0	0
% App. Total	0	80	20		80.6	0	19.4		29.4	70.6	0		0	0	0	
PHF	.000	.600	.750	.625	.781	.000	.500	.705	.417	.750	.000	.708	.000	.000	.000	.000

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	2	0	2	6	0	0	6	4	4	0	8	0	0	0	0	16
04:15 PM	0	4	1	5	7	0	0	7	5	0	0	5	0	0	0	0	17
04:30 PM	0	0	3	3	5	0	0	5	4	1	0	5	0	0	0	0	13
04:45 PM	0	1	0	1	3	0	0	3	4	4	0	8	0	0	0	0	12
Total	0	7	4	11	21	0	0	21	17	9	0	26	0	0	0	0	58
05:00 PM	0	1	1	2	2	0	2	4	6	1	0	7	0	0	0	0	13
05:15 PM	0	0	0	0	7	0	2	9	2	1	0	3	0	0	0	0	12
05:30 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	3	0	0	3	4	3	0	7	0	0	0	0	11
Total	0	3	1	4	12	0	4	16	13	5	0	18	0	0	0	0	38
Grand Total	0	10	5	15	33	0	4	37	30	14	0	44	0	0	0	0	96
Apprch %	0	66.7	33.3		89.2	0	10.8		68.2	31.8	0		0	0	0		
Total %	0	10.4	5.2	15.6	34.4	0	4.2	38.5	31.2	14.6	0	45.8	0	0	0	0	

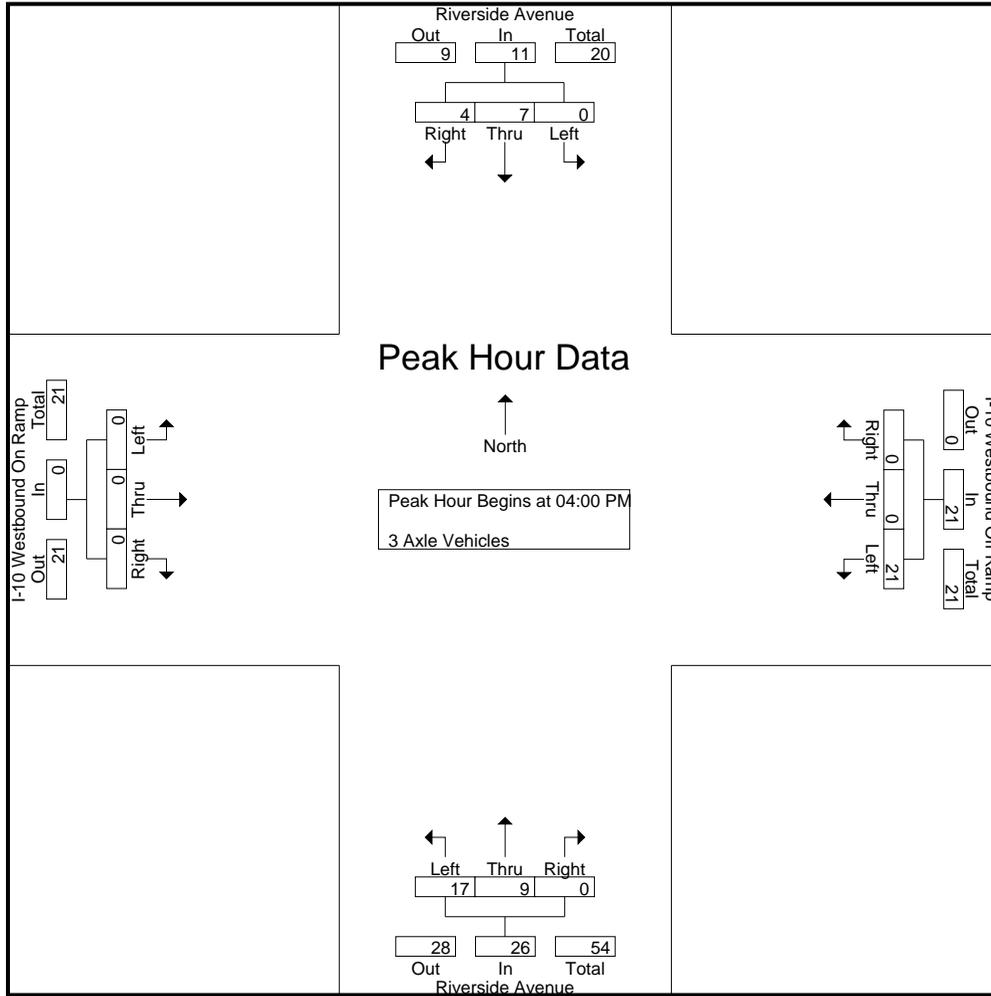
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	2	0	2	6	0	0	6	4	4	0	8	0	0	0	0	16
04:15 PM	0	4	1	5	7	0	0	7	5	0	0	5	0	0	0	0	17
04:30 PM	0	0	3	3	5	0	0	5	4	1	0	5	0	0	0	0	13
04:45 PM	0	1	0	1	3	0	0	3	4	4	0	8	0	0	0	0	12
Total Volume	0	7	4	11	21	0	0	21	17	9	0	26	0	0	0	0	58
% App. Total	0	63.6	36.4		100	0	0		65.4	34.6	0		0	0	0		
PHF	.000	.438	.333	.550	.750	.000	.000	.750	.850	.563	.000	.813	.000	.000	.000	.000	.853

Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	2	0	2	6	0	0	6	4	4	0	8	0	0	0	0
+15 mins.	0	4	1	5	7	0	0	7	5	0	0	5	0	0	0	0
+30 mins.	0	0	3	3	5	0	0	5	4	1	0	5	0	0	0	0
+45 mins.	0	1	0	1	3	0	0	3	4	4	0	8	0	0	0	0
Total Volume	0	7	4	11	21	0	0	21	17	9	0	26	0	0	0	0
% App. Total	0	63.6	36.4		100	0	0		65.4	34.6	0		0	0	0	
PHF	.000	.438	.333	.550	.750	.000	.000	.750	.850	.563	.000	.813	.000	.000	.000	.000

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

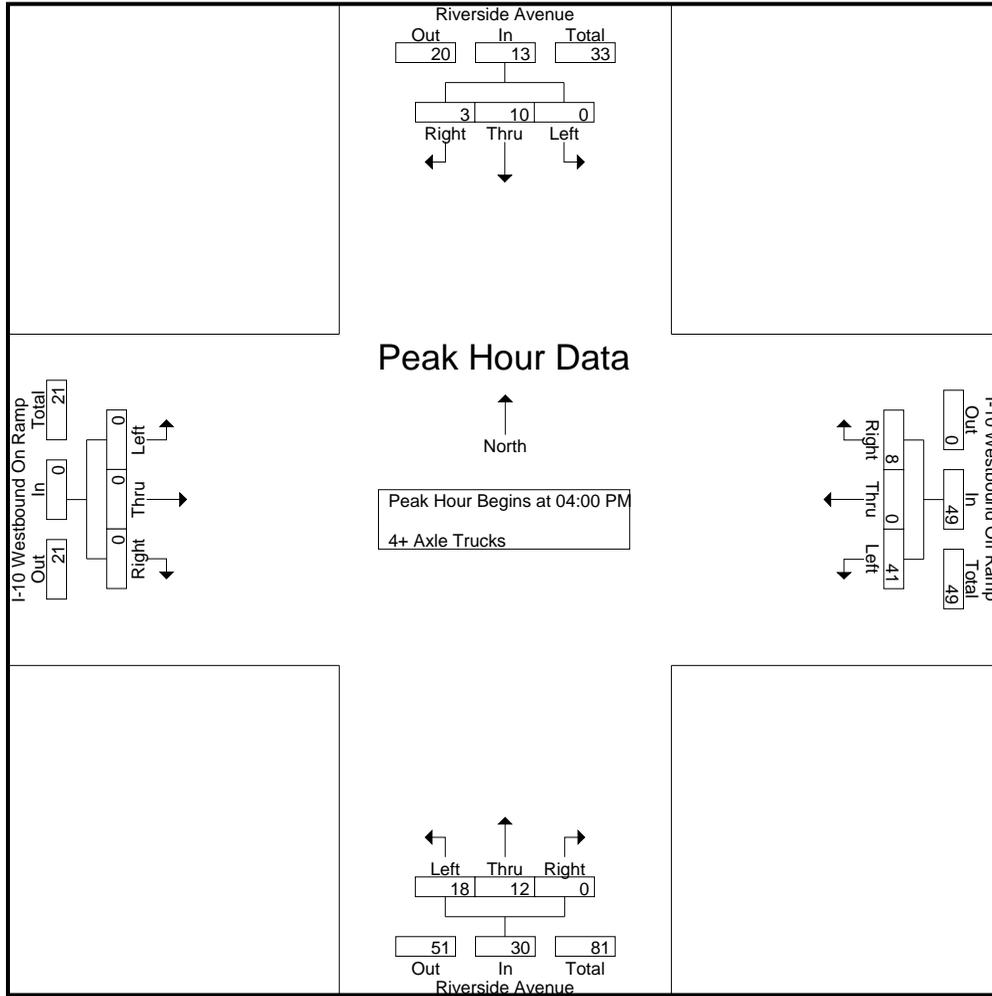
Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	1	4	7	0	3	10	11	5	0	16	0	0	0	0	30
04:15 PM	0	2	0	2	7	0	2	9	2	3	0	5	0	0	0	0	16
04:30 PM	0	2	1	3	16	0	3	19	3	4	0	7	0	0	0	0	29
04:45 PM	0	3	1	4	11	0	0	11	2	0	0	2	0	0	0	0	17
Total	0	10	3	13	41	0	8	49	18	12	0	30	0	0	0	0	92
05:00 PM	0	1	1	2	11	0	0	11	4	3	0	7	0	0	0	0	20
05:15 PM	0	0	2	2	12	0	0	12	3	2	0	5	0	0	0	0	19
05:30 PM	0	2	1	3	12	0	0	12	6	0	0	6	0	0	0	0	21
05:45 PM	0	0	0	0	9	0	1	10	5	2	0	7	0	0	0	0	17
Total	0	3	4	7	44	0	1	45	18	7	0	25	0	0	0	0	77
Grand Total	0	13	7	20	85	0	9	94	36	19	0	55	0	0	0	0	169
Apprch %	0	65	35		90.4	0	9.6		65.5	34.5	0		0	0	0		
Total %	0	7.7	4.1	11.8	50.3	0	5.3	55.6	21.3	11.2	0	32.5	0	0	0	0	

Start Time	Riverside Avenue Southbound				I-10 Westbound Off Ramp Westbound				Riverside Avenue Northbound				I-10 Westbound On Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	3	1	4	7	0	3	10	11	5	0	16	0	0	0	0	30
04:15 PM	0	2	0	2	7	0	2	9	2	3	0	5	0	0	0	0	16
04:30 PM	0	2	1	3	16	0	3	19	3	4	0	7	0	0	0	0	29
04:45 PM	0	3	1	4	11	0	0	11	2	0	0	2	0	0	0	0	17
Total Volume	0	10	3	13	41	0	8	49	18	12	0	30	0	0	0	0	92
% App. Total	0	76.9	23.1		83.7	0	16.3		60	40	0		0	0	0		
PHF	.000	.833	.750	.813	.641	.000	.667	.645	.409	.600	.000	.469	.000	.000	.000	.000	.767

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

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

File Name : 02_COL_River_10W PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	3	1	4	7	0	3	10	11	5	0	16	0	0	0	0
+15 mins.	0	2	0	2	7	0	2	9	2	3	0	5	0	0	0	0
+30 mins.	0	2	1	3	16	0	3	19	3	4	0	7	0	0	0	0
+45 mins.	0	3	1	4	11	0	0	11	2	0	0	2	0	0	0	0
Total Volume	0	10	3	13	41	0	8	49	18	12	0	30	0	0	0	0
% App. Total	0	76.9	23.1		83.7	0	16.3		60	40	0		0	0	0	
PHF	.000	.833	.750	.813	.641	.000	.667	.645	.409	.600	.000	.469	.000	.000	.000	.000

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

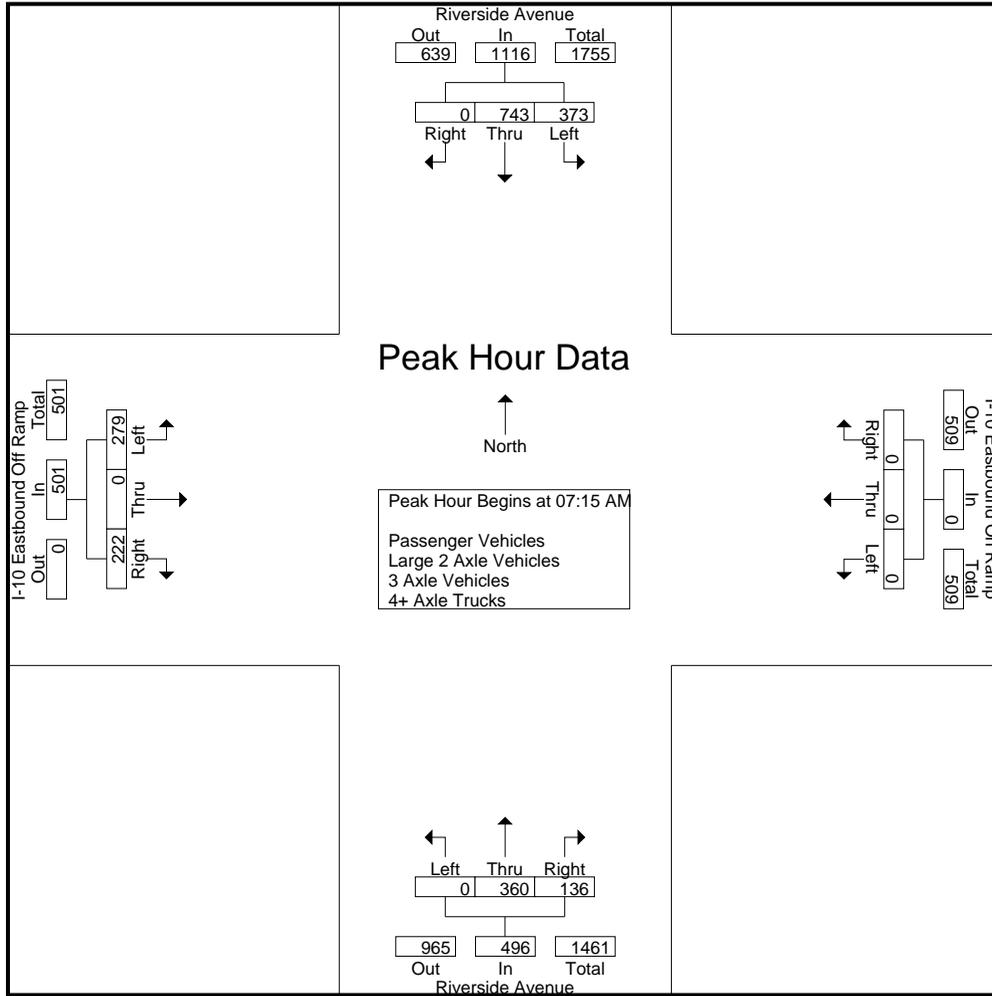
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	79	150	0	229	0	0	0	0	0	85	23	108	58	0	42	100	437
07:15 AM	77	202	0	279	0	0	0	0	0	78	28	106	76	0	45	121	506
07:30 AM	124	209	0	333	0	0	0	0	0	100	25	125	81	0	49	130	588
07:45 AM	109	174	0	283	0	0	0	0	0	94	34	128	54	0	72	126	537
Total	389	735	0	1124	0	0	0	0	0	357	110	467	269	0	208	477	2068
08:00 AM	63	158	0	221	0	0	0	0	0	88	49	137	68	0	56	124	482
08:15 AM	73	151	0	224	0	0	0	0	0	64	24	88	59	1	37	97	409
08:30 AM	72	155	0	227	0	0	0	0	0	75	38	113	62	1	45	108	448
08:45 AM	81	144	0	225	0	0	0	0	0	67	61	128	88	2	46	136	489
Total	289	608	0	897	0	0	0	0	0	294	172	466	277	4	184	465	1828
Grand Total	678	1343	0	2021	0	0	0	0	0	651	282	933	546	4	392	942	3896
Apprch %	33.5	66.5	0		0	0	0		0	69.8	30.2		58	0.4	41.6		
Total %	17.4	34.5	0	51.9	0	0	0	0	0	16.7	7.2	23.9	14	0.1	10.1	24.2	
Passenger Vehicles	642	1165	0	1807	0	0	0	0	0	481	152	633	515	3	249	767	3207
% Passenger Vehicles	94.7	86.7	0	89.4	0	0	0	0	0	73.9	53.9	67.8	94.3	75	63.5	81.4	82.3
Large 2 Axle Vehicles	14	26	0	40	0	0	0	0	0	33	19	52	12	0	22	34	126
% Large 2 Axle Vehicles	2.1	1.9	0	2	0	0	0	0	0	5.1	6.7	5.6	2.2	0	5.6	3.6	3.2
3 Axle Vehicles	14	26	0	40	0	0	0	0	0	33	19	52	12	0	22	34	126
% 3 Axle Vehicles	2.1	1.9	0	2	0	0	0	0	0	5.1	6.7	5.6	2.2	0	5.6	3.6	3.2
4+ Axle Trucks	8	126	0	134	0	0	0	0	0	104	92	196	7	1	99	107	437
% 4+ Axle Trucks	1.2	9.4	0	6.6	0	0	0	0	0	16	32.6	21	1.3	25	25.3	11.4	11.2

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	77	202	0	279	0	0	0	0	0	78	28	106	76	0	45	121	506
07:30 AM	124	209	0	333	0	0	0	0	0	100	25	125	81	0	49	130	588
07:45 AM	109	174	0	283	0	0	0	0	0	94	34	128	54	0	72	126	537
08:00 AM	63	158	0	221	0	0	0	0	0	88	49	137	68	0	56	124	482
Total Volume	373	743	0	1116	0	0	0	0	0	360	136	496	279	0	222	501	2113
% App. Total	33.4	66.6	0		0	0	0		0	72.6	27.4		55.7	0	44.3		
PHF	.752	.889	.000	.838	.000	.000	.000	.000	.000	.900	.694	.905	.861	.000	.771	.963	.898

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:00 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	79	150	0	229	0	0	0	0	0	78	28	106	76	0	45	121
+15 mins.	77	202	0	279	0	0	0	0	0	100	25	125	81	0	49	130
+30 mins.	124	209	0	333	0	0	0	0	0	94	34	128	54	0	72	126
+45 mins.	109	174	0	283	0	0	0	0	0	88	49	137	68	0	56	124
Total Volume	389	735	0	1124	0	0	0	0	0	360	136	496	279	0	222	501
% App. Total	34.6	65.4	0		0	0	0		0	72.6	27.4		55.7	0	44.3	
PHF	.784	.879	.000	.844	.000	.000	.000	.000	.000	.900	.694	.905	.861	.000	.771	.963

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

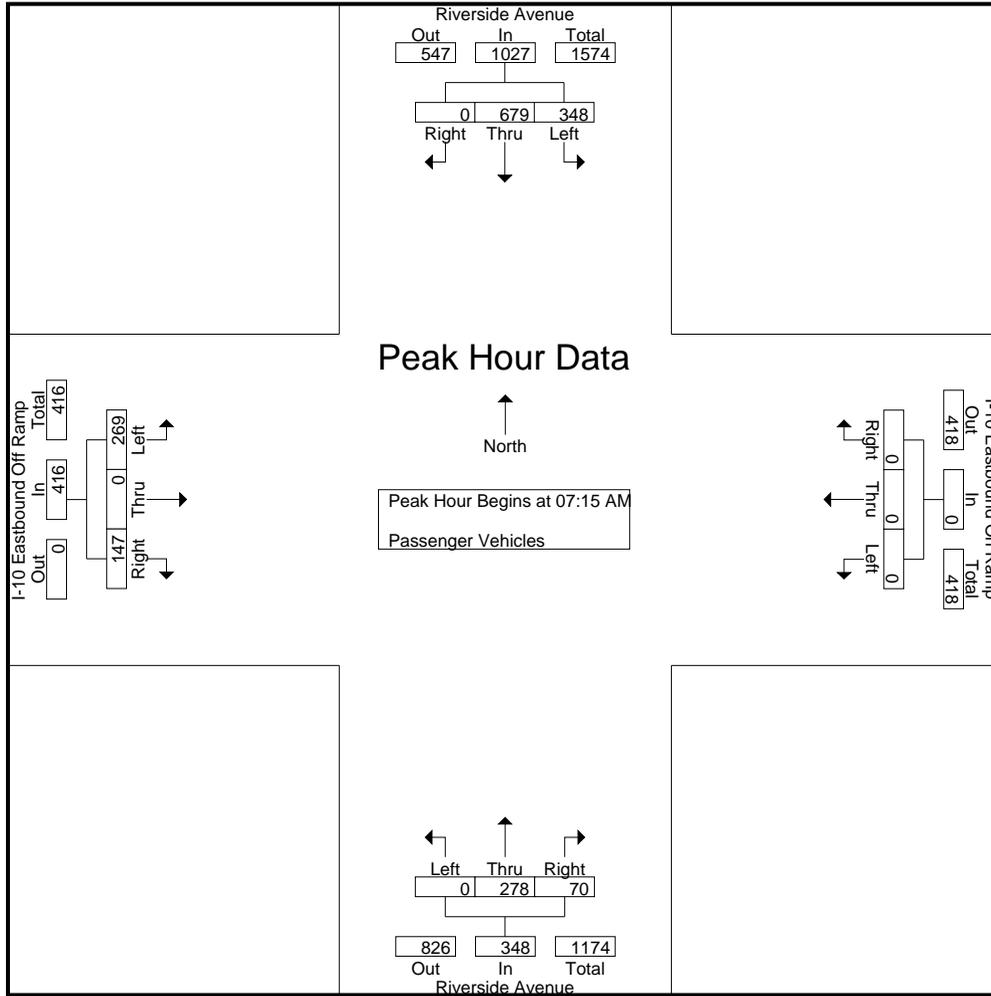
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	74	133	0	207	0	0	0	0	0	64	12	76	50	0	30	80	363
07:15 AM	76	188	0	264	0	0	0	0	0	58	11	69	74	0	31	105	438
07:30 AM	114	195	0	309	0	0	0	0	0	79	12	91	75	0	36	111	511
07:45 AM	100	157	0	257	0	0	0	0	0	72	19	91	52	0	46	98	446
Total	364	673	0	1037	0	0	0	0	0	273	54	327	251	0	143	394	1758
08:00 AM	58	139	0	197	0	0	0	0	0	69	28	97	68	0	34	102	396
08:15 AM	73	120	0	193	0	0	0	0	0	45	18	63	57	0	19	76	332
08:30 AM	66	126	0	192	0	0	0	0	0	48	19	67	58	1	28	87	346
08:45 AM	81	107	0	188	0	0	0	0	0	46	33	79	81	2	25	108	375
Total	278	492	0	770	0	0	0	0	0	208	98	306	264	3	106	373	1449
Grand Total	642	1165	0	1807	0	0	0	0	0	481	152	633	515	3	249	767	3207
Apprch %	35.5	64.5	0		0	0	0		0	76	24		67.1	0.4	32.5		
Total %	20	36.3	0	56.3	0	0	0	0	0	15	4.7	19.7	16.1	0.1	7.8	23.9	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	76	188	0	264	0	0	0	0	0	58	11	69	74	0	31	105	438
07:30 AM	114	195	0	309	0	0	0	0	0	79	12	91	75	0	36	111	511
07:45 AM	100	157	0	257	0	0	0	0	0	72	19	91	52	0	46	98	446
08:00 AM	58	139	0	197	0	0	0	0	0	69	28	97	68	0	34	102	396
Total Volume	348	679	0	1027	0	0	0	0	0	278	70	348	269	0	147	416	1791
% App. Total	33.9	66.1	0		0	0	0		0	79.9	20.1		64.7	0	35.3		
PHF	.763	.871	.000	.831	.000	.000	.000	.000	.000	.880	.625	.897	.897	.000	.799	.937	.876

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

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	76	188	0	264	0	0	0	0	0	58	11	69	74	0	31	105
+15 mins.	114	195	0	309	0	0	0	0	0	79	12	91	75	0	36	111
+30 mins.	100	157	0	257	0	0	0	0	0	72	19	91	52	0	46	98
+45 mins.	58	139	0	197	0	0	0	0	0	69	28	97	68	0	34	102
Total Volume	348	679	0	1027	0	0	0	0	0	278	70	348	269	0	147	416
% App. Total	33.9	66.1	0		0	0	0		0	79.9	20.1		64.7	0	35.3	
PHF	.763	.871	.000	.831	.000	.000	.000	.000	.000	.880	.625	.897	.897	.000	.799	.937

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	2	0	3	0	0	0	0	0	4	2	6	4	0	3	7	16
07:15 AM	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2	12
07:30 AM	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4	13
07:45 AM	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6	19
Total	10	9	0	19	0	0	0	0	0	17	5	22	8	0	11	19	60
08:00 AM	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2	12
08:15 AM	0	5	0	5	0	0	0	0	0	4	0	4	1	0	2	3	12
08:30 AM	2	6	0	8	0	0	0	0	0	7	3	10	1	0	2	3	21
08:45 AM	0	3	0	3	0	0	0	0	0	3	8	11	2	0	5	7	21
Total	4	17	0	21	0	0	0	0	0	16	14	30	4	0	11	15	66
Grand Total	14	26	0	40	0	0	0	0	0	33	19	52	12	0	22	34	126
Apprch %	35	65	0		0	0	0		0	63.5	36.5		35.3	0	64.7		
Total %	11.1	20.6	0	31.7	0	0	0	0	0	26.2	15.1	41.3	9.5	0	17.5	27	

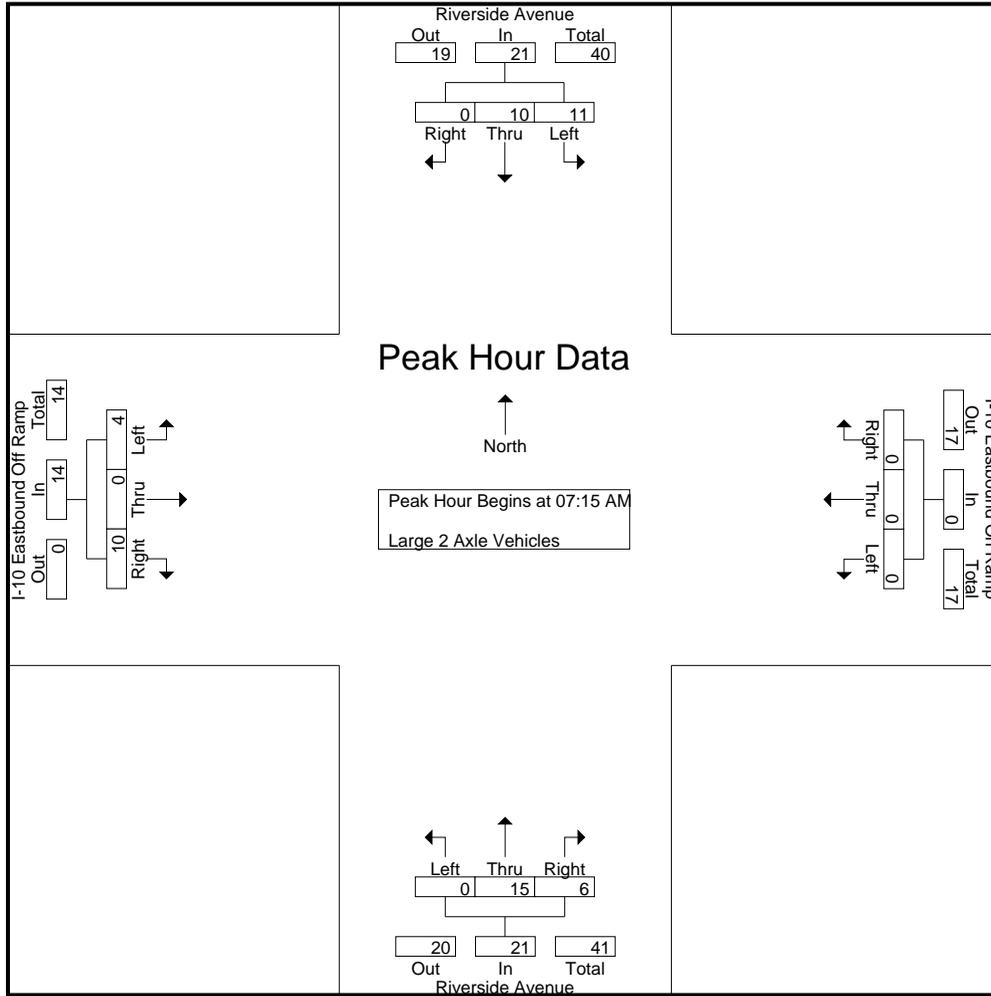
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2	12
07:30 AM	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4	13
07:45 AM	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6	19
08:00 AM	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2	12
Total Volume	11	10	0	21	0	0	0	0	0	15	6	21	4	0	10	14	56
% App. Total	52.4	47.6	0		0	0	0		0	71.4	28.6		28.6	0	71.4		
PHF	.550	.833	.000	.750	.000	.000	.000	.000	.000	.625	.500	.750	.500	.000	.500	.583	.737

