



Appendix K

Traffic Study



Traffic Study

for the:

Miro Way and Ayala Drive Warehouse Project

In the City of Rialto

February 2025

Kimley»Horn

**TRAFFIC STUDY
FOR THE PROPOSED
MIRO WAY AND AYALA DRIVE WAREHOUSE PROJECT
IN THE CITY OF RIALTO**

Prepared by:

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

February 2025

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
A. Purpose of the TIA and Study Objectives.....	1
B. Site Plan Location and Study Area.....	1
C. Development Project Identification.....	3
D. Development Project Description.....	3
E. Analysis Methodology.....	5
1. Intersection Analysis – HCM Methodology.....	5
2. Level of Service Standards and Measure of Significance	5
II. AREA CONDITIONS	8
A. Identify Study Area and Intersections	8
B. Description of Existing Roads, Traffic Control, and Intersection Geometrics	8
C. Existing Traffic Volumes.....	11
D. Existing Delay and Level of Service.....	11
E. General Plan Circulation Element.....	15
F. Transit Service.....	15
III. PROJECTED FUTURE TRAFFIC.....	18
A. Project Traffic.....	18
1. Project Trip Generation	18
2. Trip Distribution and Assignment	18
3. Volume Redistribution.....	18
B. Existing Plus Growth Plus Project Traffic (Opening Year 2024)	22
1. Ambient Growth Rate.....	22
2. Opening Year 2024 Existing Plus Growth	22
3. Opening Year 2024 Existing Plus Growth Plus Project	23
C. Cumulative Conditions (Existing Plus Growth Plus Cumulative Projects)	30
1. Cumulative Projects	30
2. Background Growth Rate.....	30
3. Cumulative Projects Trip Generation	30
4. Cumulative Projects Trip Distribution and Assignment.....	30
5. Opening Year 2024 Cumulative Without Project Conditions	34
6. Opening Year 2024 Cumulative Plus Project Conditions.....	34
IV. RECOMMENDED IMPROVEMENTS.....	42
A. Intersection Improvements.....	42
B. Roadway Improvements.....	43
V. VEHICLE MILES TRAVELED ANALYSIS.....	47
A. Introduction.....	47
B. VMT Analysis	47
I. ALTERNATIVE SITE PLAN	49
II. FINDINGS AND RECOMMENDATIONS.....	52
A. Improvements.....	52
B. Traffic Signal Warrant Analysis	52
C. Site Circulation.....	52
D. Safety and Operational Improvement.....	53

E. Fair Share Calculations.....	53
F. Specific Plan Signalization	53
G. General Plan Conformance	53
H. Regional Funding Mechanisms	53

LIST OF FIGURES

	Page
Figure 1 – Vicinity Map	2
Figure 2 – Project Site Plan.....	4
Figure 3 – Existing Lane Configuration and Traffic Control	10
Figure 4 – Existing Peak Hour Traffic Volumes.....	12
Figure 5 – Renaissance Specific Plan Amendment Vehicular Circulation Plan.....	16
Figure 6 – Renaissance Specific Plan Amendment Truck Routes.....	17
Figure 7 – Project Trip Distribution.....	20
Figure 8 – Project-Related Traffic Volumes.....	21
Figure 9 – Opening Year 2024 – Existing Plus Growth Traffic Volumes.....	24
Figure 10 – Opening Year 2024 – Existing Plus Growth Plus Project Traffic Volumes	27
Figure 11 – Location of Cumulative Projects	32
Figure 12 – Cumulative Projects Traffic Volumes.....	33
Figure 13 – Opening Year 2024 Cumulative Without Project Traffic Volumes	36
Figure 14 – Opening Year 2024 Cumulative Plus Project Traffic Volumes	39
Figure 15 – Alternative Project Site Plan.....	50

LIST OF TABLES

	Page
Table 1 – Summary of Intersection Operation – Existing Conditions.....	13
Table 2 – Summary of Roadway Analysis – Existing Conditions	14
Table 3 – Summary of Project Trip Generation.....	19
Table 4 – Summary of Intersection Operation – Opening Year 2024 – Existing Plus Growth.....	25
Table 5 – Summary of Roadway Analysis – Opening Year 2024 – Existing Plus Growth.....	26
Table 6 – Summary of Intersection Operation – Opening Year 2024 – Existing + Growth Plus Project...28	28
Table 7 – Summary of Roadway Analysis – Opening Year 2024 – Existing + Growth + Project.....	29
Table 8 – Summary of Cumulative Projects.....	31
Table 9 – Summary of Intersection Operation – Opening Year 2024 Cumulative Without Project.....	37
Table 10 – Summary of Roadway Analysis – Opening Year 2024 Cumulative Without Project.....	38
Table 11 – Summary of Intersection Operation – Opening Year 2024 Cumulative Plus Project	40
Table 12 – Summary of Roadway Analysis – Opening Year 2024 Cumulative Plus Project.....	41
Table 13 – Summary of Intersection Operation with Proposed Improvements	44
Table 14 – Summary of Project Fair Share for Improvements	45
Table 15 – Traffic Improvement Fair-Share Cost.....	46
Table 16 – Summary of Alternative Project Trip Generation.....	51

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

APPENDIX F: SIGNAL WARRANT ANALYSIS WORKSHEETS

APPENDIX G: REROUTED EXISTING VOLUMES FOR PLUS PROJECT SCENARIOS

**TRAFFIC STUDY
FOR THE PROPOSED
MIRO WAY AND AYALA DRIVE WAREHOUSE PROJECT
IN THE CITY OF RIALTO**

I. INTRODUCTION

A. Purpose of the TIA and Study Objectives

This Traffic Study has been prepared to address the traffic-related effects of the proposed Miro Way and Ayala Drive Warehouse project in the City of Rialto.

This traffic study has been conducted in accordance with the traffic study requirements of the City of Rialto, based on the City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (October 2021), and in accordance with San Bernardino Association of Governments (SANBAG) Congestion Management Program (CMP) requirements.

This study addresses existing and short-term future traffic conditions, taking into account the project trips to be generated by the project and potential project-related effects on the surrounding circulation system.

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 achieve acceptable intersection operation in the vicinity of the project.

The project will be evaluated for the following conditions:

- Existing Conditions
- Opening Year 2024 – Existing Plus Growth
- Opening Year 2024 – Existing Plus Growth Plus Project
- Opening Year 2024 Cumulative – Without Project
- Opening Year 2024 Cumulative – With Project

B. Site Plan Location and Study Area

The project is located in the northwestern area of the City of Rialto, and is shown in its regional setting on a vicinity map on **Figure 1**. The project site (approximately 20.76 acres) is bounded by vacant land and a truck repair shop to the north, industrial uses to the south, Ayala Drive and Fitzgerald Avenue to the east, and Linden Avenue to the west. The project site is located within the Renaissance Specific Plan area.



NOT TO SCALE

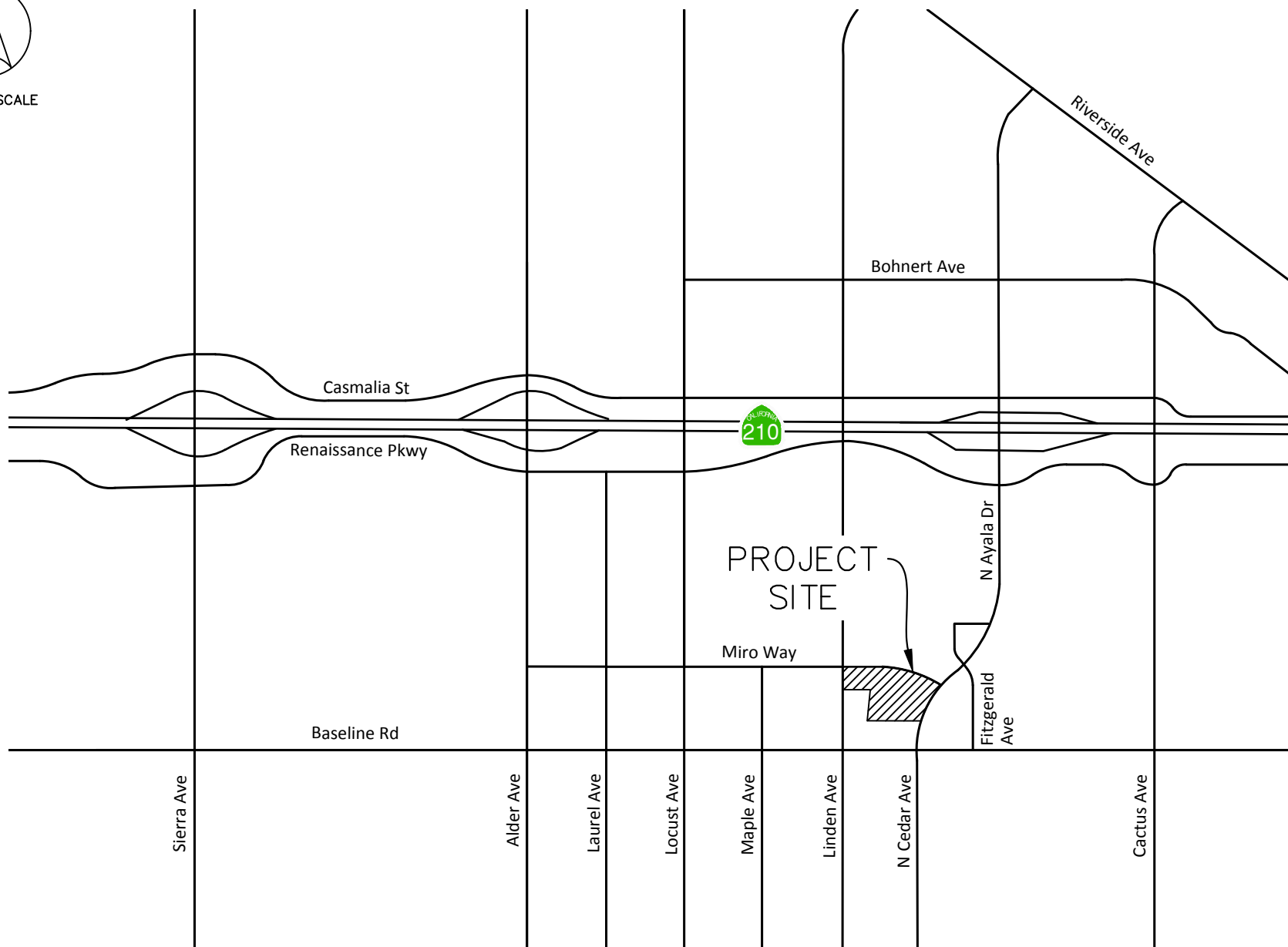


FIGURE 1
VICINITY MAP

C. Development Project Identification

Pending

D. Development Project Description

The project will involve the construction of 2 separate warehouses totaling 428,715 square feet (SF). A copy of the project site plan is provided on **Figure 2**. The site is located within the Renaissance Specific Plan, which is located generally between Renaissance Parkway on the north, Baseline Road on the south, Ayala Drive and Fitzgerald Avenue on the east, and Linden Avenue on the west. The Renaissance Specific Plan area covers 1,445 acres, with 81 separate Planning Areas, and is approved for a variety of land uses, including residential, commercial, industrial, and employment uses. The Specific Plan was approved for build-out in three separate phases, over a 20-year period. An amendment to the Specific Plan was approved in December 2016.

The Miro Way and Ayala Drive Warehouse development is located within Planning Areas 126 and 133 of the Renaissance Specific Plan Amendment. It should be noted that Planning Area 123 is included as a part of the Project, but only for rezoning purposes and does not include proposed building square footage within PA 123. The Project would include the rezone of Planning Area 123 (north of Miro Way) from School to General Commercial with a Residential Overlay. The Project would also include the rezone of Planning Areas 126 and 133 (south of Miro Way) from Park and Employment (with a designated Park Overlay) to Business Center, to allow for the development of two industrial warehouses.

Direct vehicular access provisions for the project site would consist of the following:

- Building 1
 - One shared (with Building 2) full-movement driveway for both trucks and passenger cars on Miro Way
- Building 2
 - One shared (with Building 1) full-movement driveway for both trucks and passenger cars on Miro Way
 - One full-movement driveway for both trucks and passenger cars on Miro Way
 - One right-in right-out (RIRO) driveway for passenger cars on Ayala Drive
 - One RIRO driveway for trucks and passenger cars on Ayala Drive

The proposed opening year for the project is Year 2024. The project will be developed in a single project phase. The project site is located approximately 0.5 miles from the City of Rialto's border with the City of Fontana.



NOT TO SCALE

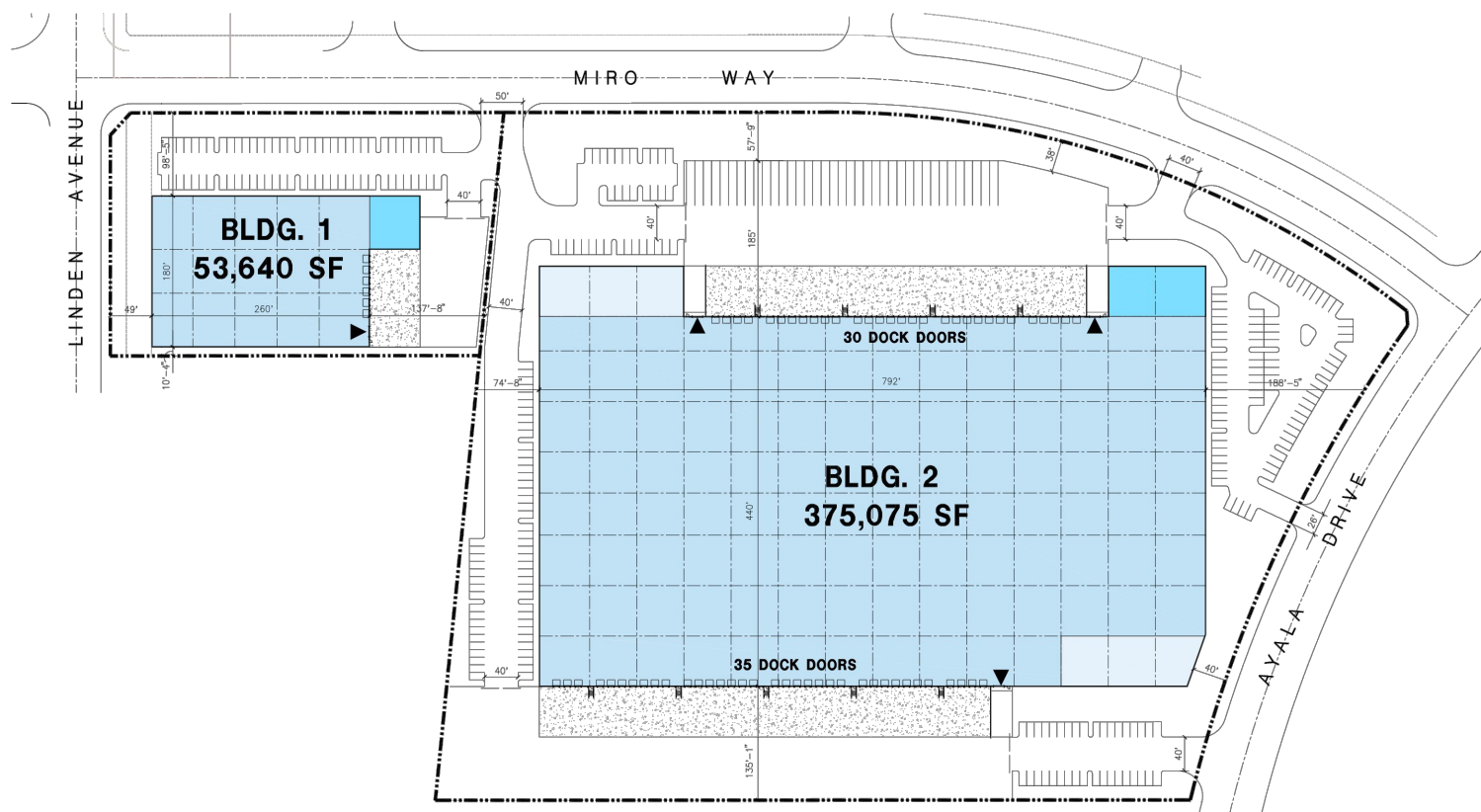


FIGURE 2
PROJECT SITE PLAN

Hours of Operation

The tenant(s) of the warehouse facility has not been identified; therefore, the precise nature of facility operations cannot be determined at this time. Any future occupant would be required to adhere to the pertinent City regulations. The hours of operation are assumed to be 7 days a week, 24 hours per day.

E. Analysis Methodology

1. Intersection Analysis – HCM Methodology

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

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

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

2. Level of Service Standards and Measure of Significance

Under CEQA Guidelines section 15064.3, automobile delay is no longer considered an environmental impact and is only analyzed for compliance with the City's General Plan. The City of Rialto, per the City of Rialto 2010 General Plan Update, establishes minimum Level of Service standards. According to Policy 4-1.20 of the General Plan document, the City requires that signalized intersections operate at LOS D or better during the morning and evening peak hours. The City's Traffic Study Guidelines require new development to mitigate project-related 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 seconds

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

LEVEL OF SERVICE DEFINITIONS	
Level of Service	Description
A	No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turns are made easily and nearly all drivers find freedom of operation.
B	This service level represents stable operation, where an occasional approach phase is fully utilized, and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.
C	This level still represents stable operating conditions. Occasionally drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted but not objectionably so.
D	This level encompasses a zone of increasing restriction, approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak period; however, enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.
E	Capacity occurs at the upper end of this service level. It represents the most vehicles that any particular intersection approach can accommodate. Full utilization of every signal cycle is seldom attained no matter how great the demand.
F	This level describes forced flow operations at low speeds, where volumes exceed capacity. These conditions usually result from queues of vehicles backing up from a restriction downstream. Speeds are reduced substantially, and stoppages may occur for short or long periods of time due to the congestion. In the extreme case, both speed and volume can drop to zero.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS		
Level of Service	Signalized Intersection (Average delay per vehicle, in seconds) ¹	Unsignalized Intersections (Average delay per vehicle, in seconds) ²
A	≤ 10	0 – 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 – 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

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

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

Roadway Segment Analysis

The roadway segment analysis will address the project's effect on daily operating conditions on roadway segments within the project vicinity. Roadway segments are evaluated by comparing the daily traffic volume on a roadway segment to the daily capacity of that segment, to determine the volume-to-capacity (v/c) ratio. Daily capacity is based on the roadway classification, as shown in the following chart:

CITY OF RIALTO ROADWAY CAPACITY ⁽¹⁾				
Roadway Classification	No. of Lanes	Two-Way Traffic Volume (ADT) ⁽²⁾		
		Service Level C	Service Level D	Service Level E
Local	2	2,500-2,799	2,800-3,099	3,100 +
Collector (60' or 64')	2	9,900-11,199	11,200-12,499	12,500 +
Industrial (45')	2	9,900-11,199	11,200-12,499	12,500 +
Arterial ⁽³⁾	2	14,400-16,199	16,200-17,999	18,000 +
Secondary Highway	4	16,900-19,399	19,400-21,999	22,000 +
Modified Arterial (100')	4	26,200-29,599	29,600-32,999	33,000 +
Arterial (120')	6	38,700-44,099	44,100-49,499	49,500 +
Notes: (1) All capacity figures are based on optimum conditions and are intended as guidelines for planning purposes only (2) Maximum two-way ADT values are based on the 1999 Modified Highway Capacity Manual Level of Service Tables. (3) Two-lane roads designated as future arterials that conform to arterial design standards for vertical and horizontal alignments are analyzed as arterials.				

Source: City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)* (2021)

II. AREA CONDITIONS

A. Identify Study Area and Intersections

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

Study Intersections:

1. Alder Avenue at SR-210 Westbound Ramps
2. Alder Avenue at SR-210 Eastbound Ramps
3. Alder Avenue at Renaissance Parkway
4. Alder Avenue at Baseline Road
5. Ayala Drive at Renaissance Parkway
6. Ayala Drive at Fitzgerald Avenue
7. Ayala Drive at Miro Way
8. Ayala Drive at Baseline Road
9. Linden Avenue at Miro Way
10. Linden Avenue at Baseline Road

In addition, the following roadway segments were analyzed:

- Alder Avenue: SR-210 WB Ramps to SR-210 EB Ramps
- Alder Avenue: SR-210 EB Ramps to Renaissance Parkway
- Alder Avenue: Renaissance Parkway to Baseline Road
- Linden Avenue: Miro Way to Baseline Road
- Ayala Drive: Renaissance Parkway to Fitzgerald Avenue
- Ayala Drive: Miro Way to Baseline Road
- Baseline Road: Alder Avenue to Linden Avenue
- Baseline Road: Linden Avenue to Ayala Drive

The study locations were established in conjunction with City staff through the Scoping Agreement process (Exhibit A of the City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)*). A copy of the approved Scoping Agreement is provided in **Appendix A**. It should be noted that since approval of the Scoping Agreement, the site plan has been modified to a smaller building footprint and square footage, compared to the site plan that was provided in the approved Scoping Agreement. As a conservative approach, the study locations noted above are consistent with the locations noted in the approved Scoping Agreement and have remained as part of the traffic analysis for this project. New traffic counts were collected (March 2023) for all study locations.

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

Regional access to the site is provided primarily by the State Route 210 (SR-210) Freeway, approximately 2/3-mile to the north of the project site. In addition, the I-215 Freeway is located approximately 5.5 miles to the east of the site; the I-15 Freeway is approximately 6.5 miles to the west of the site, and access to the I-10 Freeway is approximately 4 miles to the south.

Existing lane configurations and intersection controls at the study intersections at the time the traffic counts were collected (March 2023) are shown on **Figure 3**. The following provides a description of the roadways surrounding the project site.