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2
+15 mins.	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4
+30 mins.	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6
+45 mins.	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2
Total Volume	11	10	0	21	0	0	0	0	0	15	6	21	4	0	10	14
% App. Total	52.4	47.6	0		0	0	0	0	0	71.4	28.6		28.6	0	71.4	
PHF	.550	.833	.000	.750	.000	.000	.000	.000	.000	.625	.500	.750	.500	.000	.500	.583

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

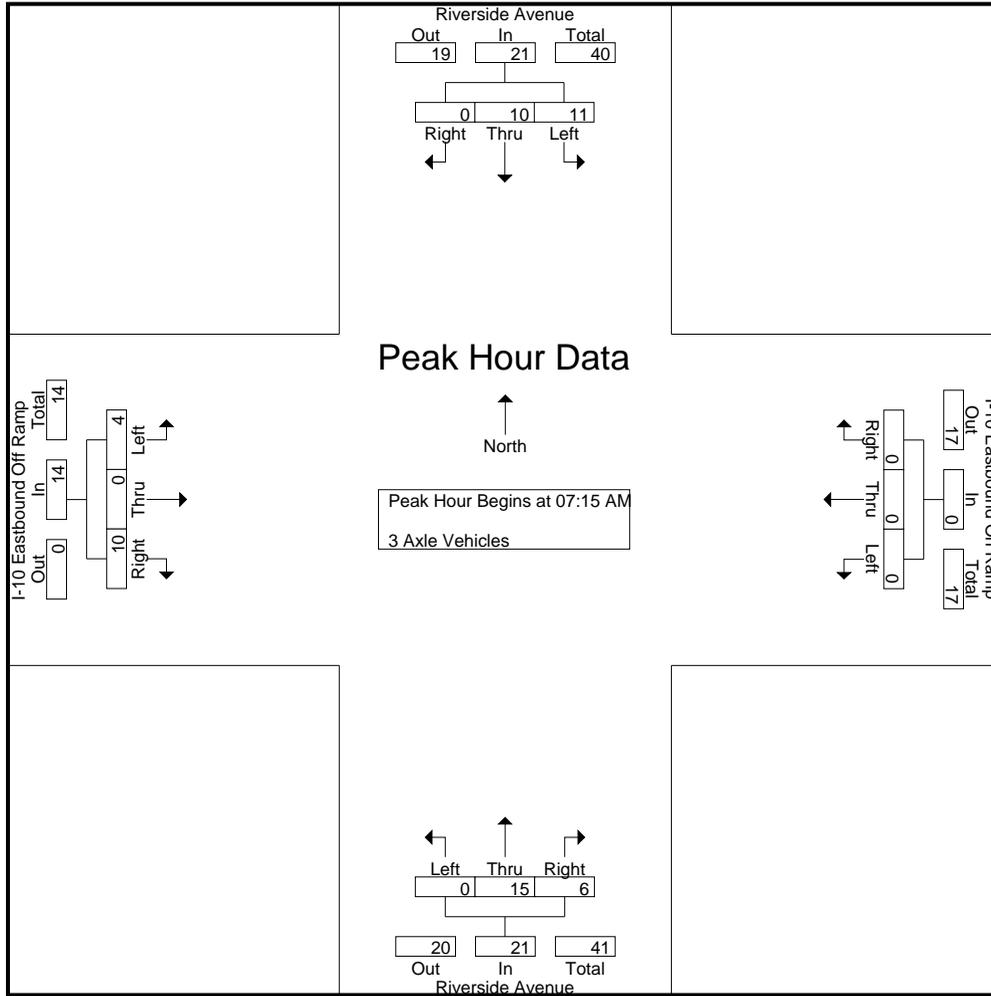
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	2	0	3	0	0	0	0	0	4	2	6	4	0	3	7	16
07:15 AM	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2	12
07:30 AM	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4	13
07:45 AM	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6	19
Total	10	9	0	19	0	0	0	0	0	17	5	22	8	0	11	19	60
08:00 AM	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2	12
08:15 AM	0	5	0	5	0	0	0	0	0	4	0	4	1	0	2	3	12
08:30 AM	2	6	0	8	0	0	0	0	0	7	3	10	1	0	2	3	21
08:45 AM	0	3	0	3	0	0	0	0	0	3	8	11	2	0	5	7	21
Total	4	17	0	21	0	0	0	0	0	16	14	30	4	0	11	15	66
Grand Total	14	26	0	40	0	0	0	0	0	33	19	52	12	0	22	34	126
Apprch %	35	65	0		0	0	0		0	63.5	36.5		35.3	0	64.7		
Total %	11.1	20.6	0	31.7	0	0	0	0	0	26.2	15.1	41.3	9.5	0	17.5	27	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2	12
07:30 AM	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4	13
07:45 AM	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6	19
08:00 AM	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2	12
Total Volume	11	10	0	21	0	0	0	0	0	15	6	21	4	0	10	14	56
% App. Total	52.4	47.6	0		0	0	0		0	71.4	28.6		28.6	0	71.4		
PHF	.550	.833	.000	.750	.000	.000	.000	.000	.000	.625	.500	.750	.500	.000	.500	.583	.737

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

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	3	0	3	0	0	0	0	0	5	2	7	1	0	1	2
+15 mins.	5	2	0	7	0	0	0	0	0	2	0	2	2	0	2	4
+30 mins.	4	2	0	6	0	0	0	0	0	6	1	7	1	0	5	6
+45 mins.	2	3	0	5	0	0	0	0	0	2	3	5	0	0	2	2
Total Volume	11	10	0	21	0	0	0	0	0	15	6	21	4	0	10	14
% App. Total	52.4	47.6	0		0	0	0	0	0	71.4	28.6		28.6	0	71.4	
PHF	.550	.833	.000	.750	.000	.000	.000	.000	.000	.625	.500	.750	.500	.000	.500	.583

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

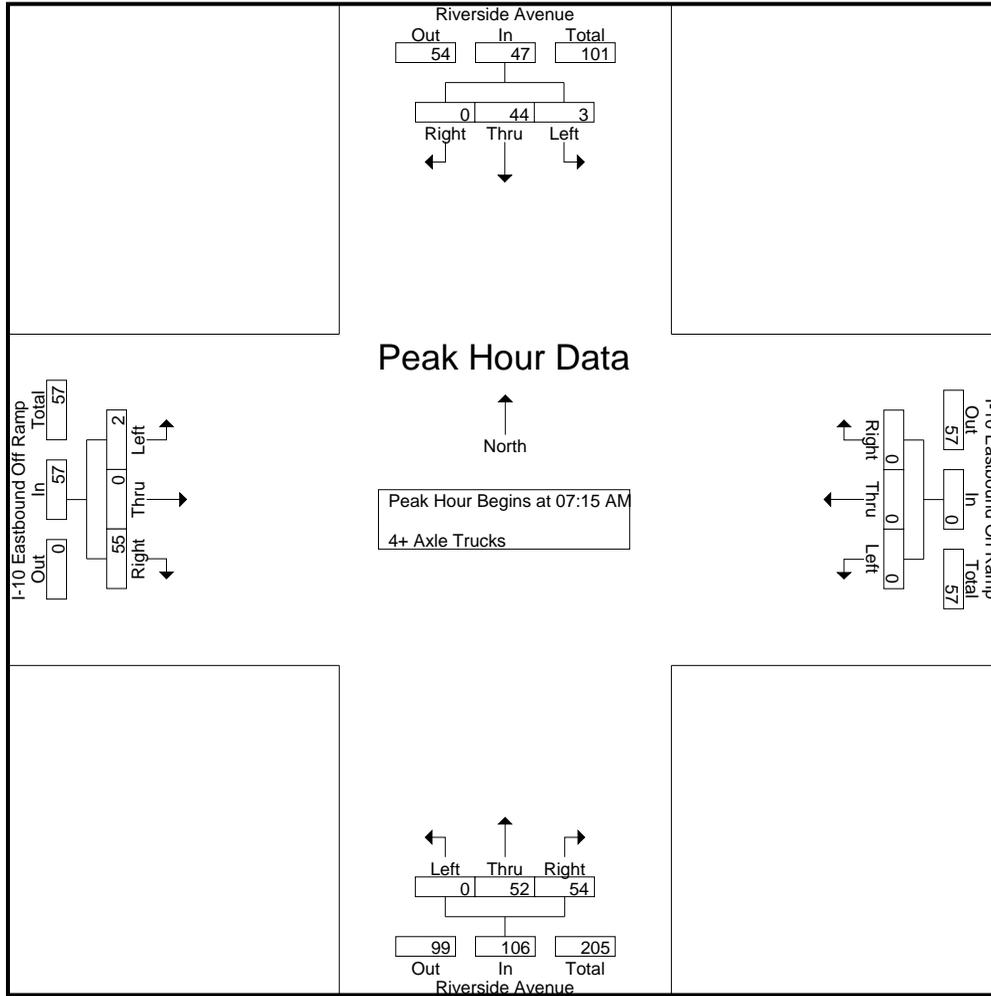
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	13	0	16	0	0	0	0	0	13	7	20	0	0	6	6	42
07:15 AM	1	8	0	9	0	0	0	0	0	10	13	23	0	0	12	12	44
07:30 AM	0	10	0	10	0	0	0	0	0	17	13	30	2	0	9	11	51
07:45 AM	1	13	0	14	0	0	0	0	0	10	13	23	0	0	16	16	53
Total	5	44	0	49	0	0	0	0	0	50	46	96	2	0	43	45	190
08:00 AM	1	13	0	14	0	0	0	0	0	15	15	30	0	0	18	18	62
08:15 AM	0	21	0	21	0	0	0	0	0	11	6	17	0	1	14	15	53
08:30 AM	2	17	0	19	0	0	0	0	0	13	13	26	2	0	13	15	60
08:45 AM	0	31	0	31	0	0	0	0	0	15	12	27	3	0	11	14	72
Total	3	82	0	85	0	0	0	0	0	54	46	100	5	1	56	62	247
Grand Total	8	126	0	134	0	0	0	0	0	104	92	196	7	1	99	107	437
Apprch %	6	94	0		0	0	0		0	53.1	46.9		6.5	0.9	92.5		
Total %	1.8	28.8	0	30.7	0	0	0		0	23.8	21.1	44.9	1.6	0.2	22.7	24.5	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	1	8	0	9	0	0	0	0	0	10	13	23	0	0	12	12	44
07:30 AM	0	10	0	10	0	0	0	0	0	17	13	30	2	0	9	11	51
07:45 AM	1	13	0	14	0	0	0	0	0	10	13	23	0	0	16	16	53
08:00 AM	1	13	0	14	0	0	0	0	0	15	15	30	0	0	18	18	62
Total Volume	3	44	0	47	0	0	0	0	0	52	54	106	2	0	55	57	210
% App. Total	6.4	93.6	0		0	0	0		0	49.1	50.9		3.5	0	96.5		
PHF	.750	.846	.000	.839	.000	.000	.000	.000	.000	.765	.900	.883	.250	.000	.764	.792	.847

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

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

File Name : 03_COL_River_10E AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	1	8	0	9	0	0	0	0	0	10	13	23	0	0	12	12
+15 mins.	0	10	0	10	0	0	0	0	0	17	13	30	2	0	9	11
+30 mins.	1	13	0	14	0	0	0	0	0	10	13	23	0	0	16	16
+45 mins.	1	13	0	14	0	0	0	0	0	15	15	30	0	0	18	18
Total Volume	3	44	0	47	0	0	0	0	0	52	54	106	2	0	55	57
% App. Total	6.4	93.6	0		0	0	0	0	0	49.1	50.9		3.5	0	96.5	
PHF	.750	.846	.000	.839	.000	.000	.000	.000	.000	.765	.900	.883	.250	.000	.764	.792

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

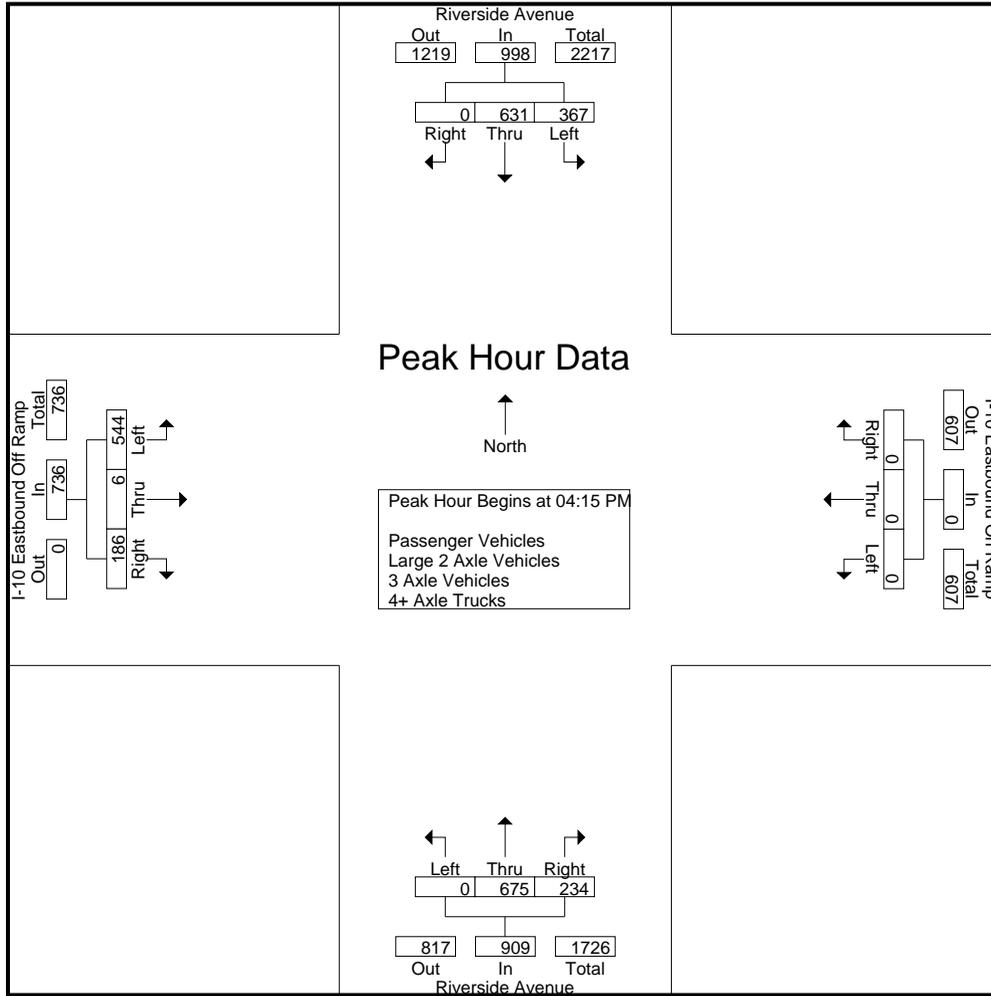
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	95	157	0	252	0	0	0	0	0	141	48	189	159	0	37	196	637
04:15 PM	94	157	0	251	0	0	0	0	0	166	59	225	150	1	50	201	677
04:30 PM	75	186	0	261	0	0	0	0	0	165	64	229	132	0	35	167	657
04:45 PM	106	158	0	264	0	0	0	0	0	177	53	230	116	4	53	173	667
Total	370	658	0	1028	0	0	0	0	0	649	224	873	557	5	175	737	2638
05:00 PM	92	130	0	222	0	0	0	0	0	167	58	225	146	1	48	195	642
05:15 PM	105	177	0	282	0	0	0	0	0	139	64	203	115	0	40	155	640
05:30 PM	84	167	0	251	0	0	0	0	0	161	63	224	115	0	49	164	639
05:45 PM	92	131	0	223	0	0	0	0	0	144	42	186	132	0	46	178	587
Total	373	605	0	978	0	0	0	0	0	611	227	838	508	1	183	692	2508
Grand Total	743	1263	0	2006	0	0	0	0	0	1260	451	1711	1065	6	358	1429	5146
Apprch %	37	63	0		0	0	0		0	73.6	26.4		74.5	0.4	25.1		
Total %	14.4	24.5	0	39	0	0	0	0	0	24.5	8.8	33.2	20.7	0.1	7	27.8	
Passenger Vehicles	727	1064	0	1791	0	0	0	0	0	1153	355	1508	1046	5	259	1310	4609
% Passenger Vehicles	97.8	84.2	0	89.3	0	0	0	0	0	91.5	78.7	88.1	98.2	83.3	72.3	91.7	89.6
Large 2 Axle Vehicles	11	64	0	75	0	0	0	0	0	22	11	33	6	0	21	27	135
% Large 2 Axle Vehicles	1.5	5.1	0	3.7	0	0	0	0	0	1.7	2.4	1.9	0.6	0	5.9	1.9	2.6
3 Axle Vehicles	2	44	0	46	0	0	0	0	0	37	27	64	4	0	19	23	133
% 3 Axle Vehicles	0.3	3.5	0	2.3	0	0	0	0	0	2.9	6	3.7	0.4	0	5.3	1.6	2.6
4+ Axle Trucks	3	91	0	94	0	0	0	0	0	48	58	106	9	1	59	69	269
% 4+ Axle Trucks	0.4	7.2	0	4.7	0	0	0	0	0	3.8	12.9	6.2	0.8	16.7	16.5	4.8	5.2

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	94	157	0	251	0	0	0	0	0	166	59	225	150	1	50	201	677
04:30 PM	75	186	0	261	0	0	0	0	0	165	64	229	132	0	35	167	657
04:45 PM	106	158	0	264	0	0	0	0	0	177	53	230	116	4	53	173	667
05:00 PM	92	130	0	222	0	0	0	0	0	167	58	225	146	1	48	195	642
Total Volume	367	631	0	998	0	0	0	0	0	675	234	909	544	6	186	736	2643
% App. Total	36.8	63.2	0		0	0	0		0	74.3	25.7		73.9	0.8	25.3		
PHF	.866	.848	.000	.945	.000	.000	.000	.000	.000	.953	.914	.988	.907	.375	.877	.915	.976

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:30 PM				04:00 PM				04:15 PM				04:00 PM			
+0 mins.	75	186	0	261	0	0	0	0	0	166	59	225	159	0	37	196
+15 mins.	106	158	0	264	0	0	0	0	0	165	64	229	150	1	50	201
+30 mins.	92	130	0	222	0	0	0	0	0	177	53	230	132	0	35	167
+45 mins.	105	177	0	282	0	0	0	0	0	167	58	225	116	4	53	173
Total Volume	378	651	0	1029	0	0	0	0	0	675	234	909	557	5	175	737
% App. Total	36.7	63.3	0		0	0	0		0	74.3	25.7		75.6	0.7	23.7	
PHF	.892	.875	.000	.912	.000	.000	.000	.000	.000	.953	.914	.988	.876	.313	.825	.917

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

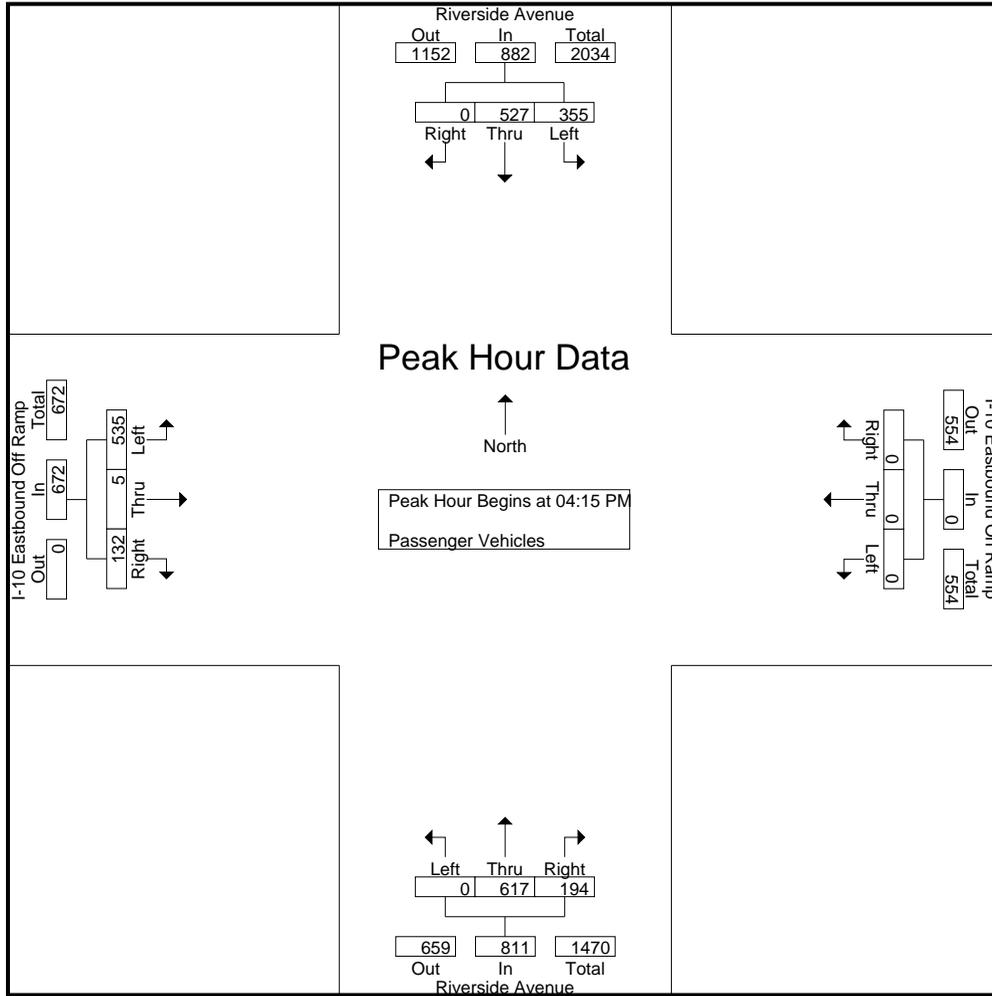
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	92	128	0	220	0	0	0	0	0	121	39	160	155	0	23	178	558
04:15 PM	90	128	0	218	0	0	0	0	0	154	47	201	147	1	35	183	602
04:30 PM	75	156	0	231	0	0	0	0	0	149	56	205	129	0	27	156	592
04:45 PM	100	135	0	235	0	0	0	0	0	165	44	209	115	3	40	158	602
Total	357	547	0	904	0	0	0	0	0	589	186	775	546	4	125	675	2354
05:00 PM	90	108	0	198	0	0	0	0	0	149	47	196	144	1	30	175	569
05:15 PM	104	148	0	252	0	0	0	0	0	130	46	176	112	0	29	141	569
05:30 PM	84	147	0	231	0	0	0	0	0	151	46	197	115	0	34	149	577
05:45 PM	92	114	0	206	0	0	0	0	0	134	30	164	129	0	41	170	540
Total	370	517	0	887	0	0	0	0	0	564	169	733	500	1	134	635	2255
Grand Total	727	1064	0	1791	0	0	0	0	0	1153	355	1508	1046	5	259	1310	4609
Apprch %	40.6	59.4	0		0	0	0		0	76.5	23.5		79.8	0.4	19.8		
Total %	15.8	23.1	0	38.9	0	0	0		0	25	7.7	32.7	22.7	0.1	5.6	28.4	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	90	128	0	218	0	0	0	0	0	154	47	201	147	1	35	183	602
04:30 PM	75	156	0	231	0	0	0	0	0	149	56	205	129	0	27	156	592
04:45 PM	100	135	0	235	0	0	0	0	0	165	44	209	115	3	40	158	602
05:00 PM	90	108	0	198	0	0	0	0	0	149	47	196	144	1	30	175	569
Total Volume	355	527	0	882	0	0	0	0	0	617	194	811	535	5	132	672	2365
% App. Total	40.2	59.8	0		0	0	0		0	76.1	23.9		79.6	0.7	19.6		
PHF	.888	.845	.000	.938	.000	.000	.000	.000	.000	.935	.866	.970	.910	.417	.825	.918	.982

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

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	90	128	0	218	0	0	0	0	0	154	47	201	147	1	35	183
+15 mins.	75	156	0	231	0	0	0	0	0	149	56	205	129	0	27	156
+30 mins.	100	135	0	235	0	0	0	0	0	165	44	209	115	3	40	158
+45 mins.	90	108	0	198	0	0	0	0	0	149	47	196	144	1	30	175
Total Volume	355	527	0	882	0	0	0	0	0	617	194	811	535	5	132	672
% App. Total	40.2	59.8	0		0	0	0	0	0	76.1	23.9		79.6	0.7	19.6	
PHF	.888	.845	.000	.938	.000	.000	.000	.000	.000	.935	.866	.970	.910	.417	.825	.918

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

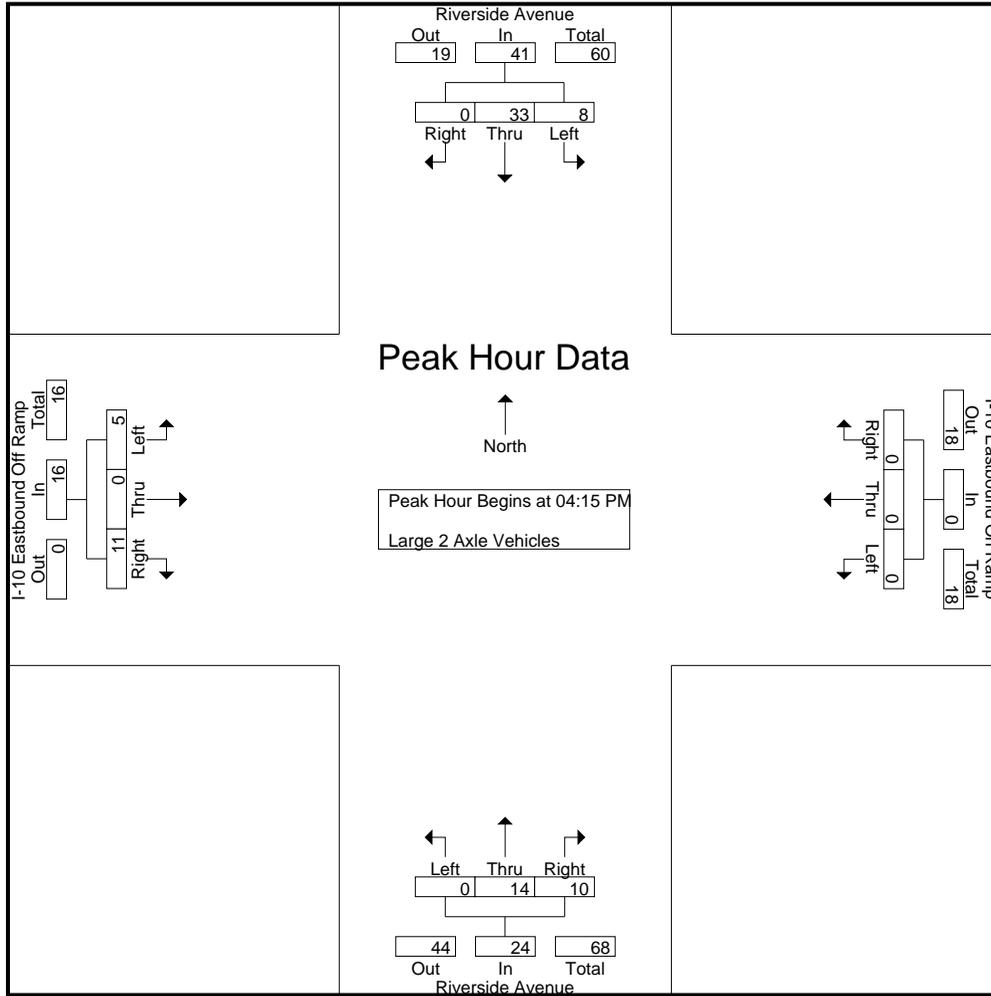
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	12	0	14	0	0	0	0	0	3	0	3	0	0	2	2	19
04:15 PM	3	10	0	13	0	0	0	0	0	1	1	2	2	0	2	4	19
04:30 PM	0	9	0	9	0	0	0	0	0	3	1	4	2	0	1	3	16
04:45 PM	4	6	0	10	0	0	0	0	0	4	6	10	0	0	4	4	24
Total	9	37	0	46	0	0	0	0	0	11	8	19	4	0	9	13	78
05:00 PM	1	8	0	9	0	0	0	0	0	6	2	8	1	0	4	5	22
05:15 PM	1	11	0	12	0	0	0	0	0	2	1	3	1	0	2	3	18
05:30 PM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	5	5	13
05:45 PM	0	3	0	3	0	0	0	0	0	0	0	0	0	0	1	1	4
Total	2	27	0	29	0	0	0	0	0	11	3	14	2	0	12	14	57
Grand Total	11	64	0	75	0	0	0	0	0	22	11	33	6	0	21	27	135
Apprch %	14.7	85.3	0		0	0	0		0	66.7	33.3		22.2	0	77.8		
Total %	8.1	47.4	0	55.6	0	0	0	0	0	16.3	8.1	24.4	4.4	0	15.6	20	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	3	10	0	13	0	0	0	0	0	1	1	2	2	0	2	4	19
04:30 PM	0	9	0	9	0	0	0	0	0	3	1	4	2	0	1	3	16
04:45 PM	4	6	0	10	0	0	0	0	0	4	6	10	0	0	4	4	24
05:00 PM	1	8	0	9	0	0	0	0	0	6	2	8	1	0	4	5	22
Total Volume	8	33	0	41	0	0	0	0	0	14	10	24	5	0	11	16	81
% App. Total	19.5	80.5	0		0	0	0		0	58.3	41.7		31.2	0	68.8		
PHF	.500	.825	.000	.788	.000	.000	.000	.000	.000	.583	.417	.600	.625	.000	.688	.800	.844