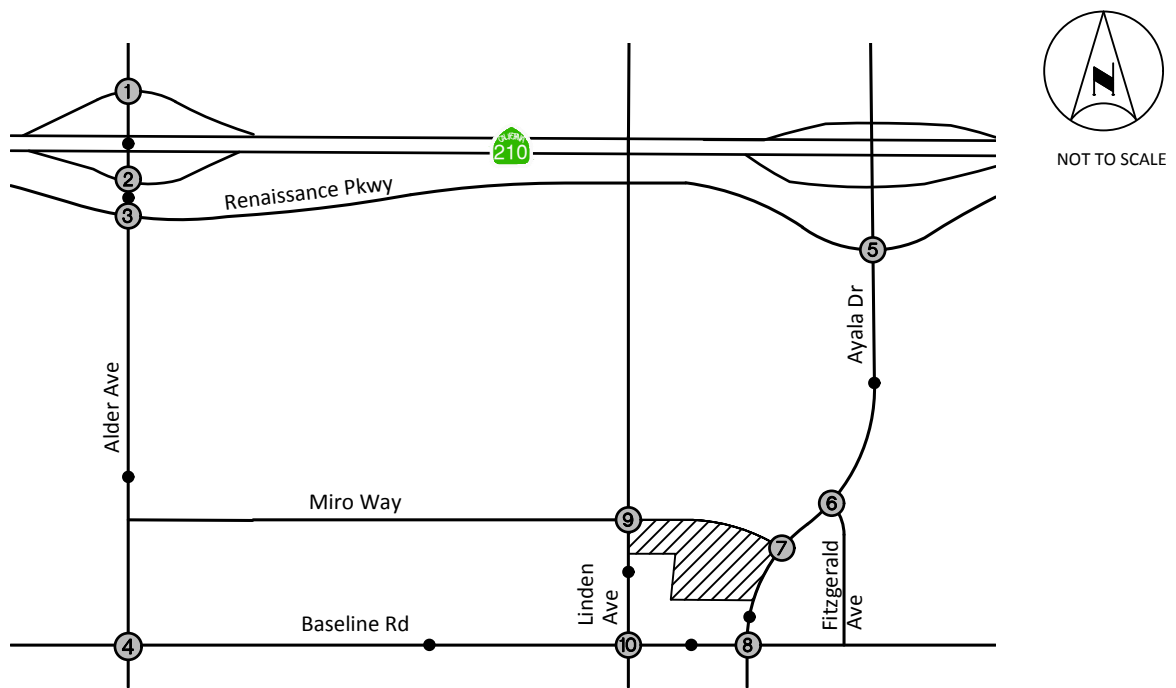
Alder Avenue – Alder Avenue is located approximately 1 mile west of the project site and is designated as a Major Arterial in the Renaissance Specific Plan Amendment, with four travel lanes, a bike lane in each direction, and a raised median within 100 feet of right-of-way. Alder Avenue is a truck route between Baseline Road to Casa Grande Drive. The posted speed limit on Alder Avenue is 50 miles per hour (mph) and on-street parking is not allowed.

Linden Avenue – Linden Avenue is designated as a Secondary Arterial and would provide four travel lanes within 80 feet of right-of-way. Linden Avenue is a designated truck route from Baseline Road to Miro Way and north of Casmalia Street, with truck access restricted to local deliveries between Casmalia Street and Miro Way. The posted speed limit along Linden Avenue is 35 mph. Linden Avenue would provide access to the project site via one signalized full-movement driveway at the intersection of Linden Avenue and Miro Way.

Ayala Drive – Ayala Drive is designated as a Secondary Arterial and would provide four travel lanes and a bike lane in each direction. Ayala Drive is designated as a truck route throughout the Renaissance Specific Plan area with truck access restricted from Baseline Road to Renaissance Parkway. The posted speed limit along Ayala Drive is 45 mph. Ayala Drive will form the east boundary of the project site. Ayala Drive would provide access to the project site via one signalized full-movement driveway at the intersection of Ayala Drive and Miro Way.

Renaissance Parkway – The City of Rialto Circulation Element refers to the Renaissance Specific Plan for roadway classifications within the Specific Plan area. The Renaissance Specific Plan designates Renaissance Parkway as a Major Arterial west of Ayala Drive and a Secondary Arterial between Ayala Drive and the Renaissance Specific Plan eastern boundaries. Within the project area, Renaissance Parkway would provide four travel lanes with bike lanes and a raised median within 108 feet of right-of-way. Renaissance Parkway extends in an east-west orientation through and beyond the boundaries of the City of Rialto, changing to Highland Avenue to the west and Easton Street to the east. Renaissance Parkway connects with north-south streets that have interchanges with the SR-210 Freeway to the north, and the I-10 Freeway to the south. Renaissance Parkway is a truck route between Alder Avenue and Locust Avenue, and east of Ayala Drive; with truck access restricted to local deliveries between Locust Avenue and Ayala Drive, and west of Alder Avenue. The posted speed limit along Renaissance Parkway is 45 mph.

Baseline Road – Baseline Road is designated as a Major Arterial. Baseline Road would provide four travel lanes and a bike lane in each direction within 80 feet of right-of-way. Baseline Road is a designated truck route from Ayala Drive to Linden Avenue. The posted speed limit along Baseline Road is 50 mph.



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
		FUTURE INTERSECTION	
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		

LEGEND:

- = Project Site
- = Study Intersection
- = Turn or Through Lane
- = Signal
- = Stop Sign
- = Study Roadway Segment

FIGURE 3
EXISTING LANE CONFIGURATION AND
TRAFFIC CONTROL

C. Existing Traffic Volumes

Traffic count data included vehicle classifications for passenger vehicles and trucks. Vehicle classifications are necessary to compute Passenger Car Equivalent (PCE) volumes, which are used in the traffic analysis to address the effects of truck traffic on intersection and roadway operation. Copies of the traffic count data worksheets are provided in **Appendix B**.

The PCE volumes were developed by applying a PCE factor of 1.5 for 2-axle trucks, 2.0 for 3-axle trucks, and 3.0 for trucks with 4 or more axles. These factors are consistent with the City of Rialto's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)*. PCE volume worksheets are provided in **Appendix C**. Existing morning and evening peak hour volumes and daily roadway volumes with the PCE factors applied are presented on **Figure 4**.

D. Existing Delay and Level of Service

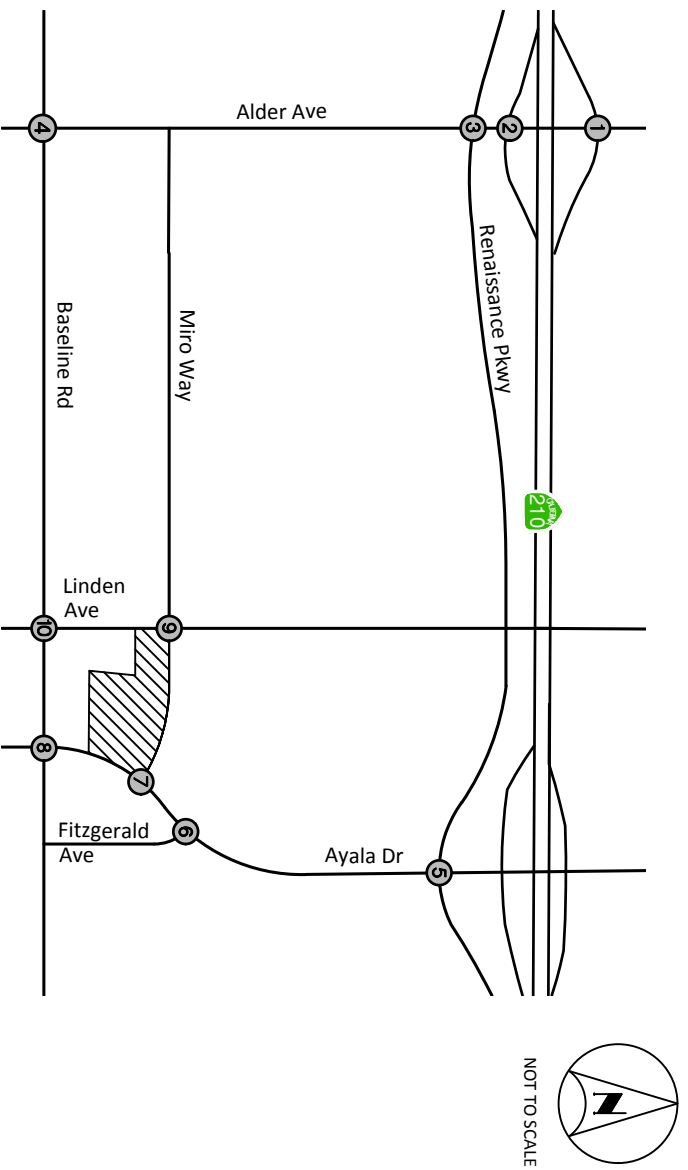
Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for the morning and evening peak hours using the analysis procedures and assumptions described previously in this report. The results of the intersection analysis for Existing Conditions are shown on **Table 1**. Review of this table indicates that the study intersections currently operate at an acceptable Level of Service.

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

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted based on the roadway capacities presented previously in this report. The results of the roadway analysis for Existing Conditions are shown on **Table 2**. Review of this table indicates that the study roadway segments currently operate at an acceptable LOS.



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
12/376 17/292 157/123 5/4 431/295	421/430 6/155 298/203 3/4 616/502	78/138 775/603 155/183 199/221 140/172 26/20	138/123 345/363 63/118 128/87 472/346 41/57
396/475 343/298	486/565 333/420	97/95 158/269 80/67 127/51 567/659 15/34	96/79 373/434 74/63 157/43 301/323 100/44
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
341/559 698/805 198/342 350/357 122/184 29/61	8/1 641/851 122/209 136/151 1/3 3/1	FUTURE INTERSECTION	115/135 56/63 546/678 53/139 39/49 322/350 60/89
236/379 106/378 80/113 47/106 716/774 38/75	1/0 4/5 14/8 717/810 3/8		197/142 584/647 68/96 115/135 264/447 154/206
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
52/71 233/377 40/70 8/24 285/402 20/35	47/95 93/170 74/153 126/169 436/367 20/39		
	402/475 31/27 41/18 134/168 61/45		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 4
EXISTING PEAK HOUR 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	Alder Avenue at SR-210 WB Ramps	S	32.0	C	29.7	C
2	Alder Avenue at SR-210 EB Ramps	S	24.7	C	29.3	C
3	Alder Avenue at Renaissance Parkway	S	27.1	C	26.1	C
4	Alder Avenue at Baseline Road	S	35.5	D	30.8	C
5	Ayala Drive at Renaissance Parkway	S	21.5	C	25.3	C
6	Ayala Drive at Fitzgerald Avenue	S	6.7	A	6.9	A
7	Ayala Drive at Miro Way	FUTURE INTERSECTION				
8	Ayala Drive at Baseline Road	S	28.4	C	29.8	C
9	Linden Avenue at Miro Way	S	6.3	A	8.2	A
10	Linden Avenue at Baseline Road	S	28.8	C	28.7	C

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition).

S = Signalized

U = Unsignalized

TABLE 2 SUMMARY OF ROADWAY ANALYSIS EXISTING CONDITIONS					
Roadway	Segment	Current Configuration	LOS D Capacity	Existing ADT	LOS D or Better?
Alder Avenue	SR-210 WB Ramps to SR-210 EB Ramps	4 Lanes Divided	32,999	16,020	Yes
	SR-210 EB Ramps to Renaissance Parkway	4 Lanes Divided	32,999	23,147	Yes
	Renaissance Parkway to Baseline Road	4 Lanes Divided	32,999	18,946	Yes
Linden Avenue	Miro Way to Baseline Road	4 Lanes Divided	32,999	9,062	Yes
Ayala Drive	Renaissance Parkway to Fitzgerald Avenue	4 Lanes Divided	32,999	25,610	Yes
	Miro Way to Baseline Road	4 Lanes Divided	32,999	21,446	Yes
Baseline Road	Alder Avenue to Linden Avenue	4 Lanes Divided	32,999	12,697	Yes
	Linden Avenue to Ayala Drive	4 Lanes Divided	32,999	13,739	Yes
Notes: LOS = Level of Service ADT = Average Daily Traffic					

E. General Plan Circulation Element

The General Plan Circulation Element references the Renaissance Specific Plan for roadway designations for the project site and the surrounding vicinity. The original Renaissance Specific Plan was approved in 2010. An amendment to the specific plan – the Renaissance Specific Plan Amendment (RSPA) was approved in December 2016. A copy of the RSPA Vehicular Circulation Plan is provided on **Figure 5**. Designated truck routes in the RSPA area are shown on **Figure 6**.

Beyond the Specific Plan area, Alder Avenue, Locust Avenue, and Ayala Drive continue as truck routes to the north, with only Ayala Drive continuing as a truck route to the south (changing name to Cedar Avenue at Baseline Road). Baseline Road and Casmalia Avenue continue to the west as truck routes outside the Specific Plan area, and Baseline Road continues as a truck route to the east.

F. Transit Service

Transit service to the project area is provided via the OmniTrans transit lines, which serve various San Bernardino cities in the area. Bus stops in the project vicinity are located along Renaissance Parkway, approximately 4,000 ft to the north, Baseline Road, approximately 1,000 ft to the south and Linden Avenue approximately 500 ft to the west. A description of the bus routes serving the project area is provided below.

OmniTrans Route 10 operates between the City of Fontana and the City of San Bernardino, traveling through Rialto along Baseline Road in the project vicinity. Route 10 operates on weekdays from 6:30 AM to 7:30 PM with approximately 1-hour headways (the time between bus arrivals), on Saturdays from 6:20 AM to 7:00 PM with approximately 1-hour headways, and on Sundays from 7:10 AM to 6:00 PM with approximately 1-hour headways.

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

OmniTrans Route 312 operates between the City of San Bernardino and the City of Fontana through Cal State San Bernardino and Rialto, along Renaissance Parkway and Linden Avenue in the project vicinity. Route 312 operates on weekdays from 5:20 AM to 10:30 PM with approximately 1-hour headways, on Saturdays and Sundays from 7:15 AM to 6:50 PM with approximately 1-hour headways.

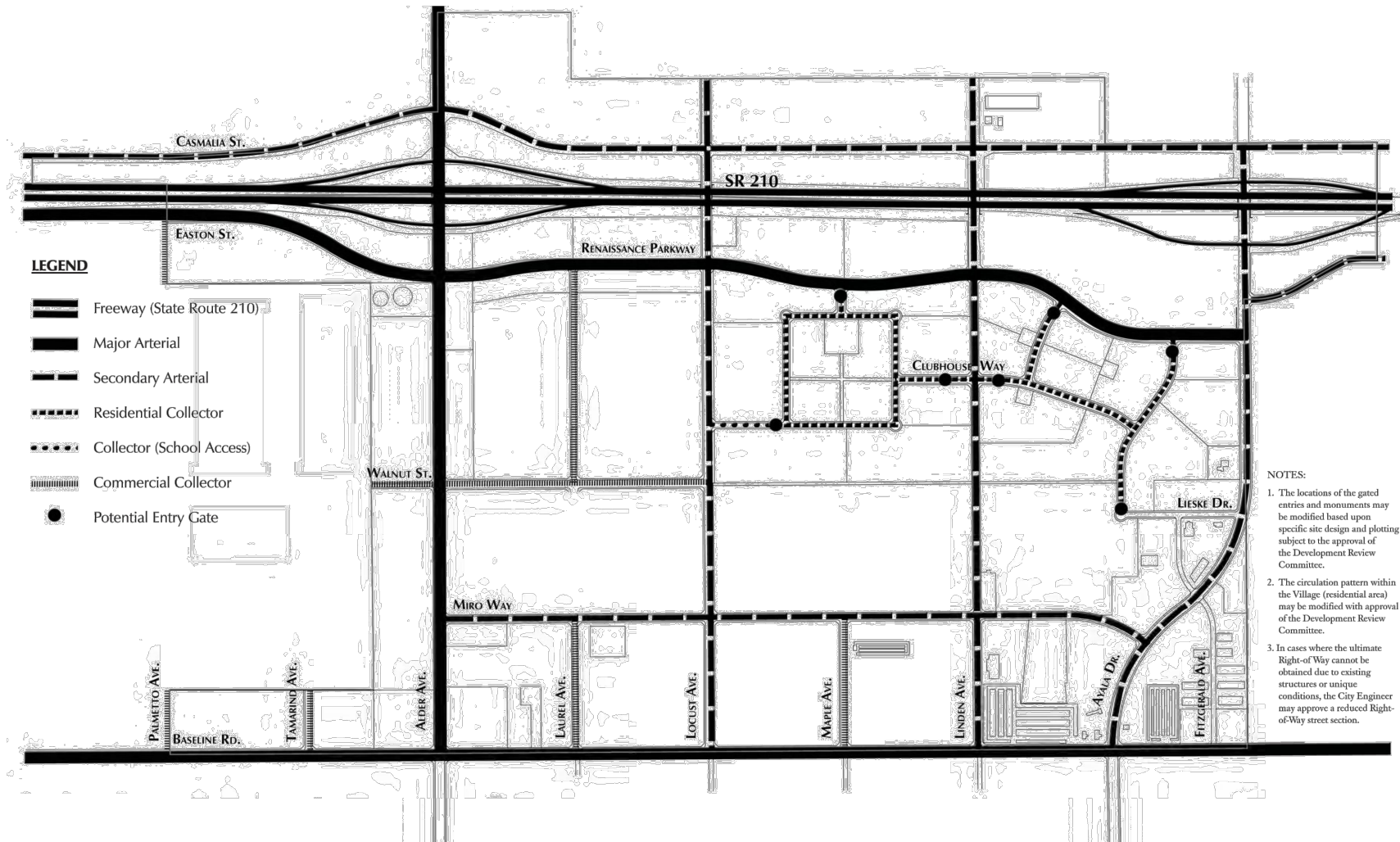


FIGURE 5
RENAISSANCE SPECIFIC PLAN AMENDMENT
VEHICULAR CIRCULATION PLAN

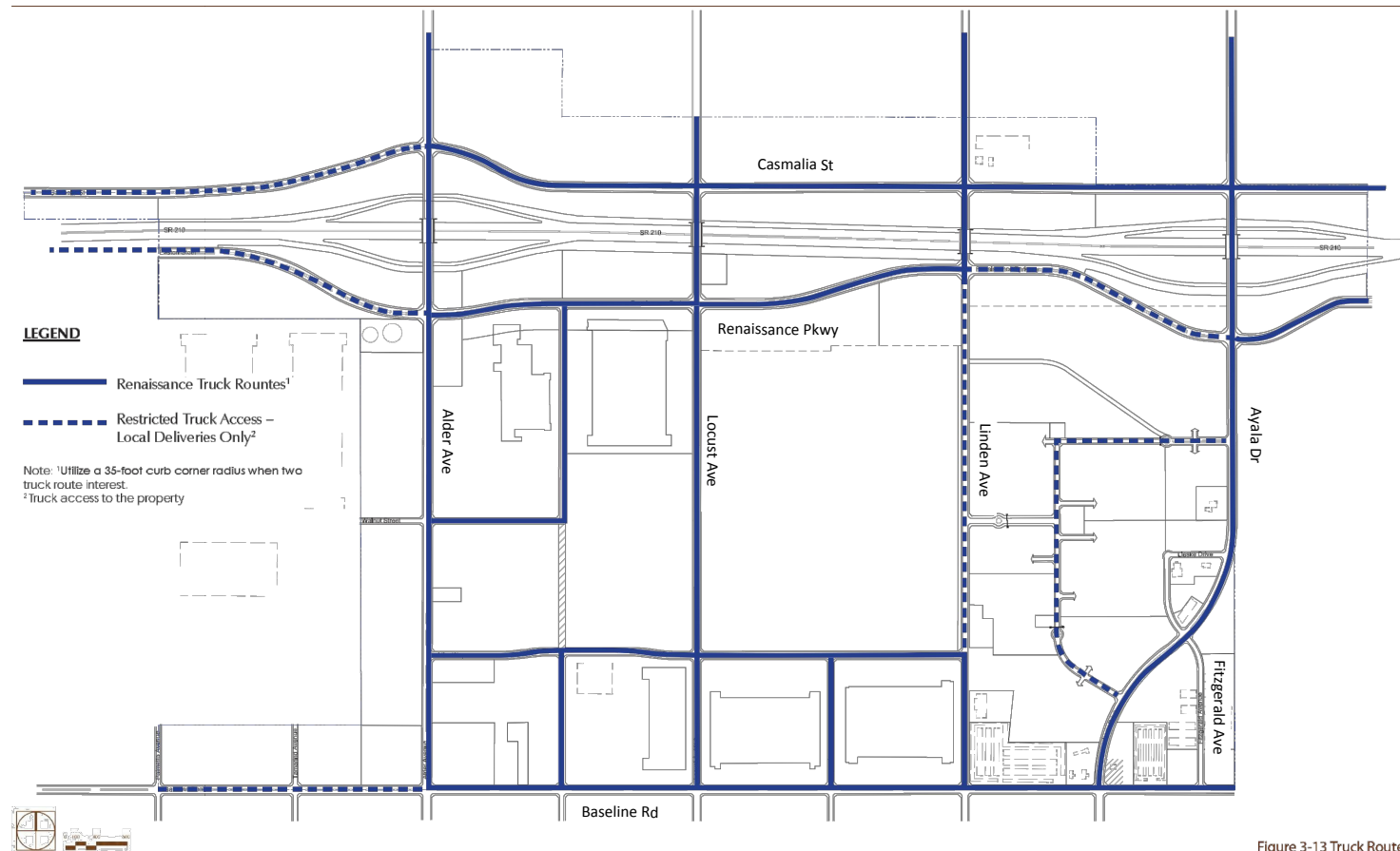


Figure 3-13 Truck Routes

FIGURE 6
RENAISSANCE SPECIFIC PLAN AMENDMENT
TRUCK ROUTES

III. PROJECTED FUTURE TRAFFIC

A. Project Traffic

1. Project Trip Generation

Trip generation estimates for the Miro Way and Ayala Drive Warehouse project are based on daily and peak hourly trip generation rates obtained from the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition). ITE trip generation estimates for the project are based on the trip generation rates for ITE Land Use 150: Warehousing.

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 and PCE factors, and the resulting trip generation estimates for the project are summarized on **Table 3**. The project is estimated to generate 1,128 PCE trips on a daily basis, with 123 trips in the morning peak hour, and 131 trips in the evening peak hour.

2. Trip Distribution and Assignment

Trip distribution assumptions for the project were developed by considering the proposed site uses, the location of the site access points and assumed percentages in and out of each access points and the routes to and from nearby roadway gates and the freeway system. It should be noted that a Truck Route Moratorium was adopted by the City of Rialto on December 13, 2022, which has designated Alder Avenue and Baseline Road as truck routes. As such, trucks will enter the project site from the SR-210 freeway by using the Alder Avenue/SR-210 interchange, head south on Alder Avenue, then head east on Baseline Road, and then north on Ayala Drive to Miro Way to access the project site. Trucks exiting the project site to head to the SR-210 freeway would head east on Miro Way, then south on Ayala Drive, west on Baseline Road, and then north on Alder Avenue to access the SR-210 freeway. Trip distribution patterns are shown on **Figure 7**. Trip distribution percentages at each study intersection were applied to the project trip generation to determine the project trips through each intersection. The resulting project-related peak hour trips at the study intersections are shown on **Figure 8**.

3. Volume Redistribution

Based on discussion with City staff, the extension of Miro Way from Linden Avenue to Ayala Drive would provide a more direct route for existing vehicles to/from the SR-210 freeway by using Miro Way instead of Baseline Road or Renaissance Parkway to access Ayala Drive and Alder Avenue. As such, a percentage of existing traffic was rerouted from Baseline Road and Renaissance Parkway to Miro Way between Linden Avenue and Ayala Drive in the Plus Project scenarios. The rerouted existing peak hour and daily volumes for the Plus Project scenarios are provided in **Appendix G**.

TABLE 3
SUMMARY OF PROJECT TRIP GENERATION
MIRO WAY AND AYALA DRIVE WAREHOUSE 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		428,715	KSF	733	56	17	73	21	56	77
Passenger Vehicles	60.00%			440	34	10	44	13	34	47
Trucks	40.00%			293	22	7	29	8	22	30

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	440	1.0	440	34	10	44	13	34	47
2-Axle Trucks	0.80%	6	1.5	9	1	0	1	0	1	1
3-Axle Trucks	11.20%	82	2.0	164	13	4	17	5	13	18
4+ Axle Trucks	28.00%	205	3.0	615	47	14	61	18	47	65
Total Truck PCE Trips				788	61	18	79	23	61	84
Total Project PCE Trips				1,228	95	28	123	36	95	131

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

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

² Source: City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Assessment (October, 2021)



NOT TO SCALE

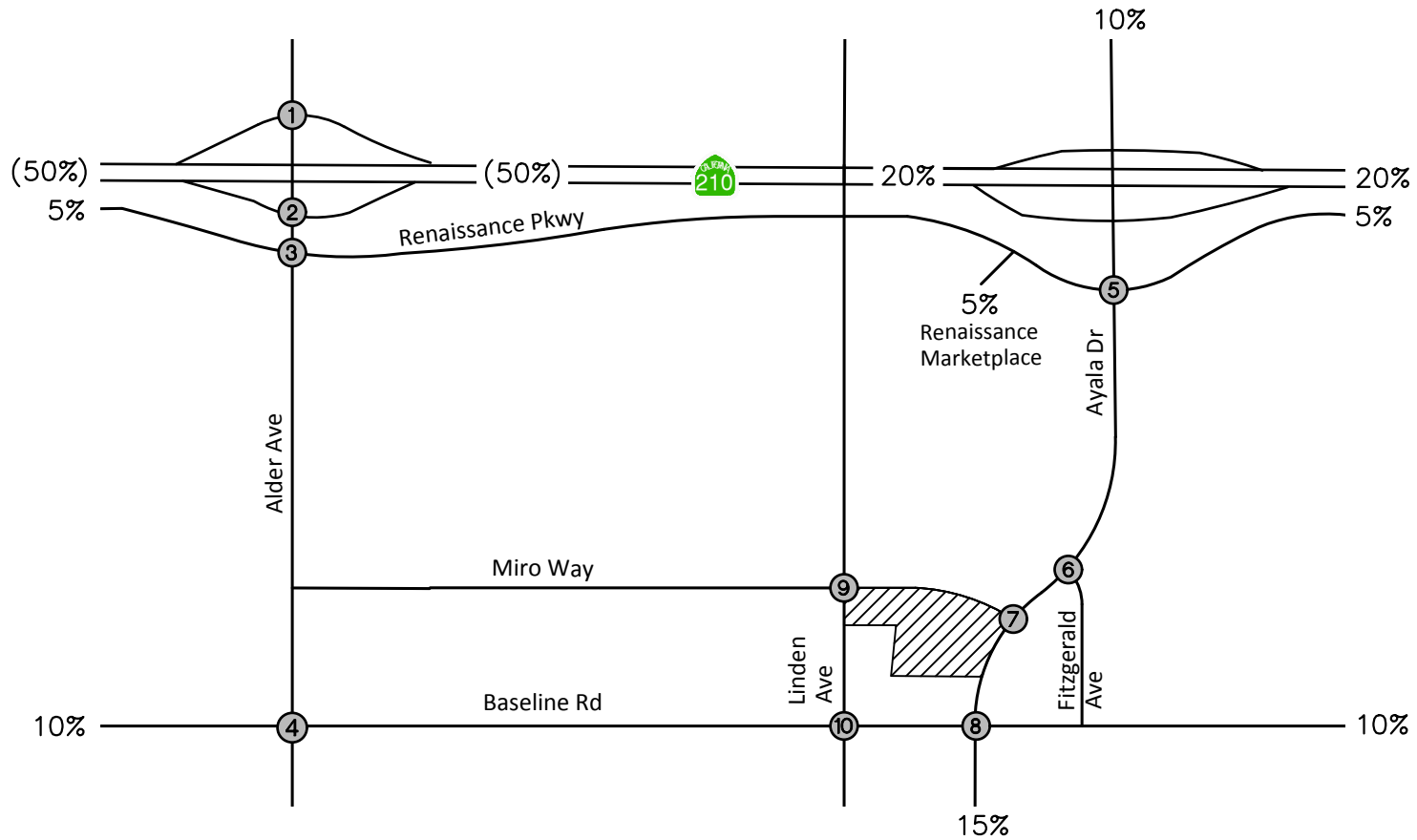
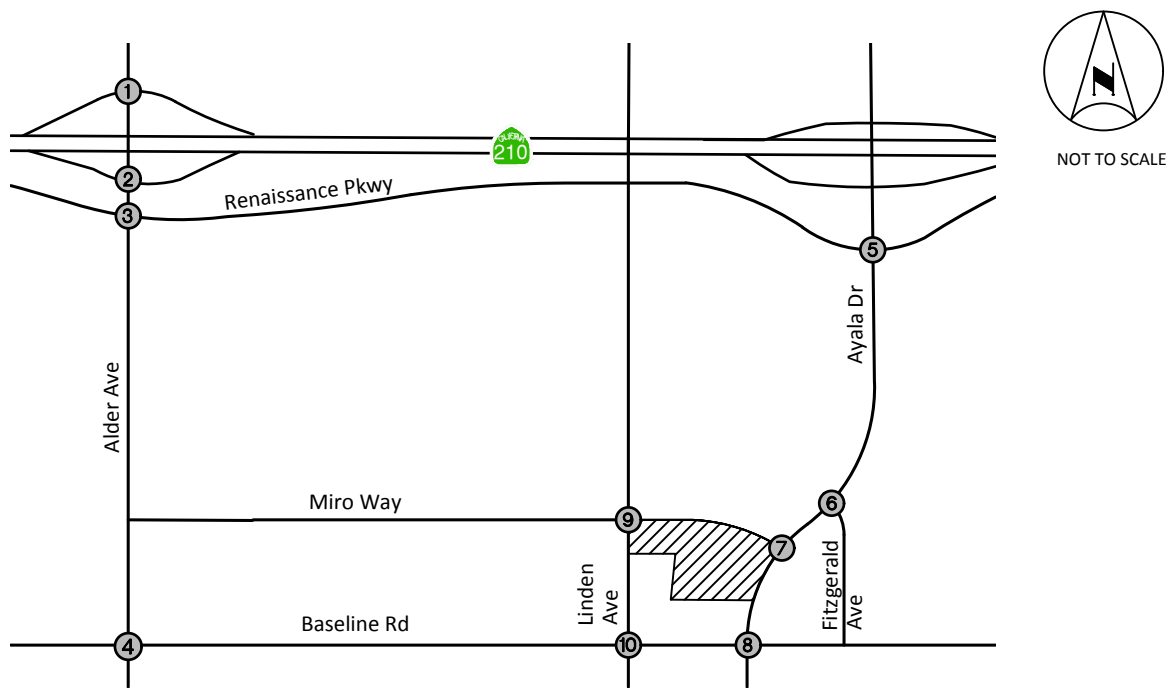


FIGURE 7
PROJECT TRIP DISTRIBUTION

LEGEND:

- = Project Site
- = Study Intersection
- XX% = Passenger Car Trip Distribution
- (YY%) = Truck Trip Distribution



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 8
PROJECT-RELATED TRAFFIC VOLUMES

B. Existing Plus Growth Plus Project Traffic (Opening Year 2024)

The project Opening Year is anticipated to be Year 2024. Local roadway and intersection improvements that are currently underway or have been conditioned on other projects are expected to be in place by the Project Opening Year 2024.

1. Ambient Growth Rate

An ambient growth rate of 2.0% per year to Opening Year 2024 was applied to existing peak hour traffic volumes to develop Existing Plus Growth forecasts. The resulting daily and peak hour Existing Plus Growth without the project (Opening Year 2024) traffic volumes are shown on **Figure 9**.

Project traffic was then added to develop Existing Plus Growth Plus Project (Opening Year 2024) traffic forecasts. Existing Plus Growth Plus Project daily and peak hour traffic volumes are shown on **Figure 10**.

2. Opening Year 2024 Existing Plus Growth

Peak Hour Operating Conditions

Intersection Level of Service analysis was conducted for Existing Plus Growth without the project (Opening Year 2024). The results are shown on **Table 4**. Intersection analysis worksheets for this scenario are provided in **Appendix D**.

Review of this table indicates that with the addition of ambient growth, the study intersections would continue to operate at an acceptable LOS.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for the Existing Plus Growth conditions and the results are shown on **Table 5**. Review of this table indicates that the study roadway segments would continue to operate at an acceptable LOS.

3. Opening Year 2024 Existing Plus Growth Plus Project

Peak Hour Operating Conditions

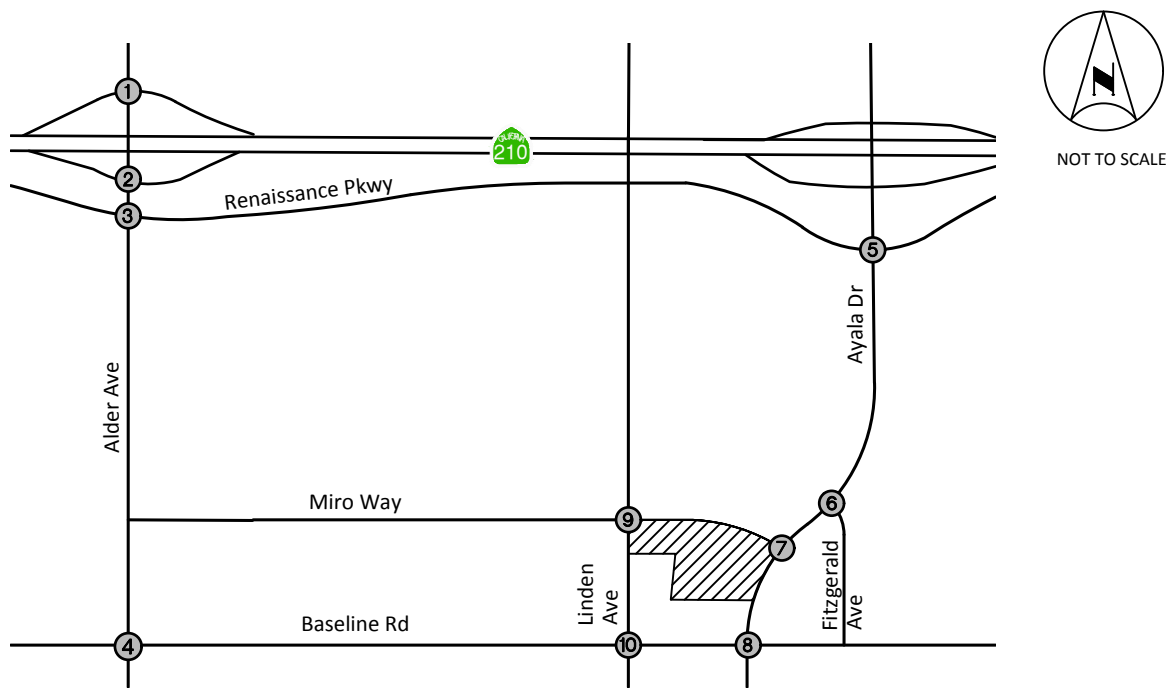
Intersection Level of Service analysis was conducted for the Existing Plus Growth Plus Project conditions. The results of the intersection analysis are shown on **Table 6**. Review of this table indicates that, with the addition of ambient growth and project traffic, the following study intersection would operate at an unacceptable LOS:

- #7 - Ayala Drive at Miro Way: PM – LOS E

The Level of Service for an unsignalized intersection is reported based on the single approach movement with the highest delay, which in this case, would be the eastbound approach for intersection #7. While the side street approach operates at a deficient Level of Service based on the highest delay approach, the overall intersection delay would be acceptable. Any queuing that occurs on the side street is contained on the minor intersection approach and does not impact the progression of traffic on the main arterial.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for the Existing Plus Growth Plus Project condition and the results are shown on **Table 7**. Review of this table indicates that the study roadway segments would continue to operate at an acceptable LOS.



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
12/384 17/298 160/125 5/4 440/301 404/485 350/304	429/439 6/158 304/207 3/4 628/512 496/576 340/428	80/141 791/615 158/187 203/225 143/175 27/20 99/97 161/274 82/68 130/52 578/672 15/35	141/125 352/370 64/120 131/89 481/353 42/58 98/81 380/443 75/64 160/44 307/328 102/45
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
348/570 712/821 202/349 357/364 124/188 30/62 240/387 108/386 82/115 48/108 730/789 39/77	8/1 654/868 124/213 139/154 1/3 3/1 1/0 4/5 14/8 731/826 3/8	FUTURE INTERSECTION	57/64 557/692 54/142 40/50 328/357 61/91 117/138 269/456 157/210 201/145 596/660 69/98
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
53/72 238/385 41/71 20/36 8/24 291/410	48/97 95/173 75/156 129/172 445/374 20/40 27/85 410/485 32/28 42/18 137/171 62/46		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 9
OPENING YEAR 2024 - EXISTING PLUS
GROWTH TRAFFIC VOLUMES

TABLE 4
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 - EXISTING PLUS GROWTH

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Alder Avenue at SR-210 WB Ramps	S	32.2	C	30.5	C
2	Alder Avenue at SR-210 EB Ramps	S	25.2	C	30.1	C
3	Alder Avenue at Renaissance Parkway	S	27.4	C	26.2	C
4	Alder Avenue at Baseline Road	S	36.1	D	31.1	C
5	Ayala Drive at Renaissance Parkway	S	21.7	C	25.6	C
6	Ayala Drive at Fitzgerald Avenue	S	6.8	A	7.0	A
7	Ayala Drive at Miro Way	FUTURE INTERSECTION				
8	Ayala Drive at Baseline Road	S	28.8	C	30.2	C
9	Linden Avenue at Miro Way	S	6.3	A	8.2	A
10	Linden Avenue at Baseline Road	S	28.7	C	28.8	C

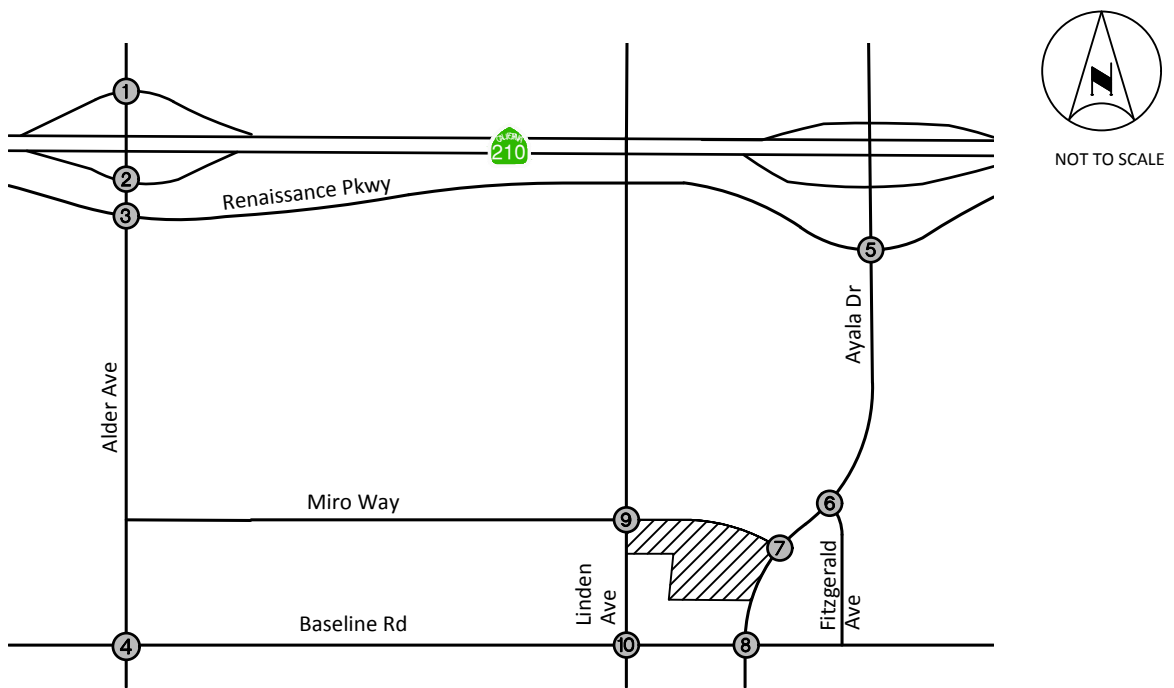
Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition).

S = Signalized

U = Unsignalized

TABLE 5 SUMMARY OF ROADWAY ANALYSIS OPENING YEAR 2024 - EXISTING PLUS GROWTH					
Roadway	Segment	LOS D Capacity	Existing ADT	Existing Plus Growth ADT	LOS D or Better?
Alder Avenue	SR-210 WB Ramps to SR-210 EB Ramps	32,999	16,020	16,340	Yes
	SR-210 EB Ramps to Renaissance Parkway	32,999	23,147	23,610	Yes
	Renaissance Parkway to Baseline Road	32,999	18,946	19,325	Yes
Linden Avenue	Miro Way to Baseline Road	32,999	9,062	9,243	Yes
Ayala Drive	Renaissance Parkway to Fitzgerald Avenue	32,999	25,610	26,122	Yes
	Miro Way to Baseline Road	32,999	21,446	21,875	Yes
Baseline Road	Alder Avenue to Linden Avenue	32,999	12,697	12,951	Yes
	Linden Avenue to Ayala Drive	32,999	13,739	14,014	Yes
Notes: LOS = Level of Service ADT = Average Daily Traffic					



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
12/384 17/298 160/125 5/4 471/312 413/515 350/304	480/450 6/158 304/207 3/4 658/524 505/606 349/459	80/141 852/638 158/187 203/225 144/177 27/20 99/97 163/275 82/68 130/52 596/733 15/35	141/125 352/370 125/143 149/150 482/356 42/58 98/81 383/444 75/64 160/44 307/328 102/45
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
335/552 742/845 202/349 357/364 124/188 32/63 230/368 108/386 84/116 49/110 744/825 40/79	8/1 688/894 124/213 139/154 1/3 3/1 1/0 4/5 14/8 747/866 3/8	36/32 659/868 20/49 10/33 33/13 744/833	64/88 557/692 55/145 43/51 328/357 61/91 142/141 269/456 159/215 206/147 596/660 69/98
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
40/54 238/385 2/1 1/2 15/24 12/39 31/53 15/28 15/27 6/18 291/410 39/14	58/31 95/173 72/152 131/168 454/404 20/40 61/97 440/497 32/28 42/18 137/171 62/46		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 10
OPENING YEAR 2024 - EXISTING PLUS GROWTH
PLUS PROJECT TRAFFIC VOLUMES

TABLE 6
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 - EXISTING PLUS GROWTH 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	Alder Avenue at SR-210 WB Ramps	S	32.2	C	33.0	C	0.8	No	30.5	C	32.5	C	2.0	No
2	Alder Avenue at SR-210 EB Ramps	S	25.2	C	26.7	C	1.5	No	30.1	C	31.9	C	1.8	No
3	Alder Avenue at Renaissance Parkway	S	27.4	C	27.5	C	0.1	No	26.2	C	26.2	C	0.0	No
4	Alder Avenue at Baseline Road	S	36.1	D	37.2	D	1.1	No	31.1	C	31.1	C	0.0	No
5	Ayala Drive at Renaissance Parkway	S	21.7	C	21.6	C	-0.1	No	25.6	C	25.5	C	-0.1	No
6	Ayala Drive at Fitzgerald Avenue	S	6.8	A	6.7	A	-0.1	No	7.0	A	7.0	A	0.0	No
7	Ayala Drive at Miro Way	U	-	-	27.6	D	-	No	-	-	47.9	E	-	Yes
8	Ayala Drive at Baseline Road	S	28.8	C	32.1	C	3.3	No	30.2	C	30.5	C	0.3	No
9	Linden Avenue at Miro Way	S	6.3	A	7.4	A	1.1	No	8.2	A	10.4	B	2.2	No
10	Linden Avenue at Baseline Road	S	28.7	C	29.1	C	0.4	No	28.8	C	29.1	C	0.3	No

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition).

S = Signalized

U = Unsignalized

TABLE 7
SUMMARY OF ROADWAY ANALYSIS
OPENING YEAR 2024 - EXISTING PLUS GROWTH PLUS PROJECT

Roadway	Segment	LOS D Capacity	Existing ADT (Rerouted)	Existing Plus Growth ADT	Daily Project Traffic	Existing + Growth + Project ADT	LOS D or Better?
Alder Avenue	SR-210 WB Ramps to SR-210 EB Ramps	32,999	16,020	16,340	389	16,729	Yes
	SR-210 EB Ramps to Renaissance Parkway	32,999	23,147	23,610	779	24,389	Yes
	Renaissance Parkway to Baseline Road	32,999	18,946	19,325	779	20,104	Yes
Linden Avenue	Miro Way to Baseline Road	32,999	8,762	8,937	500	9,437	Yes
Ayala Drive	Renaissance Parkway to Fitzgerald Avenue	32,999	26,330	26,857	264	27,121	Yes
	Miro Way to Baseline Road	32,999	21,146	21,569	433	22,002	Yes
Baseline Road	Alder Avenue to Linden Avenue	32,999	12,697	12,951	823	13,774	Yes
	Linden Avenue to Ayala Drive	32,999	13,439	13,708	455	14,163	Yes

Notes: LOS = Level of Service
ADT = Average Daily Traffic

C. Cumulative Conditions (Existing Plus Growth Plus Cumulative Projects)

1. Cumulative Projects

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

A summary of Cumulative Projects in the project vicinity and the trip generation associated with each is provided on **Table 8**. The locations of the Cumulative Projects are shown on **Figure 11**. Cumulative Project traffic volumes are shown on **Figure 12**.

2. Background Growth Rate

As discussed earlier, an ambient growth rate of 2.0% per year to Opening Year 2024 was assumed for this analysis.