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

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	3	10	0	13	0	0	0	0	0	1	1	2	2	0	2	4
+15 mins.	0	9	0	9	0	0	0	0	0	3	1	4	2	0	1	3
+30 mins.	4	6	0	10	0	0	0	0	0	4	6	10	0	0	4	4
+45 mins.	1	8	0	9	0	0	0	0	0	6	2	8	1	0	4	5
Total Volume	8	33	0	41	0	0	0	0	0	14	10	24	5	0	11	16
% App. Total	19.5	80.5	0		0	0	0		0	58.3	41.7		31.2	0	68.8	
PHF	.500	.825	.000	.788	.000	.000	.000	.000	.000	.583	.417	.600	.625	.000	.688	.800

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

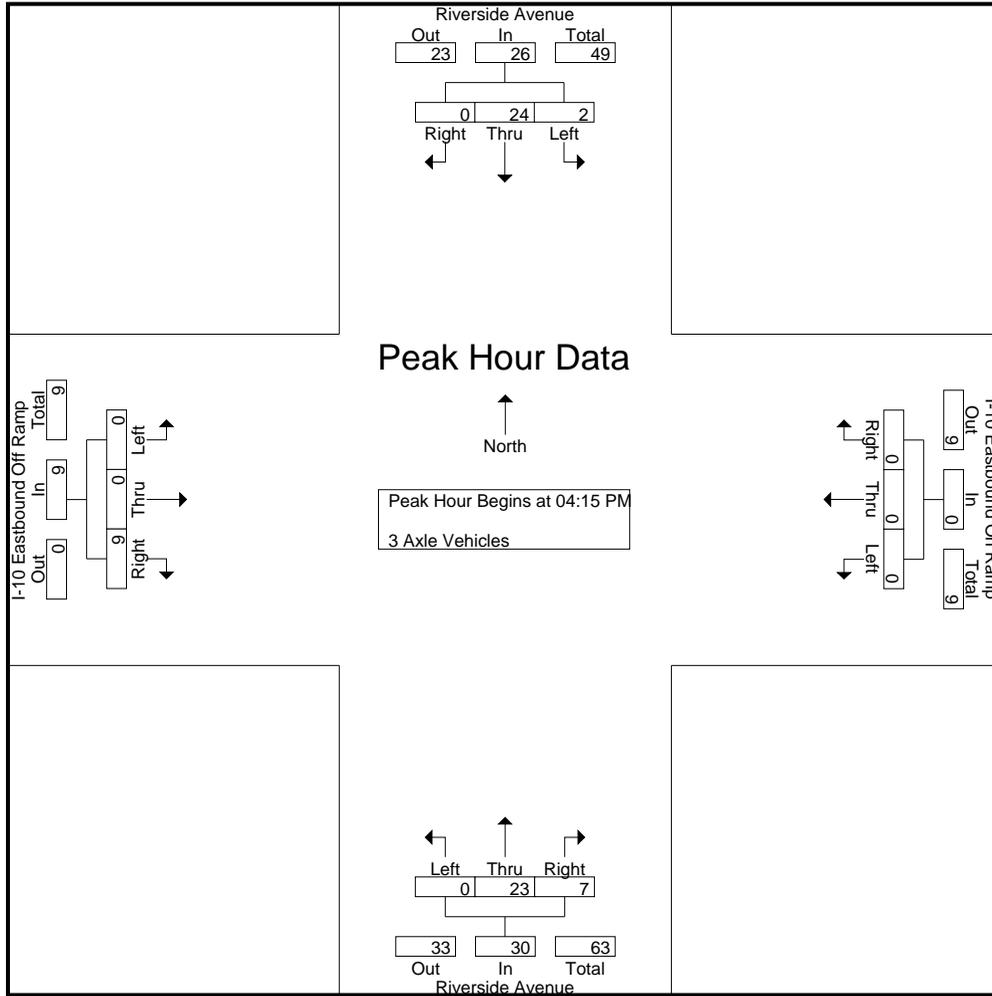
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	8	0	8	0	0	0	0	0	5	6	11	2	0	3	5	24
04:15 PM	1	11	0	12	0	0	0	0	0	8	1	9	0	0	3	3	24
04:30 PM	0	5	0	5	0	0	0	0	0	4	1	5	0	0	2	2	12
04:45 PM	1	4	0	5	0	0	0	0	0	4	1	5	0	0	1	1	11
Total	2	28	0	30	0	0	0	0	0	21	9	30	2	0	9	11	71
05:00 PM	0	4	0	4	0	0	0	0	0	7	4	11	0	0	3	3	18
05:15 PM	0	7	0	7	0	0	0	0	0	2	8	10	1	0	2	3	20
05:30 PM	0	1	0	1	0	0	0	0	0	2	3	5	0	0	4	4	10
05:45 PM	0	4	0	4	0	0	0	0	0	5	3	8	1	0	1	2	14
Total	0	16	0	16	0	0	0	0	0	16	18	34	2	0	10	12	62
Grand Total	2	44	0	46	0	0	0	0	0	37	27	64	4	0	19	23	133
Apprch %	4.3	95.7	0		0	0	0		0	57.8	42.2		17.4	0	82.6		
Total %	1.5	33.1	0	34.6	0	0	0		0	27.8	20.3	48.1	3	0	14.3	17.3	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	1	11	0	12	0	0	0	0	0	8	1	9	0	0	3	3	24
04:30 PM	0	5	0	5	0	0	0	0	0	4	1	5	0	0	2	2	12
04:45 PM	1	4	0	5	0	0	0	0	0	4	1	5	0	0	1	1	11
05:00 PM	0	4	0	4	0	0	0	0	0	7	4	11	0	0	3	3	18
Total Volume	2	24	0	26	0	0	0	0	0	23	7	30	0	0	9	9	65
% App. Total	7.7	92.3	0		0	0	0		0	76.7	23.3		0	0	100		
PHF	.500	.545	.000	.542	.000	.000	.000	.000	.000	.719	.438	.682	.000	.000	.750	.750	.677

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

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM				
+0 mins.	1	11	0	12	0	0	0	0	0	8	1	9	0	0	0	3	3
+15 mins.	0	5	0	5	0	0	0	0	0	4	1	5	0	0	0	2	2
+30 mins.	1	4	0	5	0	0	0	0	0	4	1	5	0	0	0	1	1
+45 mins.	0	4	0	4	0	0	0	0	0	7	4	11	0	0	0	3	3
Total Volume	2	24	0	26	0	0	0	0	0	23	7	30	0	0	0	9	9
% App. Total	7.7	92.3	0		0	0	0	0	0	76.7	23.3		0	0	0	100	
PHF	.500	.545	.000	.542	.000	.000	.000	.000	.000	.719	.438	.682	.000	.000	.750	.750	

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

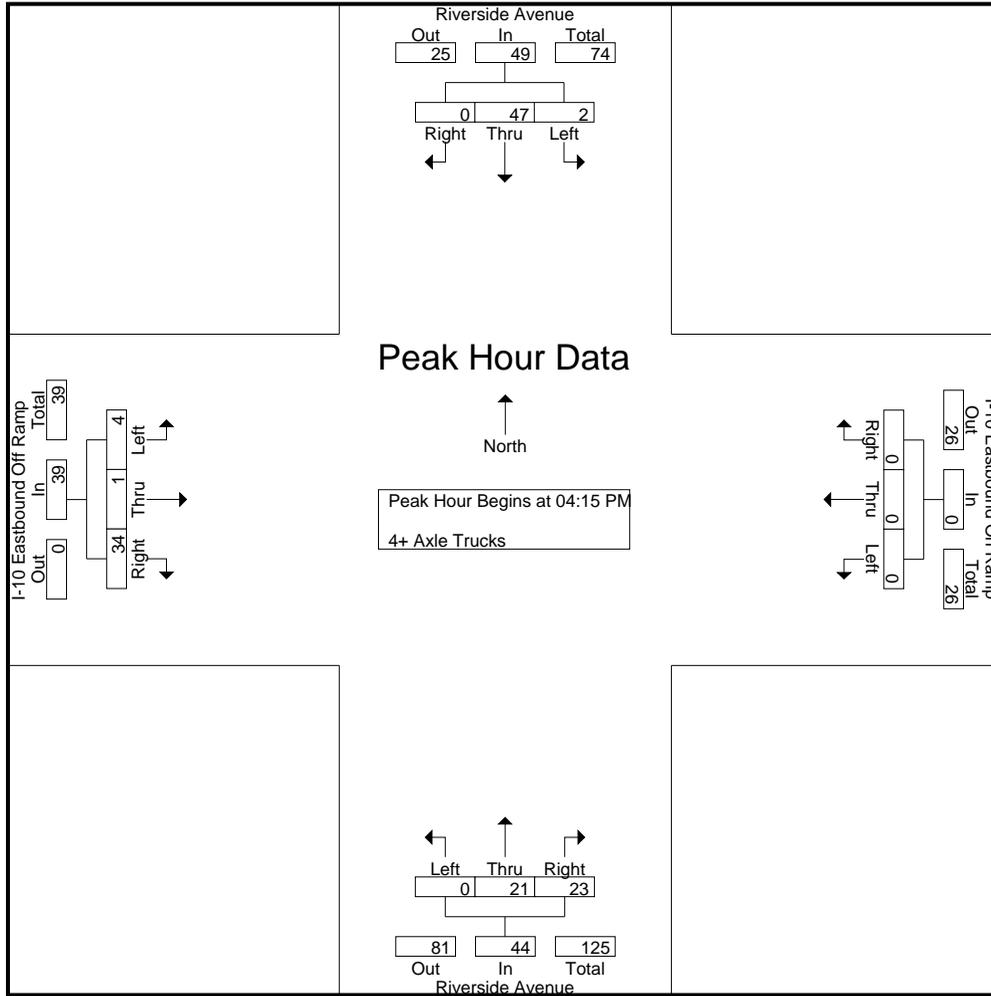
Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	1	9	0	10	0	0	0	0	0	12	3	15	2	0	9	11	36
04:15 PM	0	8	0	8	0	0	0	0	0	3	10	13	1	0	10	11	32
04:30 PM	0	16	0	16	0	0	0	0	0	9	6	15	1	0	5	6	37
04:45 PM	1	13	0	14	0	0	0	0	0	4	2	6	1	1	8	10	30
Total	2	46	0	48	0	0	0	0	0	28	21	49	5	1	32	38	135
05:00 PM	1	10	0	11	0	0	0	0	0	5	5	10	1	0	11	12	33
05:15 PM	0	11	0	11	0	0	0	0	0	5	9	14	1	0	7	8	33
05:30 PM	0	14	0	14	0	0	0	0	0	5	14	19	0	0	6	6	39
05:45 PM	0	10	0	10	0	0	0	0	0	5	9	14	2	0	3	5	29
Total	1	45	0	46	0	0	0	0	0	20	37	57	4	0	27	31	134
Grand Total	3	91	0	94	0	0	0	0	0	48	58	106	9	1	59	69	269
Apprch %	3.2	96.8	0		0	0	0		0	45.3	54.7		13	1.4	85.5		
Total %	1.1	33.8	0	34.9	0	0	0		0	17.8	21.6	39.4	3.3	0.4	21.9	25.7	

Start Time	Riverside Avenue Southbound				I-10 Eastbound On Ramp Westbound				Riverside Avenue Northbound				I-10 Eastbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:15 PM	0	8	0	8	0	0	0	0	0	3	10	13	1	0	10	11	32
04:30 PM	0	16	0	16	0	0	0	0	0	9	6	15	1	0	5	6	37
04:45 PM	1	13	0	14	0	0	0	0	0	4	2	6	1	1	8	10	30
05:00 PM	1	10	0	11	0	0	0	0	0	5	5	10	1	0	11	12	33
Total Volume	2	47	0	49	0	0	0	0	0	21	23	44	4	1	34	39	132
% App. Total	4.1	95.9	0		0	0	0		0	47.7	52.3		10.3	2.6	87.2		
PHF	.500	.734	.000	.766	.000	.000	.000	.000	.000	.583	.575	.733	1.00	.250	.773	.813	.892

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

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

File Name : 03_COL_River_10E PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:15 PM				04:15 PM				04:15 PM				04:15 PM			
+0 mins.	0	8	0	8	0	0	0	0	0	3	10	13	1	0	10	11
+15 mins.	0	16	0	16	0	0	0	0	0	9	6	15	1	0	5	6
+30 mins.	1	13	0	14	0	0	0	0	0	4	2	6	1	1	8	10
+45 mins.	1	10	0	11	0	0	0	0	0	5	5	10	1	0	11	12
Total Volume	2	47	0	49	0	0	0	0	0	21	23	44	4	1	34	39
% App. Total	4.1	95.9	0		0	0	0		0	47.7	52.3		10.3	2.6	87.2	
PHF	.500	.734	.000	.766	.000	.000	.000	.000	.000	.583	.575	.733	1.000	.250	.773	.813

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

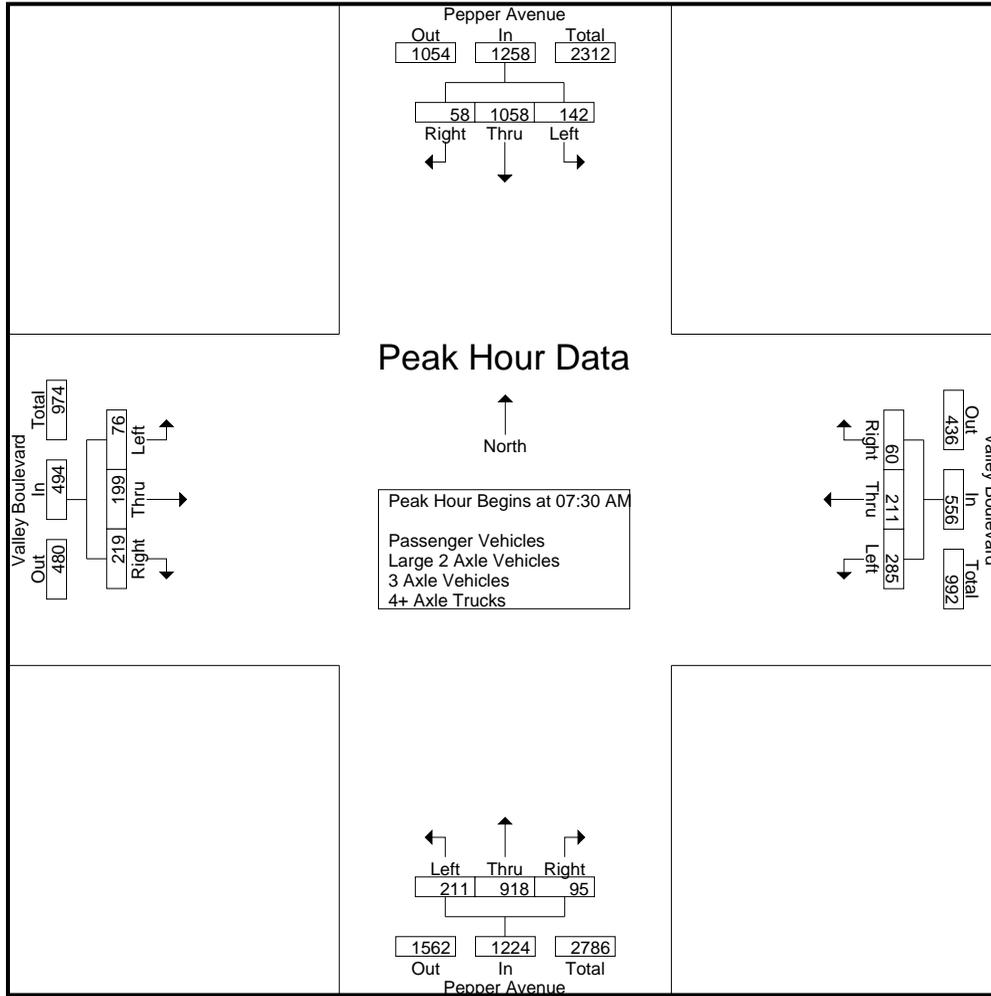
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	24	238	12	274	71	40	9	120	45	182	20	247	11	24	29	64	705
07:15 AM	16	256	8	280	72	50	13	135	44	205	20	269	13	38	40	91	775
07:30 AM	28	332	10	370	86	72	16	174	67	229	21	317	23	47	52	122	983
07:45 AM	34	252	21	307	75	56	12	143	64	232	34	330	18	51	40	109	889
Total	102	1078	51	1231	304	218	50	572	220	848	95	1163	65	160	161	386	3352
08:00 AM	44	229	14	287	58	40	16	114	42	252	22	316	14	50	81	145	862
08:15 AM	36	245	13	294	66	43	16	125	38	205	18	261	21	51	46	118	798
08:30 AM	21	187	10	218	47	58	23	128	52	174	12	238	12	40	40	92	676
08:45 AM	26	176	7	209	51	46	13	110	51	215	29	295	19	36	20	75	689
Total	127	837	44	1008	222	187	68	477	183	846	81	1110	66	177	187	430	3025
Grand Total	229	1915	95	2239	526	405	118	1049	403	1694	176	2273	131	337	348	816	6377
Apprch %	10.2	85.5	4.2		50.1	38.6	11.2		17.7	74.5	7.7		16.1	41.3	42.6		
Total %	3.6	30	1.5	35.1	8.2	6.4	1.9	16.4	6.3	26.6	2.8	35.6	2.1	5.3	5.5	12.8	
Passenger Vehicles	224	1761	85	2070	517	386	109	1012	378	1597	165	2140	118	318	310	746	5968
% Passenger Vehicles	97.8	92	89.5	92.5	98.3	95.3	92.4	96.5	93.8	94.3	93.8	94.1	90.1	94.4	89.1	91.4	93.6
Large 2 Axle Vehicles	3	30	3	36	7	14	7	28	16	17	9	42	8	17	24	49	155
% Large 2 Axle Vehicles	1.3	1.6	3.2	1.6	1.3	3.5	5.9	2.7	4	1	5.1	1.8	6.1	5	6.9	6	2.4
3 Axle Vehicles	2	59	3	64	0	3	0	3	3	34	1	38	2	1	7	10	115
% 3 Axle Vehicles	0.9	3.1	3.2	2.9	0	0.7	0	0.3	0.7	2	0.6	1.7	1.5	0.3	2	1.2	1.8
4+ Axle Trucks	0	65	4	69	2	2	2	6	6	46	1	53	3	1	7	11	139
% 4+ Axle Trucks	0	3.4	4.2	3.1	0.4	0.5	1.7	0.6	1.5	2.7	0.6	2.3	2.3	0.3	2	1.3	2.2

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	28	332	10	370	86	72	16	174	67	229	21	317	23	47	52	122	983
07:45 AM	34	252	21	307	75	56	12	143	64	232	34	330	18	51	40	109	889
08:00 AM	44	229	14	287	58	40	16	114	42	252	22	316	14	50	81	145	862
08:15 AM	36	245	13	294	66	43	16	125	38	205	18	261	21	51	46	118	798
Total Volume	142	1058	58	1258	285	211	60	556	211	918	95	1224	76	199	219	494	3532
% App. Total	11.3	84.1	4.6		51.3	37.9	10.8		17.2	75	7.8		15.4	40.3	44.3		
PHF	.807	.797	.690	.850	.828	.733	.938	.799	.787	.911	.699	.927	.826	.975	.676	.852	.898

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:30 AM				07:00 AM				07:15 AM				07:30 AM			
+0 mins.	28	332	10	370	71	40	9	120	44	205	20	269	23	47	52	122
+15 mins.	34	252	21	307	72	50	13	135	67	229	21	317	18	51	40	109
+30 mins.	44	229	14	287	86	72	16	174	64	232	34	330	14	50	81	145
+45 mins.	36	245	13	294	75	56	12	143	42	252	22	316	21	51	46	118
Total Volume	142	1058	58	1258	304	218	50	572	217	918	97	1232	76	199	219	494
% App. Total	11.3	84.1	4.6		53.1	38.1	8.7		17.6	74.5	7.9		15.4	40.3	44.3	
PHF	.807	.797	.690	.850	.884	.757	.781	.822	.810	.911	.713	.933	.826	.975	.676	.852

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

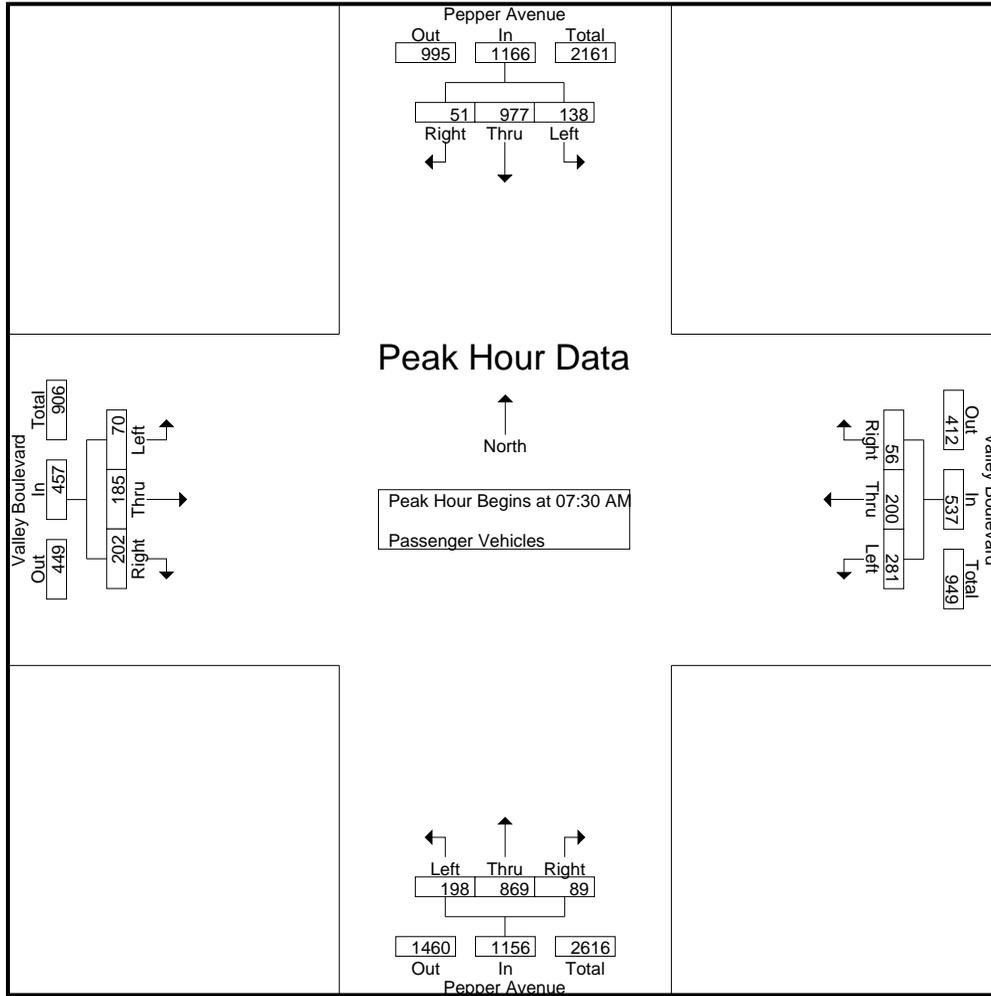
Groups Printed- Passenger Vehicles

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	23	222	9	254	69	37	9	115	42	170	20	232	10	24	26	60	661
07:15 AM	16	242	8	266	70	46	11	127	43	192	18	253	10	36	32	78	724
07:30 AM	28	313	8	349	84	69	15	168	64	217	19	300	21	43	49	113	930
07:45 AM	33	232	19	284	75	55	11	141	61	225	31	317	17	50	36	103	845
Total	100	1009	44	1153	298	207	46	551	210	804	88	1102	58	153	143	354	3160
08:00 AM	42	210	11	263	57	37	15	109	38	236	22	296	12	45	74	131	799
08:15 AM	35	222	13	270	65	39	15	119	35	191	17	243	20	47	43	110	742
08:30 AM	21	172	10	203	47	57	21	125	47	163	11	221	11	38	32	81	630
08:45 AM	26	148	7	181	50	46	12	108	48	203	27	278	17	35	18	70	637
Total	124	752	41	917	219	179	63	461	168	793	77	1038	60	165	167	392	2808
Grand Total	224	1761	85	2070	517	386	109	1012	378	1597	165	2140	118	318	310	746	5968
Apprch %	10.8	85.1	4.1		51.1	38.1	10.8		17.7	74.6	7.7		15.8	42.6	41.6		
Total %	3.8	29.5	1.4	34.7	8.7	6.5	1.8	17	6.3	26.8	2.8	35.9	2	5.3	5.2	12.5	

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	28	313	8	349	84	69	15	168	64	217	19	300	21	43	49	113	930
07:45 AM	33	232	19	284	75	55	11	141	61	225	31	317	17	50	36	103	845
08:00 AM	42	210	11	263	57	37	15	109	38	236	22	296	12	45	74	131	799
08:15 AM	35	222	13	270	65	39	15	119	35	191	17	243	20	47	43	110	742
Total Volume	138	977	51	1166	281	200	56	537	198	869	89	1156	70	185	202	457	3316
% App. Total	11.8	83.8	4.4		52.3	37.2	10.4		17.1	75.2	7.7		15.3	40.5	44.2		
PHF	.821	.780	.671	.835	.836	.725	.933	.799	.773	.921	.718	.912	.833	.925	.682	.872	.891

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	28	313	8	349	84	69	15	168	64	217	19	300	21	43	49	113
+15 mins.	33	232	19	284	75	55	11	141	61	225	31	317	17	50	36	103
+30 mins.	42	210	11	263	57	37	15	109	38	236	22	296	12	45	74	131
+45 mins.	35	222	13	270	65	39	15	119	35	191	17	243	20	47	43	110
Total Volume	138	977	51	1166	281	200	56	537	198	869	89	1156	70	185	202	457
% App. Total	11.8	83.8	4.4		52.3	37.2	10.4		17.1	75.2	7.7		15.3	40.5	44.2	
PHF	.821	.780	.671	.835	.836	.725	.933	.799	.773	.921	.718	.912	.833	.925	.682	.872