3. Cumulative Projects Trip Generation

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

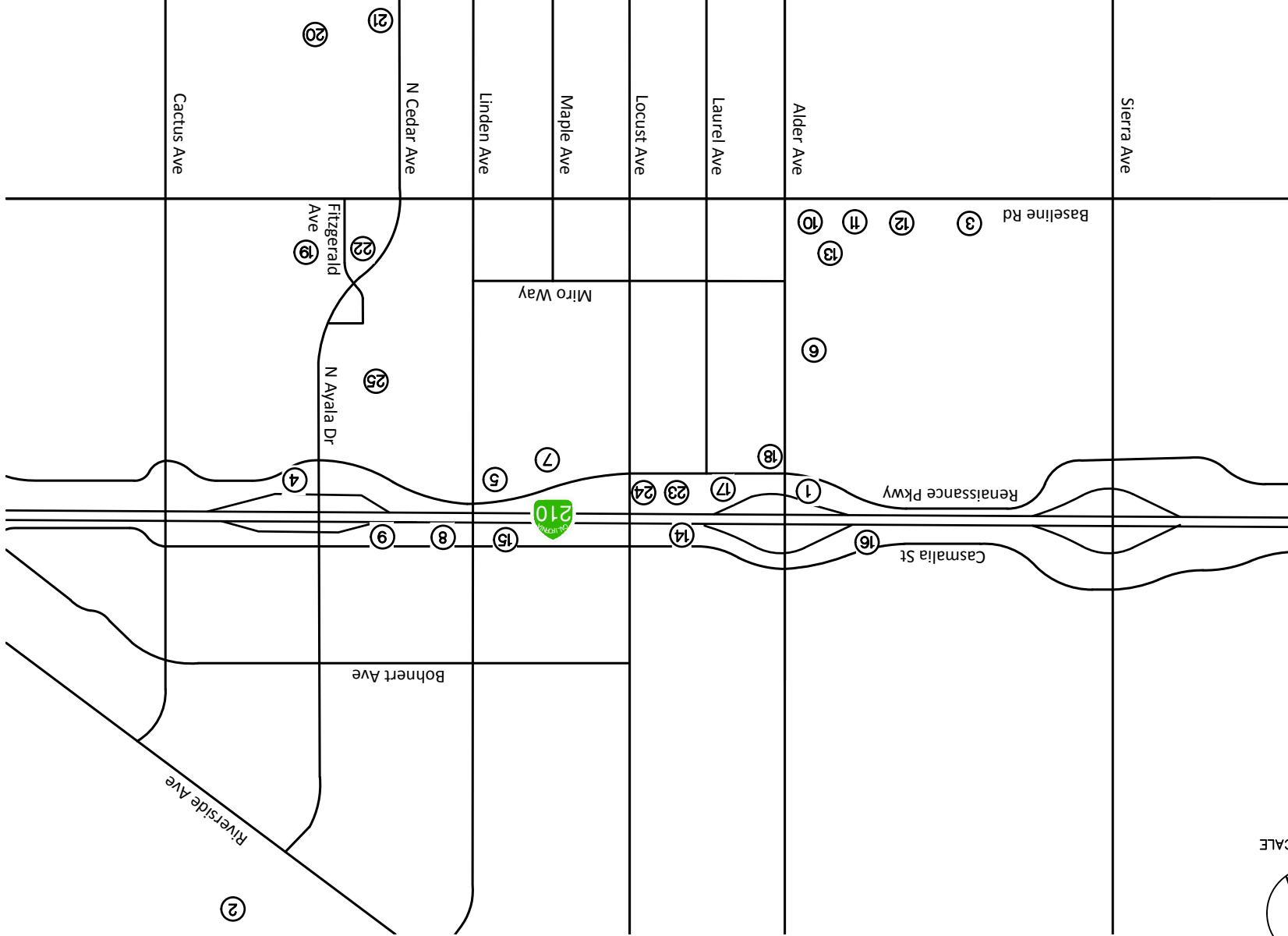
4. Cumulative Projects Trip Distribution and Assignment

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

**TABLE 8
SUMMARY OF CUMULATIVE PROJECTS**

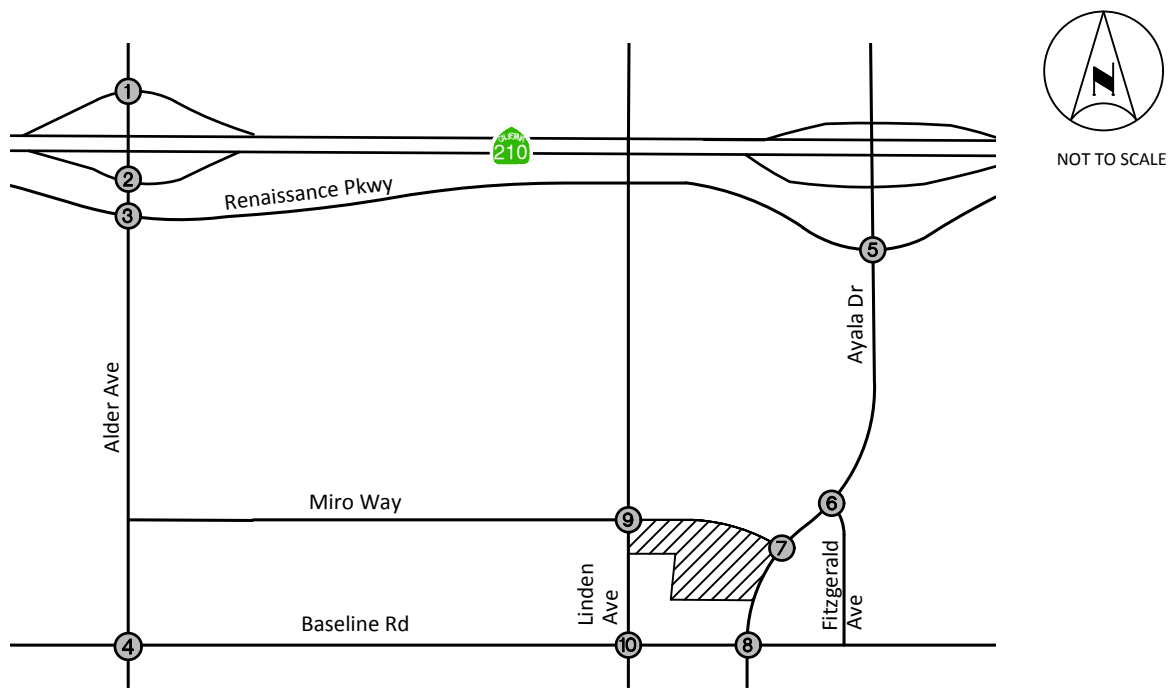
Project #	Land Use	Quantity	Units	Trip Generation Estimates						
				Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
1	Stater Bros									
	Hotel	100	ROOMS	817	31	22	53	31	29	60
	High-Turnover (Sit-Down) Restaurant	2.000	KSF	254	12	11	23	13	9	22
	Pass-by High-Turn (Sit-Down) Restaurant			-57	0	0	0	-2	-2	-4
	Fast-Food Restaurant w/o D.T.	1.000	KSF	716	26	18	44	13	13	26
	Pass-by Fast-Food Restaurant			-161	-6	-4	-10	-3	-3	-6
	Fast-Food Restaurant w/ D.T.	5.440	KSF	2,699	126	121	247	92	85	177
	Pass-by Fast-Food Restaurant			-638	-31	-30	-61	-20	-20	-40
	Gasoline Station w/ Conv. Mkt. & Car Wash	16	VFP	2,445	97	93	190	113	109	222
	Pass-by Gasoline/Service Station			-572	-21	-21	-42	-26	-26	-52
	Site Internal Capture (10%)			-693	-29	-27	-56	-26	-25	-51
2	Lytle Creek SP (10% of Capacity)									
	Single-Family Detached Housing	504	DU	4,823	95	284	379	321	188	509
	Condominium	336	DU	1,952	25	123	148	117	58	175
3	Warehouse II (Baseline and Palmetto NEC)	90.726	KSF	158	12	4	16	5	13	18
4	Renaissance East									
	Specialty Retail Center	4.550	KSF	202	-	-	-	5	7	12
	Pass-by Specialty Retail Center (10%)			-40	0	0	0	-1	-1	-2
	High-Turnover (Sit-Down) Restaurant	8.849	KSF	993	48	40	88	54	33	87
5	Hotel (SWC of Linden and Renaissance)	135	Occupied Room	1,204	52	38	90	46	48	94
6	Morin Warehouse	200.000	KSF	1,193	77	22	99	26	78	104
7	Buildings 7, 8, and 9 Warehouse	540.427	KSF	3,224	216	57	273	73	218	291
8	SEC Casmalia / Linden Warehouse	136.220	KSF	813	54	13	67	18	55	73
9	Fuel Station/Fast Food at SWC of Casmalia / Ayala	7.000	KSF	4,419	202	188	390	174	164	338
10	NWC Baseline / Alder Warehouse	255.655	KSF	1,526	104	28	132	34	104	138
11	NWC Baseline / Tamarind Warehouse	156.500	KSF	935	65	18	83	23	65	88
12	Baseline / Palmetto Warehouse	99.999	KSF	599	41	12	53	13	41	54
13	Warehouse	78.680	KSF	698	32	31	63	34	35	67
14	Warehouse	87.189	KSF	524	25	24	49	26	25	51
15	Warehouse	116.429	KSF	500	24	24	48	25	25	50
16	Rialto Travel Center	-	FUELING POSITIONS	5,532	277	276	553	256	259	515
17	PA 19	168.143	KSF	402	30	10	40	13	31	44
18	Fuel / FF / Market	-	FUELING POSITIONS	9,993	557	556	1,113	454	454	908
19	Olive Grove Warehouse	679.607	KSF	1,981	149	45	194	58	157	215
20	Housing	-	DU	1,487	52	51	103	66	65	131
21	Shopping / Fast Food	-	KSF	4,651	44	44	88	99	98	197
22	Crow Holdings (N/S Baseline E/O Ayala)	668.524	KSF	1,163	88	26	114	34	93	127
23	Orbis (NEC Renaissance and Laurel)	135.408	KSF	236	18	5	23	7	19	26
24	Orbis Rialto II (PCE)	117.255	KSF	704	49	14	63	18	49	67
25	Renaissance Place Residential	435	DU	3,132	65	144	209	141	107	248
Total Project Trips				57,814	2,606	2,261	4,866	2,324	2,658	4,979
DU = Dwelling Units, KSF = 1,000 square feet, VFP = Vehicle Fueling Positions, DT = Drive-through										

FIGURE 11
LOCATION OF CUMULATIVE PROJECTS



NOT TO SCALE





1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
89/91 291/255 89/88 339/204 210/317 292/255	542/369 89/89 89/88 339/205 413/483 210/316	18/15 533/346 235/297 74/64 18/15 70/65 3/1 1/3 370/485	60/30 18/17 108/46 39/113 35/50 29/61 32/52 5/13 13/5 20/18
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
152/166 19/23 16/16 4/8 17/18 7/6 7/14 14/11 149/183 19/24	146/125 19/7 3/9 107/188	146/125 107/188	12/19 103/108 18/10 8/27 53/125 21/39 22/15 117/65 33/56 42/51 91/114 24/35
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
40/28 17/44	7/11 33/17 13/36 57/143 4/8 127/82		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 12
CUMULATIVE PROJECTS TRAFFIC VOLUMES

5. Opening Year 2024 Cumulative Without Project Conditions

Peak Hour Operating Conditions

Daily and peak hour traffic volumes for Opening Year 2024 Cumulative Without Project Conditions are shown on **Figure 13**. Intersection Level of Service results are shown on **Table 9**. Review of this table indicates that, with the addition of Cumulative Projects traffic, the following intersections would operate at an unacceptable Level of Service:

- #1 - Alder Avenue at SR-210 WB Ramps: AM – LOS F, PM – LOS F
- #2 - Alder Avenue at SR-210 EB Ramps: AM – LOS F, PM – LOS F
- #3 - Alder Avenue at Renaissance Parkway: AM – LOS F, PM – LOS F

Copies of intersection analysis worksheets for this scenario are provided in **Appendix D**.

Daily Roadway Operating Conditions

Roadway Level of Service analysis was conducted for Opening Year 2024 Cumulative without Project conditions and the results are shown on **Table 10**. Review of this table indicates that the following study roadway segment would operate at an unacceptable LOS:

- Alder Avenue: SR-210 EB Ramps to Renaissance Parkway

6. Opening Year 2024 Cumulative Plus Project Conditions

Peak Hour Operating Conditions

Project traffic was added to Opening Year 2024 Cumulative traffic volumes to develop Opening Year 2024 Cumulative plus Project traffic forecast volumes. The resulting daily and peak hour traffic volumes are shown on **Figure 14**.

Intersection Level of Service analysis results are shown on **Table 11**. As this table indicates, with the addition of project traffic, the following intersections would continue to operate at an unacceptable Level of Service:

- #1 - Alder Avenue at SR-210 WB Ramps: AM – LOS F, PM – LOS F
- #2 - Alder Avenue at SR-210 EB Ramps: AM – LOS F, PM – LOS F
- #3 - Alder Avenue at Renaissance Parkway: AM – LOS F, PM – LOS F
- #7 - Ayala Drive at Miro Way: PM – LOS F

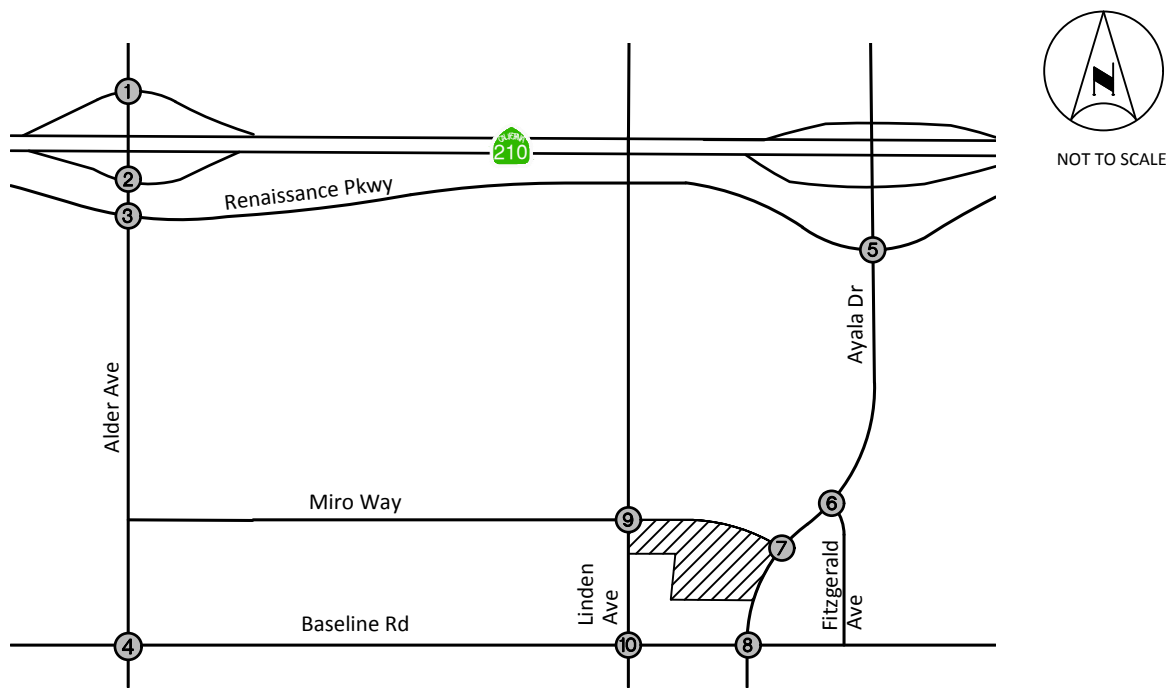
These intersections were also forecasted to operate at an unacceptable Level of Service under Opening Year Cumulative Without Project conditions. Based on the significance thresholds presented earlier in this report, the project effect is considered to be a cumulative effect at these intersections.

Recommended measures to improve the project-related effects are presented in the Recommended Improvements section of this report. Copies of intersection analysis worksheets for this scenario are provided in **Appendix D**.

Daily Roadway Operating Conditions

Roadway Level of Service analysis results for Opening Year 2024 Cumulative Plus Project conditions are shown on **Table 12**. Review of this table indicates that the following study roadway segment would continue to operate at an unacceptable LOS:

- Alder Avenue: SR-210 EB Ramps to Renaissance Parkway



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
101/475 308/553 249/213 5/4 779/505 614/802 642/559	971/808 95/247 393/295 3/4 967/717 909/1059 550/744	98/156 1324/961 489/401 438/522 217/239 27/20 117/112 231/339 85/69 131/55 948/1157 15/35	201/155 370/387 172/166 170/202 516/403 42/58 127/142 412/495 80/77 173/49 327/347 102/45
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
348/570 864/987 221/372 373/380 128/196 47/80 240/387 115/392 89/129 62/119 879/972 58/101	8/1 800/993 143/220 142/163 1/3 3/1 1/0 4/5 14/8 838/994 3/8	FUTURE INTERSECTION	69/83 660/800 72/152 48/77 381/482 82/130 139/153 386/521 190/266 243/196 687/774 93/133
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
53/72 278/413 41/71 20/36 8/24 308/454	55/108 95/173 108/173 142/208 502/517 20/40 31/93 537/567 32/28 42/18 137/171 62/46		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 13
OPENING YEAR 2024 CUMULATIVE TRAFFIC
VOLUMES

TABLE 9
SUMMARY OF INTERSECTION OPERATION
OPENING YEAR 2024 CUMULATIVE WITHOUT PROJECT

Int. #	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Alder Avenue at SR-210 WB Ramps	S	94.7	F	130.1	F
2	Alder Avenue at SR-210 EB Ramps	S	135.6	F	131.7	F
3	Alder Avenue at Renaissance Parkway	S	86.6	F	82.9	F
4	Alder Avenue at Baseline Road	S	48.7	D	33.7	C
5	Ayala Drive at Renaissance Parkway	S	22.7	C	26.1	C
6	Ayala Drive at Fitzgerald Avenue	S	6.6	A	7.4	A
7	Ayala Drive at Miro Way	FUTURE INTERSECTION				
8	Ayala Drive at Baseline Road	S	36.3	D	37.4	D
9	Linden Avenue at Miro Way	S	5.9	A	7.4	A
10	Linden Avenue at Baseline Road	S	29.1	C	29.0	C

Notes:

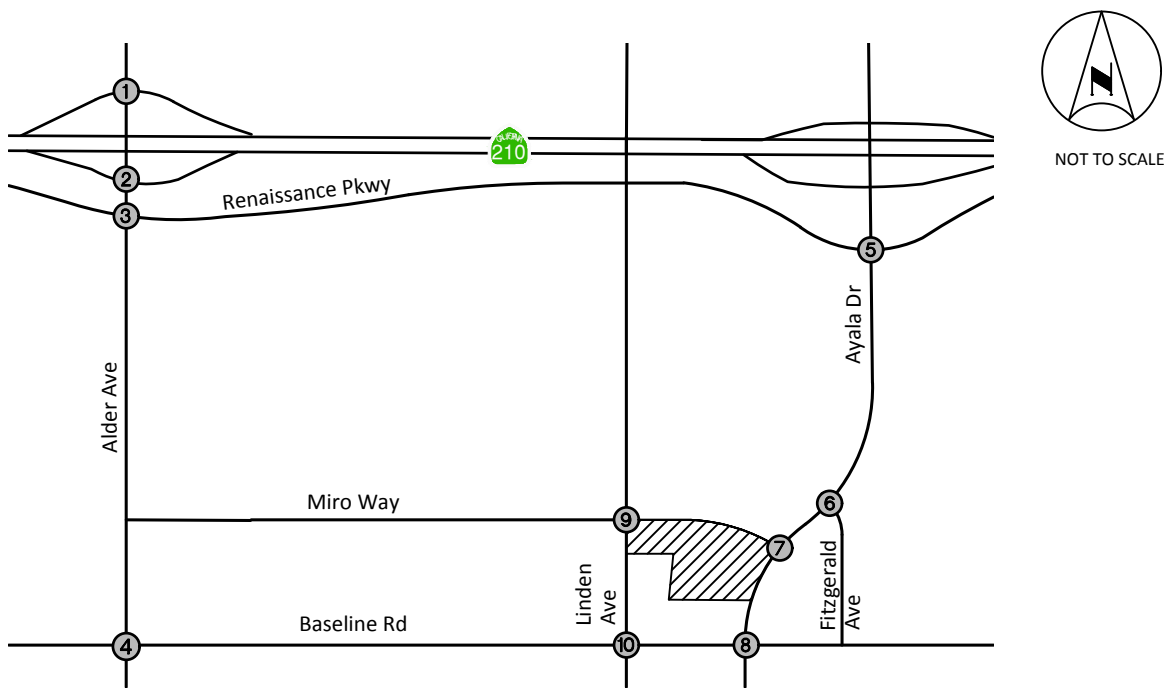
- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition).

S = Signalized

U = Unsignalized

TABLE 10
SUMMARY OF ROADWAY ANALYSIS
OPENING YEAR 2024 CUMULATIVE WITHOUT PROJECT

Roadway	Segment	LOS D Capacity	Existing Plus Growth ADT	Cumulative Projects ADT	Opening Year + Cum. Projects ADT	LOS D or Better?
Alder Avenue	SR-210 WB Ramps to SR-210 EB Ramps	32,999	16,340	10,310	26,650	Yes
	SR-210 EB Ramps to Renaissance Parkway	32,999	23,610	13,730	37,340	No
	Renaissance Parkway to Baseline Road	32,999	19,325	8,350	27,675	Yes
Linden Avenue	Miro Way to Baseline Road	32,999	9,243	720	9,963	Yes
Ayala Drive	Renaissance Parkway to Fitzgerald Avenue	32,999	26,122	4,160	30,282	Yes
	Miro Way to Baseline Road	32,999	21,875	2,930	24,805	Yes
Baseline Road	Alder Avenue to Linden Avenue	32,999	12,951	2,610	15,561	Yes
	Linden Avenue to Ayala Drive	32,999	14,014	3,310	17,324	Yes
Notes: LOS = Level of Service ADT = Average Daily Traffic						



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
101/475 308/553 249/213 5/4 810/516 623/832 642/559	1002/819 95/247 393/295 3/4 997/729 918/1089 559/775	98/156 1385/984 489/401 438/522 218/241 27/20 117/112 233/340 85/69 131/55 966/1218 15/35	201/155 370/387 233/189 188/263 517/406 42/58 127/142 415/496 80/77 173/49 327/347 102/45
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
335/552 894/1011 221/372 373/380 128/196 49/81 230/368 115/392 91/130 63/121 893/1008 59/103	8/1 834/1019 143/220 142/163 1/3 3/1 1/0 4/5 14/8 854/1034 3/8	36/32 805/993 20/49 10/33 33/13 851/1001	76/107 660/800 73/155 51/78 381/482 82/130 164/156 386/521 192/271 248/198 687/774 93/133
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
40/54 278/413 14/38 38/18 15/24 12/39 31/53 15/28 15/27 6/18 308/454 39/14	65/142 95/173 105/169 144/204 511/547 20/40 65/105 567/579 32/28 42/18 137/171 62/46		

LEGEND:

= Project Site

= Study Intersection

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

FIGURE 14
OPENING YEAR 2024 CUMULATIVE PLUS
PROJECT TRAFFIC VOLUMES

TABLE 11
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	Alder Avenue at SR-210 WB Ramps	S	94.7	F	103.0	F	8.3	Yes	130.1	F	138.6	F	8.5	Yes
2	Alder Avenue at SR-210 EB Ramps	S	135.6	F	143.2	F	7.6	Yes	131.7	F	136.3	F	4.6	Yes
3	Alder Avenue at Renaissance Parkway	S	86.6	F	92.1	F	5.5	Yes	82.9	F	90.8	F	7.9	Yes
4	Alder Avenue at Baseline Road	S	48.7	D	51.7	D	3.0	No	33.7	C	34.5	C	0.8	No
5	Ayala Drive at Renaissance Parkway	S	22.7	C	22.6	C	-0.1	No	26.1	C	26.0	C	-0.1	No
6	Ayala Drive at Fitzgerald Avenue	S	6.6	A	6.6	A	0.0	No	7.4	A	7.5	A	0.1	No
7	Ayala Drive at Miro Way	U	-	-	37.5	E	-	Yes	-	-	79.7	F	-	Yes
8	Ayala Drive at Baseline Road	S	36.3	D	41.7	D	5.4	Yes	37.4	D	38.1	D	0.7	No
9	Linden Avenue at Miro Way	S	5.9	A	8.5	A	2.6	No	7.4	A	10.2	B	2.8	No
10	Linden Avenue at Baseline Road	S	29.1	C	29.3	C	0.2	No	29.0	C	29.1	C	0.1	No

Notes:

- **Bold** and shaded values indicate intersections operating at an unacceptable Level of Service.
- At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle.
- At a two-way stop-controlled intersection, delay refers to the average vehicle delay on the worst (highest delay) movement.
- Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition).

S = Signalized

U = Unsignalized

TABLE 12
SUMMARY OF ROADWAY ANALYSIS
OPENING YEAR 2024 CUMULATIVE PLUS PROJECT

Roadway	Segment	LOS D Capacity	Existing ADT (Rerouted)	Existing Plus Growth ADT	Cumulative Projects ADT	Daily Project Traffic	Opening Year + Cum. Project + Project ADT	LOS D or Better?
Alder Avenue	SR-210 WB Ramps to SR-210 EB Ramps	32,999	16,020	16,340	10,310	389	27,039	Yes
	SR-210 EB Ramps to Renaissance Parkway	32,999	23,147	23,610	13,730	779	38,119	No
	Renaissance Parkway to Baseline Road	32,999	18,946	19,325	8,350	779	28,454	Yes
Linden Avenue	Miro Way to Baseline Road	32,999	8,762	8,937	720	500	10,157	Yes
Ayala Drive	Renaissance Parkway to Fitzgerald Avenue	32,999	26,330	26,857	4,160	264	31,281	Yes
	Miro Way to Baseline Road	32,999	21,146	21,569	2,930	433	24,932	Yes
Baseline Road	Alder Avenue to Linden Avenue	32,999	12,697	12,951	2,610	823	16,384	Yes
	Linden Avenue to Ayala Drive	32,999	13,439	13,708	3,310	455	17,473	Yes
Notes: LOS = Level of Service ADT = Average Daily Traffic								

IV. RECOMMENDED IMPROVEMENTS

A. Intersection Improvements

Based on the significance criteria in the City's *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment (LOS)*, there would be a project-related effect at the following intersections:

- #1 - Alder Avenue at SR-210 WB Ramps (Cumulative effect)
- #2 - Alder Avenue at SR-210 EB Ramps (Cumulative effect)
- #3 - Alder Avenue at Renaissance Parkway (Cumulative effect)
- #7 - Ayala Drive at Miro Way (Direct effect)
- #8 - Ayala Drive at Baseline Road (Cumulative effect)

Implementation of the following recommended improvements would offset the project-related effect at the following intersections:

#1 – Alder Avenue at SR-210 Westbound Ramps: Restripe the northbound approach to add a second northbound left-turn lane. Although the intersection would continue to operate at an unacceptable Level of Service, the addition of a second northbound left-turn lane would improve the overall intersection delay and would more than offset the project-related incremental increase in delay.

#2 – Alder Avenue at SR-210 Eastbound Ramps: Restripe the southbound approach to add a second southbound left-turn lane and modify the existing eastbound shared left/through lane to a shared left/through/right lane. Although the intersection would continue to operate at an unacceptable Level of Service, the addition of a second southbound left-turn lane and modified shared left/through/right lane would improve the overall intersection delay and would more than offset the project-related incremental increase in delay.

#3 – Alder Avenue at Renaissance Parkway: Restripe the southbound approach to provide a second dedicated southbound left-turn lane. Although the intersection would continue to operate at an unacceptable Level of Service, the addition of a second southbound left-turn lane would improve the overall intersection delay and would more than offset the project-related incremental increase in delay.

The Alder Avenue interchange with the SR-210 Freeway is the subject of a Feasibility Study Report (August 2017), which proposes improvements to the freeway off-ramps and to Alder Avenue between Sierra Lakes Parkway and Renaissance Parkway. The Build Alternative Layout Plan has identified the need for additional right- and left-turn capacity to and from the freeway ramps and on Alder Avenue through the interchange.

The recommended improvements identified above to offset the project-related effect are consistent with and a sub-set of the more comprehensive Build Alternative improvement plan and recommended improvements as noted in the *Renaissance Specific Plan Amendment Traffic Impact Analysis* (September 2016).

#7 – Ayala Drive at Miro Way: Install a traffic signal.

#8 – Ayala Drive at Baseline Road: Signal retiming. With volume growth overtime, signal retiming is an ordinary responsibility of the City and would be included as part of routine signal maintenance. Therefore, the project would not be responsible for any cost associated with this improvement. It should be noted that the project causes only a sliding-scale effect based on the City's guidelines and does not cause the intersection to operate deficiently. The study intersection would operate at an acceptable LOS under Opening Year 2024 Cumulative Plus Project conditions.

A summary of the intersection operation before and after implementation of these improvements is provided on **Table 13**. Intersection Analysis Worksheets with improvements are provided in **Appendix D**. The project fair share proportion of the improvements are shown on **Table 14**, and the estimated costs of the proposed improvements, as derived from the Renaissance Specific Plan fee program, the Citywide Development Impact Fee Program, and the Congestion Management Program (CMP) Appendix G, are shown on **Table 15**.

B. Roadway Improvements

The following study roadway segment would exceed its daily LOS D roadway capacity based on a four-lane cross-section:

- Alder Avenue: SR-210 EB Ramps to Renaissance Parkway

The Alder Avenue/SR-210 Interchange improvements noted above would offset the project-related effect on the study roadway segment.

TABLE 13 SUMMARY OF INTERSECTION OPERATIONS WITH PROPOSED IMPROVEMENTS									
Int. #	Intersection	AM Peak Hour				PM Peak Hour			
		Without Mitigation		With Mitigation		Without Mitigation		With Mitigation	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Alder Avenue at SR-210 WB Ramps								
	- Alder Avenue Improvement Project (Restripe NB approach to add a second NB Left-Turn Lane) ¹	103.0	F	45.6	D	138.6	F	57.6	E
2	Alder Avenue at SR-210 EB Ramps								
	- Alder Avenue Improvement Project (Restripe SB approach to add a second SB Left-Turn lane, and modify existing EB shared left/through lane to a shared left/through/right lane) ¹	143.2	F	82.5	F	136.3	F	72.7	E
3	Alder Avenue at Renaissance Parkway								
	- Alder Avenue Improvement Project (Restripe SB approach to add a second SB Left-Turn lane) ¹	92.1	F	66.7	E	90.8	F	60.5	E
7	Ayala Drive at Miro Way								
	- Install Traffic Signal	37.5	E	2.2	A	79.7	F	4.0	A
8	Ayala Drive at Baseline Road								
	- Signal Retiming	41.7	D	32.6	C	38.1	D	36.6	D
Notes: - Bold and shaded values indicate intersections operating at an unacceptable Level of Service. - At a signalized intersection, delay refers to the average control delay for the entire intersection, measured in seconds per vehicle. - Delay values are based on the methodology outlined in the Highway Capacity Manual, (7th Edition). ¹ Source: Feasibility Study Report: Alder Avenue at SR-210 Interchange (August 2017). ² Source: Renaissance Specific Plan Amendment Traffic Impact Analysis (September 2016).									

TABLE 14
SUMMARY OF PROJECT FAIR SHARE FOR IMPROVEMENTS

Intersection	AM Peak Hour					PM Peak Hour					Fair-Share Percentage (Total of Both Peak Hours)		
	Total Volume		Total Growth	Project Trips	% -age	Total Volume		Total Growth	Project Trips	% -age	Total Growth	Project Trips	% -age
	RSP Baseline	2035				RSP Baseline	2035						
Build-Out 2035 Conditions ¹													
Alder Avenue at Sierra Lakes Parkway/Casmalia Street	1,173	2,729	1,556	0	0.0%	1,312	2,642	1,330	0	0.0%	2,886	0	0.0%
#1 - Alder Avenue at SR-210 WB Ramps	1,448	3,381	1,933	38	2.0%	1,297	3,820	2,523	40	1.6%	4,456	78	1.8%
#2 - Alder Avenue at SR-210 EB Ramps	1,205	3,929	2,724	76	2.8%	1,491	4,413	2,922	82	2.8%	5,646	158	2.8%
#3 - Alder Avenue at Renaissance Parkway	1,014	4,226	3,212	79	2.5%	1,165	5,668	4,503	85	1.9%	7,715	164	2.1%
Peak-Hour Fair-Share Percentage for Interchange	4,840	14,265	9,425	193	2.0%	5,265	16,543	11,278	207	1.8%	20,703	400	1.9%

¹ Existing 2010 and Build-Out 2035 total volumes are based Figures 4C and 34C, respectively, of the Traffic Impact Analysis for the Renaissance Specific Plan (July, 2010). Since the deficiencies at the interchange occur during both peak hours, the fair-share percentage is based on the average fair-share during both the AM and PM peak hours for the interchange, which results in 3.3%.

TABLE 15
TRAFFIC IMPROVEMENT FAIR-SHARE COST

#1, #2, #3 = Alder Avenue Interchange Improvement			
Alder Avenue Improvement Project	\$ 5,015,059 ¹	1	\$ 5,015,059
Project Fair Share percentage ²			1.9%
Project Cost			\$ 95,286
#7 - Ayala Drive at Miro Way	Unit Cost⁴	Quantity	Total
Install Traffic Signal	\$ 400,000	1	\$ 400,000
Project Fair Share percentage ³			100.0%
Project Cost			\$ 400,000
Total Project Cost			\$ 495,286

¹ Cost based on Exhibit A - PS&E Final Design Cost Estimate (\$1,192,059) for the SR-210/Alder Ave Interchange Improvements Project, provided as part of City Council Agenda Item #20-0741 (dated November 10, 2020), and Appendix C - Cost Estimate (\$3,823,000) for the SR-210/Alder Ave Interchange Improvements Project, provided as part of the Approved Permit Engineering Evaluation Report (PEER) 08-SBd-210, PM 15.7/16.2 (approved August 24, 2022).

² Average blended fair share percentage calculated based on AM and PM peak hour volumes between intersections #1, #2 and #3, as noted in Table 14.

³ Since the improvement is a result of a direct effect, the improvement fair share is 100%.

⁴ The unit cost is based on the Renaissance Specific Plan Amendment Traffic Impact Analysis (September 2016).

V. VEHICLE MILES TRAVELED ANALYSIS

A. Introduction

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

B. VMT Analysis

The City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (LOS) (TIA Guidelines October 2021) provides details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed level analysis. Screening thresholds are broken down into the following three criteria:

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

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

Transit Priority Area (TPA) Screening

A project located within a TPA as determined by the San Bernardino Transportation Analysis (SBTAM) VMT Screening would be considered to have a less-than-significant transportation impact. Based on the SBCTA VMT Screening Tool, the proposed project is not located within a TPA.

The Transit Priority Area threshold is not met.

Low VMT Generating Area

A project located within a low VMT generating area as determined by the City's guidelines and the SBCTA VMT Screening Tool would be considered to have a less-than-significant transportation impact. A Transportation Analysis Zone (TAZ) with a VMT below the County baseline of 16.9 is considered to be a low VMT area. Based on the SBCTA VMT Screening Tool, the project site is located within TAZ 53745301, which has PA VMT per worker of 15.7. Therefore, the proposed project is located within a low VMT generating area. Results of the SBCTA VMT Screening Tool are provided in the Approved Scoping Agreement in **Appendix A**.

The Low VMT Generating Area threshold is met.

Project Type Screening

The City's TIA Guidelines identify that the following project types would be presumed to have a less-than-significant VMT impact:

- Local-serving K-12 schools
- Local parks
- Day care centers
- Local-serving retail uses less than 50,000 square feet, including:
 - Gas stations
 - Banks
 - Restaurants
 - Shopping Center
- Local-serving hotels (e.g., non-destination hotels)
- Student housing projects on or adjacent to college campuses
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (Public libraries, fire stations, local government)
- Local-serving community colleges that are consistent with the assumptions noted in the RTP/SCS Affordable or supportive housing
- Assisted living facilities
- Senior housing as defined by the U.S. Department of Housing and Urban Development (HUD)
- Projects generating less than 110 daily vehicle trips
 - This generally corresponds to the following "typical" development potentials:
 - 11 single family housing units
 - 16 multi-family, condominiums, or townhouse housing units
 - 10,000 sq. ft. of office
 - 15,000 sq. ft. of light industrial
 - 63,000 sq. ft. of warehousing
 - 79,000 sq. ft. of high cube transload and short-term storage warehouse

The project will involve the construction 2 separate warehouses totaling 428,715 square feet that generates more than 110 daily trips; therefore, the project would not be screened out based on project type.

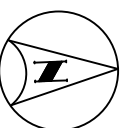
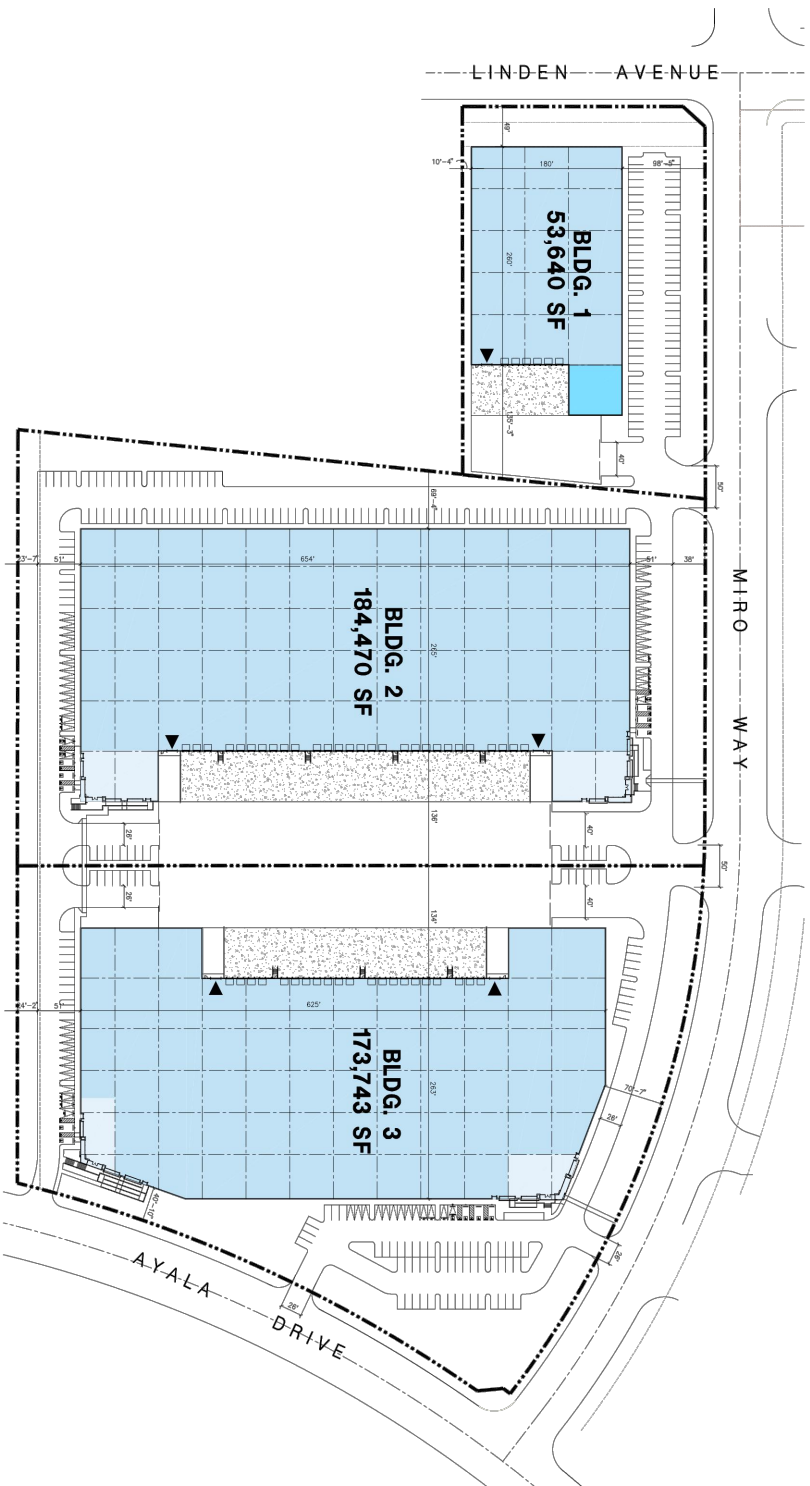
The Project Type Screening threshold is not met.

Based on the City of Rialto Traffic Impact Analysis Guidelines VMT and LOS (October 2021) and the SBCTA VMT Screening tool, the project is located in a low VMT generating area. Therefore, the proposed project would create a less-than-significant VMT impact, and no further VMT analysis is required.

I. ALTERNATIVE SITE PLAN

An alternative site plan was evaluated for the proposed project. The alternative site plan would involve the construction of three warehouse buildings totaling 411,853 square feet and would have the same access provisions as the proposed site plan. A copy of the project site plan is provided on **Figure 15**. Trip generation rates, PCE factors, and the resulting trip generation estimates for the alternative site plan are summarized on **Table 16**. The alternative site plan would generate 1,180 PCE trips on a daily basis, with 117 PCE trips in the morning peak hour, and 126 PCE trips in the evening peak hour. Since the alternative site plan would generate less trips than the proposed project, the traffic-related effects would be considered less for the alternative site plan, compared to the proposed project. Therefore, no further analysis would be required for the alternative site plan.

FIGURE 15
ALTERNATIVE PROJECT SITE PLAN



NOT TO SCALE

TABLE 16
SUMMARY OF ALTERNATIVE PROJECT TRIP GENERATION
MIRO WAY AND AYALA DRIVE WAREHOUSE 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		411.853	KSF	704	54	16	70	21	54	75
Passenger Vehicles	60.00%			422	32	10	42	13	32	45
Trucks	40.00%			282	22	6	28	8	22	30

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	422	1.0	422	32	10	42	13	32	45
2-Axle Trucks	0.80%	6	1.5	9	1	0	1	0	1	1
3-Axle Trucks	11.20%	79	2.0	158	12	4	16	5	12	17
4+ Axle Trucks	28.00%	197	3.0	591	45	13	58	18	45	63
Total Truck PCE Trips				758	58	17	75	23	58	81
Total Project PCE Trips				1,180	90	27	117	36	90	126

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

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

² Source: City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Assessment (October, 2021)

II. FINDINGS AND RECOMMENDATIONS

A. Improvements

Off-site recommended improvements were identified to offset the project-related effect at the following study intersections and roadway segments:

Intersections:

- #1 - Alder Avenue at SR-210 WB Ramps
- #2 - Alder Avenue at SR-210 EB Ramps
- #3 - Alder Avenue at Renaissance Parkway
- #7 - Ayala Drive at Miro Way
- #8 - Ayala Drive at Baseline Road

Roadway Segments:

- Alder Avenue: SR-210 EB Ramps to Renaissance Parkway

B. Traffic Signal Warrant Analysis

A peak hour signal warrant analysis was conducted for the following unsignalized intersection:

- #7 - Ayala Drive at Miro Way

For intersection #7, the signal warrant analysis shows that the Peak Hour Signal Warrant is satisfied in the PM peak hour under both Opening Year 2024 Cumulative Plus Project conditions and Opening Year 2024 Existing Plus Growth Plus Project conditions.

Signal analysis worksheets are provided in ***Appendix F***.

C. Site Circulation

Vehicular access provisions for the project site would consist of two driveways on Miro Way and two driveways on Ayala Drive, as noted below:

- Building 1
 - One shared (with Building 2) full-movement driveway for both trucks and passenger cars on Miro Way

- Building 2
 - One shared (with Building 1) full-movement driveway for both trucks and passenger cars on Miro Way
 - One full-movement driveway for both trucks and passenger cars on Miro Way
 - One right-in right-out (RIRO) driveway for passenger cars on Ayala Drive
 - One RIRO driveway for trucks and passenger cars on Ayala Drive

D. Safety and Operational Improvement

The site driveways and project improvements must be designed so that adequate sight distance for drivers entering and exiting the site is maintained.

The line of sight – a straight line between the driver’s eye and oncoming vehicles on the adjacent roadway defines the Limited Use Area. The Limited Use Area for each driveway must be kept clear of visual obstructions, including project signs, building structures, and landscaping, in order to maintain adequate sight distance.

E. Fair Share Calculations

The project fair share proportion of the improvements are shown on Table 14 (presented previously), and the estimated costs of the proposed improvements, are shown on Table 15 (presented previously).

F. Specific Plan Signalization

Not Applicable.

G. General Plan Conformance

The proposed Renaissance Place Residential project is anticipated to conform on the Renaissance Specific Plan and the City of Rialto General Plan.

H. Regional Funding Mechanisms

The project is located in the Renaissance Specific Plan area, and as such, is subject to the Renaissance Specific Plan Traffic Fee Program, as well as the City’s city-wide traffic impact fee program. To the extent that a recommended improvement is included in an existing fee program, the project’s payment of impact fees can be used to offset the costs of implementing the recommended improvements. In addition, the project may be required to construct a needed improvement in advance of the City’s receipt of full funding, in which case the improvement may be subject to a reimbursement agreement, to allow the project to recoup costs from future development. Any reimbursement agreements are at the discretion of the City Engineer.