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

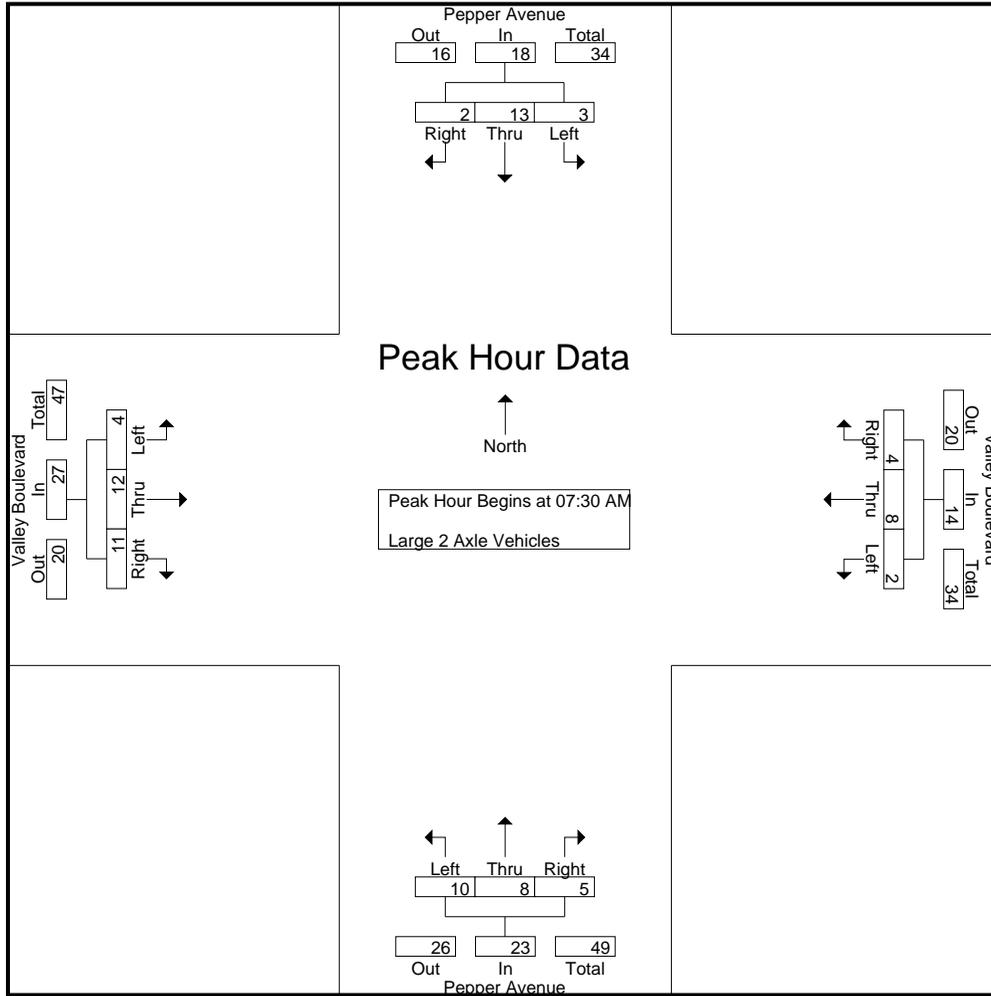
Groups Printed- Large 2 Axle Vehicles

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	5	1	6	2	3	0	5	3	1	0	4	1	0	2	3	18
07:15 AM	0	2	0	2	2	2	2	6	0	1	2	3	1	2	6	9	20
07:30 AM	0	3	1	4	1	3	1	5	3	1	2	6	2	2	2	6	21
07:45 AM	1	1	0	2	0	1	1	2	3	3	2	8	0	1	3	4	16
Total	1	11	2	14	5	9	4	18	9	6	6	21	4	5	13	22	75
08:00 AM	2	4	1	7	0	1	1	2	3	3	0	6	2	5	4	11	26
08:15 AM	0	5	0	5	1	3	1	5	1	1	1	3	0	4	2	6	19
08:30 AM	0	4	0	4	0	1	0	1	2	5	1	8	1	2	4	7	20
08:45 AM	0	6	0	6	1	0	1	2	1	2	1	4	1	1	1	3	15
Total	2	19	1	22	2	5	3	10	7	11	3	21	4	12	11	27	80
Grand Total	3	30	3	36	7	14	7	28	16	17	9	42	8	17	24	49	155
Apprch %	8.3	83.3	8.3		25	50	25		38.1	40.5	21.4		16.3	34.7	49		
Total %	1.9	19.4	1.9	23.2	4.5	9	4.5	18.1	10.3	11	5.8	27.1	5.2	11	15.5	31.6	

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	3	1	4	1	3	1	5	3	1	2	6	2	2	2	6	21
07:45 AM	1	1	0	2	0	1	1	2	3	3	2	8	0	1	3	4	16
08:00 AM	2	4	1	7	0	1	1	2	3	3	0	6	2	5	4	11	26
08:15 AM	0	5	0	5	1	3	1	5	1	1	1	3	0	4	2	6	19
Total Volume	3	13	2	18	2	8	4	14	10	8	5	23	4	12	11	27	82
% App. Total	16.7	72.2	11.1		14.3	57.1	28.6		43.5	34.8	21.7		14.8	44.4	40.7		
PHF	.375	.650	.500	.643	.500	.667	1.00	.700	.833	.667	.625	.719	.500	.600	.688	.614	.788

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	3	1	4	1	3	1	5	3	1	2	6	2	2	2	6
+15 mins.	1	1	0	2	0	1	1	2	3	3	2	8	0	1	3	4
+30 mins.	2	4	1	7	0	1	1	2	3	3	0	6	2	5	4	11
+45 mins.	0	5	0	5	1	3	1	5	1	1	1	3	0	4	2	6
Total Volume	3	13	2	18	2	8	4	14	10	8	5	23	4	12	11	27
% App. Total	16.7	72.2	11.1		14.3	57.1	28.6		43.5	34.8	21.7		14.8	44.4	40.7	
PHF	.375	.650	.500	.643	.500	.667	1.000	.700	.833	.667	.625	.719	.500	.600	.688	.614

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	1	3	1	5	0	0	0	0	0	5	0	5	0	0	1	1	11
07:15 AM	0	7	0	7	0	1	0	1	0	5	0	5	2	0	0	2	15
07:30 AM	0	8	0	8	0	0	0	0	0	4	0	4	0	1	1	2	14
07:45 AM	0	7	1	8	0	0	0	0	0	2	0	2	0	0	0	0	10
Total	1	25	2	28	0	1	0	1	0	16	0	16	2	1	2	5	50
08:00 AM	0	5	1	6	0	2	0	2	0	2	0	2	0	0	1	1	11
08:15 AM	1	13	0	14	0	0	0	0	1	10	0	11	0	0	1	1	26
08:30 AM	0	2	0	2	0	0	0	0	2	3	0	5	0	0	2	2	9
08:45 AM	0	14	0	14	0	0	0	0	0	3	1	4	0	0	1	1	19
Total	1	34	1	36	0	2	0	2	3	18	1	22	0	0	5	5	65
Grand Total	2	59	3	64	0	3	0	3	3	34	1	38	2	1	7	10	115
Apprch %	3.1	92.2	4.7		0	100	0		7.9	89.5	2.6		20	10	70		
Total %	1.7	51.3	2.6	55.7	0	2.6	0	2.6	2.6	29.6	0.9	33	1.7	0.9	6.1	8.7	

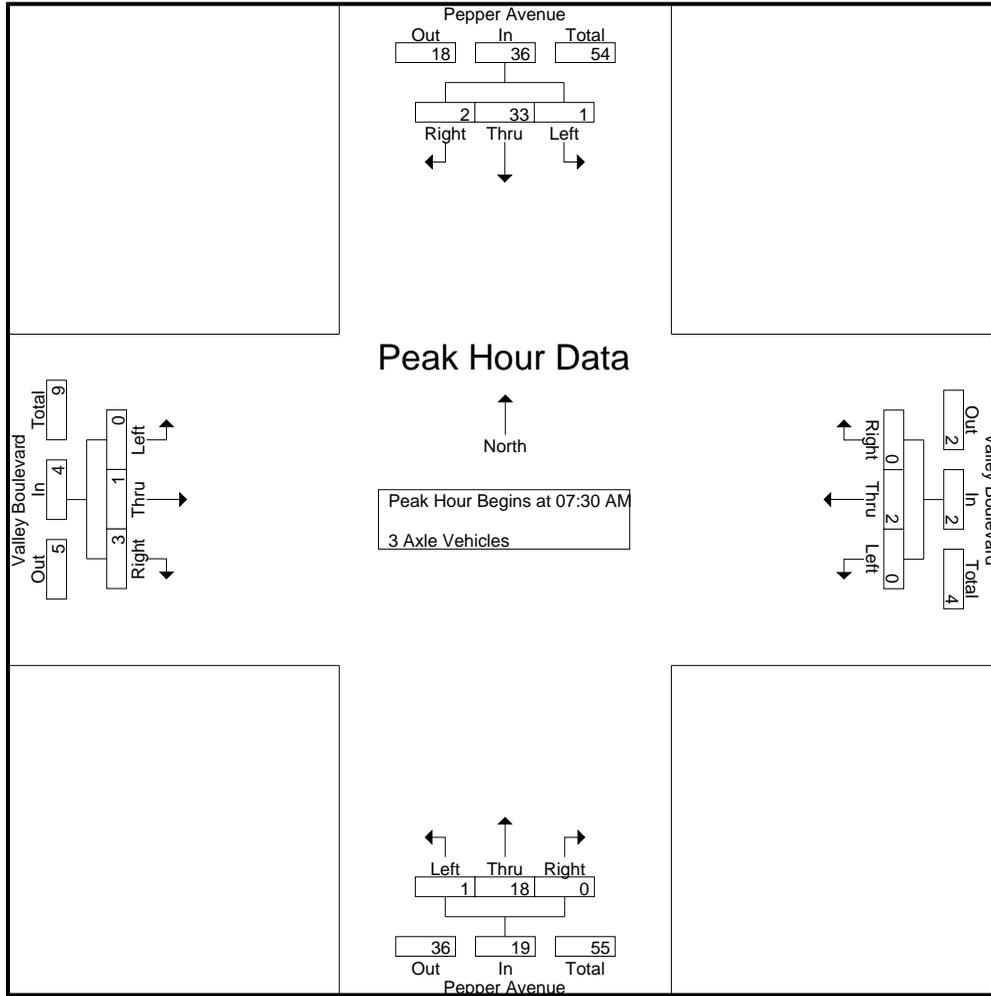
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	8	0	8	0	0	0	0	0	4	0	4	0	1	1	2	14
07:45 AM	0	7	1	8	0	0	0	0	0	2	0	2	0	0	0	0	10
08:00 AM	0	5	1	6	0	2	0	2	0	2	0	2	0	0	1	1	11
08:15 AM	1	13	0	14	0	0	0	0	1	10	0	11	0	0	1	1	26
Total Volume	1	33	2	36	0	2	0	2	1	18	0	19	0	1	3	4	61
% App. Total	2.8	91.7	5.6		0	100	0		5.3	94.7	0		0	25	75		
PHF	.250	.635	.500	.643	.000	.250	.000	.250	.250	.450	.000	.432	.000	.250	.750	.500	.587

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	8	0	8	0	0	0	0	0	4	0	4	0	1	1	2
+15 mins.	0	7	1	8	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	5	1	6	0	2	0	2	0	2	0	2	0	0	1	1
+45 mins.	1	13	0	14	0	0	0	0	1	10	0	11	0	0	1	1
Total Volume	1	33	2	36	0	2	0	2	1	18	0	19	0	1	3	4
% App. Total	2.8	91.7	5.6		0	100	0		5.3	94.7	0		0	25	75	
PHF	.250	.635	.500	.643	.000	.250	.000	.250	.250	.450	.000	.432	.000	.250	.750	.500

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	8	1	9	0	0	0	0	0	6	0	6	0	0	0	0	15
07:15 AM	0	5	0	5	0	1	0	1	1	7	0	8	0	0	2	2	16
07:30 AM	0	8	1	9	1	0	0	1	0	7	0	7	0	1	0	1	18
07:45 AM	0	12	1	13	0	0	0	0	0	2	1	3	1	0	1	2	18
Total	0	33	3	36	1	1	0	2	1	22	1	24	1	1	3	5	67
08:00 AM	0	10	1	11	1	0	0	1	1	11	0	12	0	0	2	2	26
08:15 AM	0	5	0	5	0	1	0	1	1	3	0	4	1	0	0	1	11
08:30 AM	0	9	0	9	0	0	2	2	1	3	0	4	0	0	2	2	17
08:45 AM	0	8	0	8	0	0	0	0	2	7	0	9	1	0	0	1	18
Total	0	32	1	33	1	1	2	4	5	24	0	29	2	0	4	6	72
Grand Total	0	65	4	69	2	2	2	6	6	46	1	53	3	1	7	11	139
Apprch %	0	94.2	5.8		33.3	33.3	33.3		11.3	86.8	1.9		27.3	9.1	63.6		
Total %	0	46.8	2.9	49.6	1.4	1.4	1.4	4.3	4.3	33.1	0.7	38.1	2.2	0.7	5	7.9	

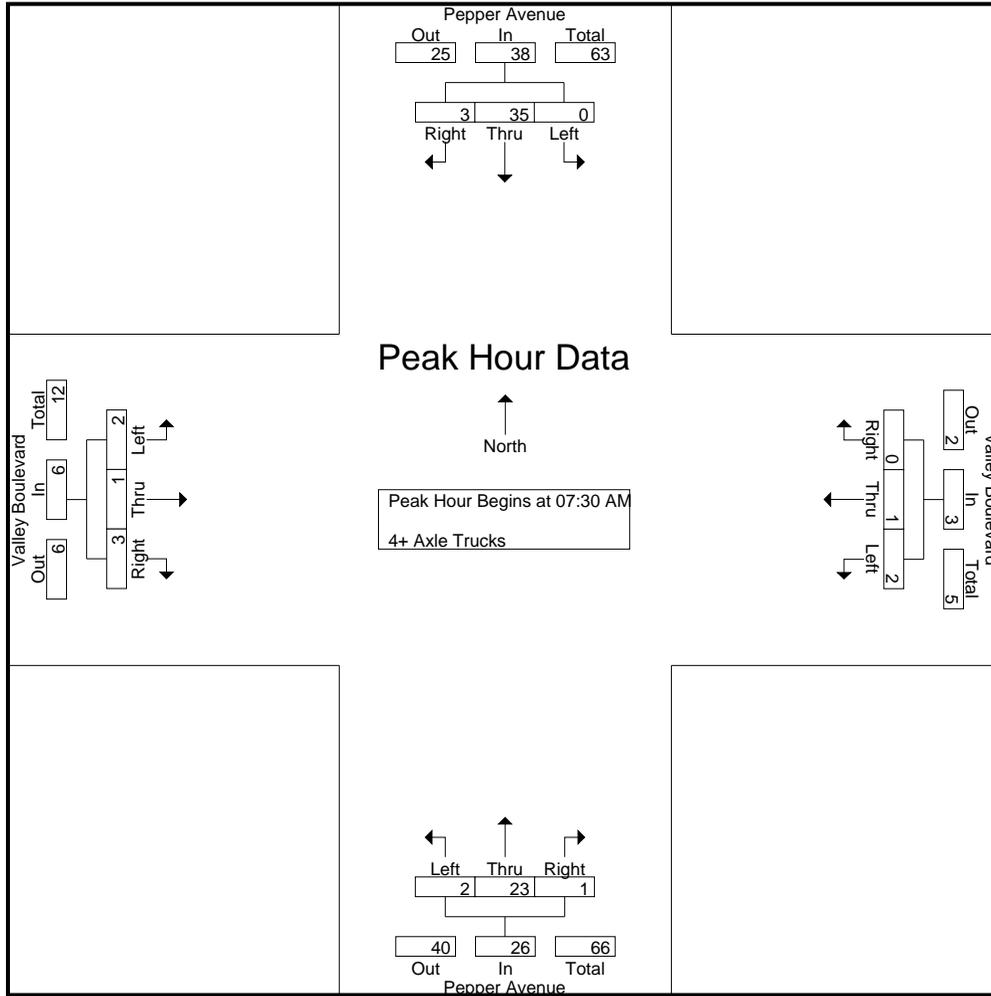
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30 AM	0	8	1	9	1	0	0	1	0	7	0	7	0	1	0	1	18
07:45 AM	0	12	1	13	0	0	0	0	0	2	1	3	1	0	1	2	18
08:00 AM	0	10	1	11	1	0	0	1	1	11	0	12	0	0	2	2	26
08:15 AM	0	5	0	5	0	1	0	1	1	3	0	4	1	0	0	1	11
Total Volume	0	35	3	38	2	1	0	3	2	23	1	26	2	1	3	6	73
% App. Total	0	92.1	7.9		66.7	33.3	0		7.7	88.5	3.8		33.3	16.7	50		
PHF	.000	.729	.750	.731	.500	.250	.000	.750	.500	.523	.250	.542	.500	.250	.375	.750	.702

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30 AM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley AM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	8	1	9	1	0	0	1	0	7	0	7	0	1	0	1
+15 mins.	0	12	1	13	0	0	0	0	0	2	1	3	1	0	1	2
+30 mins.	0	10	1	11	1	0	0	1	1	11	0	12	0	0	2	2
+45 mins.	0	5	0	5	0	1	0	1	1	3	0	4	1	0	0	1
Total Volume	0	35	3	38	2	1	0	3	2	23	1	26	2	1	3	6
% App. Total	0	92.1	7.9		66.7	33.3	0		7.7	88.5	3.8		33.3	16.7	50	
PHF	.000	.729	.750	.731	.500	.250	.000	.750	.500	.523	.250	.542	.500	.250	.375	.750

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

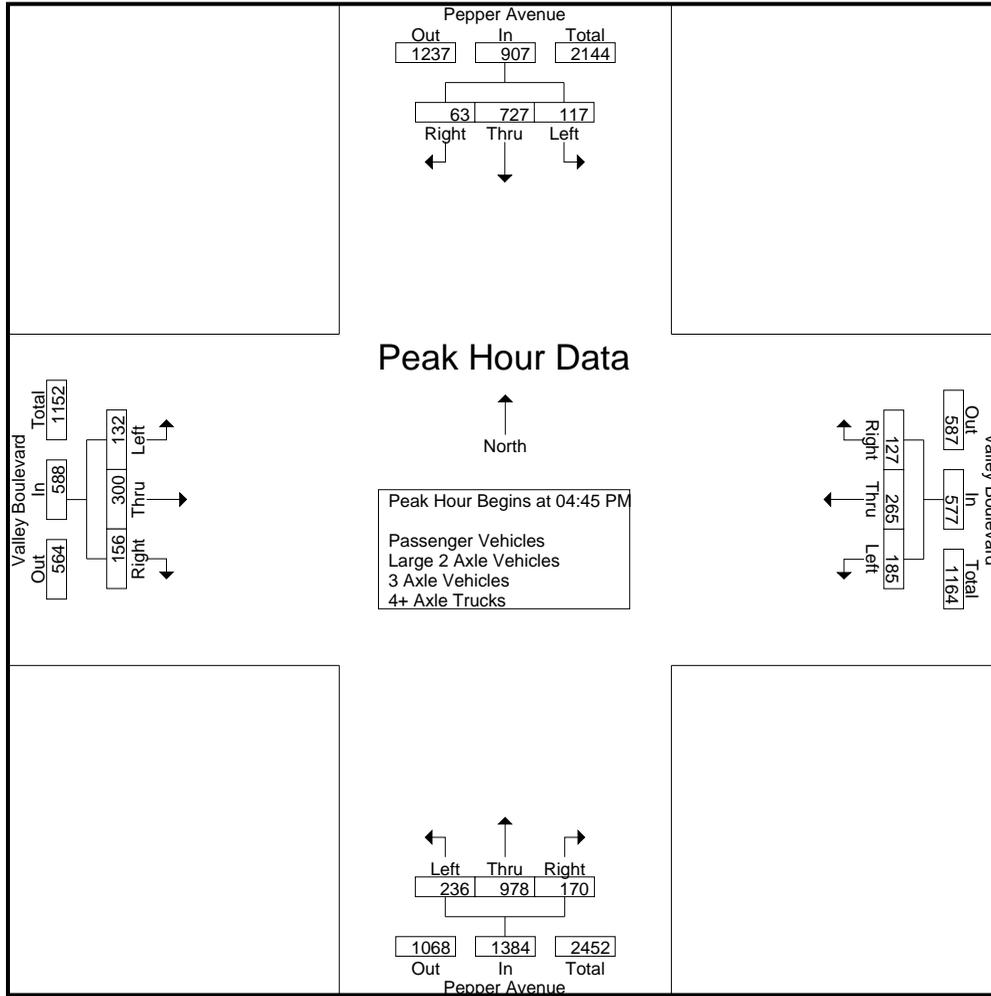
Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	168	23	218	42	87	17	146	41	220	27	288	25	84	49	158	810
04:15 PM	30	146	23	199	38	84	26	148	58	218	27	303	25	83	32	140	790
04:30 PM	37	178	18	233	56	69	25	150	67	200	37	304	32	81	41	154	841
04:45 PM	35	187	21	243	31	52	30	113	69	240	35	344	36	71	42	149	849
Total	129	679	85	893	167	292	98	557	235	878	126	1239	118	319	164	601	3290
05:00 PM	24	186	11	221	32	68	21	121	53	229	38	320	38	88	42	168	830
05:15 PM	31	173	16	220	70	80	47	197	55	245	47	347	32	82	34	148	912
05:30 PM	27	181	15	223	52	65	29	146	59	264	50	373	26	59	38	123	865
05:45 PM	18	169	15	202	63	68	33	164	39	242	39	320	30	63	23	116	802
Total	100	709	57	866	217	281	130	628	206	980	174	1360	126	292	137	555	3409
Grand Total	229	1388	142	1759	384	573	228	1185	441	1858	300	2599	244	611	301	1156	6699
Apprch %	13	78.9	8.1		32.4	48.4	19.2		17	71.5	11.5		21.1	52.9	26		
Total %	3.4	20.7	2.1	26.3	5.7	8.6	3.4	17.7	6.6	27.7	4.5	38.8	3.6	9.1	4.5	17.3	
Passenger Vehicles	227	1305	132	1664	379	567	217	1163	421	1752	295	2468	236	594	287	1117	6412
% Passenger Vehicles	99.1	94	93	94.6	98.7	99	95.2	98.1	95.5	94.3	98.3	95	96.7	97.2	95.3	96.6	95.7
Large 2 Axle Vehicles	2	12	5	19	2	3	7	12	10	11	1	22	3	13	2	18	71
% Large 2 Axle Vehicles	0.9	0.9	3.5	1.1	0.5	0.5	3.1	1	2.3	0.6	0.3	0.8	1.2	2.1	0.7	1.6	1.1
3 Axle Vehicles	0	38	2	40	1	0	2	3	1	24	2	27	2	2	6	10	80
% 3 Axle Vehicles	0	2.7	1.4	2.3	0.3	0	0.9	0.3	0.2	1.3	0.7	1	0.8	0.3	2	0.9	1.2
4+ Axle Trucks	0	33	3	36	2	3	2	7	9	71	2	82	3	2	6	11	136
% 4+ Axle Trucks	0	2.4	2.1	2	0.5	0.5	0.9	0.6	2	3.8	0.7	3.2	1.2	0.3	2	1	2

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	35	187	21	243	31	52	30	113	69	240	35	344	36	71	42	149	849
05:00 PM	24	186	11	221	32	68	21	121	53	229	38	320	38	88	42	168	830
05:15 PM	31	173	16	220	70	80	47	197	55	245	47	347	32	82	34	148	912
05:30 PM	27	181	15	223	52	65	29	146	59	264	50	373	26	59	38	123	865
Total Volume	117	727	63	907	185	265	127	577	236	978	170	1384	132	300	156	588	3456
% App. Total	12.9	80.2	6.9		32.1	45.9	22		17.1	70.7	12.3		22.4	51	26.5		
PHF	.836	.972	.750	.933	.661	.828	.676	.732	.855	.926	.850	.928	.868	.852	.929	.875	.947

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



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

	04:30 PM				05:00 PM				04:45 PM				04:30 PM			
+0 mins.	37	178	18	233	32	68	21	121	69	240	35	344	32	81	41	154
+15 mins.	35	187	21	243	70	80	47	197	53	229	38	320	36	71	42	149
+30 mins.	24	186	11	221	52	65	29	146	55	245	47	347	38	88	42	168
+45 mins.	31	173	16	220	63	68	33	164	59	264	50	373	32	82	34	148
Total Volume	127	724	66	917	217	281	130	628	236	978	170	1384	138	322	159	619
% App. Total	13.8	79	7.2		34.6	44.7	20.7		17.1	70.7	12.3		22.3	52	25.7	
PHF	.858	.968	.786	.943	.775	.878	.691	.797	.855	.926	.850	.928	.908	.915	.946	.921

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Passenger Vehicles

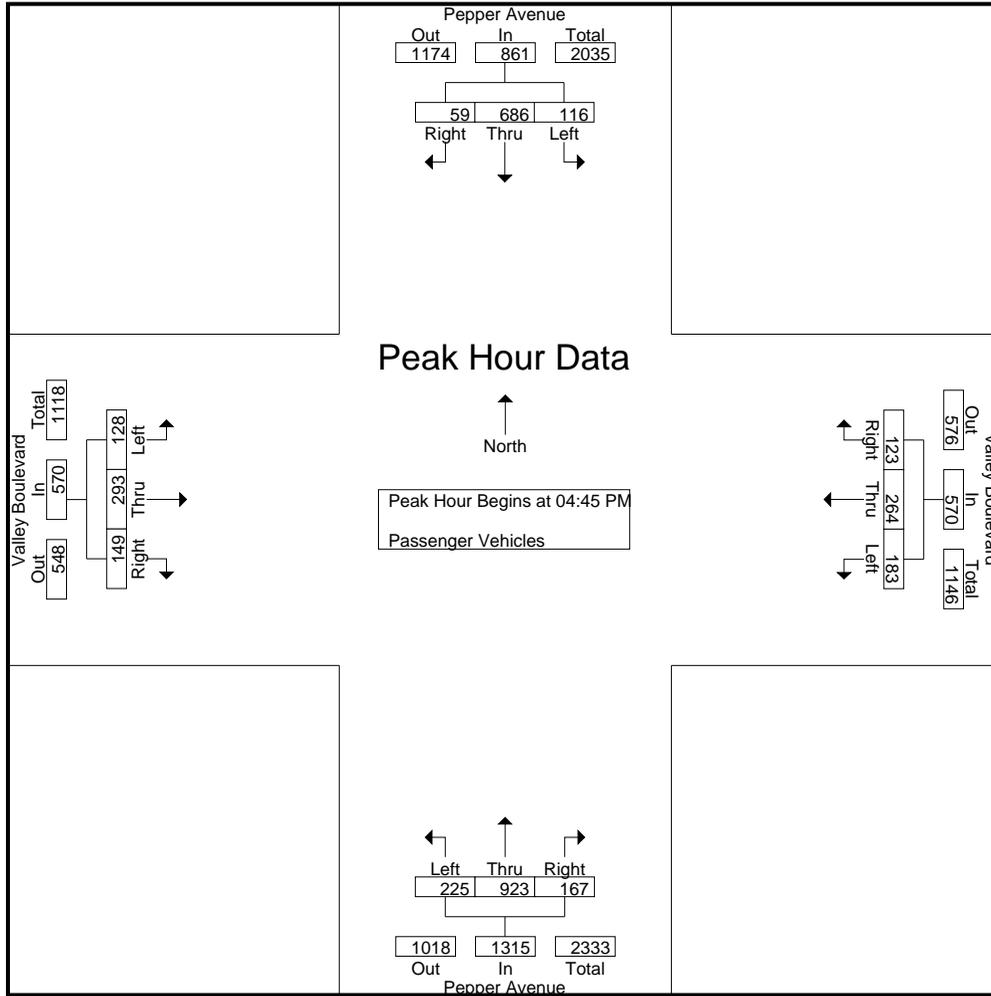
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	27	152	20	199	42	85	17	144	39	206	26	271	24	82	46	152	766
04:15 PM	30	138	21	189	37	82	24	143	56	205	27	288	24	80	30	134	754
04:30 PM	36	170	18	224	54	69	23	146	64	189	37	290	31	76	40	147	807
04:45 PM	34	175	20	229	31	52	30	113	66	229	35	330	34	71	37	142	814
Total	127	635	79	841	164	288	94	546	225	829	125	1179	113	309	153	575	3141
05:00 PM	24	177	10	211	31	68	19	118	50	208	37	295	37	85	41	163	787
05:15 PM	31	162	15	208	69	80	45	194	53	233	47	333	31	79	33	143	878
05:30 PM	27	172	14	213	52	64	29	145	56	253	48	357	26	58	38	122	837
05:45 PM	18	159	14	191	63	67	30	160	37	229	38	304	29	63	22	114	769
Total	100	670	53	823	215	279	123	617	196	923	170	1289	123	285	134	542	3271
Grand Total	227	1305	132	1664	379	567	217	1163	421	1752	295	2468	236	594	287	1117	6412
Apprch %	13.6	78.4	7.9		32.6	48.8	18.7		17.1	71	12		21.1	53.2	25.7		
Total %	3.5	20.4	2.1	26	5.9	8.8	3.4	18.1	6.6	27.3	4.6	38.5	3.7	9.3	4.5	17.4	

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	34	175	20	229	31	52	30	113	66	229	35	330	34	71	37	142	814
05:00 PM	24	177	10	211	31	68	19	118	50	208	37	295	37	85	41	163	787
05:15 PM	31	162	15	208	69	80	45	194	53	233	47	333	31	79	33	143	878
05:30 PM	27	172	14	213	52	64	29	145	56	253	48	357	26	58	38	122	837
Total Volume	116	686	59	861	183	264	123	570	225	923	167	1315	128	293	149	570	3316
% App. Total	13.5	79.7	6.9		32.1	46.3	21.6		17.1	70.2	12.7		22.5	51.4	26.1		
PHF	.853	.969	.738	.940	.663	.825	.683	.735	.852	.912	.870	.921	.865	.862	.909	.874	.944

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 04:45 PM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	34	175	20	229	31	52	30	113	66	229	35	330	34	71	37	142
+15 mins.	24	177	10	211	31	68	19	118	50	208	37	295	37	85	41	163
+30 mins.	31	162	15	208	69	80	45	194	53	233	47	333	31	79	33	143
+45 mins.	27	172	14	213	52	64	29	145	56	253	48	357	26	58	38	122
Total Volume	116	686	59	861	183	264	123	570	225	923	167	1315	128	293	149	570
% App. Total	13.5	79.7	6.9		32.1	46.3	21.6		17.1	70.2	12.7		22.5	51.4	26.1	
PHF	.853	.969	.738	.940	.663	.825	.683	.735	.852	.912	.870	.921	.865	.862	.909	.874