APPENDIX A

APPROVED SCOPING AGREEMENT



Exhibit A

SCOPING AGREEMENT FOR TRAFFIC IMPACT ANALYSIS

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

City of Rialto

Traffic Impact Analysis

Scoping Agreement

Case No. _____

Related Cases -

SP No. _____

EIR No. _____

GPA No. _____

ZC No. _____

Project Name: Miro Way and Ayala Drive Warehouse Project

Project Address: Northwest and southwest corners of Miro Way and Ayala Drive

Project Description: 6 separate warehouses totaling 739,653 square-feet

Consultant

Developer

Name: Kimley-Horn and Associates, Inc.

Lewis-Hillwood Rialto Company, LLC

Address: 3880 Lemon St #420, Riverside, CA 92501

1156 N. Mountain Ave. Upland, CA 91786

Telephone: (951) 543-9868

(909) 579-5193

Fax: _____



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

Existing GP Land Use Vacant Proposed Land Use Industrial

Current Zoning: Industrial/Residential Proposed Zoning: Medium Industrial

Total Daily Project Trips: 2,120 PCE **See Attachment B**

	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>162</u>	<u>47</u>	<u>209</u>
PM Trips	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>61</u>	<u>162</u>	<u>223</u>
Internal Trip Allowance	Yes	<u>No</u>	(_____ % Trip Discount)			
Pass-By Trip Allowance	Yes	<u>No</u>	(_____ % Trip Discount)			

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

2. Trip Geographic Distribution: N 10 % S 15 % E 40 % W 35 %

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

See Attachment C

3. Background Growth Traffic

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

Other Phase Years _____

Other area projects to be considered: We will include the Cumulative Projects list as noted by the City's Planning Department

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

Model/Forecast methodology: Existing + Growth + Cumulative Projects + Project to Opening Year

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

1. <u>Alder Ave at SR-210 WB Ramps</u>	6. <u>Ayala Dr at Fitzgerald Ave</u>
2. <u>Alder Ave at SR-210 EB Ramps</u>	7. <u>Ayala Dr at Miro Way</u>
3. <u>Alder Ave at Renaissance Pkwy</u>	8. <u>Ayala Dr at Base Line Rd</u>
4. <u>Alder Ave at Base Line Rd</u>	9. <u>Linden Ave at Miro Way</u>
5. <u>Ayala Dr at Renaissance Pkwy</u>	10. <u>Linden Ave at Base Line Rd</u>



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

1. <u>Alder Ave: I-210 WB to I-210 EB Ramps</u>	6. <u>Linden Ave: Miro Way to Base Line Rd</u>
2. <u>Alder Ave: I-210 EB Ramps to Renaissance Pkwy</u>	7. <u>Base Line Rd: Alder Ave to Linden Ave</u>
3. <u>Alder Ave: Renaissance Way to Base Line Rd</u>	8. <u>Base Line Rd: Linden Ave to Ayala Dr</u>
4. <u>Ayala Dr: Renaissance Pkwy to Fitzgerald Ave</u>	9. _____
5. <u>Ayala Dr: Miro Way to Base Line Rd</u>	10. _____

6. Other Jurisdictional Impacts

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

YES

NO

If so, name of Jurisdiction: City of Fontana

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

8. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (to be filled out by the City of Rialto Public Works Department) (NOTE: If the traffic study states that "a traffic signal is warranted" (or "a traffic signal appears to be warranted," or similar statement) at an existing un-signalized intersection under existing conditions, 8-hour approach traffic volume information must be submitted in addition to the peak hourly turning movement counts for that intersection.)

9. Existing Conditions

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

Date of counts: New counts will be collected with truck classification

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

Fees Paid: _____ Date _____



Recommended:

Scoping Agreement Submittal date 03/08/2023

Scoping Agreement Resubmittal date _____

Kimley-Horn and Associates, Inc.

03/08/2023

Applicant/Engineer

Date

Land Use Concurrence:

Development Services Department

Date

Approved by:

Justin P. Schlaefli

3/14/23

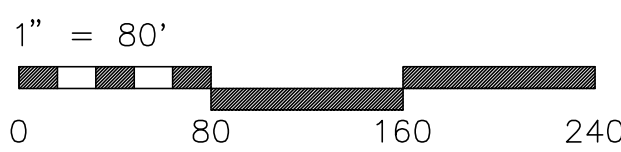
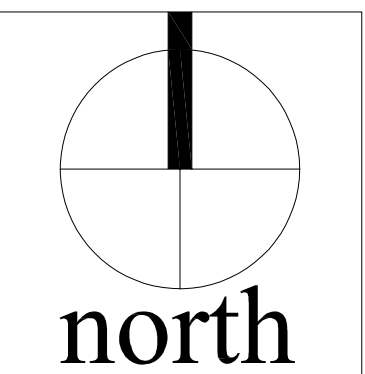
Public Works Department

Date

NOTE:

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

ATTACHMENT A

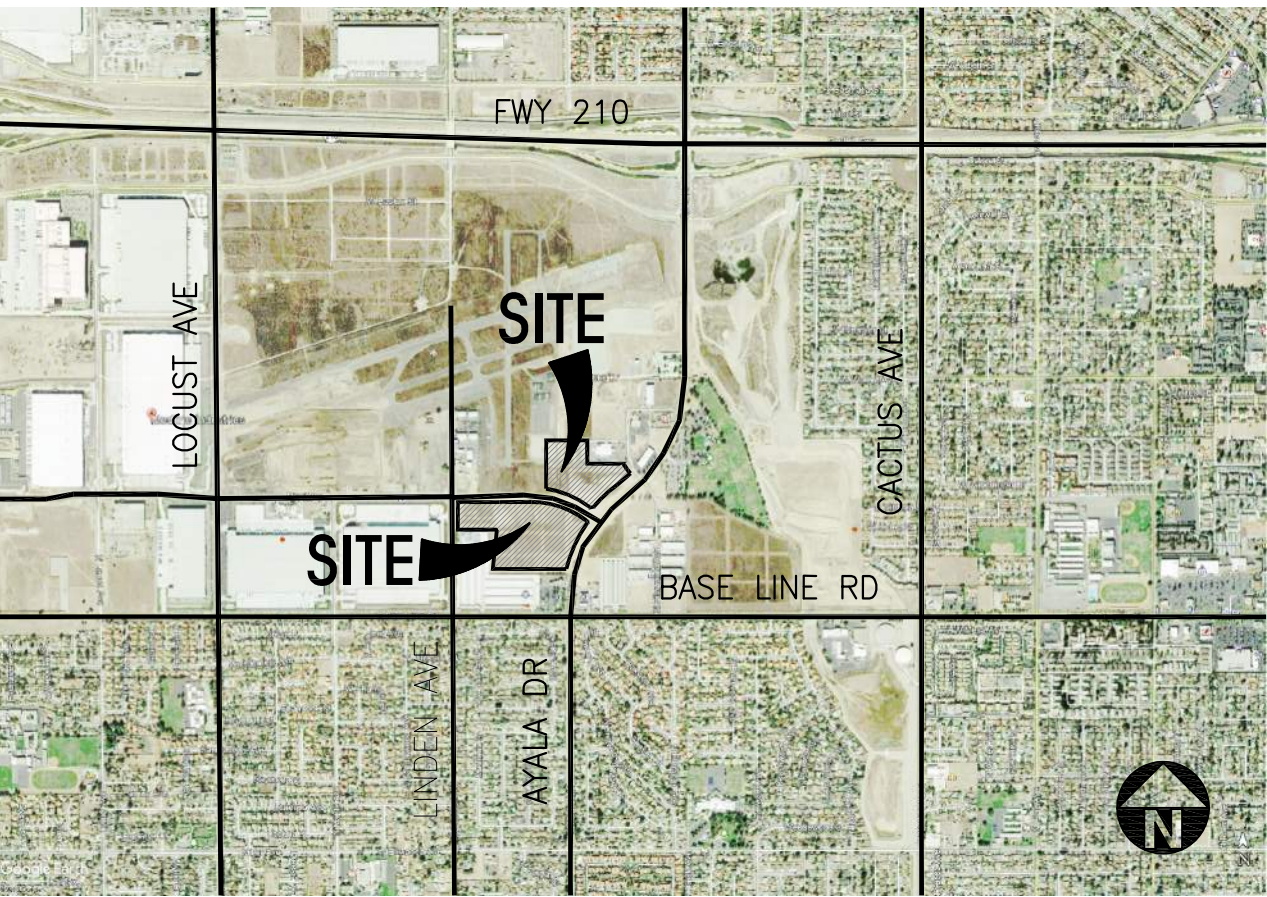


Conceptual Site Plan

Miro Way and Ayala Dr.

Rialto, CA

Aerial Map



Legend

- POTENTIAL OFFICE
- WAREHOUSE
- DRIVE THRU DOOR

Tabulation

	BLDG. 1	BLDG. 2	BLDG. 3	BLDG. 4	BLDG. 5	BLDG. 6	TOTAL
SITE AREA							
In s.f.	130,791	390,549	383,940	282,410	158,900	305,126	1,651,716 s.f.
In acres	3.00	8.97	8.81	6.48	3.65	7.00	37.92 ac
BUILDING AREA							
Office	3,000	10,000	10,000	6,000	5,000	5,000	39,000 s.f.
Warehouse	54,770	174,470	163,743	118,930	62,430	123,040	697,383 s.f.
TOTAL	57,770	184,470	173,743	124,930	67,430	128,040	736,383 s.f.
COVERAGE							
	44.2%	47.2%	45.3%	44.2%	42.4%	42.0%	44.6%
AUTO PARKING REQUIRED							
Office: 1/250 s.f.	12	40	40	24	20	20	156 stalls
Whse: 1st 40K @ 1/1,000 s.f.	40	40	40	40	40	40	240 stalls
above 40K @ 1/4,000 s.f.	4	34	31	20	6	21	116 stalls
TOTAL	56	114	111	84	66	81	512 stalls
AUTO PARKING PROVIDED							
Standard (9' x 18')	59	185	122	114	78	126	684 stalls
ZONING ORDINANCE FOR CITY							
Proposed Zoning Designation - Renaissance SP (Business Center)							
MAXIMUM BUILDING HEIGHT ALLOWED							
Height - 75'							
MAXIMUM FLOOR AREA RATIO							
FAR - .50							
SETBACKS							
Front / street side							
Bldgs < 100K - 20' ave. 15' min.							
Bldgs > 100K - 30' ave. 25' min.							
Interior side							
adjacent to business uses - 0 or separated by 20' plus 10' for each additional floor							
adjacent to Residential uses - 40' single story and 10' for each additional floor							
- loading and unloading areas directly face R zone - 120' from PL to the loading bay door.							
Rear							
adjacent to business uses / streets - 25' ave. 20' min.							
adjacent to residential uses - 40' single story and 10' for each additional floor							
- loading and unloading areas directly face R zone - 120' from PL to the loading bay door.							



ATTACHMENT B
SUMMARY OF PROJECT TRIP GENERATION
MIRO WAY AND AYALA DRIVE WAREHOUSE 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		739,653	KSF	1,265	97	29	126	37	96	133
Passenger Vehicles	60.00%			759	58	17	75	22	58	80
Trucks	40.00%			506	39	12	51	15	38	53

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	759	1.0	759	58	17	75	22	58	80
2-Axle Trucks	0.80%	10	1.5	15	1	0	1	0	1	1
3-Axle Trucks	11.20%	142	2.0	284	22	6	28	8	22	30
4+ Axle Trucks	28.00%	354	3.0	1,062	81	24	105	31	81	112
Total Truck PCE Trips				1,361	104	30	134	39	104	143
Total Project PCE Trips				2,120	162	47	209	61	162	223

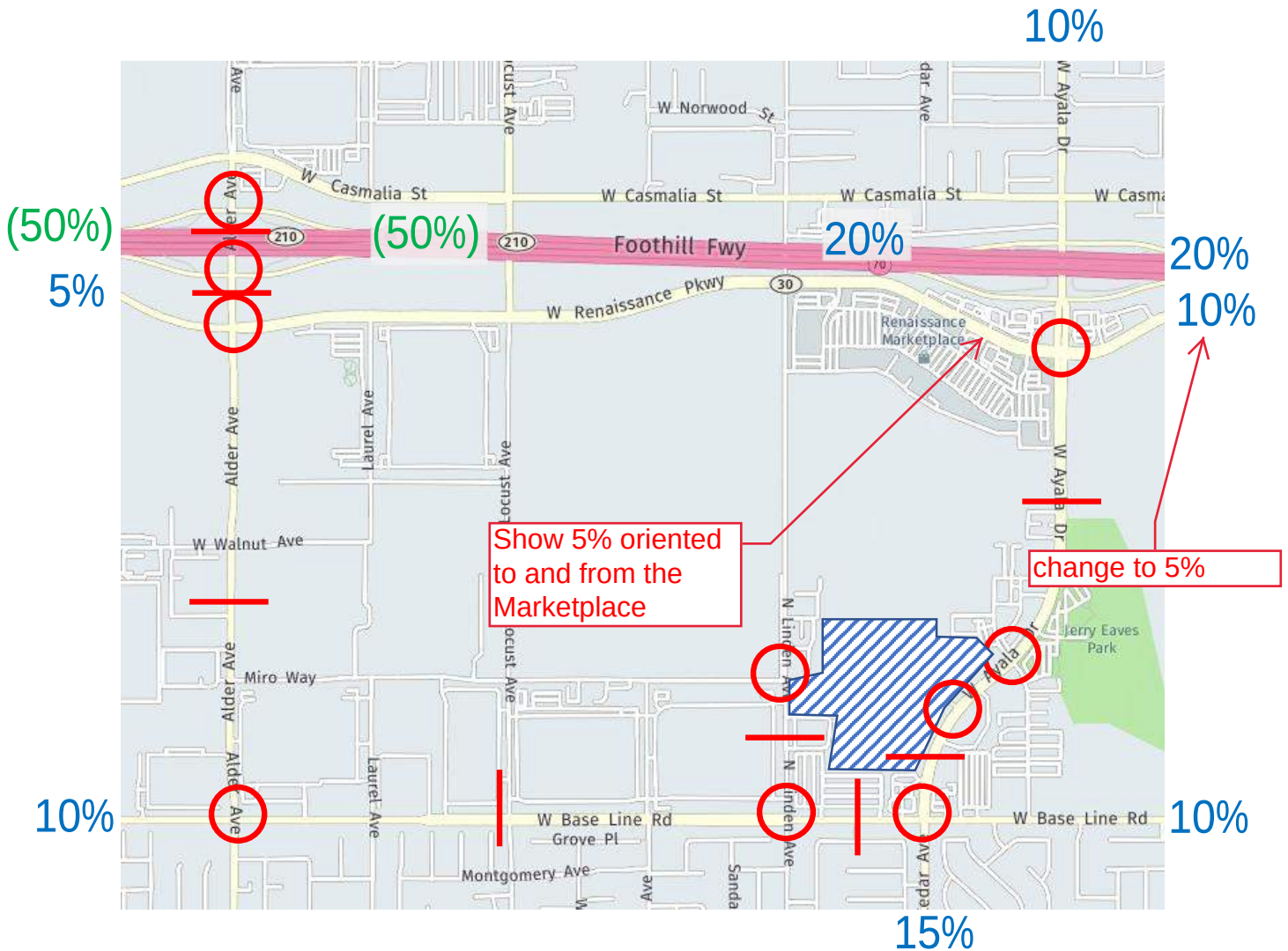
PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

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

² Source: City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Assessment (October, 2021)

ATTACHMENT C PROJECT STUDY AREA AND TRIP DISTRIBUTION





VMT Analysis Project Scoping Form

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

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Miro Way and Ayala Drive Warehouse Project
Project Address:	Northwest and southwest corners of Miro Way and Ayala Drive
Project Opening Year:	2024
Project Description:	6 separate warehouses totaling 739,653 square-feet

	Consultant:	Developer:
Name:	Kimley-Horn and Associates, Inc.	Lewis-Hillwood Rialto Company, LLC
Address:	3880 Lemon Street, Suite 420, Riverside, CA 92501	1156 N. Mountain Avenue Upland, CA 91786
Telephone:	(951) 543-9868	(909) 579-5193
Fax/Email:		

Trip Generation Information:

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

Current General Plan Land Use:

Vacant

Proposed General Plan Land Use:

Industrial

Current Zoning:

Residential/Public Park/School

Proposed Zoning:

Medium Industrial



	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips	NA	NA	NA	162 PCE	47 PCE	209 PCE
PM Trips	NA	NA	NA	61 PCE	162 PCE	223 PCE

Trip Internalization: ☐ Yes ☒ No (0 % Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (0 % Trip Discount)

Potential Screening Checks

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

VMT screening justification _____ Please see attached VMT Screening Memorandum _____ _____ _____

VMT Scoping

For projects that are not screened, identify the following:

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



Approved by:

Justin P. Schlaepfer

3/14/23

Public Works Department

Date

NOTE:

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



March 8, 2023

Daniel Casey
Senior Planner
City of Rialto
150 S. Palm Avenue
Rialto, CA 92376

Subject: *Vehicle Miles Traveled Memorandum for the Miro Way and Ayala Drive Warehouse Project in the City of Rialto*

Dear Mr. Casey:

Kimley-Horn and Associates, Inc. has prepared a Vehicle Miles Traveled (VMT) memorandum for the proposed Miro Way and Ayala Drive Warehouse Project. This memorandum based on the City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service (LOS) Assessment* (October 2021).

PROJECT DESCRIPTION

The project site is located on the northwest and southwest corners of Miro Way and Ayala Drive in the City of Rialto. The project site is bounded by Ayala Drive to the east, commercial and industrial uses to the south, Linden Avenue to the west, and vacant land to the north. The project will involve the construction of 6 separate warehouses totaling 739,653 square feet. A copy of the project site plan is provided on Attachment A.

Vehicular access provisions for the project site would be provided via one full-movement driveway on Ayala Drive and one full-movement driveway on Linden Avenue.

PROPOSED TRIP GENERATION

Trip generation estimates for the proposed project are based on the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) trip generation rates for Warehousing (ITE 150). Trip generation rates and the resulting trip generation estimates for the proposed project are summarized on Attachment B.

The project is estimated to generate 759 PC trips on a daily basis with 75 PC trips in the morning peak hour and 80 PC trips in the evening peak hour; and 509 truck trips on a daily basis with 51 truck trips in the morning peak hour and 53 truck trips in the evening peak hour.

PCE factors were then applied to the truck types, based on the number of axles, to determine the total PCE volumes generated by the proposed project. Daily and peak hour trip generation estimates for the proposed project are summarized on Table 1 (previously mentioned). The proposed project is estimated to generate 2,120 daily PCE trips, with 209 PCE trips in the morning peak hour, and 223 PCE trips in the evening peak hour.

CEQA VEHICLE MILES TRAVELED (VMT) SCREENING

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

The City of Rialto *Traffic Impact Analysis Guidelines for Vehicle Miles Traveled (VMT) and Level of Service Assessment* (LOS) (TIA Guidelines October 2021) provides details on appropriate screening thresholds that can be used to identify when a proposed land use project is anticipated to result in a less-than-significant impact without conducting a more detailed level analysis. Screening thresholds are broken down into the following three criteria:

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

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

Transit Priority Area (TPA) Screening

A project located within a TPA as determined by the San Bernardino Transportation Analysis (SBTAM) VMT Screening would be considered to have a less-than-significant transportation impact. Based on the SBCTA VMT Screening Tool, the proposed project is not located within a TPA.

The Transit Priority Area threshold is not met.

Low VMT Generating Area

A project located within a low VMT generating area as determined by the SBCTA VMT Screening Tool and the City's TIA guidelines would be considered to have a less-than-significant transportation impact. Based on the SBCTA VMT Screening Tool and the City's TIA guidelines, the proposed project is located within a low VMT generating area. Results of the SBCTA VMT Screening Tool are provided in Attachment C.

The Low VMT Generating Area threshold is met.

Project Type Screening

The City's TIA Guidelines identify that the following project types would be presumed to have a less-than-significant VMT impact:

- Local-serving K-12 schools
- Local parks
- Day care centers
- Local-serving retail uses less than 50,000 square feet, including:
 - o Gas stations
 - o Banks
 - o Restaurants
 - o Shopping Center
- Local-serving hotels (e.g., non-destination hotels)
- Student housing projects on or adjacent to college campuses
- Local-serving assembly uses (places of worship, community organizations)
- Community institutions (Public libraries, fire stations, local government)
- Local-serving community colleges that are consistent with the assumptions noted in the RTP/SCS Affordable or supportive housing
- Assisted living facilities
- Senior housing as defined by the U.S. Department of Housing and Urban Development (HUD)
- Projects generating less than 110 daily vehicle trips
 - o This generally corresponds to the following "typical" development potentials:
 - 11 single family housing units
 - 16 multi-family, condominiums, or townhouse housing units
 - 10,000 sq. ft. of office
 - 15,000 sq. ft. of light industrial
 - 63,000 sq. ft. of warehousing
 - 79,000 sq. ft. of high cube transload and short-term storage warehouse

The project will involve the construction 6 separate warehouses totaling 735,653 square feet that generates more than 110 daily trips; therefore, the project would not be screened out based on project type.

The Project Type Screening threshold is not met.

FINDINGS AND CONCLUSIONS

Based on the City of Rialto *Traffic Impact Analysis Guidelines for VMT and LOS Assessment* (October 2021) and the SBCTA VMT Screening tool, the project is located in a low VMT generating area. Therefore, the project would have a less-than-significant VMT impact and no further VMT analysis is required.

Please contact me if you have any questions or if you need additional information.

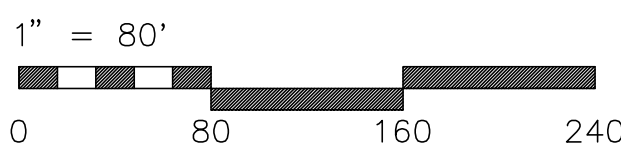
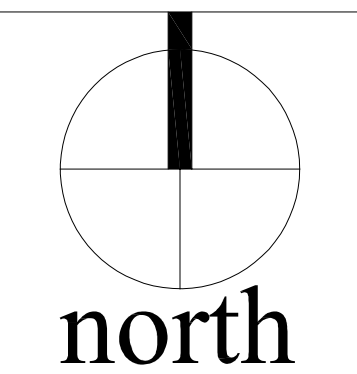
Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.