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- Large 2 Axle Vehicles

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	1	1	2	0	1	0	1	2	0	0	2	1	2	1	4	9
04:15 PM	0	2	1	3	0	1	2	3	2	1	0	3	0	3	1	4	13
04:30 PM	1	2	0	3	1	0	1	2	1	0	0	1	0	3	0	3	9
04:45 PM	1	3	1	5	0	0	0	0	1	2	0	3	1	0	0	1	9
Total	2	8	3	13	1	2	3	6	6	3	0	9	2	8	2	12	40
05:00 PM	0	3	1	4	1	0	1	2	2	5	1	8	0	1	0	1	15
05:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	3	0	3	5
05:30 PM	0	1	1	2	0	0	0	0	1	1	0	2	0	1	0	1	5
05:45 PM	0	0	0	0	0	1	2	3	1	1	0	2	1	0	0	1	6
Total	0	4	2	6	1	1	4	6	4	8	1	13	1	5	0	6	31
Grand Total	2	12	5	19	2	3	7	12	10	11	1	22	3	13	2	18	71
Apprch %	10.5	63.2	26.3		16.7	25	58.3		45.5	50	4.5		16.7	72.2	11.1		
Total %	2.8	16.9	7	26.8	2.8	4.2	9.9	16.9	14.1	15.5	1.4	31	4.2	18.3	2.8	25.4	

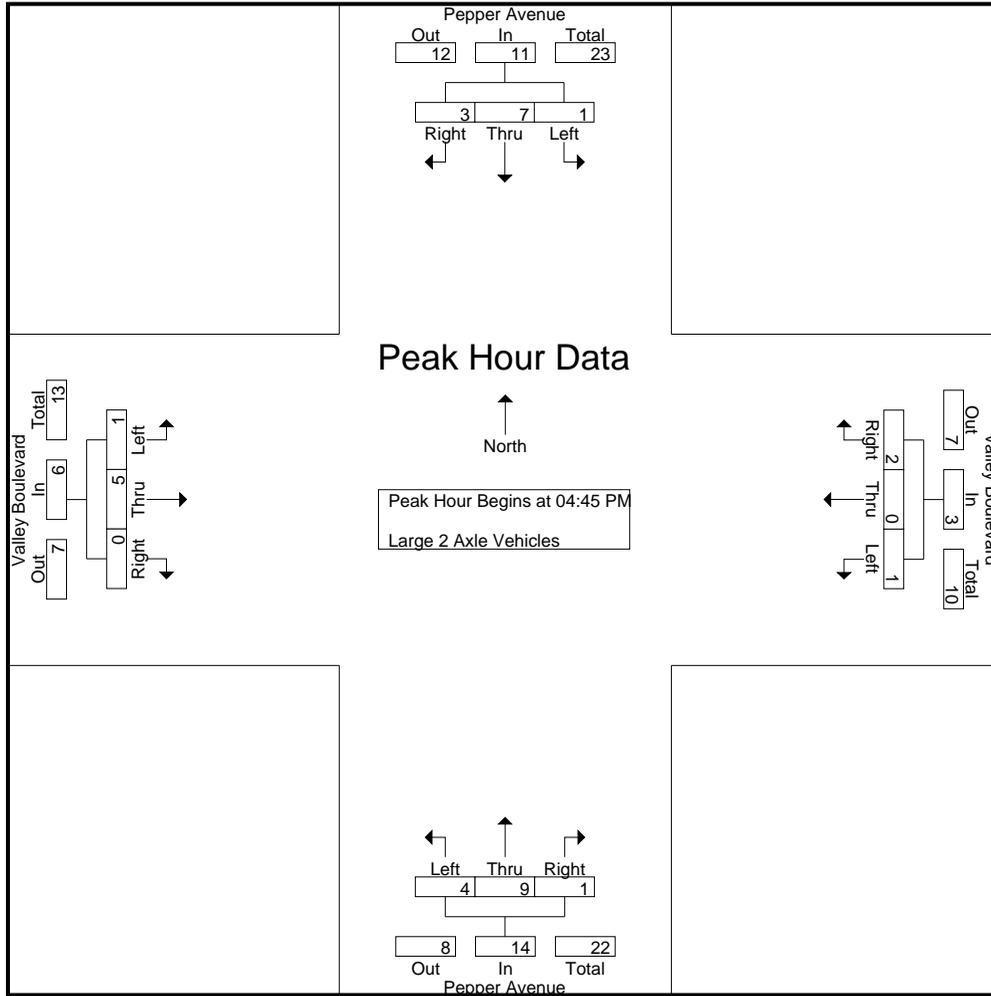
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	1	3	1	5	0	0	0	0	1	2	0	3	1	0	0	1	9
05:00 PM	0	3	1	4	1	0	1	2	2	5	1	8	0	1	0	1	15
05:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	3	0	3	5
05:30 PM	0	1	1	2	0	0	0	0	1	1	0	2	0	1	0	1	5
Total Volume	1	7	3	11	1	0	2	3	4	9	1	14	1	5	0	6	34
% App. Total	9.1	63.6	27.3		33.3	0	66.7		28.6	64.3	7.1		16.7	83.3	0		
PHF	.250	.583	.750	.550	.250	.000	.500	.375	.500	.450	.250	.438	.250	.417	.000	.500	.567

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	1	3	1	5	0	0	0	0	1	2	0	3	1	0	0	1
+15 mins.	0	3	1	4	1	0	1	2	2	5	1	8	0	1	0	1
+30 mins.	0	0	0	0	0	0	1	1	0	1	0	1	0	3	0	3
+45 mins.	0	1	1	2	0	0	0	0	1	1	0	2	0	1	0	1
Total Volume	1	7	3	11	1	0	2	3	4	9	1	14	1	5	0	6
% App. Total	9.1	63.6	27.3		33.3	0	66.7		28.6	64.3	7.1		16.7	83.3	0	
PHF	.250	.583	.750	.550	.250	.000	.500	.375	.500	.450	.250	.438	.250	.417	.000	.500

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 3 Axle Vehicles

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	9	1	10	0	0	0	0	0	3	1	4	0	0	1	1	15
04:15 PM	0	1	1	2	0	0	0	0	0	4	0	4	0	0	1	1	7
04:30 PM	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
04:45 PM	0	4	0	4	0	0	0	0	1	2	0	3	1	0	3	4	11
Total	0	19	2	21	0	0	0	0	1	13	1	15	1	0	5	6	42
05:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	2	1	3	7
05:15 PM	0	6	0	6	1	0	1	2	0	3	0	3	1	0	0	1	12
05:30 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
05:45 PM	0	7	0	7	0	0	1	1	0	5	1	6	0	0	0	0	14
Total	0	19	0	19	1	0	2	3	0	11	1	12	1	2	1	4	38
Grand Total	0	38	2	40	1	0	2	3	1	24	2	27	2	2	6	10	80
Apprch %	0	95	5		33.3	0	66.7		3.7	88.9	7.4		20	20	60		
Total %	0	47.5	2.5	50	1.2	0	2.5	3.8	1.2	30	2.5	33.8	2.5	2.5	7.5	12.5	

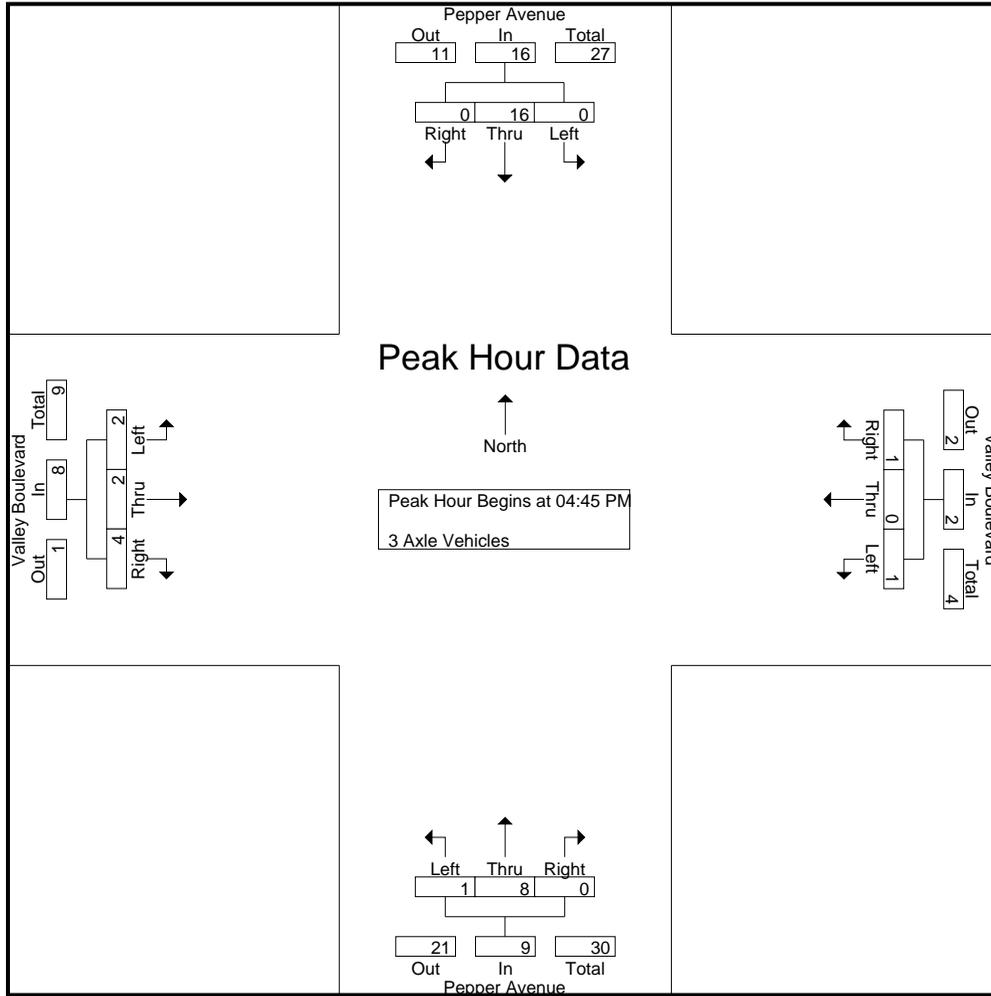
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	0	4	0	4	0	0	0	0	1	2	0	3	1	0	3	4	11
05:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	2	1	3	7
05:15 PM	0	6	0	6	1	0	1	2	0	3	0	3	1	0	0	1	12
05:30 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Total Volume	0	16	0	16	1	0	1	2	1	8	0	9	2	2	4	8	35
% App. Total	0	100	0		50	0	50		11.1	88.9	0		25	25	50		
PHF	.000	.667	.000	.667	.250	.000	.250	.250	.250	.667	.000	.750	.500	.250	.333	.500	.729

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	4	0	4	0	0	0	0	1	2	0	3	1	0	3	4
+15 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	2	1	3
+30 mins.	0	6	0	6	1	0	1	2	0	3	0	3	1	0	0	1
+45 mins.	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	16	0	16	1	0	1	2	1	8	0	9	2	2	4	8
% App. Total	0	100	0		50	0	50		11.1	88.9	0		25	25	50	
PHF	.000	.667	.000	.667	.250	.000	.250	.250	.250	.667	.000	.750	.500	.250	.333	.500

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 1

Groups Printed- 4+ Axle Trucks

Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	6	1	7	0	1	0	1	0	11	0	11	0	0	1	1	20
04:15 PM	0	5	0	5	1	1	0	2	0	8	0	8	1	0	0	1	16
04:30 PM	0	1	0	1	1	0	1	2	2	7	0	9	1	2	1	4	16
04:45 PM	0	5	0	5	0	0	0	0	1	7	0	8	0	0	2	2	15
Total	0	17	1	18	2	2	1	5	3	33	0	36	2	2	4	8	67
05:00 PM	0	4	0	4	0	0	1	1	1	14	0	15	1	0	0	1	21
05:15 PM	0	5	1	6	0	0	0	0	2	8	0	10	0	0	1	1	17
05:30 PM	0	4	0	4	0	1	0	1	2	9	2	13	0	0	0	0	18
05:45 PM	0	3	1	4	0	0	0	0	1	7	0	8	0	0	1	1	13
Total	0	16	2	18	0	1	1	2	6	38	2	46	1	0	2	3	69
Grand Total	0	33	3	36	2	3	2	7	9	71	2	82	3	2	6	11	136
Apprch %	0	91.7	8.3		28.6	42.9	28.6		11	86.6	2.4		27.3	18.2	54.5		
Total %	0	24.3	2.2	26.5	1.5	2.2	1.5	5.1	6.6	52.2	1.5	60.3	2.2	1.5	4.4	8.1	

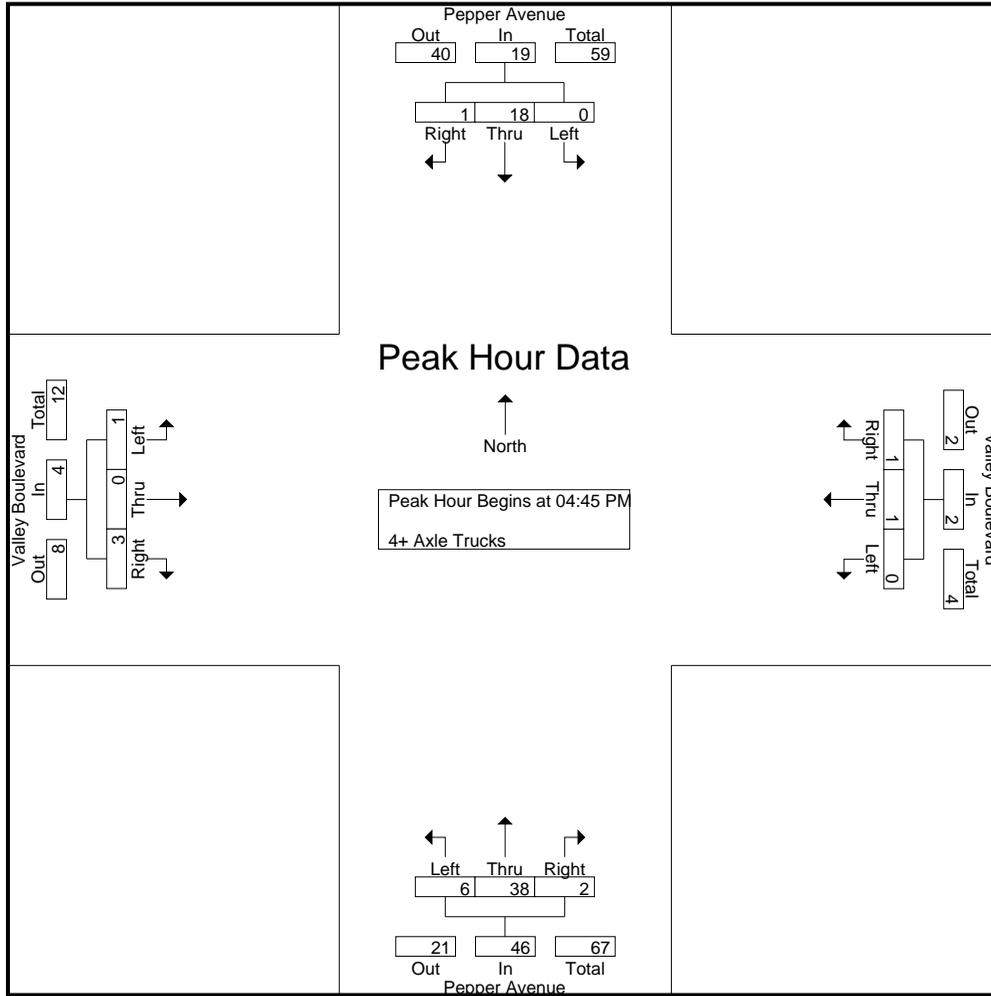
Start Time	Pepper Avenue Southbound				Valley Boulevard Westbound				Pepper Avenue Northbound				Valley Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	0	5	0	5	0	0	0	0	1	7	0	8	0	0	2	2	15
05:00 PM	0	4	0	4	0	0	1	1	1	14	0	15	1	0	0	1	21
05:15 PM	0	5	1	6	0	0	0	0	2	8	0	10	0	0	1	1	17
05:30 PM	0	4	0	4	0	1	0	1	2	9	2	13	0	0	0	0	18
Total Volume	0	18	1	19	0	1	1	2	6	38	2	46	1	0	3	4	71
% App. Total	0	94.7	5.3		0	50	50		13	82.6	4.3		25	0	75		
PHF	.000	.900	.250	.792	.000	.250	.250	.500	.750	.679	.250	.767	.250	.000	.375	.500	.845

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Colton
 N/S: Pepper Avenue
 E/W: Valley Boulevard
 Weather: Clear

File Name : 04_COL_Pepper_Valley PM
 Site Code : 10822858
 Start Date : 9/29/2022
 Page No : 2



Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	5	0	5	0	0	0	0	1	7	0	8	0	0	2	2
+15 mins.	0	4	0	4	0	0	1	1	1	14	0	15	1	0	0	1
+30 mins.	0	5	1	6	0	0	0	0	2	8	0	10	0	0	1	1
+45 mins.	0	4	0	4	0	1	0	1	2	9	2	13	0	0	0	0
Total Volume	0	18	1	19	0	1	1	2	6	38	2	46	1	0	3	4
% App. Total	0	94.7	5.3		0	50	50		13	82.6	4.3		25	0	75	
PHF	.000	.900	.250	.792	.000	.250	.250	.500	.750	.679	.250	.767	.250	.000	.375	.500

APPENDIX C

PCE WORKSHEETS

Existing Peak Hour Volumes - Classification Counts

1 Riverside Ave at E Valley Blvd

	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	271	9	6	6	21	7.2%	44	2.1	315	370	5	4	10	19	4.9%	46	2.4	416
NT	496	12	3	0	15	2.9%	24	1.6	520	1,075	7	0	1	8	0.7%	14	1.8	1,089
NR	63	6	0	3	9	12.5%	18	2.0	81	119	2	0	6	8	6.3%	21	2.6	140
SL	52	2	0	0	2	3.7%	3	1.5	55	75	1	0	1	2	2.6%	5	2.5	80
ST	866	14	1	2	17	1.9%	29	1.7	895	623	11	4	1	16	2.5%	28	1.8	651
SR	31	0	1	0	1	3.1%	2	2.0	33	47	2	0	0	2	4.1%	3	1.5	50
EL	43	4	0	0	4	8.5%	6	1.5	49	94	1	0	1	2	2.1%	5	2.5	99
ET	267	17	1	3	21	7.3%	37	1.8	304	281	7	1	1	9	3.1%	16	1.8	297
ER	432	10	2	3	15	3.4%	28	1.9	460	381	7	3	9	19	4.8%	44	2.3	425
WL	124	6	2	10	18	12.7%	43	2.4	167	113	4	5	2	11	8.9%	22	2.0	135
WT	187	4	1	0	5	2.6%	8	1.6	195	290	5	3	3	11	3.7%	23	2.1	313
WR	40	1	0	0	1	2.4%	2	2.0	42	119	2	0	0	2	1.7%	3	1.5	122
									3,116									3,817
North Leg Volumes																		
Approach	949	16	2	2	20		34		983	745	14	4	2	20		36		781
Depart	579	17	3	0	20		32		611	1,288	10	0	2	12		22		1,310
Total	1,528	33	5	2	40	2.6%	66	1.7	1,594	2,033	24	4	4	32	1.5%	58	1.8	2,091
South Leg Volumes																		
Approach	830	27	9	9	45		86		916	1,564	14	4	17	35		81		1,645
Depart	1,422	30	5	15	50		100		1,522	1,117	22	12	12	46		94		1,211
Total	2,252	57	14	24	95	4.0%	186	2.0	2,438	2,681	36	16	29	81	2.9%	175	2.2	2,856
East Leg Volumes																		
Approach	351	11	3	10	24		53		404	522	11	8	5	24		48		570
Depart	382	25	1	6	32		58		440	475	10	1	8	19		42		517
Total	733	36	4	16	56	7.1%	111	2.0	844	997	21	9	13	43	4.1%	90	2.1	1,087
West Leg Volumes																		
Approach	742	31	3	6	40		71		813	756	15	4	11	30		65		821
Depart	489	13	8	6	27		54		543	707	12	7	13	32		72		779
Total	1,231	44	11	12	67	5.2%	125	1.9	1,356	1,463	27	11	24	62	4.1%	137	2.2	1,600
All Legs																		
Approach	2,872	85	17	27	129		244		3,116	3,587	54	20	35	109		230		3,817
Depart	2,872	85	17	27	129		244		3,116	3,587	54	20	35	109		230		3,817
Total	5,744	170	34	54	258	4.3%	488	1.9	6,232	7,174	108	40	70	218	2.9%	460	2.1	7,634

Existing Peak Hour Volumes - Classification Counts

2 Riverside Ave at I-10 WB Ramps

	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	47	12	22	44	78	62.4%	194	2.5	241	100	5	17	18	40	28.6%	96	2.4	196
NT	520	15	5	12	32	5.8%	69	2.2	589	1,032	12	9	12	33	3.1%	72	2.2	1,104
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	842	21	6	8	35	4.0%	68	1.9	910	725	24	4	10	38	5.0%	74	1.9	799
SR	584	14	2	7	23	3.8%	46	2.0	630	369	6	7	3	16	4.2%	32	2.0	401
EL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
ER	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
WL	223	6	16	38	60	21.2%	155	2.6	378	166	25	21	41	87	34.4%	203	2.3	369
WT	0	0	0	1	1	100.0%	3	3.0	3	2	0	0	0	0	0.0%	0	0.0	2
WR	356	8	1	0	9	2.5%	14	1.6	370	540	6	0	8	14	2.5%	33	2.4	573
									3,121									3,444
North Leg Volumes																		
Approach	1,426	35	8	15	58		114		1,540	1,094	30	11	13	54		106		1,200
Depart	876	23	6	12	41		83		959	1,572	18	9	20	47		105		1,677
Total	2,302	58	14	27	99	4.1%	197	2.0	2,499	2,666	48	20	33	101	3.7%	211	2.1	2,877
South Leg Volumes																		
Approach	567	27	27	56	110		263		830	1,132	17	26	30	73		168		1,300
Depart	1,065	27	22	46	95		223		1,288	891	49	25	51	125		277		1,168
Total	1,632	54	49	102	205	11.2%	486	2.4	2,118	2,023	66	51	81	198	8.9%	445	2.2	2,468
East Leg Volumes																		
Approach	579	14	17	39	70		172		751	708	31	21	49	101		236		944
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Total	579	14	17	39	70	10.8%	172	2.5	751	708	31	21	49	101	12.5%	236	2.3	944
West Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	631	26	24	52	102		243		874	471	11	24	21	56		128		599
Total	631	26	24	52	102	13.9%	243	2.4	874	471	11	24	21	56	10.6%	128	2.3	599
All Legs																		
Approach	2,572	76	52	110	238		549		3,121	2,934	78	58	92	228		510		3,444
Depart	2,572	76	52	110	238		549		3,121	2,934	78	58	92	228		510		3,444
Total	5,144	152	104	220	476	8.5%	1,098	2.3	6,242	5,868	156	116	184	456	7.2%	1,020	2.2	6,888

Existing Peak Hour Volumes - Classification Counts

3 Riverside Ave at I-10 EB Ramps

	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	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	278	15	15	52	82	22.8%	209	2.5	487	617	14	23	21	58	8.6%	130	2.2	747
NR	70	6	6	54	66	48.5%	183	2.8	253	194	10	7	23	40	17.1%	98	2.5	292
SL	348	11	11	0	22	5.9%	39	1.8	387	355	8	2	2	12	3.3%	22	1.8	377
ST	679	10	10	44	64	8.6%	167	2.6	846	527	33	24	47	104	16.5%	239	2.3	766
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0
EL	147	4	4	2	10	6.4%	20	2.0	167	535	5	0	4	9	1.7%	20	2.2	555
ET	0	0	0	0	0	0.0%	0	0.0	0	5	0	0	1	1	16.7%	3	3.0	8
ER	269	10	10	55	75	21.8%	200	2.7	469	132	11	9	34	54	29.0%	137	2.5	269
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
									2,609									3,014
North Leg Volumes																		
Approach	1,027	21	21	44	86		206		1,233	882	41	26	49	116		261		1,143
Depart	425	19	19	54	92		229		654	1,152	19	23	25	67		150		1,302
Total	1,452	40	40	98	178	10.9%	435	2.4	1,887	2,034	60	49	74	183	8.3%	411	2.2	2,445
South Leg Volumes																		
Approach	348	21	21	106	148		392		740	811	24	30	44	98		228		1,039
Depart	948	20	20	99	139		367		1,315	659	44	33	81	158		376		1,035
Total	1,296	41	41	205	287	18.1%	759	2.6	2,055	1,470	68	63	125	256	14.8%	604	2.4	2,074
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Depart	418	17	17	54	88		222		640	554	18	9	26	53		123		677
Total	418	17	17	54	88	17.4%	222	2.5	640	554	18	9	26	53	8.7%	123	2.3	677
West Leg Volumes																		
Approach	416	14	14	57	85		220		636	672	16	9	39	64		160		832
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0
Total	416	14	14	57	85	17.0%	220	2.6	636	672	16	9	39	64	8.7%	160	2.5	832
All Legs																		
Approach	1,791	56	56	207	319		818		2,609	2,365	81	65	132	278		649		3,014
Depart	1,791	56	56	207	319		818		2,609	2,365	81	65	132	278		649		3,014
Total	3,582	112	112	414	638	15.1%	1,636	2.6	5,218	4,730	162	130	264	556	10.5%	1,298	2.3	6,028

Existing Peak Hour Volumes - Classification Counts

4 N Pepper Ave at W Valley Blvd

	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	198	10	1	2	13	6.2%	23	1.8	221	225	4	1	6	11	4.7%	26	2.4	251
NT	869	8	18	23	49	5.3%	117	2.4	986	923	9	8	38	55	5.6%	144	2.6	1,067
NR	89	5	0	1	6	6.3%	11	1.8	100	167	1	0	2	3	1.8%	8	2.7	175
SL	138	3	2	3	8	5.5%	18	2.3	156	116	1	0	0	1	0.9%	2	2.0	118
ST	977	13	33	35	81	7.7%	191	2.4	1,168	686	7	16	18	41	5.6%	97	2.4	783
SR	51	2	1	0	3	5.6%	5	1.7	56	59	3	0	1	4	6.3%	8	2.0	67
EL	70	4	0	2	6	7.9%	12	2.0	82	128	1	2	1	4	3.0%	9	2.3	137
ET	185	12	1	1	14	7.0%	23	1.6	208	293	5	2	0	7	2.3%	12	1.7	305
ER	202	11	3	3	17	7.8%	32	1.9	234	149	0	4	3	7	4.5%	17	2.4	166
WL	281	2	0	2	4	1.4%	9	2.3	290	183	1	1	0	2	1.1%	4	2.0	187
WT	200	8	2	1	11	5.2%	19	1.7	219	264	0	0	1	1	0.4%	3	3.0	267
WR	56	4	0	0	4	6.7%	6	1.5	62	123	2	1	1	4	3.1%	8	2.0	131
									3,782									3,654
North Leg Volumes																		
Approach	1,166	18	36	38	92		214		1,380	861	11	16	19	46		107		968
Depart	995	16	18	25	59		135		1,130	1,174	12	11	40	63		161		1,335
Total	2,161	34	54	63	151	6.5%	349	2.3	2,510	2,035	23	27	59	109	5.1%	268	2.5	2,303
South Leg Volumes																		
Approach	1,156	23	19	26	68		151		1,307	1,315	14	9	46	69		178		1,493
Depart	1,460	26	36	40	102		232		1,692	1,018	8	21	21	50		118		1,136
Total	2,616	49	55	66	170	6.1%	383	2.3	2,999	2,333	22	30	67	119	4.9%	296	2.5	2,629
East Leg Volumes																		
Approach	537	14	2	3	19		34		571	570	3	2	2	7		15		585
Depart	412	20	3	5	28		52		464	576	7	2	2	11		22		598
Total	949	34	5	8	47	4.7%	86	1.8	1,035	1,146	10	4	4	18	1.5%	37	2.1	1,183
West Leg Volumes																		
Approach	457	27	4	6	37		67		524	570	6	8	4	18		38		608
Depart	449	20	4	3	27		47		496	548	7	1	8	16		37		585
Total	906	47	8	9	64	6.6%	114	1.8	1,020	1,118	13	9	12	34	3.0%	75	2.2	1,193
All Legs																		
Approach	3,316	82	61	73	216		466		3,782	3,316	34	35	71	140		338		3,654
Depart	3,316	82	61	73	216		466		3,782	3,316	34	35	71	140		338		3,654
Total	6,632	164	122	146	432	6.1%	932	2.2	7,564	6,632	68	70	142	280	4.1%	676	2.4	7,308

APPENDIX D

**INTERSECTION ANALYSIS
WORKSHEETS**

2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_AM.vistro

Scenario 1 EX AM

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

10/14/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	EB Left	0.707	41.8	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.693	25.4	C
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.459	26.4	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	NB Left	0.573	32.8	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	41.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

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

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			E Valley Blvd		
Base Volume Input [veh/h]	315	520	81	55	895	33	49	304	460	167	195	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	315	520	81	55	895	33	49	304	460	167	195	42
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	88	144	23	15	249	9	14	84	128	46	54	12
Total Analysis Volume [veh/h]	350	578	90	61	994	37	54	338	511	186	217	47
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	36	0	11	30	0	11	55	0	18	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	44	44	5	36	36	5	41	41	14	50	50
g / C, Green / Cycle	0.11	0.37	0.37	0.04	0.30	0.30	0.04	0.34	0.34	0.12	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.12	0.12	0.03	0.19	0.19	0.03	0.09	0.32	0.10	0.06	0.03
s, saturation flow rate [veh/h]	3514	3618	1772	1810	3618	1865	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	381	1324	649	80	1092	563	72	1229	549	211	1507	673
d1, Uniform Delay [s]	52.98	27.53	27.55	56.71	36.00	36.01	57.03	28.85	38.27	52.18	21.72	21.03
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.28	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	9.28	0.69	1.42	13.63	2.68	5.13	14.41	0.12	16.22	11.27	0.04	0.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.34	0.34	0.76	0.62	0.62	0.75	0.28	0.93	0.88	0.14	0.07
d, Delay for Lane Group [s/veh]	62.26	28.22	28.97	70.34	38.68	41.14	71.44	28.97	54.48	63.45	21.77	21.08
Lane Group LOS	E	C	C	E	D	D	E	C	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.71	4.78	4.85	2.13	8.94	9.61	1.91	3.59	16.78	6.17	1.92	0.81
50th-Percentile Queue Length [ft/ln]	142.67	119.50	121.19	53.34	223.38	240.28	47.75	89.70	419.44	154.18	48.00	20.24
95th-Percentile Queue Length [veh/ln]	9.62	8.37	8.46	3.84	13.84	14.70	3.44	6.46	23.50	10.24	3.46	1.46
95th-Percentile Queue Length [ft/ln]	240.61	209.14	211.46	96.01	345.94	367.38	85.96	161.47	587.38	256.00	86.40	36.43

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	62.26	28.39	28.97	70.34	39.46	41.14	71.44	28.97	54.48	63.45	21.77	21.08
Movement LOS	E	C	C	E	D	D	E	C	D	E	C	C
d_A, Approach Delay [s/veh]	40.09			41.24			45.95			38.92		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	41.83											
Intersection LOS	D											
Intersection V/C	0.707											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.158	2.856	2.713	2.740
Crosswalk LOS	C	C	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	433	850	967
d_b, Bicycle Delay [s]	32.27	36.82	19.84	16.02
I_b,int, Bicycle LOS Score for Intersection	2.120	2.160	2.305	1.931
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.693

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	241	589	0	0	910	630	0	0	0	378	3	370
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	589	0	0	910	630	0	0	0	378	3	370
Peak Hour Factor	0.8800	0.8800	1.0000	1.0000	0.8800	0.8800	1.0000	1.0000	1.0000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	68	167	0	0	259	179	0	0	0	107	1	105
Total Analysis Volume [veh/h]	274	669	0	0	1034	716	0	0	0	430	3	420
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	15	76	0	0	61	0	0	0	0	0	0	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	11	88	73	73		24	24	24
g / C, Green / Cycle	0.09	0.73	0.61	0.61		0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.08	0.13	0.15	0.44		0.16	0.17	0.17
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1707	1615
c, Capacity [veh/h]	322	3787	4186	980		365	344	326
d1, Uniform Delay [s]	53.69	4.96	10.92	16.68		45.59	45.88	46.16
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	6.29	0.10	0.14	4.80		4.07	5.03	6.21
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.18	0.25	0.73		0.80	0.83	0.85
d, Delay for Lane Group [s/veh]	59.98	5.06	11.06	21.47		49.66	50.91	52.37
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.35	1.58	3.14	14.43		8.68	8.58	8.50
50th-Percentile Queue Length [ft/ln]	108.79	39.52	78.56	360.64		216.92	214.51	212.59
95th-Percentile Queue Length [veh/ln]	7.77	2.85	5.66	20.65		13.51	13.38	13.29
95th-Percentile Queue Length [ft/ln]	194.32	71.14	141.41	516.36		337.69	334.61	332.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	59.98	5.06	0.00	0.00	11.06	21.47	0.00	0.00	0.00	50.08	50.91	51.89
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	21.02				15.32		0.00		50.96			
Approach LOS	C				B		A		D			
d_I, Intersection Delay [s/veh]	25.41											
Intersection LOS	C											
Intersection V/C	0.693											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	2.233
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	950	0	667
d_b, Bicycle Delay [s]	9.60	16.54	60.00	26.67
I_b,int, Bicycle LOS Score for Intersection	2.078	2.281	4.132	2.967
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.459

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			T+T+T					
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	487	253	387	846	0	167	0	469	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	487	253	387	846	0	167	0	469	0	0	0
Peak Hour Factor	1.0000	0.8980	0.8980	0.8980	0.8980	1.0000	0.8980	0.8980	0.8980	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	136	70	108	236	0	46	0	131	0	0	0
Total Analysis Volume [veh/h]	0	542	282	431	942	0	186	0	522	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	68	68	17	89	23	23	23	
g / C, Green / Cycle	0.57	0.57	0.14	0.74	0.19	0.19	0.19	
(v / s)_i Volume / Saturation Flow Rate	0.15	0.17	0.12	0.26	0.10	0.16	0.16	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	1615	1615	
c, Capacity [veh/h]	2046	913	508	2689	344	307	307	
d1, Uniform Delay [s]	13.33	13.73	50.04	5.34	43.89	46.96	46.96	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.32	0.88	4.03	0.36	1.33	6.59	6.59	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.26	0.31	0.85	0.35	0.54	0.85	0.85	
d, Delay for Lane Group [s/veh]	13.64	14.60	54.07	5.70	45.21	53.56	53.56	
Lane Group LOS	B	B	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	3.78	4.18	6.58	3.73	5.13	8.08	8.08	
50th-Percentile Queue Length [ft/ln]	94.47	104.42	164.55	93.32	128.26	201.90	201.90	
95th-Percentile Queue Length [veh/ln]	6.80	7.52	10.79	6.72	8.85	12.74	12.74	
95th-Percentile Queue Length [ft/ln]	170.05	187.95	269.73	167.97	221.13	318.41	318.41	

Movement, Approach, & Intersection Results

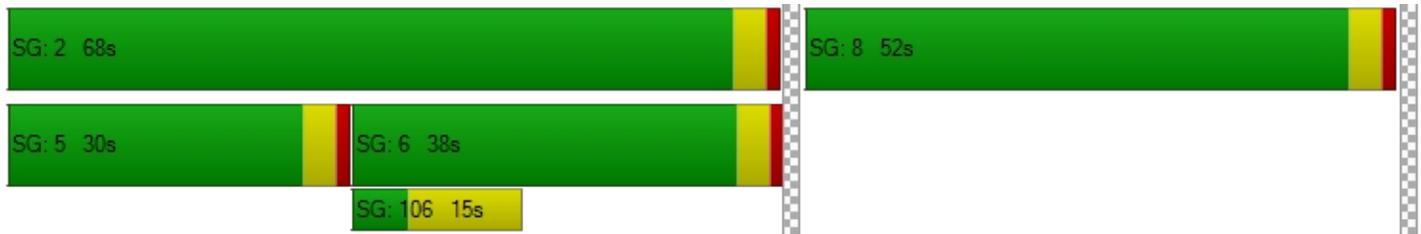
d_M, Delay for Movement [s/veh]	0.00	13.64	14.60	54.07	5.70	0.00	45.21	53.56	53.56	0.00	0.00	0.00
Movement LOS		B	B	D	A		D	D	D			
d_A, Approach Delay [s/veh]		13.97		20.88			51.37			0.00		
Approach LOS		B		C			D			A		
d_I, Intersection Delay [s/veh]	26.35											
Intersection LOS	C											
Intersection V/C	0.459											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000		0.000		0.000		2.187
Crosswalk LOS	F		F		F		B
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000
c_b, Capacity of the bicycle lane [bicycles/h]	567		1067		800		0
d_b, Bicycle Delay [s]	30.82		13.07		21.60		60.00
I_b,int, Bicycle LOS Score for Intersection	2.013		2.692		2.728		4.132
Bicycle LOS	B		B		B		D

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.573

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	221	986	100	156	1168	56	82	208	234	290	219	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	221	986	100	156	1168	56	82	208	234	290	219	62
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	62	274	28	43	325	16	23	58	65	81	61	17
Total Analysis Volume [veh/h]	246	1098	111	174	1301	62	91	232	261	323	244	69
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	39	0	12	37	0	22	52	0	17	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	61	61	8	59	59	5	22	22	13	30	30
g / C, Green / Cycle	0.08	0.51	0.51	0.07	0.49	0.49	0.04	0.18	0.18	0.11	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.21	0.07	0.05	0.25	0.25	0.03	0.06	0.16	0.09	0.09	0.09
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1856	3514	3618	1615	3514	1900	1758
c, Capacity [veh/h]	293	2637	823	229	1778	912	150	668	298	377	473	438
d1, Uniform Delay [s]	54.21	18.33	15.50	55.16	20.67	20.67	56.44	42.61	47.56	52.67	36.97	37.00
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.40	0.49	0.34	5.10	1.04	2.01	3.89	0.31	7.97	5.70	0.43	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.84	0.42	0.13	0.76	0.51	0.51	0.61	0.35	0.87	0.86	0.34	0.34
d, Delay for Lane Group [s/veh]	60.62	18.81	15.84	60.26	21.70	22.68	60.33	42.92	55.53	58.37	37.40	37.47
Lane Group LOS	E	B	B	E	C	C	E	D	E	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.92	6.37	1.68	2.75	8.68	9.16	1.44	3.04	8.23	5.08	3.97	3.72
50th-Percentile Queue Length [ft/ln]	98.01	159.15	42.02	68.76	217.07	228.93	35.95	76.04	205.71	126.96	99.31	92.93
95th-Percentile Queue Length [veh/ln]	7.06	10.50	3.03	4.95	13.52	14.12	2.59	5.48	12.93	8.77	7.15	6.69
95th-Percentile Queue Length [ft/ln]	176.41	262.60	75.64	123.77	337.88	353.00	64.71	136.88	323.32	219.35	178.76	167.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.62	18.81	15.84	60.26	22.00	22.68	60.33	42.92	55.53	58.37	37.42	37.47
Movement LOS	E	B	B	E	C	C	E	D	E	E	D	D
d_A, Approach Delay [s/veh]	25.65			26.36			51.27			48.07		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.85											
Intersection LOS	C											
Intersection V/C	0.573											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.226	3.081	2.879	2.655
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	550	800	717
d_b, Bicycle Delay [s]	30.10	31.54	21.60	24.70
I_b,int, Bicycle LOS Score for Intersection	2.360	2.405	2.041	2.084
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_PM.vistro

Scenario 1 EX PM

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

10/17/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	WB Left	0.620	38.1	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.503	23.2	C
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.494	27.4	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	SB Left	0.418	31.4	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	38.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

Intersection Setup

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

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			E Valley Blvd		
Base Volume Input [veh/h]	416	1089	140	80	651	50	99	297	425	135	313	122
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	416	1089	140	80	651	50	99	297	425	135	313	122
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	106	277	36	20	166	13	25	76	108	34	80	31
Total Analysis Volume [veh/h]	424	1109	143	81	663	51	101	302	433	137	319	124
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	39	0	11	30	0	20	56	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	52	52	7	43	43	8	35	35	10	37	37
g / C, Green / Cycle	0.13	0.43	0.43	0.06	0.36	0.36	0.07	0.29	0.29	0.08	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.12	0.23	0.23	0.04	0.13	0.13	0.06	0.08	0.27	0.08	0.09	0.08
s, saturation flow rate [veh/h]	3514	3618	1791	1810	3618	1832	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	469	1572	778	103	1295	656	129	1057	472	151	1100	491
d1, Uniform Delay [s]	51.25	24.97	24.98	55.88	28.45	28.48	54.79	32.81	41.09	54.55	31.88	31.49
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.18	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.81	1.30	2.61	12.43	0.80	1.59	9.79	0.15	11.85	17.86	0.14	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.90	0.53	0.53	0.79	0.37	0.37	0.78	0.29	0.92	0.91	0.29	0.25
d, Delay for Lane Group [s/veh]	58.07	26.26	27.59	68.31	29.25	30.07	64.59	32.96	52.94	72.41	32.02	31.75
Lane Group LOS	E	C	C	E	C	C	E	C	D	E	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.71	8.97	9.18	2.78	5.18	5.43	3.36	3.44	13.81	4.85	3.57	2.76
50th-Percentile Queue Length [ft/ln]	167.82	224.28	229.53	69.41	129.41	135.75	83.92	85.90	345.34	121.24	89.33	69.08
95th-Percentile Queue Length [veh/ln]	10.96	13.88	14.15	5.00	8.91	9.25	6.04	6.18	19.91	8.46	6.43	4.97
95th-Percentile Queue Length [ft/ln]	274.05	347.08	353.76	124.94	222.69	231.29	151.06	154.62	497.72	211.53	160.80	124.35

Movement, Approach, & Intersection Results

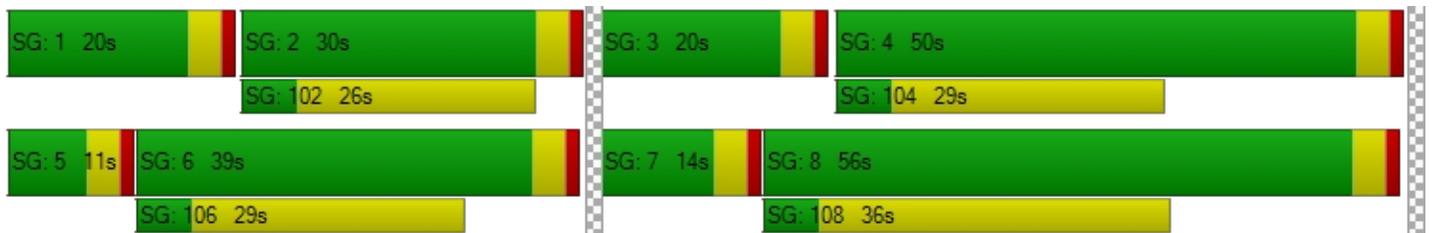
d_M, Delay for Movement [s/veh]	58.07	26.59	27.59	68.31	29.49	30.07	64.59	32.96	52.94	72.41	32.02	31.75
Movement LOS	E	C	C	E	C	C	E	C	D	E	C	C
d_A, Approach Delay [s/veh]	34.64			33.48			47.13			41.50		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	38.11											
Intersection LOS	D											
Intersection V/C	0.620											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.180	2.906	2.733	2.763
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	433	867	767
d_b, Bicycle Delay [s]	30.10	36.82	19.27	22.82
I_b,int, Bicycle LOS Score for Intersection	2.481	1.997	2.249	2.038
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	23.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	196	1104	0	0	799	401	0	0	0	369	2	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	196	1104	0	0	799	401	0	0	0	369	2	573
Peak Hour Factor	0.9890	0.9890	1.0000	1.0000	0.9890	0.9890	1.0000	1.0000	1.0000	0.9890	0.9890	0.9890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	50	279	0	0	202	101	0	0	0	93	1	145
Total Analysis Volume [veh/h]	198	1116	0	0	808	405	0	0	0	373	2	579
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	47	0	0	30	0	0	0	0	0	0	73	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	9	85	72	72		27	27	27
g / C, Green / Cycle	0.07	0.71	0.60	0.60		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.06	0.22	0.12	0.25		0.18	0.19	0.20
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1646	1615
c, Capacity [veh/h]	260	3647	4123	965		414	376	369
d1, Uniform Delay [s]	54.53	6.67	11.01	12.98		43.37	44.23	44.42
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.60	0.22	0.11	1.34		3.11	5.18	5.84
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.31	0.20	0.42		0.77	0.84	0.86
d, Delay for Lane Group [s/veh]	59.12	6.89	11.12	14.32		46.48	49.41	50.25
Lane Group LOS	E	A	B	B		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.10	3.36	2.43	6.04		9.24	9.52	9.60
50th-Percentile Queue Length [ft/ln]	77.56	84.09	60.86	150.98		230.88	238.10	240.10
95th-Percentile Queue Length [veh/ln]	5.58	6.05	4.38	10.07		14.22	14.59	14.69
95th-Percentile Queue Length [ft/ln]	139.61	151.36	109.54	251.74		355.48	364.63	367.16

Movement, Approach, & Intersection Results

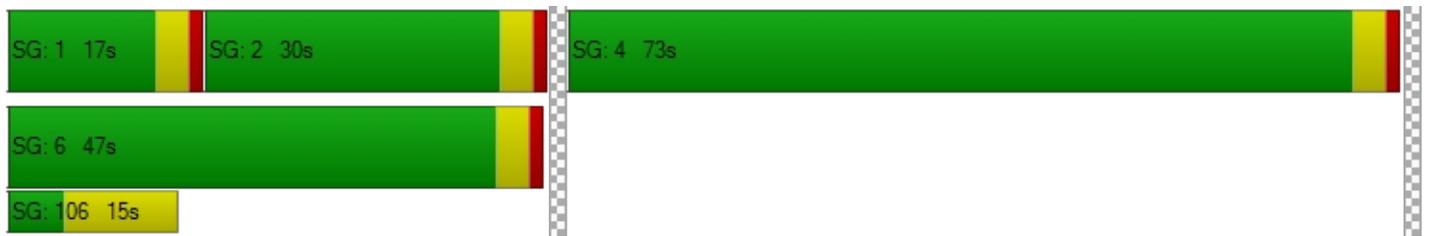
d_M, Delay for Movement [s/veh]	59.12	6.89	0.00	0.00	11.12	14.32	0.00	0.00	0.00	46.91	49.41	49.87
Movement LOS	E	A			B	B				D	D	D
d_A, Approach Delay [s/veh]	14.76				12.19		0.00		48.70			
Approach LOS	B				B		A		D			
d_I, Intersection Delay [s/veh]	23.17											
Intersection LOS	C											
Intersection V/C	0.503											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	2.265
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	717	433	0	1150
d_b, Bicycle Delay [s]	24.70	36.82	60.00	10.84
I_b,int, Bicycle LOS Score for Intersection	2.282	2.060	4.132	3.134
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	27.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			T+T+T					
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	747	292	377	766	0	555	8	269	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	747	292	377	766	0	555	8	269	0	0	0
Peak Hour Factor	1.0000	0.9760	0.9760	0.9760	0.9760	1.0000	0.9760	0.9760	0.9760	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	191	75	97	196	0	142	2	69	0	0	0
Total Analysis Volume [veh/h]	0	765	299	386	785	0	569	8	276	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	68	68	16	88	24	24	24	
g / C, Green / Cycle	0.57	0.57	0.13	0.73	0.20	0.20	0.20	
(v / s)_i Volume / Saturation Flow Rate	0.20	0.21	0.11	0.22	0.16	0.16	0.17	
s, saturation flow rate [veh/h]	3618	1654	3514	3618	1810	1811	1615	
c, Capacity [veh/h]	2056	940	463	2653	362	362	323	
d1, Uniform Delay [s]	13.91	14.23	50.80	5.44	45.72	45.72	46.28	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.46	1.16	3.98	0.28	4.11	4.10	6.27	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.35	0.38	0.83	0.30	0.80	0.80	0.85	
d, Delay for Lane Group [s/veh]	14.37	15.39	54.79	5.73	49.83	49.81	52.55	
Lane Group LOS	B	B	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	5.20	5.48	5.91	3.10	8.61	8.61	8.43	
50th-Percentile Queue Length [ft/ln]	129.88	137.09	147.70	77.62	215.14	215.17	210.85	
95th-Percentile Queue Length [veh/ln]	8.93	9.32	9.89	5.59	13.42	13.42	13.20	
95th-Percentile Queue Length [ft/ln]	223.33	233.11	247.35	139.71	335.42	335.46	329.92	

Movement, Approach, & Intersection Results

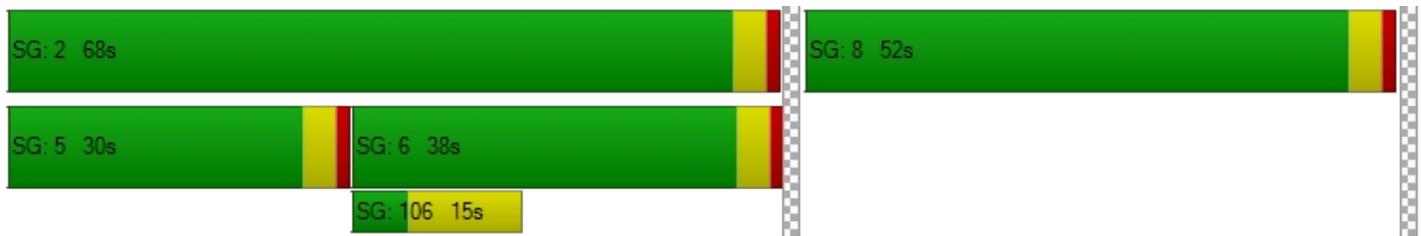
d_M, Delay for Movement [s/veh]	0.00	14.44	15.39	54.79	5.73	0.00	49.82	49.81	52.55	0.00	0.00	0.00
Movement LOS		B	B	D	A		D	D	D			
d_A, Approach Delay [s/veh]		14.71		21.90			50.70			0.00		
Approach LOS		B		C			D			A		
d_I, Intersection Delay [s/veh]	27.38											
Intersection LOS	C											
Intersection V/C	0.494											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000		0.000		0.000		2.181
Crosswalk LOS	F		F		F		B
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000
c_b, Capacity of the bicycle lane [bicycles/h]	567		1067		800		0
d_b, Bicycle Delay [s]	30.82		13.07		21.60		60.00
I_b,int, Bicycle LOS Score for Intersection	2.145		2.526		2.967		4.132
Bicycle LOS	B		B		C		D

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	31.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.418

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	251	1067	175	118	783	67	137	305	166	187	267	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	251	1067	175	118	783	67	137	305	166	187	267	131
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	282	46	31	207	18	36	81	44	49	70	35
Total Analysis Volume [veh/h]	265	1127	185	125	827	71	145	322	175	197	282	138
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	44	0	10	36	0	11	52	0	14	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	11	73	73	6	68	68	7	16	16	9	18	18
g / C, Green / Cycle	0.09	0.61	0.61	0.05	0.57	0.57	0.06	0.13	0.13	0.07	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.11	0.04	0.16	0.17	0.04	0.09	0.11	0.06	0.12	0.12
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1824	3514	3618	1615	3514	1900	1693
c, Capacity [veh/h]	326	3166	988	176	2059	1038	200	480	214	254	281	251
d1, Uniform Delay [s]	53.42	11.56	10.21	56.15	13.34	13.35	55.67	49.56	50.63	54.70	49.27	49.36
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.92	0.31	0.42	5.24	0.36	0.71	4.95	1.64	7.46	5.02	4.79	5.69
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.36	0.19	0.71	0.29	0.29	0.73	0.67	0.82	0.78	0.78	0.80
d, Delay for Lane Group [s/veh]	58.34	11.87	10.63	61.39	13.70	14.06	60.62	51.20	58.09	59.72	54.05	55.05
Lane Group LOS	E	B	B	E	B	B	E	D	E	E	D	E
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.14	4.91	2.21	1.99	4.19	4.35	2.30	4.71	5.56	3.10	6.74	6.17
50th-Percentile Queue Length [ft/ln]	103.59	122.84	55.32	49.83	104.82	108.70	57.42	117.81	138.89	77.58	168.60	154.21
95th-Percentile Queue Length [veh/ln]	7.46	8.55	3.98	3.59	7.55	7.77	4.13	8.27	9.42	5.59	11.00	10.24
95th-Percentile Queue Length [ft/ln]	186.47	213.72	99.57	89.70	188.68	194.20	103.35	206.81	235.52	139.64	275.08	256.04

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.34	11.87	10.63	61.39	13.80	14.06	60.62	51.20	58.09	59.72	54.27	55.05
Movement LOS	E	B	B	E	B	B	E	D	E	E	D	E
d_A, Approach Delay [s/veh]	19.54			19.63			55.21			56.19		
Approach LOS	B			B			E			E		
d_I, Intersection Delay [s/veh]	31.36											
Intersection LOS	C											
Intersection V/C	0.418											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.165	3.037	2.894	2.671
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	533	800	850
d_b, Bicycle Delay [s]	26.67	32.27	21.60	19.84
I_b,int, Bicycle LOS Score for Intersection	2.427	2.122	2.089	2.069
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_AM.vistro

Scenario 2 OY CUM AM

Report File: K:\...\2. OY CUM AM.pdf

10/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	NB Left	0.790	49.3	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.801	37.8	D
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.592	27.6	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	NB Left	0.609	34.3	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	49.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.790

Intersection Setup

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

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			E Valley Blvd		
Base Volume Input [veh/h]	315	520	81	55	895	33	49	304	460	167	195	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	43	88	12	8	136	11	2	8	9	9	16	8
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	371	629	96	65	1067	45	53	324	487	183	219	52
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	175	27	18	296	13	15	90	135	51	61	14
Total Analysis Volume [veh/h]	412	699	107	72	1186	50	59	360	541	203	243	58
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	36	0	11	30	0	11	55	0	18	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	41	41	6	34	34	5	43	43	14	52	52
g / C, Green / Cycle	0.11	0.34	0.34	0.05	0.28	0.28	0.04	0.36	0.36	0.12	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.12	0.15	0.15	0.04	0.23	0.23	0.03	0.10	0.33	0.11	0.07	0.04
s, saturation flow rate [veh/h]	3514	3618	1774	1810	3618	1861	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	381	1234	605	93	1028	529	78	1293	577	211	1560	696
d1, Uniform Delay [s]	53.50	30.62	30.63	56.24	39.70	39.70	56.80	27.51	37.24	52.73	20.82	20.14
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.31	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	47.48	1.13	2.30	12.81	6.31	11.66	13.83	0.12	17.73	20.88	0.05	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.44	0.44	0.78	0.79	0.79	0.76	0.28	0.94	0.96	0.16	0.08
d, Delay for Lane Group [s/veh]	100.98	31.75	32.93	69.05	46.02	51.36	70.62	27.62	54.97	73.62	20.86	20.19
Lane Group LOS	F	C	C	E	D	D	E	C	D	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.24	6.25	6.34	2.49	11.95	13.08	2.07	3.73	17.93	7.30	2.10	0.98
50th-Percentile Queue Length [ft/ln]	206.00	156.25	158.48	62.15	298.76	327.07	51.74	93.17	448.16	182.44	52.58	24.42
95th-Percentile Queue Length [veh/ln]	13.35	10.35	10.47	4.47	17.62	19.01	3.73	6.71	24.87	11.73	3.79	1.76
95th-Percentile Queue Length [ft/ln]	333.82	258.75	261.71	111.87	440.49	475.36	93.14	167.71	621.75	293.20	94.65	43.95