Trevor Briggs, P.E (C87664)

ATTACHMENT A

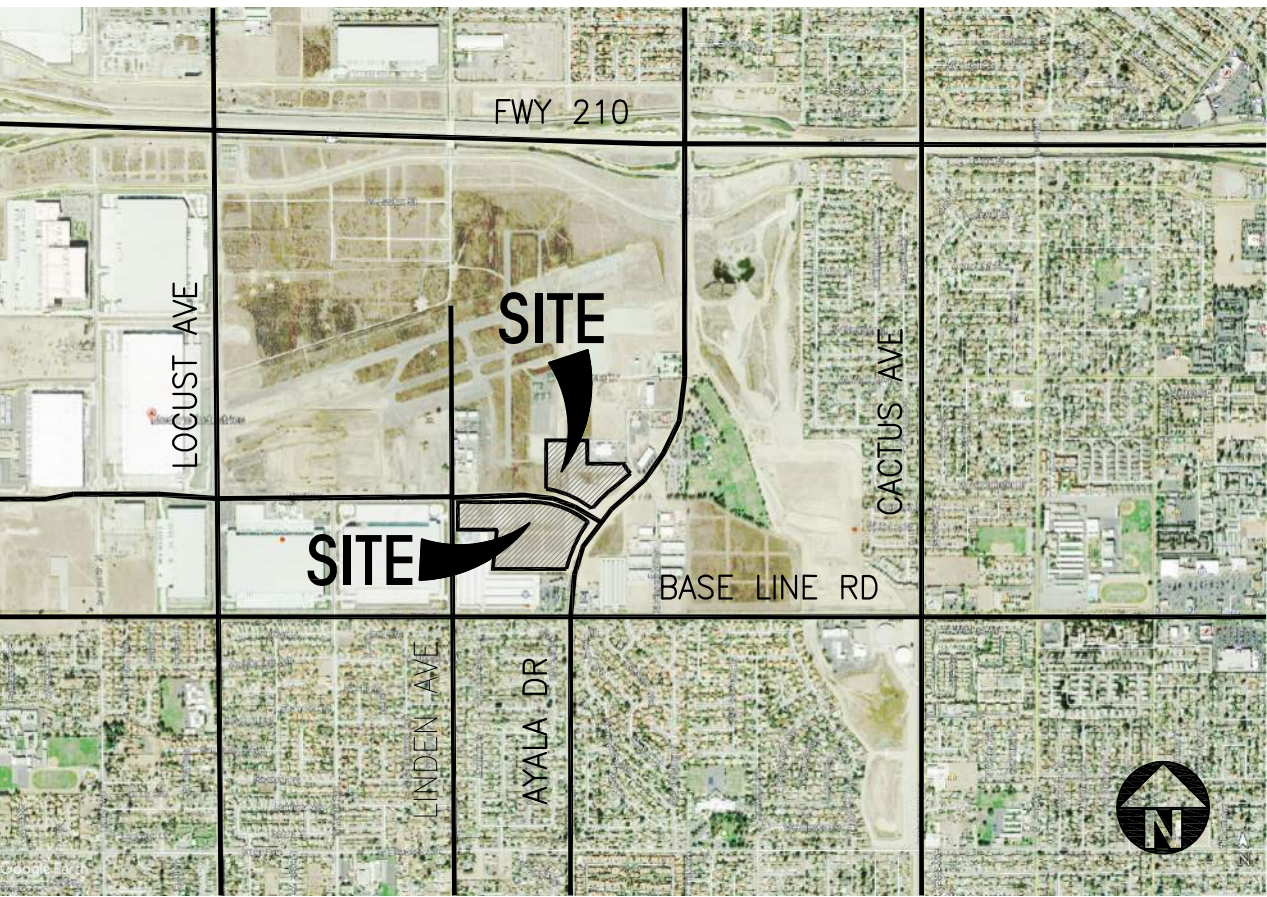


Conceptual Site Plan

Miro Way and Ayala Dr.

Rialto, CA

Aerial Map



Legend

- POTENTIAL OFFICE
- WAREHOUSE
- DRIVE THRU DOOR

Tabulation

	BLDG. 1	BLDG. 2	BLDG. 3	BLDG. 4	BLDG. 5	BLDG. 6	TOTAL
SITE AREA							
In s.f.	130,791	390,549	383,940	282,410	158,900	305,126	1,651,716 s.f.
In acres	3.00	8.97	8.81	6.48	3.65	7.00	37.92 ac
BUILDING AREA							
Office	3,000	10,000	10,000	6,000	5,000	5,000	39,000 s.f.
Warehouse	54,770	174,470	163,743	118,930	62,430	123,040	697,383 s.f.
TOTAL	57,770	184,470	173,743	124,930	67,430	128,040	736,383 s.f.
COVERAGE							
	44.2%	47.2%	45.3%	44.2%	42.4%	42.0%	44.6%
AUTO PARKING REQUIRED							
Office: 1/250 s.f.	12	40	40	24	20	20	156 stalls
Whse: 1st 40K @ 1/1,000 s.f.	40	40	40	40	40	40	240 stalls
above 40K @ 1/4,000 s.f.	4	34	31	20	6	21	116 stalls
TOTAL	56	114	111	84	66	81	512 stalls
AUTO PARKING PROVIDED							
Standard (9' x 18')	59	185	122	114	78	126	684 stalls
ZONING ORDINANCE FOR CITY							
Proposed Zoning Designation - Renaissance SP (Business Center)							
MAXIMUM BUILDING HEIGHT ALLOWED							
Height - 75'							
MAXIMUM FLOOR AREA RATIO							
FAR - .50							
SETBACKS							
Front / street side							
Bldgs < 100K - 20' ave. 15' min.							
Bldgs > 100K - 30' ave. 25' min.							
Interior side							
adjacent to business uses - 0 or separated by 20' plus 10' for each additional floor							
adjacent to Residential uses - 40' single story and 10' for each additional floor							
- loading and unloading areas directly face R zone - 120' from PL to the loading bay door.							
Rear							
adjacent to business uses / streets - 25' ave. 20' min.							
adjacent to residential uses - 40' single story and 10' for each additional floor							
- loading and unloading areas directly face R zone - 120' from PL to the loading bay door.							



ATTACHMENT B
SUMMARY OF PROJECT TRIP GENERATION
MIRO WAY AND AYALA DRIVE WAREHOUSE 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		739,653	KSF	1,265	97	29	126	37	96	133
Passenger Vehicles	60.00%			759	58	17	75	22	58	80
Trucks	40.00%			506	39	12	51	15	38	53

PROJECT TRIPS - PASSENGER CAR EQUIVALENTS (PCE)

Vehicle Type	Vehicle Mix ²	Daily Vehicles	PCE Factor	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Passenger Vehicles	60.00%	759	1.0	759	58	17	75	22	58	80
2-Axle Trucks	0.80%	10	1.5	15	1	0	1	0	1	1
3-Axle Trucks	11.20%	142	2.0	284	22	6	28	8	22	30
4+ Axle Trucks	28.00%	354	3.0	1,062	81	24	105	31	81	112
Total Truck PCE Trips				1,361	104	30	134	39	104	143
Total Project PCE Trips				2,120	162	47	209	61	162	223

PCE = Passenger Car Equivalent

KSF = Thousand Square Feet

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

² Source: City of Rialto Traffic Impact Analysis Guidelines for VMT and LOS Assessment (October, 2021)

ATTACHMENT C - VMT SCREENING TOOL



APPENDIX B

TRAFFIC COUNT DATA SHEETS

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - Total

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	74	53	0	0	0	5	4	0	0	0	0	0	85	1	26	0	248
7:15 AM	81	63	0	0	0	1	3	0	0	0	0	0	99	1	27	0	275
7:30 AM	77	57	0	0	0	1	2	0	0	0	0	0	91	0	18	0	246
7:45 AM	84	67	0	0	0	4	2	0	0	0	0	0	123	1	38	0	319
8:00 AM	80	54	0	0	0	1	3	0	0	0	0	0	67	1	23	0	229
8:15 AM	77	67	0	0	0	1	2	0	0	0	0	0	72	1	15	0	235
8:30 AM	72	52	0	0	0	10	0	0	0	0	0	0	47	0	23	0	204
8:45 AM	63	56	0	0	0	19	1	0	0	0	0	0	52	0	26	0	217
TOTAL VOLUMES :	NL 608	NT 469	NR 0	NU 0	SL 0	ST 42	SR 17	SU 0	EL 0	ET 0	ER 0	EU 0	WL 636	WT 5	WR 196	WU 0	TOTAL 1973
APPROACH %'s :	56.45%	43.55%	0.00%	0.00%	0.00%	71.19%	28.81%	0.00%					75.99%	0.60%	23.42%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	316	240	0	0	0	11	11	0	0	0	0	0	398	3	109	0	1088
PEAK HR FACTOR :	0.940	0.896	0.000	0.000	0.000	0.550	0.688	0.000	0.000	0.000	0.000	0.000	0.809	0.750	0.717	0.000	0.853
	0.921				0.611								0.787				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	81	53	0	0	0	55	84	0	0	0	0	0	70	0	22	0	365
4:15 PM	77	57	0	0	0	57	53	0	0	0	0	0	76	0	27	0	347
4:30 PM	121	50	0	0	0	77	79	0	0	0	0	0	65	2	19	0	413
4:45 PM	93	57	0	0	0	59	63	0	0	0	0	0	75	1	15	0	363
5:00 PM	108	63	0	0	0	53	72	0	0	0	0	0	62	0	22	0	380
5:15 PM	76	59	0	0	0	46	58	0	0	0	0	0	92	1	14	0	346
5:30 PM	99	44	0	0	0	46	33	0	0	0	0	0	87	0	14	0	323
5:45 PM	80	57	0	0	0	35	36	0	0	0	0	0	99	0	24	0	331
TOTAL VOLUMES :	NL 735	NT 440	NR 0	NU 0	SL 0	ST 428	SR 478	SU 0	EL 0	ET 0	ER 0	EU 0	WL 626	WT 4	WR 157	WU 0	TOTAL 2868
APPROACH %'s :	62.55%	37.45%	0.00%	0.00%	0.00%	47.24%	52.76%	0.00%					79.54%	0.51%	19.95%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	399	227	0	0	0	246	267	0	0	0	0	0	278	3	83	0	1503
PEAK HR FACTOR :	0.824	0.901	0.000	0.000	0.000	0.799	0.845	0.000	0.000	0.000	0.000	0.000	0.914	0.375	0.769	0.000	0.910
	0.915				0.822								0.883				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	66	36	0	0	0	5	3	0	0	0	0	0	80	1	17	0	208
7:15 AM	74	43	0	0	0	0	2	0	0	0	0	0	92	0	17	0	228
7:30 AM	61	40	0	0	0	0	2	0	0	0	0	0	89	0	12	0	204
7:45 AM	68	54	0	0	0	2	2	0	0	0	0	0	116	1	26	0	269
8:00 AM	62	33	0	0	0	0	2	0	0	0	0	0	60	1	20	0	178
8:15 AM	61	44	0	0	0	1	2	0	0	0	0	0	61	1	8	0	178
8:30 AM	48	36	0	0	0	10	0	0	0	0	0	0	42	0	16	0	152
8:45 AM	45	33	0	0	0	19	1	0	0	0	0	0	45	0	13	0	156
TOTAL VOLUMES :	NL 485	NT 319	NR 0	NU 0	SL 0	ST 37	SR 14	SU 0	EL 0	ET 0	ER 0	EU 0	WL 585	WT 4	WR 129	WU 0	TOTAL 1573
APPROACH %'s :	60.32%	39.68%	0.00%	0.00%	0.00%	72.55%	27.45%	0.00%					81.48%	0.56%	17.97%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	269	173	0	0	0	7	9	0	0	0	0	0	377	2	72	0	909
PEAK HR FACTOR :	0.909	0.801	0.000	0.000	0.000	0.350	0.750	0.000	0.000	0.000	0.000	0.000	0.813	0.500	0.692	0.000	0.845
	0.906				0.500								0.788				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	68	45	0	0	0	44	70	0	0	0	0	0	70	0	13	0	310
4:15 PM	68	45	0	0	0	45	38	0	0	0	0	0	72	0	19	0	287
4:30 PM	111	36	0	0	0	73	64	0	0	0	0	0	62	1	14	0	361
4:45 PM	80	46	0	0	0	50	46	0	0	0	0	0	73	1	11	0	307
5:00 PM	97	54	0	0	0	49	52	0	0	0	0	0	61	0	15	0	328
5:15 PM	66	55	0	0	0	43	46	0	0	0	0	0	88	1	11	0	310
5:30 PM	87	42	0	0	0	40	28	0	0	0	0	0	86	0	13	0	296
5:45 PM	68	54	0	0	0	32	32	0	0	0	0	0	92	0	20	0	298
TOTAL VOLUMES :	NL 645	NT 377	NR 0	NU 0	SL 0	ST 376	SR 376	SU 0	EL 0	ET 0	ER 0	EU 0	WL 604	WT 3	WR 116	WU 0	TOTAL 2497
APPROACH %'s :	63.11%	36.89%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%					83.54%	0.41%	16.04%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	356	181	0	0	0	217	200	0	0	0	0	0	268	2	59	0	1283
PEAK HR FACTOR :	0.802	0.838	0.000	0.000	0.000	0.743	0.781	0.000	0.000	0.000	0.000	0.000	0.918	0.500	0.776	0.000	0.889
	0.889				0.761								0.904				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	1	4	0	0	0	0	1	0	0	0	0	0	2	0	2	0	10
7:15 AM	2	1	0	0	0	0	1	0	0	0	0	0	3	0	3	0	10
7:30 AM	2	4	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	0	5
8:00 AM	2	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7
8:15 AM	1	5	0	0	0	0	0	0	0	0	0	0	1	0	2	0	9
8:30 AM	4	1	0	0	0	0	0	0	0	0	0	0	2	0	2	0	9
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2	0	5	0	9
TOTAL VOLUMES : APPROACH %'s :	NL 12	NT 21	NR 0	NU 0	SL 0	ST 1	SR 2	SU 0	EL 0	ET 0	ER 0	EU 0	WL 10	WT 0	WR 21	WU 0	TOTAL 67
	36.36%	63.64%	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%					32.26%	0.00%	67.74%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	5	9	0	0	0	1	2	0	0	0	0	0	5	0	11	0	33
PEAK HR FACTOR :	0.625	0.563	0.000	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.688	0.000	0.825
	0.583				0.750								0.667				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	3	2	0	0	0	5	3	0	0	0	0	0	0	0	1	0	14
4:15 PM	0	2	0	0	0	3	1	0	0	0	0	0	1	0	0	0	7
4:30 PM	1	2	0	0	0	1	3	0	0	0	0	0	0	0	1	0	8
4:45 PM	1	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5
5:00 PM	0	3	0	0	0	1	1	0	0	0	0	0	0	0	2	0	7
5:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
5:45 PM	4	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	7
TOTAL VOLUMES : APPROACH %'s :	NL 9	NT 11	NR 0	NU 0	SL 0	ST 13	SR 12	SU 0	EL 0	ET 0	ER 0	EU 0	WL 3	WT 0	WR 4	WU 0	TOTAL 52
	45.00%	55.00%	0.00%	0.00%	0.00%	52.00%	48.00%	0.00%					42.86%	0.00%	57.14%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	2	9	0	0	0	6	6	0	0	0	0	0	1	0	3	0	27
PEAK HR FACTOR :	0.500	0.750	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.375	0.000	0.844
	0.917				0.750								0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	1	4	0	0	0	0	0	0	0	0	0	0	1	0	3	0	9
7:15 AM	1	3	0	0	0	1	0	0	0	0	0	0	0	0	2	0	7
7:30 AM	5	5	0	0	0	0	0	0	0	0	0	0	1	0	1	0	12
7:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	4	0	10
8:00 AM	3	4	0	0	0	0	0	0	0	0	0	0	3	0	0	0	10
8:15 AM	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5
8:30 AM	2	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7
8:45 AM	0	4	0	0	0	0	0	0	0	0	0	0	1	0	3	0	8
TOTAL VOLUMES :	NL 12	NT 34	NR 0	NU 0	SL 0	ST 1	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 7	WT 0	WR 14	WU 0	TOTAL 68
APPROACH %'s :	26.09%	73.91%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					33.33%	0.00%	66.67%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	7	18	0	0	0	1	0	0	0	0	0	0	2	0	10	0	38
PEAK HR FACTOR :	0.350	0.750	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.625	0.000	0.792
	0.625				0.250								0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	1	3	0	0	0	3	2	0	0	0	0	0	0	0	5	0	14
4:15 PM	1	1	0	0	0	2	3	0	0	0	0	0	1	0	3	0	11
4:30 PM	1	3	0	0	0	0	2	0	0	0	0	0	0	1	1	0	8
4:45 PM	2	2	0	0	0	1	6	0	0	0	0	0	1	0	0	0	12
5:00 PM	3	2	0	0	0	0	5	0	0	0	0	0	0	0	0	0	10
5:15 PM	1	2	0	0	0	0	3	0	0	0	0	0	0	0	1	0	7
5:30 PM	4	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	7
5:45 PM	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1	0	5
TOTAL VOLUMES :	NL 14	NT 14	NR 0	NU 0	SL 0	ST 8	SR 23	SU 0	EL 0	ET 0	ER 0	EU 0	WL 2	WT 1	WR 12	WU 0	TOTAL 74
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	0.00%	25.81%	74.19%	0.00%					13.33%	6.67%	80.00%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	7	8	0	0	0	3	16	0	0	0	0	0	2	1	4	0	41
PEAK HR FACTOR :	0.583	0.667	0.000	0.000	0.000	0.375	0.667	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.333	0.000	0.854
	0.750				0.679								0.438				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	6	9	0	0	0	0	0	0	0	0	0	0	2	0	4	0	21
7:15 AM	4	16	0	0	0	0	0	0	0	0	0	0	4	1	5	0	30
7:30 AM	9	8	0	0	0	1	0	0	0	0	0	0	1	0	3	0	22
7:45 AM	16	7	0	0	0	1	0	0	0	0	0	0	7	0	4	0	35
8:00 AM	13	13	0	0	0	1	1	0	0	0	0	0	4	0	2	0	34
8:15 AM	15	14	0	0	0	0	0	0	0	0	0	0	9	0	5	0	43
8:30 AM	18	11	0	0	0	0	0	0	0	0	0	0	3	0	4	0	36
8:45 AM	18	17	0	0	0	0	0	0	0	0	0	0	4	0	5	0	44
TOTAL VOLUMES :	NL 99	NT 95	NR 0	NU 0	SL 0	ST 3	SR 1	SU 0	EL 0	ET 0	ER 0	EU 0	WL 34	WT 1	WR 32	WU 0	TOTAL 265
APPROACH %'s :	51.03%	48.97%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%					50.75%	1.49%	47.76%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	35	40	0	0	0	2	0	0	0	0	0	0	14	1	16	0	108
PEAK HR FACTOR :	0.547	0.625	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.250	0.800	0.000	0.771
	0.815				0.500								0.705				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	9	3	0	0	0	3	9	0	0	0	0	0	0	0	3	0	27
4:15 PM	8	9	0	0	0	7	11	0	0	0	0	0	2	0	5	0	42
4:30 PM	8	9	0	0	0	3	10	0	0	0	0	0	3	0	3	0	36
4:45 PM	10	7	0	0	0	7	10	0	0	0	0	0	1	0	4	0	39
5:00 PM	8	4	0	0	0	3	14	0	0	0	0	0	1	0	5	0	35
5:15 PM	9	2	0	0	0	3	7	0	0	0	0	0	4	0	2	0	27
5:30 PM	8	2	0	0	0	4	3	0	0	0	0	0	1	0	0	0	18
5:45 PM	7	2	0	0	0	1	3	0	0	0	0	0	5	0	3	0	21
TOTAL VOLUMES :	NL 67	NT 38	NR 0	NU 0	SL 0	ST 31	SR 67	SU 0	EL 0	ET 0	ER 0	EU 0	WL 17	WT 0	WR 25	WU 0	TOTAL 245
APPROACH %'s :	63.81%	36.19%	0.00%	0.00%	0.00%	31.63%	68.37%	0.00%					40.48%	0.00%	59.52%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	34	29	0	0	0	20	45	0	0	0	0	0	7	0	17	0	152
PEAK HR FACTOR :	0.850	0.806	0.000	0.000	0.000	0.714	0.804	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.850	0.000	0.905
	0.926				0.903								0.857				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 WB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-001
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 WB Ramps				SR-210 WB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
7:00 AM	8	17	0	0	0	0	1	0	0	0	0	0	5	0	9	0	40
7:15 AM	7	20	0	0	0	1	1	0	0	0	0	0	7	1	10	0	47
7:30 AM	16	17	0	0	0	1	0	0	0	0	0	0	2	0	6	0	42
7:45 AM	16	13	0	0	0	2	0	0	0	0	0	0	7	0	12	0	50
8:00 AM	18	21	0	0	0	1	1	0	0	0	0	0	7	0	3	0	51
8:15 AM	16	23	0	0	0	0	0	0	0	0	0	0	11	0	7	0	57
8:30 AM	24	16	0	0	0	0	0	0	0	0	0	0	5	0	7	0	52
8:45 AM	18	23	0	0	0	0	0	0	0	0	0	0	7	0	13	0	61
TOTAL VOLUMES :	NL 123	NT 150	NR 0	NU 0	SL 0	ST 5	SR 3	SU 0	EL 0	ET 0	ER 0	EU 0	WL 51	WT 1	WR 67	WU 0	TOTAL 400
APPROACH %'s :	45.05%	54.95%	0.00%	0.00%	0.00%	62.50%	37.50%	0.00%					42.86%	0.84%	56.30%	0.00%	
PEAK HR :	07:00 AM - 08:00 AM																TOTAL
PEAK HR VOL :	47	67	0	0	0	4	2	0	0	0	0	0	21	1	37	0	179
PEAK HR FACTOR :	0.734	0.838	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.000	0.000	0.000	0.750	0.250	0.771	0.000	0.895
	0.864				0.750								0.776				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	1 WL	0.5 WT	0.5 WR	0 WU	
4:00 PM	13	8	0	0	0	11	14	0	0	0	0	0	0	0	9	0	55
4:15 PM	9	12	0	0	0	12	15	0	0	0	0	0	4	0	8	0	60
4:30 PM	10	14	0	0	0	4	15	0	0	0	0	0	3	1	5	0	52
4:45 PM	13	11	0	0	0	9	17	0	0	0	0	0	2	0	4	0	56
5:00 PM	11	9	0	0	0	4	20	0	0	0	0	0	1	0	7	0	52
5:15 PM	10	4	0	0	0	3	12	0	0	0	0	0	4	0	3	0	36
5:30 PM	12	2	0	0	0	6	5	0	0	0	0	0	1	0	1	0	27
5:45 PM	12	3	0	0	0	3	4	0	0	0	0	0	7	0	4	0	33
TOTAL VOLUMES :	NL 90	NT 63	NR 0	NU 0	SL 0	ST 52	SR 102	SU 0	EL 0	ET 0	ER 0	EU 0	WL 22	WT 1	WR 41	WU 0	TOTAL 371
APPROACH %'s :	58.82%	41.18%	0.00%	0.00%	0.00%	33.77%	66.23%	0.00%					34.38%	1.56%	64.06%	0.00%	
PEAK HR :	04:15 PM - 05:15 PM																TOTAL
PEAK HR VOL :	43	46	0	0	0	29	67	0	0	0	0	0	10	1	24	0	220
PEAK HR FACTOR :	0.827	0.821	0.000	0.000	0.000	0.604	0.838	0.000	0.000	0.000	0.000	0.000	0.625	0.250	0.750	0.000	0.917
	0.927				0.889								0.729				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - Total