Movement, Approach, & Intersection Results

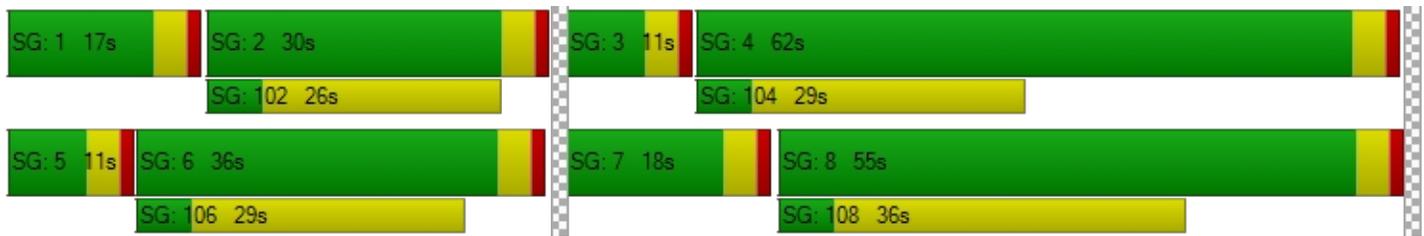
d_M, Delay for Movement [s/veh]	100.98	32.02	32.93	69.05	47.68	51.36	70.62	27.62	54.97	73.62	20.86	20.19
Movement LOS	F	C	C	E	D	D	E	C	D	E	C	C
d_A, Approach Delay [s/veh]	55.43			49.00			45.68			42.03		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	49.28											
Intersection LOS	D											
Intersection V/C	0.790											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.205	2.905	2.739	2.754
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	433	850	967
d_b, Bicycle Delay [s]	32.27	36.82	19.84	16.02
I_b,int, Bicycle LOS Score for Intersection	2.230	2.279	2.352	1.975
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	37.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	241	589	0	0	910	630	0	0	0	378	3	370
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0000	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	91	115	0	0	145	9	0	0	0	144	0	27
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	342	728	0	0	1091	664	0	0	0	537	3	412
Peak Hour Factor	0.8800	0.8800	1.0000	1.0000	0.8800	0.8800	1.0000	1.0000	1.0000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	207	0	0	310	189	0	0	0	153	1	117
Total Analysis Volume [veh/h]	389	827	0	0	1240	755	0	0	0	610	3	468
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	15	76	0	0	61	0	0	0	0	0	0	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	11	82	67	67		30	30	30
g / C, Green / Cycle	0.09	0.68	0.56	0.56		0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.18	0.47		0.20	0.21	0.22
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1747	1615
c, Capacity [veh/h]	322	3520	3830	896		458	443	409
d1, Uniform Delay [s]	54.50	7.31	14.48	22.31		41.77	42.15	43.06
k, delay calibration	0.11	0.50	0.50	0.50		0.16	0.18	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	99.98	0.16	0.22	9.46		4.47	5.92	11.56
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.23	0.32	0.84		0.79	0.81	0.88
d, Delay for Lane Group [s/veh]	154.48	7.47	14.71	31.77		46.25	48.07	54.62
Lane Group LOS	F	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.33	2.60	4.57	19.28		10.48	10.72	11.53
50th-Percentile Queue Length [ft/ln]	233.26	65.01	114.26	481.96		261.90	268.08	288.14
95th-Percentile Queue Length [veh/ln]	15.31	4.68	8.08	26.48		15.78	16.09	17.09
95th-Percentile Queue Length [ft/ln]	382.84	117.01	201.91	661.99		394.61	402.34	427.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	154.48	7.47	0.00	0.00	14.71	31.77	0.00	0.00	0.00	46.99	48.07	53.12
Movement LOS	F	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	54.50			21.16			0.00			49.65		
Approach LOS	D			C			A			D		
d_I, Intersection Delay [s/veh]	37.78											
Intersection LOS	D											
Intersection V/C	0.801											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	2.307
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	950	0	667
d_b, Bicycle Delay [s]	9.60	16.54	60.00	26.67
I_b,int, Bicycle LOS Score for Intersection	2.228	2.383	4.132	3.343
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	27.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			T+T+T					
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	487	253	387	846	0	167	0	469	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	179	91	9	280	0	27	0	144	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	685	354	411	1160	0	201	0	632	0	0	0
Peak Hour Factor	1.0000	0.8980	0.8980	0.8980	0.8980	1.0000	0.8980	0.8980	0.8980	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	191	99	114	323	0	56	0	176	0	0	0
Total Analysis Volume [veh/h]	0	763	394	458	1292	0	224	0	704	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	60	60	18	82	30	30	30	
g / C, Green / Cycle	0.50	0.50	0.15	0.69	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.24	0.13	0.36	0.12	0.22	0.22	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	1615	1615	
c, Capacity [veh/h]	1808	807	535	2479	449	401	401	
d1, Uniform Delay [s]	19.04	19.87	49.59	9.25	38.71	43.37	43.37	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.13	0.13	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.73	2.11	4.07	0.79	0.86	7.23	7.23	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.42	0.49	0.86	0.52	0.50	0.88	0.88	
d, Delay for Lane Group [s/veh]	19.76	21.98	53.66	10.04	39.57	50.60	50.60	
Lane Group LOS	B	C	D	B	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	6.84	7.65	6.99	7.91	5.78	10.79	10.79	
50th-Percentile Queue Length [ft/ln]	171.10	191.34	174.66	197.76	144.47	269.75	269.75	
95th-Percentile Queue Length [veh/ln]	11.13	12.19	11.32	12.52	9.72	16.18	16.18	
95th-Percentile Queue Length [ft/ln]	278.36	304.77	283.03	313.07	243.03	404.43	404.43	

Movement, Approach, & Intersection Results

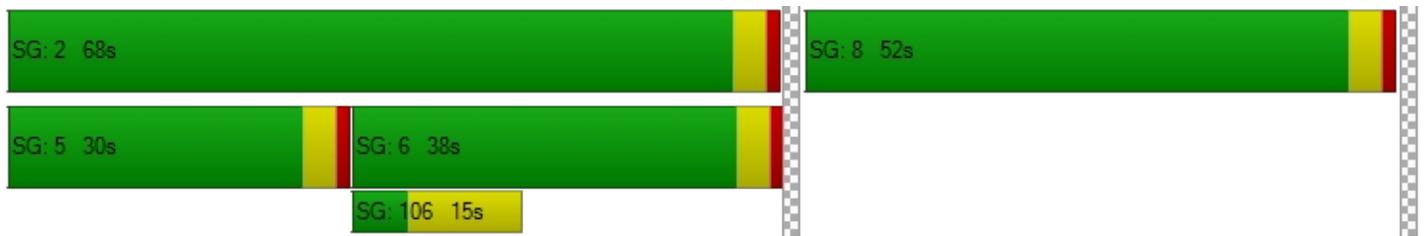
d_M, Delay for Movement [s/veh]	0.00	19.76	21.98	53.66	10.04	0.00	39.57	50.60	50.60	0.00	0.00	0.00
Movement LOS		B	C	D	B		D	D	D			
d_A, Approach Delay [s/veh]	20.52			21.45			47.94			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	27.58											
Intersection LOS	C											
Intersection V/C	0.592											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			0.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			0.00			51.34		
l_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			0.000			2.232		
Crosswalk LOS	F			F			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	567			1067			800			0		
d_b, Bicycle Delay [s]	30.82			13.07			21.60			60.00		
l_b,int, Bicycle LOS Score for Intersection	2.196			3.003			3.091			4.132		
Bicycle LOS	B			C			C			D		

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	221	986	100	156	1168	56	82	208	234	290	219	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	12	4	0	0	1	6	9	0	12	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	242	1029	104	162	1216	64	94	216	255	302	228	64
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	286	29	45	339	18	26	60	71	84	63	18
Total Analysis Volume [veh/h]	269	1146	116	180	1354	71	105	241	284	336	254	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	39	0	12	37	0	22	52	0	17	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	59	59	8	57	57	6	24	24	13	31	31
g / C, Green / Cycle	0.08	0.49	0.49	0.07	0.48	0.48	0.05	0.20	0.20	0.11	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.07	0.05	0.26	0.26	0.03	0.07	0.18	0.10	0.09	0.09
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1852	3514	3618	1615	3514	1900	1759
c, Capacity [veh/h]	293	2550	796	234	1722	881	167	720	321	381	494	457
d1, Uniform Delay [s]	54.60	19.84	16.64	55.09	22.28	22.28	56.12	41.24	46.71	52.75	36.05	36.08
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.42	0.58	0.39	5.24	1.26	2.44	3.89	0.27	7.97	6.80	0.41	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.45	0.15	0.77	0.55	0.55	0.63	0.33	0.88	0.88	0.34	0.34
d, Delay for Lane Group [s/veh]	66.02	20.41	17.03	60.33	23.54	24.72	60.01	41.51	54.67	59.55	36.46	36.52
Lane Group LOS	E	C	B	E	C	C	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.49	7.01	1.84	2.85	9.58	10.11	1.65	3.10	8.92	5.35	4.07	3.81
50th-Percentile Queue Length [ft/ln]	112.37	175.27	45.91	71.20	239.59	252.64	41.34	77.59	223.08	133.63	101.80	95.17
95th-Percentile Queue Length [veh/ln]	7.97	11.35	3.31	5.13	14.66	15.32	2.98	5.59	13.82	9.14	7.33	6.85
95th-Percentile Queue Length [ft/ln]	199.30	283.83	82.64	128.17	366.52	382.97	74.41	139.66	345.55	228.42	183.24	171.31

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	66.02	20.41	17.03	60.33	23.90	24.72	60.01	41.51	54.67	59.55	36.48	36.52
Movement LOS	E	C	B	E	C	C	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	28.17			28.02			50.53			48.21		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.29											
Intersection LOS	C											
Intersection V/C	0.609											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.244	3.097	2.890	2.663
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	550	800	717
d_b, Bicycle Delay [s]	30.10	31.54	21.60	24.70
I_b,int, Bicycle LOS Score for Intersection	2.402	2.442	2.079	2.105
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_PM.vistro

Scenario 2 OY CUM PM

Report File: K:\...\2. OY CUM PM.pdf

10/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	WB Left	0.716	42.7	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.609	26.2	C
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.644	28.2	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	SB Left	0.446	32.0	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	42.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.716

Intersection Setup

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

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	416	1089	140	80	651	50	99	297	425	135	313	122
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	13	139	12	11	93	3	11	18	44	14	11	11
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	446	1272	158	94	770	55	114	327	486	154	337	138
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	114	324	40	24	196	14	29	83	124	39	86	35
Total Analysis Volume [veh/h]	454	1295	161	96	784	56	116	333	495	157	343	141
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	39	0	11	30	0	20	56	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	47	47	7	38	38	10	40	40	10	40	40
g / C, Green / Cycle	0.13	0.40	0.40	0.06	0.32	0.32	0.08	0.33	0.33	0.08	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.13	0.27	0.27	0.05	0.15	0.15	0.06	0.09	0.31	0.09	0.09	0.09
s, saturation flow rate [veh/h]	3514	3618	1795	1810	3618	1836	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	469	1429	709	106	1158	588	145	1194	533	151	1205	538
d1, Uniform Delay [s]	51.75	30.02	30.08	56.18	32.79	32.81	54.25	29.67	38.84	55.00	29.47	29.23
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.25	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.28	2.63	5.29	23.48	1.43	2.82	9.68	0.13	15.01	45.23	0.13	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.68	0.68	0.91	0.48	0.48	0.80	0.28	0.93	1.04	0.28	0.26
d, Delay for Lane Group [s/veh]	65.03	32.65	35.37	79.67	34.22	35.64	63.92	29.79	53.85	100.23	29.60	29.49
Lane Group LOS	E	C	D	E	C	D	E	C	D	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.64	11.99	12.51	3.58	6.73	7.09	3.84	3.59	16.11	6.45	3.68	3.02
50th-Percentile Queue Length [ft/ln]	191.08	299.87	312.70	89.46	168.30	177.37	95.89	89.71	402.69	161.17	92.08	75.60
95th-Percentile Queue Length [veh/ln]	12.18	17.67	18.31	6.44	10.99	11.46	6.90	6.46	22.69	10.76	6.63	5.44
95th-Percentile Queue Length [ft/ln]	304.43	441.86	457.70	161.02	274.68	286.58	172.60	161.48	567.24	269.06	165.74	136.08

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.03	33.33	35.37	79.67	34.63	35.64	63.92	29.79	53.85	100.23	29.60	29.49
Movement LOS	E	C	D	E	C	D	E	C	D	F	C	C
d_A, Approach Delay [s/veh]	41.04			39.31			46.60			46.88		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	42.70											
Intersection LOS	D											
Intersection V/C	0.716											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.227	2.956	2.760	2.781
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	433	867	767
d_b, Bicycle Delay [s]	30.10	36.82	19.27	22.82
I_b,int, Bicycle LOS Score for Intersection	2.610	2.074	2.338	2.088
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	196	1104	0	0	799	401	0	0	0	369	2	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0000	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	148	152	0	0	123	30	0	0	0	96	0	13
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	352	1300	0	0	954	447	0	0	0	480	2	609
Peak Hour Factor	0.9890	0.9890	1.0000	1.0000	0.9890	0.9890	1.0000	1.0000	1.0000	0.9890	0.9890	0.9890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	329	0	0	241	113	0	0	0	121	1	154
Total Analysis Volume [veh/h]	356	1314	0	0	965	452	0	0	0	485	2	616
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	47	0	0	30	0	0	0	0	0	0	73	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	13	81	64	64		31	31	31
g / C, Green / Cycle	0.11	0.67	0.53	0.53		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.14	0.28		0.20	0.22	0.23
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1674	1615
c, Capacity [veh/h]	381	3476	3657	856		474	438	423
d1, Uniform Delay [s]	53.08	8.67	15.41	18.41		41.04	41.91	42.34
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	10.76	0.31	0.18	2.33		2.77	4.37	5.61
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.38	0.26	0.53		0.78	0.84	0.87
d, Delay for Lane Group [s/veh]	63.84	8.99	15.59	20.74		43.82	46.28	47.96
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.88	4.83	3.63	8.57		10.40	10.77	11.01
50th-Percentile Queue Length [ft/ln]	147.12	120.65	90.67	214.24		259.89	269.36	275.18
95th-Percentile Queue Length [veh/ln]	9.86	8.43	6.53	13.37		15.68	16.16	16.45
95th-Percentile Queue Length [ft/ln]	246.58	210.72	163.20	334.26		392.08	403.94	411.21

Movement, Approach, & Intersection Results

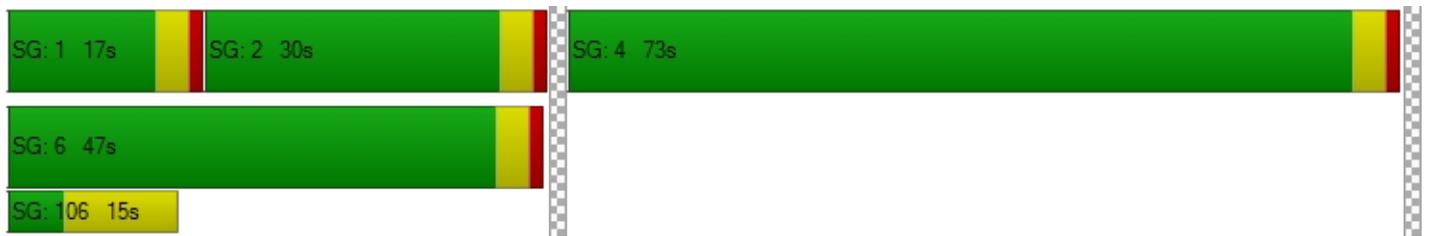
d_M, Delay for Movement [s/veh]	63.84	8.99	0.00	0.00	15.59	20.74	0.00	0.00	0.00	44.41	46.28	47.28
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	20.68				17.23		0.00		46.02			
Approach LOS	C				B		A		D			
d_I, Intersection Delay [s/veh]	26.18											
Intersection LOS	C											
Intersection V/C	0.609											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		51.34	
I_p,int, Pedestrian LOS Score for Intersection	0.000		0.000		0.000		2.314	
Crosswalk LOS	F		F		F		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	717		433		0		1150	
d_b, Bicycle Delay [s]	24.70		36.82		60.00		10.84	
I_b,int, Bicycle LOS Score for Intersection	2.478		2.144		4.132		3.380	
Bicycle LOS	B		B		D		C	

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.644

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration							+					
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	747	292	377	766	0	555	8	269	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	285	148	30	189	0	13	0	96	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1062	452	422	986	0	590	8	376	0	0	0
Peak Hour Factor	1.0000	0.9760	0.9760	0.9760	0.9760	1.0000	0.9760	0.9760	0.9760	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	272	116	108	253	0	151	2	96	0	0	0
Total Analysis Volume [veh/h]	0	1088	463	432	1010	0	605	8	385	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	62	62	17	84	28	28	28	
g / C, Green / Cycle	0.52	0.52	0.14	0.70	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.32	0.12	0.28	0.18	0.19	0.21	
s, saturation flow rate [veh/h]	3618	1641	3514	3618	1810	1778	1615	
c, Capacity [veh/h]	1874	850	509	2518	429	422	383	
d1, Uniform Delay [s]	19.53	20.36	50.02	7.69	42.78	42.95	43.97	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.18	3.23	4.03	0.48	3.03	3.33	6.08	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.55	0.61	0.85	0.40	0.78	0.79	0.87	
d, Delay for Lane Group [s/veh]	20.70	23.59	54.05	8.16	45.81	46.28	50.05	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.84	10.70	6.60	5.24	9.55	9.62	10.10	
50th-Percentile Queue Length [ft/ln]	245.96	267.57	164.92	130.90	238.84	240.48	252.38	
95th-Percentile Queue Length [veh/ln]	14.98	16.07	10.81	8.99	14.62	14.71	15.31	
95th-Percentile Queue Length [ft/ln]	374.56	401.70	270.23	224.72	365.57	367.64	382.65	

Movement, Approach, & Intersection Results

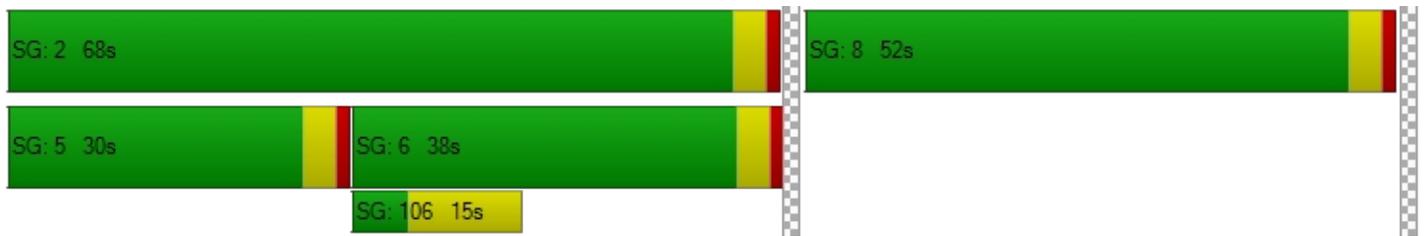
d_M, Delay for Movement [s/veh]	0.00	20.85	23.59	54.05	8.16	0.00	46.02	46.28	49.54	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]		21.67		21.91			47.38			0.00		
Approach LOS		C		C			D			A		
d_I, Intersection Delay [s/veh]		28.18										
Intersection LOS		C										
Intersection V/C		0.644										

Other Modes

g_Walk,mi, Effective Walk Time [s]		0.0		0.0		0.0		9.0			
M_corner, Corner Circulation Area [ft ² /ped]		0.00		0.00		0.00		0.00			
M_CW, Crosswalk Circulation Area [ft ² /ped]		0.00		0.00		0.00		0.00			
d_p, Pedestrian Delay [s]		0.00		0.00		0.00		51.34			
I_p,int, Pedestrian LOS Score for Intersection		0.000		0.000		0.000		2.249			
Crosswalk LOS		F		F		F		B			
s_b, Saturation Flow Rate of the bicycle lane		2000		2000		2000		2000			
c_b, Capacity of the bicycle lane [bicycles/h]		567		1067		800		0			
d_b, Bicycle Delay [s]		30.82		13.07		21.60		60.00			
I_b,int, Bicycle LOS Score for Intersection		2.413		2.749		3.206		4.132			
Bicycle LOS		B		B		C		D			

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	251	1067	175	118	783	67	137	305	166	187	267	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	17	1	0	0	3	11	8	0	17	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	278	1111	182	123	817	81	150	317	190	194	278	136
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	293	48	32	216	21	40	84	50	51	73	36
Total Analysis Volume [veh/h]	294	1173	192	130	863	86	158	335	201	205	294	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	44	0	10	36	0	11	52	0	14	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	71	71	6	65	65	7	18	18	9	20	20
g / C, Green / Cycle	0.10	0.59	0.59	0.05	0.54	0.54	0.06	0.15	0.15	0.07	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.12	0.04	0.17	0.18	0.04	0.09	0.12	0.06	0.12	0.12
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1813	3514	3618	1615	3514	1900	1693
c, Capacity [veh/h]	353	3071	958	176	1964	984	205	538	240	262	314	279
d1, Uniform Delay [s]	52.98	12.83	11.26	56.23	15.19	15.20	55.71	47.90	49.65	54.58	47.60	47.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.13	0.36	0.47	5.99	0.43	0.87	6.03	1.18	7.50	5.10	3.34	3.91
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.38	0.20	0.74	0.32	0.32	0.77	0.62	0.84	0.78	0.73	0.74
d, Delay for Lane Group [s/veh]	58.11	13.19	11.73	62.22	15.62	16.07	61.74	49.09	57.14	59.67	50.94	51.59
Lane Group LOS	E	B	B	E	B	B	E	D	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.60	5.49	2.45	2.09	4.84	4.99	2.53	4.80	6.35	3.23	6.83	6.21
50th-Percentile Queue Length [ft/ln]	114.98	137.29	61.19	52.22	120.96	124.68	63.24	119.89	158.87	80.74	170.76	155.37
95th-Percentile Queue Length [veh/ln]	8.12	9.33	4.41	3.76	8.45	8.65	4.55	8.39	10.49	5.81	11.12	10.30
95th-Percentile Queue Length [ft/ln]	202.91	233.37	110.14	94.00	211.14	216.24	113.83	209.67	262.22	145.33	277.92	257.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.11	13.19	11.73	62.22	15.74	16.07	61.74	49.09	57.14	59.67	51.08	51.59
Movement LOS	E	B	B	E	B	B	E	D	E	E	D	D
d_A, Approach Delay [s/veh]	20.98			21.37			54.30			53.93		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.96											
Intersection LOS	C											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.182	3.052	2.907	2.679
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	533	800	850
d_b, Bicycle Delay [s]	26.67	32.27	21.60	19.84
I_b,int, Bicycle LOS Score for Intersection	2.472	2.153	2.132	2.090
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_AM.vistro

Scenario 3 OY CUM WP AM

Report File: K:\...\3. OY CUM WP AM.pdf

10/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	NB Left	0.794	49.8	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.805	37.9	D
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.593	27.7	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	NB Left	0.609	34.3	C
101	W Valley Blvd at Project Driveway 1	Two-way stop	HCM 7th Edition	SB Right	0.001	10.1	B
102	W Valley Blvd at Project Driveway 2	Two-way stop	HCM 7th Edition	SB Right	0.010	10.1	B
103	W Valley Blvd at Project Driveway 3	Two-way stop	HCM 7th Edition	SB Left	0.003	17.6	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	49.8
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

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

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	315	520	81	55	895	33	49	304	460	167	195	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	43	88	12	8	136	11	2	8	9	9	16	8
Site-Generated Trips [veh/h]	0	0	23	5	0	0	0	4	0	7	1	1
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	371	629	119	70	1067	45	53	328	487	190	220	53
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	103	175	33	19	296	13	15	91	135	53	61	15
Total Analysis Volume [veh/h]	412	699	132	78	1186	50	59	364	541	211	244	59
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	17	36	0	11	30	0	11	55	0	18	62	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	13	41	41	7	34	34	5	43	43	14	52	52
g / C, Green / Cycle	0.11	0.34	0.34	0.05	0.28	0.28	0.04	0.36	0.36	0.12	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.12	0.15	0.16	0.04	0.23	0.23	0.03	0.10	0.33	0.12	0.07	0.04
s, saturation flow rate [veh/h]	3514	3618	1750	1810	3618	1861	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	381	1221	590	100	1028	529	78	1293	577	211	1560	696
d1, Uniform Delay [s]	53.50	31.16	31.17	55.99	39.71	39.71	56.80	27.53	37.24	53.00	20.82	20.15
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.31	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	47.48	1.24	2.56	12.52	6.32	11.67	13.83	0.12	17.71	28.67	0.05	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.08	0.46	0.46	0.78	0.79	0.79	0.76	0.28	0.94	1.00	0.16	0.08
d, Delay for Lane Group [s/veh]	100.98	32.41	33.74	68.51	46.03	51.38	70.62	27.65	54.95	81.66	20.86	20.20
Lane Group LOS	F	C	C	E	D	D	E	C	D	F	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	8.24	6.57	6.58	2.68	11.95	13.08	2.07	3.77	17.92	8.03	2.11	0.99
50th-Percentile Queue Length [ft/ln]	206.00	164.13	164.50	66.97	298.80	327.11	51.74	94.32	448.05	200.63	52.81	24.85
95th-Percentile Queue Length [veh/ln]	13.35	10.77	10.79	4.82	17.62	19.02	3.73	6.79	24.87	12.67	3.80	1.79
95th-Percentile Queue Length [ft/ln]	333.82	269.18	269.67	120.55	440.54	475.42	93.14	169.77	621.63	316.77	95.06	44.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	100.98	32.67	33.74	68.51	47.70	51.38	70.62	27.65	54.95	81.66	20.86	20.20
Movement LOS	F	C	C	E	D	D	E	C	D	F	C	C
d_A, Approach Delay [s/veh]	55.43			49.07			45.60			45.75		
Approach LOS	E			D			D			D		
d_I, Intersection Delay [s/veh]	49.78											
Intersection LOS	D											
Intersection V/C	0.794											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.209	2.906	2.739	2.761
Crosswalk LOS	C	C	B	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	533	433	850	967
d_b, Bicycle Delay [s]	32.27	36.82	19.84	16.02
I_b,int, Bicycle LOS Score for Intersection	2.243	2.282	2.355	1.984
Bicycle LOS	B	B	B	A

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	37.9
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.805

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	241	589	0	0	910	630	0	0	0	378	3	370
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0000	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	91	115	0	0	145	9	0	0	0	144	0	27
Site-Generated Trips [veh/h]	0	12	0	0	5	2	0	0	0	0	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	342	740	0	0	1096	666	0	0	0	537	3	423
Peak Hour Factor	0.8800	0.8800	1.0000	1.0000	0.8800	0.8800	1.0000	1.0000	1.0000	0.8800	0.8800	0.8800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	97	210	0	0	311	189	0	0	0	153	1	120
Total Analysis Volume [veh/h]	389	841	0	0	1245	757	0	0	0	610	3	481
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	15	76	0	0	61	0	0	0	0	0	0	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	11	81	66	66		31	31	31
g / C, Green / Cycle	0.09	0.68	0.55	0.55		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.11	0.16	0.18	0.47		0.20	0.21	0.23
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1743	1615
c, Capacity [veh/h]	322	3506	3812	892		463	446	413
d1, Uniform Delay [s]	54.50	7.46	14.67	22.63		41.60	42.01	42.91
k, delay calibration	0.11	0.50	0.50	0.50		0.17	0.18	0.22
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	99.98	0.16	0.23	9.87		4.60	6.20	11.83
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.24	0.33	0.85		0.79	0.82	0.88
d, Delay for Lane Group [s/veh]	154.48	7.62	14.90	32.50		46.20	48.20	54.74
Lane Group LOS	F	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.33	2.68	4.63	19.58		10.61	10.88	11.69
50th-Percentile Queue Length [ft/ln]	233.26	67.07	115.68	489.53		265.17	272.01	292.19
95th-Percentile Queue Length [veh/ln]	15.31	4.83	8.16	26.84		15.95	16.29	17.29
95th-Percentile Queue Length [ft/ln]	382.84	120.73	203.88	670.96		398.70	407.25	432.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	154.48	7.62	0.00	0.00	14.90	32.50	0.00	0.00	0.00	47.01	48.20	53.16
Movement LOS	F	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	54.07				21.55		0.00		49.72			
Approach LOS	D				C		A		D			
d_I, Intersection Delay [s/veh]	37.92											
Intersection LOS	D											
Intersection V/C	0.805											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	51.34
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	0.000	2.311
Crosswalk LOS	F	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1200	950	0	667
d_b, Bicycle Delay [s]	9.60	16.54	60.00	26.67
I_b,int, Bicycle LOS Score for Intersection	2.236	2.385	4.132	3.365
Bicycle LOS	B	B	D	C

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	27.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	487	253	387	846	0	167	0	469	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	179	91	9	280	0	27	0	144	0	0	0
Site-Generated Trips [veh/h]	0	3	0	4	1	0	9	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	688	354	415	1161	0	210	0	632	0	0	0
Peak Hour Factor	1.0000	0.8980	0.8980	0.8980	0.8980	1.0000	0.8980	0.8980	0.8980	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	192	99	116	323	0	58	0	176	0	0	0
Total Analysis Volume [veh/h]	0	766	394	462	1293	0	234	0	704	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	60	60	18	82	30	30	30	
g / C, Green / Cycle	0.50	0.50	0.15	0.69	0.25	0.25	0.25	
(v / s)_i Volume / Saturation Flow Rate	0.21	0.24	0.13	0.36	0.13	0.22	0.22	
s, saturation flow rate [veh/h]	3618	1615	3514	3618	1810	1615	1615	
c, Capacity [veh/h]	1803	805	539	2478	449	401	401	
d1, Uniform Delay [s]	19.16	19.97	49.52	9.26	38.94	43.35	43.35	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.13	0.13	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	0.74	2.13	4.08	0.79	0.94	7.19	7.19	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.42	0.49	0.86	0.52	0.52	0.88	0.88	
d, Delay for Lane Group [s/veh]	19.89	22.10	53.60	10.05	39.87	50.54	50.54	
Lane Group LOS	B	C	D	B	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	
50th-Percentile Queue Length [veh/ln]	6.90	7.68	7.05	7.93	6.08	10.78	10.78	
50th-Percentile Queue Length [ft/ln]	172.51	191.97	176.16	198.16	151.94	269.59	269.59	
95th-Percentile Queue Length [veh/ln]	11.21	12.22	11.40	12.54	10.12	16.17	16.17	
95th-Percentile Queue Length [ft/ln]	280.21	305.58	285.00	313.59	253.02	404.23	404.23	

Movement, Approach, & Intersection Results

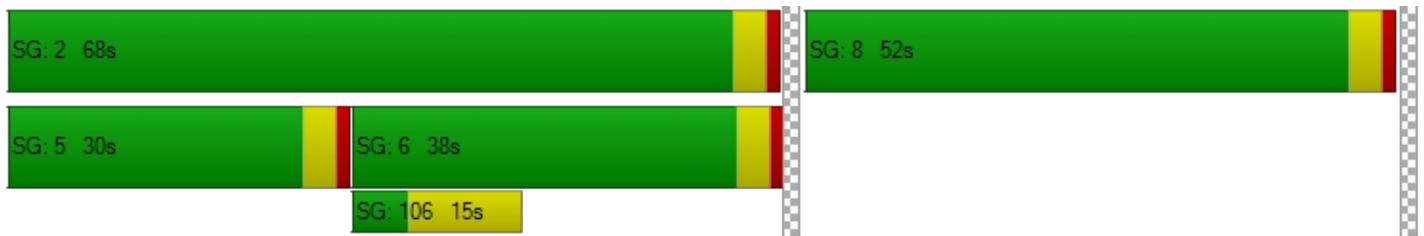
d_M, Delay for Movement [s/veh]	0.00	19.89	22.10	53.60	10.05	0.00	39.87	50.54	50.54	0.00	0.00	0.00
Movement LOS		B	C	D	B		D	D	D			
d_A, Approach Delay [s/veh]	20.64			21.52			47.88			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	27.67											
Intersection LOS	C											
Intersection V/C	0.593											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			0.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			0.00			51.34		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			0.000			2.234		
Crosswalk LOS	F			F			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	567			1067			800			0		
d_b, Bicycle Delay [s]	30.82			13.07			21.60			60.00		
I_b,int, Bicycle LOS Score for Intersection	2.198			3.007			3.107			4.132		
Bicycle LOS	B			C			C			D		

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	34.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	221	986	100	156	1168	56	82	208	234	290	219	62
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	12	4	0	0	1	6	9	0	12	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	1	0	0	4	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	242	1029	104	162	1216	64	94	217	255	302	232	64
Peak Hour Factor	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980	0.8980
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	286	29	45	339	18	26	60	71	84	65	18
Total Analysis Volume [veh/h]	269	1146	116	180	1354	71	105	242	284	336	258	71
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	14	39	0	12	37	0	22	52	0	17	47	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	10	59	59	8	57	57	6	24	24	13	31	31
g / C, Green / Cycle	0.08	0.49	0.49	0.07	0.48	0.48	0.05	0.20	0.20	0.11	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.22	0.07	0.05	0.26	0.26	0.03	0.07	0.18	0.10	0.09	0.09
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1852	3514	3618	1615	3514	1900	1761
c, Capacity [veh/h]	293	2550	796	234	1722	881	167	720	321	381	494	458
d1, Uniform Delay [s]	54.60	19.84	16.64	55.09	22.28	22.28	56.12	41.25	46.70	52.75	36.09	36.12
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	11.42	0.58	0.39	5.24	1.26	2.44	3.89	0.27	7.96	6.80	0.41	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.45	0.15	0.77	0.55	0.55	0.63	0.34	0.88	0.88	0.34	0.35
d, Delay for Lane Group [s/veh]	66.02	20.41	17.03	60.33	23.54	24.73	60.01	41.52	54.67	59.55	36.50	36.57
Lane Group LOS	E	C	B	E	C	C	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.49	7.01	1.84	2.85	9.58	10.11	1.65	3.12	8.92	5.35	4.13	3.86
50th-Percentile Queue Length [ft/ln]	112.37	175.28	45.91	71.20	239.60	252.65	41.34	77.93	223.07	133.63	103.15	96.49
95th-Percentile Queue Length [veh/ln]	7.97	11.35	3.31	5.13	14.66	15.32	2.98	5.61	13.82	9.14	7.43	6.95
95th-Percentile Queue Length [ft/ln]	199.30	283.84	82.65	128.17	366.53	382.98	74.41	140.28	345.54	228.42	185.67	173.69

Movement, Approach, & Intersection Results

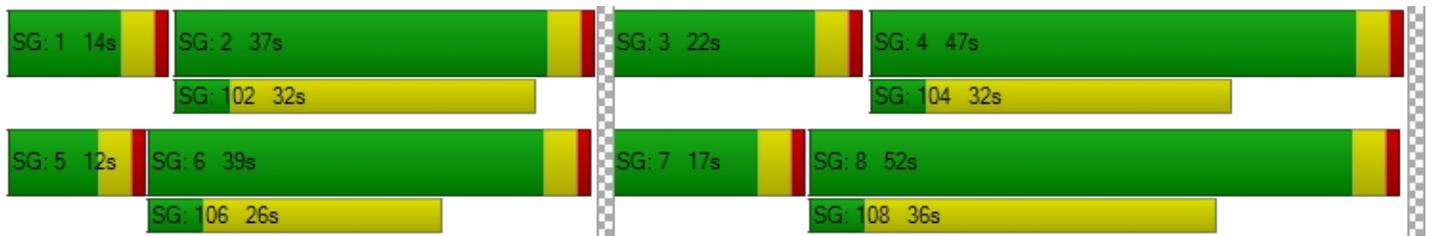
d_M, Delay for Movement [s/veh]	66.02	20.41	17.03	60.33	23.90	24.73	60.01	41.52	54.67	59.55	36.53	36.57
Movement LOS	E	C	B	E	C	C	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	28.17			28.02			50.52			48.16		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.30											
Intersection LOS	C											
Intersection V/C	0.609											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.244	3.097	2.890	2.664
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	550	800	717
d_b, Bicycle Delay [s]	30.10	31.54	21.60	24.70
I_b,int, Bicycle LOS Score for Intersection	2.402	2.442	2.080	2.108
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: W Valley Blvd at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Project Driveway 1		W Valley Blvd		W Valley Blvd	
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	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	524	496	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	28	33	0
Site-Generated Trips [veh/h]	0	1	5	27	8	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]	0	1	5	600	557	0
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	1	158	147	0
Total Analysis Volume [veh/h]	0	1	5	632	586	0
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	0.01	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	18.08	10.08	8.61	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.11	0.11	0.21	0.10	0.00	0.00
d_A, Approach Delay [s/veh]	10.08		0.07		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: W Valley Blvd at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	10.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.010

Intersection Setup

Name	Project Driveway 2		W Valley Blvd		W Valley Blvd	
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	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 2		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	524	496	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	28	33	0
Site-Generated Trips [veh/h]	0	7	24	3	1	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]	0	7	24	576	550	0
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	2	6	152	145	0
Total Analysis Volume [veh/h]	0	7	25	606	579	0
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	0.01	0.02	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	18.85	10.10	8.61	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.04	0.02	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.74	0.74	1.06	0.53	0.00	0.00
d_A, Approach Delay [s/veh]	10.10		0.34		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 103: W Valley Blvd at Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	17.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

Name	Project Driveway 3		W Valley Blvd		W Valley Blvd	
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		No		No	

Volumes

Name	Project Driveway 3		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	524	496	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	28	33	0
Site-Generated Trips [veh/h]	1	1	3	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]	1	1	3	573	549	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]	0	0	1	151	144	1
Total Analysis Volume [veh/h]	1	1	3	603	578	4
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	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	17.62	10.10	8.60	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.01	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.37	0.37	0.13	0.06	0.00	0.00
d_A, Approach Delay [s/veh]	13.86		0.04		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	C					

2245 W Valley Boulevard Project

Vistro File: K:\...\2245 W Valley Blvd Warehouse_PM.vistro

Scenario 3 OY CUM WP PM

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

10/24/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Riverside Ave at E Valley Blvd	Signalized	HCM 7th Edition	WB Left	0.732	45.3	D
2	Riverside Ave at I-10 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.615	26.2	C
3	Riverside Ave at I-10 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.648	28.4	C
4	N Pepper Ave at W Valley Blvd	Signalized	HCM 7th Edition	SB Left	0.446	32.0	C
101	W Valley Blvd at Project Driveway 1	Two-way stop	HCM 7th Edition	SB Right	0.008	10.6	B
102	W Valley Blvd at Project Driveway 2	Two-way stop	HCM 7th Edition	SB Right	0.035	10.6	B
103	W Valley Blvd at Project Driveway 3	Two-way stop	HCM 7th Edition	SB Left	0.017	20.8	C

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: Riverside Ave at E Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	45.3
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.732

Intersection Setup

Name	Riverside Ave			Riverside Ave			E Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←← ↑ →			← ↑ →			← ↑ →			← ↑ →		
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			E Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	416	1089	140	80	651	50	99	297	425	135	313	122
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	13	139	12	11	93	3	11	18	44	14	11	11
Site-Generated Trips [veh/h]	0	0	8	2	0	0	0	1	0	23	4	3
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	446	1272	166	96	770	55	114	328	486	177	341	141
Peak Hour Factor	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820	0.9820
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	114	324	42	24	196	14	29	84	124	45	87	36
Total Analysis Volume [veh/h]	454	1295	169	98	784	56	116	334	495	180	347	144
Presence of On-Street Parking	No		No									
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	20	39	0	11	30	0	20	56	0	14	50	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	24	0	0	21	0	0	31	0	0	24	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	16	47	47	7	38	38	10	40	40	10	40	40
g / C, Green / Cycle	0.13	0.40	0.40	0.06	0.32	0.32	0.08	0.33	0.33	0.08	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.13	0.27	0.27	0.05	0.15	0.15	0.06	0.09	0.31	0.10	0.10	0.09
s, saturation flow rate [veh/h]	3514	3618	1790	1810	3618	1836	1810	3618	1615	1810	3618	1615
c, Capacity [veh/h]	469	1429	707	106	1158	588	145	1194	533	151	1205	538
d1, Uniform Delay [s]	51.75	30.09	30.16	56.25	32.79	32.81	54.25	29.67	38.84	55.00	29.51	29.29
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.25	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.28	2.68	5.40	26.31	1.43	2.82	9.68	0.13	15.00	100.89	0.13	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.97	0.68	0.69	0.93	0.48	0.48	0.80	0.28	0.93	1.19	0.29	0.27
d, Delay for Lane Group [s/veh]	65.03	32.77	35.56	82.56	34.22	35.64	63.92	29.80	53.84	155.89	29.64	29.55
Lane Group LOS	E	C	D	F	C	D	E	C	D	F	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	7.64	12.10	12.60	3.72	6.73	7.09	3.84	3.60	16.11	8.78	3.73	3.09
50th-Percentile Queue Length [ft/ln]	191.08	302.56	315.11	93.12	168.30	177.37	95.89	90.01	402.66	219.45	93.27	77.37
95th-Percentile Queue Length [veh/ln]	12.18	17.81	18.43	6.70	10.99	11.46	6.90	6.48	22.69	14.48	6.72	5.57
95th-Percentile Queue Length [ft/ln]	304.43	445.19	460.67	167.61	274.68	286.58	172.60	162.01	567.21	361.89	167.88	139.27

Movement, Approach, & Intersection Results

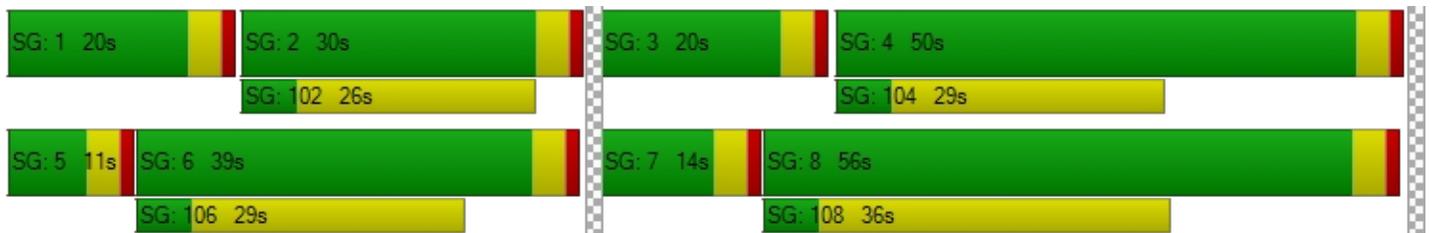
d_M, Delay for Movement [s/veh]	65.03	33.45	35.56	82.56	34.63	35.64	63.92	29.80	53.84	155.89	29.64	29.55
Movement LOS	E	C	D	F	C	D	E	C	D	F	C	C
d_A, Approach Delay [s/veh]	41.12			39.70			46.58			63.49		
Approach LOS	D			D			D			E		
d_I, Intersection Delay [s/veh]	45.33											
Intersection LOS	D											
Intersection V/C	0.732											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.230	2.956	2.761	2.786
Crosswalk LOS	C	C	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	583	433	867	767
d_b, Bicycle Delay [s]	30.10	36.82	19.27	22.82
I_b,int, Bicycle LOS Score for Intersection	2.615	2.076	2.339	2.113
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Riverside Ave at I-10 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	3	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 WB Ramps			I-10 WB Ramps		
Base Volume Input [veh/h]	196	1104	0	0	799	401	0	0	0	369	2	573
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	2.00	2.00	0.00	0.00	2.00	2.00	2.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0000	1.0000	1.0400	1.0400	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	148	152	0	0	123	30	0	0	0	96	0	13
Site-Generated Trips [veh/h]	0	4	0	0	14	9	0	0	0	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	352	1304	0	0	968	456	0	0	0	480	2	613
Peak Hour Factor	0.9890	0.9890	1.0000	1.0000	0.9890	0.9890	1.0000	1.0000	1.0000	0.9890	0.9890	0.9890
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	89	330	0	0	245	115	0	0	0	121	1	155
Total Analysis Volume [veh/h]	356	1319	0	0	979	461	0	0	0	485	2	620
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Split	Split	Split								
Signal Group	1	6	0	0	2	0	0	0	0	0	0	4	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	0	0	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	17	47	0	0	30	0	0	0	0	0	0	73	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	1.00	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	C	R
C, Cycle Length [s]	120	120	120	120		120	120	120
L, Total Lost Time per Cycle [s]	4.00	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	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00	2.00
g_i, Effective Green Time [s]	13	81	64	64		31	31	31
g / C, Green / Cycle	0.11	0.67	0.53	0.53		0.26	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.14	0.29		0.20	0.22	0.23
s, saturation flow rate [veh/h]	3514	5176	6901	1615		1810	1673	1615
c, Capacity [veh/h]	381	3471	3651	854		475	439	424
d1, Uniform Delay [s]	53.08	8.73	15.51	18.62		40.98	41.86	42.29
k, delay calibration	0.11	0.50	0.50	0.50		0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	10.76	0.32	0.18	2.44		2.77	4.38	5.60
d3, Initial Queue Delay [s]	0.00	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	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.38	0.27	0.54		0.78	0.84	0.87
d, Delay for Lane Group [s/veh]	63.84	9.05	15.69	21.06		43.75	46.24	47.89
Lane Group LOS	E	A	B	C		D	D	D
Critical Lane Group	Yes	No	No	Yes		No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.88	4.87	3.70	8.84		10.43	10.81	11.04
50th-Percentile Queue Length [ft/ln]	147.12	121.71	92.42	220.94		260.70	270.30	276.08
95th-Percentile Queue Length [veh/ln]	9.86	8.49	6.65	13.71		15.72	16.20	16.49
95th-Percentile Queue Length [ft/ln]	246.58	212.18	166.35	342.82		393.10	405.12	412.33

Movement, Approach, & Intersection Results

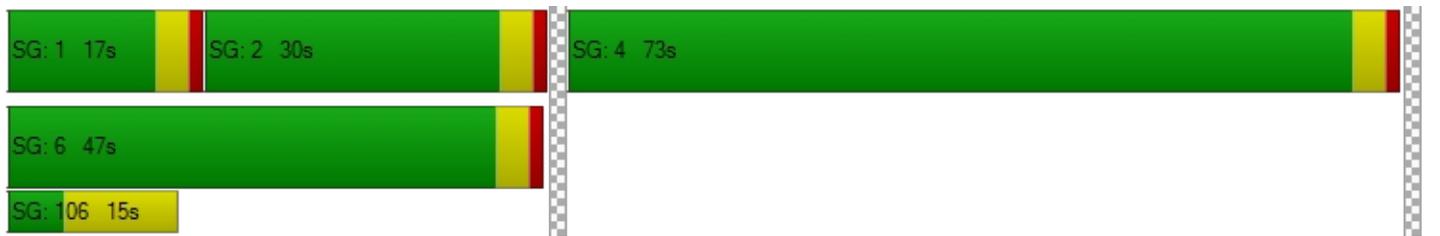
d_M, Delay for Movement [s/veh]	63.84	9.05	0.00	0.00	15.69	21.06	0.00	0.00	0.00	44.35	46.24	47.22
Movement LOS	E	A			B	C				D	D	D
d_A, Approach Delay [s/veh]	20.69				17.41		0.00		45.96			
Approach LOS	C				B		A		D			
d_I, Intersection Delay [s/veh]	26.20											
Intersection LOS	C											
Intersection V/C	0.615											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		0.0		0.0		9.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		0.00		0.00		51.34	
I_p,int, Pedestrian LOS Score for Intersection	0.000		0.000		0.000		2.315	
Crosswalk LOS	F		F		F		B	
s_b, Saturation Flow Rate of the bicycle lane	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	717		433		0		1150	
d_b, Bicycle Delay [s]	24.70		36.82		60.00		10.84	
I_b,int, Bicycle LOS Score for Intersection	2.481		2.154		4.132		3.386	
Bicycle LOS	B		B		D		C	

Sequence

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



Intersection Level Of Service Report
Intersection 3: Riverside Ave at I-10 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

Intersection Setup

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T			T			T+T+T					
Turning Movement	Left	Thru	Right									
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	49.21
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No					
Crosswalk	No			No			No			Yes		

Volumes

Name	Riverside Ave			Riverside Ave			I-10 EB Ramps			I-10 EB Ramps		
Base Volume Input [veh/h]	0	747	292	377	766	0	555	8	269	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	0.00	0.00	0.00	0.00	2.00	0.00	0.00	0.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400	1.0400	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	285	148	30	189	0	13	0	96	0	0	0
Site-Generated Trips [veh/h]	0	1	0	11	3	0	3	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	1063	452	433	989	0	593	8	376	0	0	0
Peak Hour Factor	1.0000	0.9760	0.9760	0.9760	0.9760	1.0000	0.9760	0.9760	0.9760	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	272	116	111	253	0	152	2	96	0	0	0
Total Analysis Volume [veh/h]	0	1089	463	444	1013	0	608	8	385	0	0	0
Presence of On-Street Parking	No		No	No		No	No		No			
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Split	Split	Split	Permiss	Permiss	Permiss
Signal Group	0	6	0	5	2	0	0	8	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	5	10	0	0	10	0	0	0	0
Maximum Green [s]	0	30	0	30	30	0	0	30	0	0	0	0
Amber [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
All red [s]	0.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
Split [s]	0	38	0	30	68	0	0	52	0	0	0	0
Vehicle Extension [s]	0.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No				
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	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	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	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	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	C	C	L	C	L	C	R	
C, Cycle Length [s]	120	120	120	120	120	120	120	
L, Total Lost Time per Cycle [s]	4.00	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	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	62	62	18	83	29	29	29	
g / C, Green / Cycle	0.51	0.51	0.15	0.70	0.24	0.24	0.24	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.32	0.13	0.28	0.18	0.19	0.21	
s, saturation flow rate [veh/h]	3618	1641	3514	3618	1810	1779	1615	
c, Capacity [veh/h]	1859	843	521	2516	430	423	384	
d1, Uniform Delay [s]	19.86	20.71	49.82	7.73	42.73	42.90	43.93	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	1.21	3.33	4.05	0.48	3.03	3.32	6.07	
d3, Initial Queue Delay [s]	0.00	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	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.56	0.61	0.85	0.40	0.78	0.79	0.87	
d, Delay for Lane Group [s/veh]	21.07	24.03	53.87	8.21	45.76	46.22	50.00	
Lane Group LOS	C	C	D	A	D	D	D	
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.95	10.83	6.78	5.27	9.58	9.64	10.12	
50th-Percentile Queue Length [ft/ln]	248.76	270.74	169.41	131.83	239.48	241.09	253.08	
95th-Percentile Queue Length [veh/ln]	15.12	16.23	11.05	9.04	14.66	14.74	15.34	
95th-Percentile Queue Length [ft/ln]	378.09	405.66	276.15	225.98	366.38	368.41	383.54	

Movement, Approach, & Intersection Results

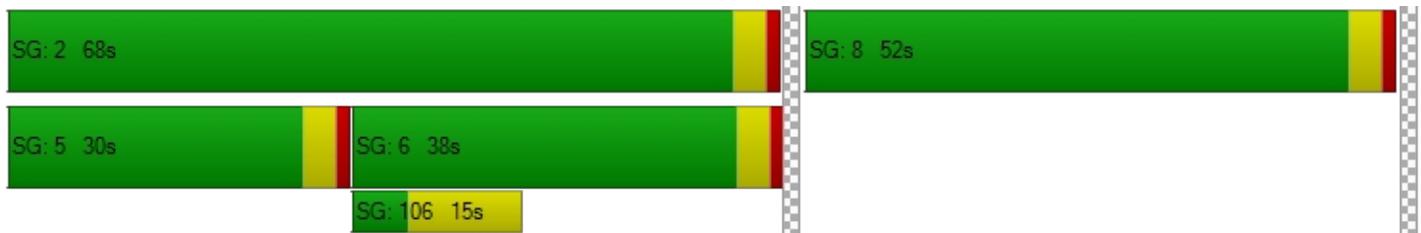
d_M, Delay for Movement [s/veh]	0.00	21.21	24.03	53.87	8.21	0.00	45.97	46.22	49.50	0.00	0.00	0.00
Movement LOS		C	C	D	A		D	D	D			
d_A, Approach Delay [s/veh]	22.06			22.12			47.33			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	28.39											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			0.0			9.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			0.00			51.34		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			0.000			2.253		
Crosswalk LOS	F			F			F			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	567			1067			800			0		
d_b, Bicycle Delay [s]	30.82			13.07			21.60			60.00		
I_b,int, Bicycle LOS Score for Intersection	2.413			2.762			3.211			4.132		
Bicycle LOS	B			C			C			D		

Sequence

Ring 1	-	2	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: N Pepper Ave at W Valley Blvd

Control Type:	Signalized	Delay (sec / veh):	32.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

Intersection Setup

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N Pepper Ave			N Pepper Ave			W Valley Blvd			W Valley Blvd		
Base Volume Input [veh/h]	251	1067	175	118	783	67	137	305	166	187	267	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	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	0.00	0.00	0.00	0.00	0.00	0.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	17	1	0	0	3	11	8	0	17	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	4	0	0	1	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	278	1111	182	123	817	81	150	321	190	194	279	136
Peak Hour Factor	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470	0.9470
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	73	293	48	32	216	21	40	85	50	51	74	36
Total Analysis Volume [veh/h]	294	1173	192	130	863	86	158	339	201	205	295	144
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
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	Protecte	Permiss	Permiss									
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-									
Minimum Green [s]	5	10	0	5	10	0	5	10	0	5	10	0
Maximum Green [s]	30	30	0	30	30	0	30	30	0	30	30	0
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	18	44	0	10	36	0	11	52	0	14	55	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	21	0	0	27	0	0	31	0	0	27	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall	No	No										
Maximum Recall	No	No										
Pedestrian Recall	No	No										
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	R	L	C	C	L	C	R	L	C	C
C, Cycle Length [s]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	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	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	12	71	71	6	65	65	7	18	18	9	20	20
g / C, Green / Cycle	0.10	0.59	0.59	0.05	0.54	0.54	0.06	0.15	0.15	0.07	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.12	0.04	0.17	0.18	0.04	0.09	0.12	0.06	0.12	0.12
s, saturation flow rate [veh/h]	3514	5176	1615	3514	3618	1813	3514	3618	1615	3514	1900	1693
c, Capacity [veh/h]	353	3070	958	176	1964	984	205	539	240	262	314	280
d1, Uniform Delay [s]	52.98	12.84	11.27	56.23	15.20	15.21	55.71	47.95	49.64	54.58	47.61	47.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.13	0.36	0.47	5.99	0.43	0.87	6.03	1.22	7.47	5.10	3.36	3.93
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	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	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	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.83	0.38	0.20	0.74	0.32	0.32	0.77	0.63	0.84	0.78	0.74	0.74
d, Delay for Lane Group [s/veh]	58.11	13.20	11.74	62.22	15.63	16.07	61.74	49.17	57.11	59.67	50.96	51.62
Lane Group LOS	E	B	B	E	B	B	E	D	E	E	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.60	5.49	2.45	2.09	4.84	4.99	2.53	4.86	6.35	3.23	6.85	6.23
50th-Percentile Queue Length [ft/ln]	114.98	137.32	61.20	52.22	120.98	124.70	63.24	121.50	158.82	80.74	171.21	155.79
95th-Percentile Queue Length [veh/ln]	8.12	9.34	4.41	3.76	8.45	8.65	4.55	8.48	10.49	5.81	11.14	10.33
95th-Percentile Queue Length [ft/ln]	202.91	233.41	110.17	94.00	211.17	216.27	113.83	211.88	262.16	145.33	278.50	258.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.11	13.20	11.74	62.22	15.75	16.07	61.74	49.17	57.11	59.67	51.11	51.62
Movement LOS	E	B	B	E	B	B	E	D	E	E	D	D
d_A, Approach Delay [s/veh]	20.99			21.37			54.30			53.95		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	31.99											
Intersection LOS	C											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	51.34	51.34	51.34	51.34
I_p,int, Pedestrian LOS Score for Intersection	3.182	3.052	2.908	2.680
Crosswalk LOS	C	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	533	800	850
d_b, Bicycle Delay [s]	26.67	32.27	21.60	19.84
I_b,int, Bicycle LOS Score for Intersection	2.472	2.153	2.135	2.091
Bicycle LOS	B	B	B	B

Sequence

Ring 1	1	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 101: W Valley Blvd at Project Driveway 1

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.008

Intersection Setup

Name	Project Driveway 1		W Valley Blvd		W Valley Blvd	
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	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 1		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	608	585	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	41	36	0
Site-Generated Trips [veh/h]	0	5	1	10	25	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]	0	5	1	683	669	0
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	1	0	180	176	0
Total Analysis Volume [veh/h]	0	5	1	719	704	0
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	0.01	0.00	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	21.37	10.58	8.99	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.58	0.58	0.04	0.02	0.00	0.00
d_A, Approach Delay [s/veh]	10.58		0.01		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.04					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 102: W Valley Blvd at Project Driveway 2

Control Type:	Two-way stop	Delay (sec / veh):	10.6
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Project Driveway 2		W Valley Blvd		W Valley Blvd	
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	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	100.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Driveway 2		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	608	585	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	41	36	0
Site-Generated Trips [veh/h]	0	22	9	1	3	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]	0	22	9	674	647	0
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	6	2	177	170	0
Total Analysis Volume [veh/h]	0	23	9	709	681	0
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	0.03	0.01	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	21.41	10.64	8.92	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.11	0.11	0.02	0.01	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.70	2.70	0.38	0.19	0.00	0.00
d_A, Approach Delay [s/veh]	10.64		0.11		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 103: W Valley Blvd at Project Driveway 3

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Driveway 3		W Valley Blvd		W Valley Blvd	
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		No		No	

Volumes

Name	Project Driveway 3		W Valley Blvd		W Valley Blvd	
Base Volume Input [veh/h]	0	0	0	608	585	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	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
In-Process Volume [veh/h]	0	0	0	41	36	0
Site-Generated Trips [veh/h]	4	3	1	0	0	1
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	3	1	673	644	1
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	1	0	177	169	0
Total Analysis Volume [veh/h]	4	3	1	708	678	1
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	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	20.85	10.69	8.90	0.00	0.00	0.00
Movement LOS	C	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]	1.67	1.67	0.04	0.02	0.00	0.00
d_A, Approach Delay [s/veh]	16.49		0.01		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.09					
Intersection LOS	C					

APPENDIX E

**CUMULATIVE PROJECTS
INFORMATION**

TOTAL CUMULATIVE PROJECTS TRAFFIC

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Riverside Avenue at E Valley Boulevard	43	88	12	8	136	11	2	8	9	9	16	8
2	Riverside Avenue at I-10 WB Ramps	91	115	0	0	145	9	0	0	0	144	0	27
3	Riverside Avenue at I-10 EB Ramps	0	179	91	9	280	0	27	0	144	0	0	0
4	N Pepper Avenue at W Valley Boulevard	12	4	0	0	1	6	9	0	12	0	0	0
D1	W Valley Boulevard at Project Driveway 1	0	0	0	0	0	0	0	28	0	0	33	0
D2	W Valley Boulevard at Project Driveway 2	0	0	0	0	0	0	0	28	0	0	33	0
D3	W Valley Boulevard at Project Driveway 3	0	0	0	0	0	0	0	28	0	0	33	0

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Riverside Avenue at E Valley Boulevard	13	139	12	11	93	3	11	18	44	14	11	11
2	Riverside Avenue at I-10 WB Ramps	148	152	0	0	123	30	0	0	0	96	0	13
3	Riverside Avenue at I-10 EB Ramps	0	285	148	30	189	0	13	0	96	0	0	0
4	N Pepper Avenue at W Valley Boulevard	17	1	0	0	3	11	8	0	17	0	0	0
D1	W Valley Boulevard at Project Driveway 1	0	0	0	0	0	0	0	41	0	0	36	0
D2	W Valley Boulevard at Project Driveway 2	0	0	0	0	0	0	0	41	0	0	36	0
D3	W Valley Boulevard at Project Driveway 3	0	0	0	0	0	0	0	41	0	0	36	0