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	88	60	0	4	92	0	0	39	0	91	0	0	0	0	0	374
7:15 AM	0	91	73	0	2	94	0	0	54	0	122	0	0	0	0	0	436
7:30 AM	0	96	72	0	0	96	0	0	40	0	120	0	0	0	0	0	424
7:45 AM	0	96	72	0	1	122	0	0	52	1	135	0	0	0	0	0	479
8:00 AM	0	91	58	0	1	67	0	0	54	1	109	0	0	0	0	0	381
8:15 AM	0	91	77	0	1	76	0	0	43	0	109	0	0	0	0	0	397
8:30 AM	0	88	78	0	1	53	0	0	37	0	81	0	0	0	0	0	338
8:45 AM	0	80	54	0	2	72	0	0	40	0	80	0	0	0	0	0	328
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	721	544	0	12	672	0	0	359	2	847	0	0	0	0	0	3157
	0.00%	57.00%	43.00%	0.00%	1.75%	98.25%	0.00%	0.00%	29.72%	0.17%	70.12%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	374	275	0	4	379	0	0	200	2	486	0	0	0	0	0	1720
PEAK HR FACTOR :	0.000	0.974	0.942	0.000	0.500	0.777	0.000	0.000	0.926	0.500	0.900	0.000	0.000	0.000	0.000	0.000	0.898
	0.966				0.778				0.915								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	110	87	0	31	92	0	0	24	0	91	0	0	0	0	0	435
4:15 PM	0	100	84	0	36	98	0	0	33	0	110	0	0	0	0	0	461
4:30 PM	0	146	93	0	38	102	0	0	33	1	105	0	0	0	0	0	518
4:45 PM	0	104	96	0	42	95	0	0	38	0	114	0	0	0	0	0	489
5:00 PM	0	124	98	0	21	91	0	0	46	1	109	0	0	0	0	0	490
5:15 PM	0	108	98	0	28	113	0	0	35	0	99	0	0	0	0	0	481
5:30 PM	0	107	104	0	25	108	0	0	28	0	97	0	0	0	0	0	469
5:45 PM	0	109	85	0	22	107	0	0	31	0	112	0	0	0	0	0	466
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	908	745	0	243	806	0	0	268	2	837	0	0	0	0	0	3809
	0.00%	54.93%	45.07%	0.00%	23.16%	76.84%	0.00%	0.00%	24.21%	0.18%	75.61%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	482	385	0	129	401	0	0	152	2	427	0	0	0	0	0	1978
PEAK HR FACTOR :	0.000	0.825	0.982	0.000	0.768	0.887	0.000	0.000	0.826	0.500	0.936	0.000	0.000	0.000	0.000	0.000	0.955
	0.907				0.940				0.931								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	76	53	0	4	86	0	0	26	0	74	0	0	0	0	0	319
7:15 AM	0	82	61	0	1	87	0	0	35	0	96	0	0	0	0	0	362
7:30 AM	0	74	65	0	0	93	0	0	29	0	105	0	0	0	0	0	366
7:45 AM	0	81	66	0	0	114	0	0	39	0	116	0	0	0	0	0	416
8:00 AM	0	69	49	0	1	60	0	0	34	1	91	0	0	0	0	0	305
8:15 AM	0	71	60	0	0	65	0	0	26	0	90	0	0	0	0	0	312
8:30 AM	0	62	67	0	1	49	0	0	24	0	63	0	0	0	0	0	266
8:45 AM	0	59	44	0	2	64	0	0	17	0	57	0	0	0	0	0	243
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	574	465	0	9	618	0	0	230	1	692	0	0	0	0	0	2589
	0.00%	55.25%	44.75%	0.00%	1.44%	98.56%	0.00%	0.00%	24.92%	0.11%	74.97%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	306	241	0	2	354	0	0	137	1	408	0	0	0	0	0	1449
PEAK HR FACTOR :	0.000	0.933	0.913	0.000	0.500	0.776	0.000	0.000	0.878	0.250	0.879	0.000	0.000	0.000	0.000	0.000	0.871
	0.930				0.781				0.881								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	98	81	0	23	91	0	0	17	0	78	0	0	0	0	0	388
4:15 PM	0	91	76	0	25	92	0	0	20	0	93	0	0	0	0	0	397
4:30 PM	0	134	89	0	34	99	0	0	22	0	92	0	0	0	0	0	470
4:45 PM	0	89	91	0	35	90	0	0	28	0	102	0	0	0	0	0	435
5:00 PM	0	113	93	0	19	88	0	0	38	1	99	0	0	0	0	0	451
5:15 PM	0	97	88	0	26	108	0	0	31	0	87	0	0	0	0	0	437
5:30 PM	0	97	98	0	20	106	0	0	25	0	82	0	0	0	0	0	428
5:45 PM	0	98	80	0	20	100	0	0	27	0	98	0	0	0	0	0	423
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	817	696	0	202	774	0	0	208	1	731	0	0	0	0	0	3429
	0.00%	54.00%	46.00%	0.00%	20.70%	79.30%	0.00%	0.00%	22.13%	0.11%	77.77%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	433	361	0	114	385	0	0	119	1	380	0	0	0	0	0	1793
PEAK HR FACTOR :	0.000	0.808	0.970	0.000	0.814	0.891	0.000	0.000	0.783	0.250	0.931	0.000	0.000	0.000	0.000	0.000	0.954
	0.890				0.931				0.906								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	3	0	0	0	2	0	0	2	0	4	0	0	0	0	0	11
7:15 AM	0	3	1	0	0	3	0	0	0	0	3	0	0	0	0	0	10
7:30 AM	0	3	1	0	0	0	0	0	3	0	0	0	0	0	0	0	7
7:45 AM	0	0	0	0	1	0	0	0	0	1	2	0	0	0	0	0	4
8:00 AM	0	2	0	0	0	0	0	0	6	0	4	0	0	0	0	0	12
8:15 AM	0	4	4	0	0	1	0	0	1	0	0	0	0	0	0	0	10
8:30 AM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6
8:45 AM	0	1	0	0	0	2	0	0	2	0	3	0	0	0	0	0	8
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	20	6	0	1	10	0	0	14	1	16	0	0	0	0	0	68
	0.00%	76.92%	23.08%	0.00%	9.09%	90.91%	0.00%	0.00%	45.16%	3.23%	51.61%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	8	2	0	1	3	0	0	9	1	9	0	0	0	0	0	33
PEAK HR FACTOR :	0.000	0.667	0.500	0.000	0.250	0.250	0.000	0.000	0.375	0.250	0.563	0.000	0.000	0.000	0.000	0.000	0.688
	0.625				0.333				0.475								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	3	1	0	4	1	0	0	2	0	2	0	0	0	0	0	13
4:15 PM	0	0	4	0	2	1	0	0	2	0	2	0	0	0	0	0	11
4:30 PM	0	2	0	0	1	0	0	0	1	0	4	0	0	0	0	0	8
4:45 PM	0	1	2	0	1	1	0	0	2	0	2	0	0	0	0	0	9
5:00 PM	0	1	1	0	1	0	0	0	2	0	1	0	0	0	0	0	6
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0	4
5:45 PM	0	3	2	0	0	3	0	0	1	0	1	0	0	0	0	0	10
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	10	11	0	10	6	0	0	10	0	15	0	0	0	0	0	62
	0.00%	47.62%	52.38%	0.00%	62.50%	37.50%	0.00%	0.00%	40.00%	0.00%	60.00%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	4	4	0	3	1	0	0	5	0	7	0	0	0	0	0	24
PEAK HR FACTOR :	0.000	0.500	0.500	0.000	0.750	0.250	0.000	0.000	0.625	0.000	0.438	0.000	0.000	0.000	0.000	0.000	0.667
	0.667				0.500				0.600								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	1	2	0	0	2	0	0	4	0	1	0	0	0	0	0	10
7:15 AM	0	2	3	0	1	0	0	0	3	0	5	0	0	0	0	0	14
7:30 AM	0	6	1	0	0	1	0	0	3	0	4	0	0	0	0	0	15
7:45 AM	0	0	2	0	0	0	0	0	6	0	3	0	0	0	0	0	11
8:00 AM	0	4	1	0	0	3	0	0	3	0	1	0	0	0	0	0	12
8:15 AM	0	3	2	0	0	1	0	0	1	0	1	0	0	0	0	0	8
8:30 AM	0	3	0	0	0	0	0	0	3	0	0	0	0	0	0	0	6
8:45 AM	0	0	4	0	0	1	0	0	5	0	1	0	0	0	0	0	11
TOTAL VOLUMES :	NL 0	NT 19	NR 15	NU 0	SL 1	ST 8	SR 0	SU 0	EL 28	ET 0	ER 16	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 87
APPROACH %'s :	0.00%	55.88%	44.12%	0.00%	11.11%	88.89%	0.00%	0.00%	63.64%	0.00%	36.36%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	12	7	0	1	4	0	0	15	0	13	0	0	0	0	0	52
PEAK HR FACTOR :	0.000	0.500	0.583	0.000	0.250	0.333	0.000	0.000	0.625	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.867
	0.679				0.417				0.778								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	1	1	0	2	0	0	0	2	0	2	0	0	0	0	0	8
4:15 PM	0	1	1	0	3	1	0	0	1	0	1	0	0	0	0	0	8
4:30 PM	0	1	3	0	0	0	0	0	3	0	1	0	0	0	0	0	8
4:45 PM	0	3	0	0	0	2	0	0	1	0	0	0	0	0	0	0	6
5:00 PM	0	3	3	0	0	0	0	0	2	0	5	0	0	0	0	0	13
5:15 PM	0	2	1	0	0	0	0	0	2	0	3	0	0	0	0	0	8
5:30 PM	0	2	2	0	1	0	0	0	1	0	2	0	0	0	0	0	8
5:45 PM	0	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	5
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 14	NR 12	NU 0	SL 7	ST 3	SR 0	SU 0	EL 13	ET 0	ER 15	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 64
	0.00%	53.85%	46.15%	0.00%	70.00%	30.00%	0.00%	0.00%	46.43%	0.00%	53.57%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	9	7	0	0	2	0	0	8	0	9	0	0	0	0	0	35
PEAK HR FACTOR :	0.000	0.750	0.583	0.000	0.000	0.250	0.000	0.000	0.667	0.000	0.450	0.000	0.000	0.000	0.000	0.000	0.673
	0.667				0.250				0.607								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	8	5	0	0	2	0	0	7	0	12	0	0	0	0	0	34
7:15 AM	0	4	8	0	0	4	0	0	16	0	18	0	0	0	0	0	50
7:30 AM	0	13	5	0	0	2	0	0	5	0	11	0	0	0	0	0	36
7:45 AM	0	15	4	0	0	8	0	0	7	0	14	0	0	0	0	0	48
8:00 AM	0	16	8	0	0	4	0	0	11	0	13	0	0	0	0	0	52
8:15 AM	0	13	11	0	1	9	0	0	15	0	18	0	0	0	0	0	67
8:30 AM	0	19	11	0	0	2	0	0	10	0	18	0	0	0	0	0	60
8:45 AM	0	20	6	0	0	5	0	0	16	0	19	0	0	0	0	0	66
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	108	58	0	1	36	0	0	87	0	123	0	0	0	0	0	413
	0.00%	65.06%	34.94%	0.00%	2.70%	97.30%	0.00%	0.00%	41.43%	0.00%	58.57%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	48	25	0	0	18	0	0	39	0	56	0	0	0	0	0	186
PEAK HR FACTOR :	0.000	0.750	0.781	0.000	0.000	0.563	0.000	0.000	0.609	0.000	0.778	0.000	0.000	0.000	0.000	0.000	0.894
	0.760				0.563				0.699								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	8	4	0	2	0	0	0	3	0	9	0	0	0	0	0	26
4:15 PM	0	8	3	0	6	4	0	0	10	0	14	0	0	0	0	0	45
4:30 PM	0	9	1	0	3	3	0	0	7	1	8	0	0	0	0	0	32
4:45 PM	0	11	3	0	6	2	0	0	7	0	10	0	0	0	0	0	39
5:00 PM	0	7	1	0	1	3	0	0	4	0	4	0	0	0	0	0	20
5:15 PM	0	9	8	0	2	5	0	0	2	0	9	0	0	0	0	0	35
5:30 PM	0	8	4	0	3	2	0	0	2	0	10	0	0	0	0	0	29
5:45 PM	0	7	2	0	1	4	0	0	2	0	12	0	0	0	0	0	28
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	67	26	0	24	23	0	0	37	1	76	0	0	0	0	0	254
	0.00%	72.04%	27.96%	0.00%	51.06%	48.94%	0.00%	0.00%	32.46%	0.88%	66.67%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	36	13	0	12	13	0	0	20	1	31	0	0	0	0	0	126
PEAK HR FACTOR :	0.000	0.818	0.406	0.000	0.500	0.650	0.000	0.000	0.714	0.250	0.775	0.000	0.000	0.000	0.000	0.000	0.808
	0.721				0.781				0.765								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & SR-210 EB Ramps
City: Rialto
Control: Signalized

Project ID: 23-030023-002
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Alder Ave				Alder Ave				SR-210 EB Ramps				SR-210 EB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	12	7	0	0	6	0	0	13	0	17	0	0	0	0	0	55
7:15 AM	0	9	12	0	1	7	0	0	19	0	26	0	0	0	0	0	74
7:30 AM	0	22	7	0	0	3	0	0	11	0	15	0	0	0	0	0	58
7:45 AM	0	15	6	0	1	8	0	0	13	1	19	0	0	0	0	0	63
8:00 AM	0	22	9	0	0	7	0	0	20	0	18	0	0	0	0	0	76
8:15 AM	0	20	17	0	1	11	0	0	17	0	19	0	0	0	0	0	85
8:30 AM	0	26	11	0	0	4	0	0	13	0	18	0	0	0	0	0	72
8:45 AM	0	21	10	0	0	8	0	0	23	0	23	0	0	0	0	0	85
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	147	79	0	3	54	0	0	129	1	155	0	0	0	0	0	568
	0.00%	65.04%	34.96%	0.00%	5.26%	94.74%	0.00%	0.00%	45.26%	0.35%	54.39%	0.00%					
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	68	34	0	2	25	0	0	63	1	78	0	0	0	0	0	271
PEAK HR FACTOR :	0.000	0.773	0.708	0.000	0.500	0.781	0.000	0.000	0.788	0.250	0.750	0.000	0.000	0.000	0.000	0.000	0.891
	0.823				0.750				0.789								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0.5 EL	0.5 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	12	6	0	8	1	0	0	7	0	13	0	0	0	0	0	47
4:15 PM	0	9	8	0	11	6	0	0	13	0	17	0	0	0	0	0	64
4:30 PM	0	12	4	0	4	3	0	0	11	1	13	0	0	0	0	0	48
4:45 PM	0	15	5	0	7	5	0	0	10	0	12	0	0	0	0	0	54
5:00 PM	0	11	5	0	2	3	0	0	8	0	10	0	0	0	0	0	39
5:15 PM	0	11	10	0	2	5	0	0	4	0	12	0	0	0	0	0	44
5:30 PM	0	10	6	0	5	2	0	0	3	0	15	0	0	0	0	0	41
5:45 PM	0	11	5	0	2	7	0	0	4	0	14	0	0	0	0	0	43
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	91	49	0	41	32	0	0	60	1	106	0	0	0	0	0	380
	0.00%	65.00%	35.00%	0.00%	56.16%	43.84%	0.00%	0.00%	35.93%	0.60%	63.47%	0.00%					
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	49	24	0	15	16	0	0	33	1	47	0	0	0	0	0	185
PEAK HR FACTOR :	0.000	0.817	0.600	0.000	0.536	0.800	0.000	0.000	0.750	0.250	0.904	0.000	0.000	0.000	0.000	0.000	0.856
	0.869				0.646				0.810								

Date: 3/7/2023

Total Trucks (PM)

Direction	Maneuver	Volume (Trucks/PM)
Northbound	Left Turn	0
	Through/Right Turn	16
	Left Turn	15
Southbound	Left Turn	0
	Through/Right Turn	49
	Left Turn	24
Eastbound	Left Turn	33
	Through/Right Turn	1
	Left Turn	47
Westbound	Left Turn	0
	Through/Right Turn	0
	Left Turn	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - Total

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	12	100	2	0	30	136	14	0	19	22	8	0	6	21	28	0	398
7:15 AM	11	109	6	0	30	165	24	0	23	20	9	0	7	22	31	0	457
7:30 AM	14	110	4	0	23	163	22	0	30	28	12	0	8	24	30	0	468
7:45 AM	24	122	2	0	27	219	17	0	18	45	10	0	8	34	28	0	554
8:00 AM	50	111	3	0	24	137	14	0	19	36	25	0	3	30	23	0	475
8:15 AM	32	117	4	0	26	141	20	0	19	45	21	0	5	42	35	0	507
8:30 AM	12	107	10	0	23	92	13	0	28	53	21	0	7	25	29	0	420
8:45 AM	10	91	3	0	24	112	23	0	12	26	11	0	2	18	24	0	356
TOTAL VOLUMES :	NL 165	NT 867	NR 34	NU 0	SL 207	ST 1165	SR 147	SU 0	EL 168	ET 275	ER 117	EU 0	WL 46	WT 216	WR 228	WU 0	TOTAL 3635
APPROACH %'s :	15.48%	81.33%	3.19%	0.00%	13.63%	76.70%	9.68%	0.00%	30.00%	49.11%	20.89%	0.00%	9.39%	44.08%	46.53%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	120	460	13	0	100	660	73	0	86	154	68	0	24	130	116	0	2004
PEAK HR FACTOR :	0.600	0.943	0.813	0.000	0.926	0.753	0.830	0.000	0.717	0.856	0.680	0.000	0.750	0.774	0.829	0.000	0.904
	0.904				0.792				0.906				0.823				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	11	133	12	0	31	122	23	0	16	80	22	0	3	48	44	0	545
4:15 PM	18	135	7	0	47	132	36	0	20	66	17	0	4	28	40	0	550
4:30 PM	15	161	9	0	33	143	28	0	20	70	16	0	5	44	47	0	591
4:45 PM	8	143	8	0	38	136	32	0	25	60	15	0	2	45	37	0	549
5:00 PM	14	152	7	0	44	127	35	0	20	64	17	0	4	40	53	0	577
5:15 PM	11	134	9	0	37	132	36	0	25	66	19	0	3	42	39	0	553
5:30 PM	16	164	16	0	29	149	34	0	17	53	6	0	7	35	35	0	561
5:45 PM	9	124	11	0	31	140	41	0	36	86	9	0	6	35	31	0	559
TOTAL VOLUMES :	NL 102	NT 1146	NR 79	NU 0	SL 290	ST 1081	SR 265	SU 0	EL 179	ET 545	ER 121	EU 0	WL 34	WT 317	WR 326	WU 0	TOTAL 4485
APPROACH %'s :	7.69%	86.36%	5.95%	0.00%	17.73%	66.08%	16.20%	0.00%	21.18%	64.50%	14.32%	0.00%	5.02%	46.82%	48.15%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	48	590	33	0	152	538	131	0	90	260	67	0	14	171	176	0	2270
PEAK HR FACTOR :	0.800	0.916	0.917	0.000	0.864	0.941	0.910	0.000	0.900	0.929	0.882	0.000	0.700	0.950	0.830	0.000	0.960
	0.907				0.996				0.948				0.930				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	10	92	2	0	23	125	10	0	19	19	8	0	5	21	18	0	352
7:15 AM	9	103	6	0	19	145	21	0	21	17	8	0	6	22	19	0	396
7:30 AM	12	95	4	0	20	150	20	0	27	25	9	0	8	23	19	0	412
7:45 AM	24	111	1	0	20	202	16	0	17	43	8	0	8	33	17	0	500
8:00 AM	49	90	3	0	14	121	14	0	18	36	22	0	3	27	13	0	410
8:15 AM	30	100	3	0	15	122	20	0	16	43	21	0	4	39	19	0	432
8:30 AM	10	92	8	0	17	77	11	0	25	53	20	0	5	24	9	0	351
8:45 AM	10	77	3	0	14	92	22	0	12	24	11	0	2	17	10	0	294
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	154	760	30	0	142	1034	134	0	155	260	107	0	41	206	124	0	3147
	16.31%	80.51%	3.18%	0.00%	10.84%	78.93%	10.23%	0.00%	29.69%	49.81%	20.50%	0.00%	11.05%	55.53%	33.42%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	115	396	11	0	69	595	70	0	78	147	60	0	23	122	68	0	1754
PEAK HR FACTOR :	0.587	0.892	0.688	0.000	0.863	0.736	0.875	0.000	0.722	0.855	0.682	0.000	0.719	0.782	0.895	0.000	0.877
	0.919				0.771				0.891				0.859				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	11	124	10	0	28	111	23	0	15	79	21	0	2	48	36	0	508
4:15 PM	18	124	6	0	38	119	35	0	20	66	17	0	3	28	34	0	508
4:30 PM	14	149	8	0	30	132	26	0	19	70	16	0	5	44	44	0	557
4:45 PM	8	129	8	0	35	123	32	0	23	58	15	0	2	45	32	0	510
5:00 PM	13	142	7	0	37	120	35	0	20	61	17	0	3	39	48	0	542
5:15 PM	11	127	9	0	32	122	34	0	24	64	19	0	1	42	26	0	511
5:30 PM	16	159	16	0	25	136	34	0	17	53	6	0	7	33	24	0	526
5:45 PM	9	116	11	0	29	123	40	0	34	86	9	0	4	34	23	0	518
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	100	1070	75	0	254	986	259	0	172	537	120	0	27	313	267	0	4180
	8.03%	85.94%	6.02%	0.00%	16.94%	65.78%	17.28%	0.00%	20.75%	64.78%	14.48%	0.00%	4.45%	51.57%	43.99%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	46	547	32	0	134	497	127	0	86	253	67	0	11	170	150	0	2120
PEAK HR FACTOR :	0.821	0.918	0.889	0.000	0.905	0.941	0.907	0.000	0.896	0.904	0.882	0.000	0.550	0.944	0.781	0.000	0.952
	0.914				0.987				0.949				0.890				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	2	1	0	0	2	2	2	0	0	3	0	0	0	0	2	0	14
7:15 AM	0	1	0	0	2	2	2	0	2	1	0	0	0	0	1	0	11
7:30 AM	0	4	0	0	0	0	0	0	0	3	0	0	0	1	0	0	8
7:45 AM	0	1	1	0	0	1	0	0	0	2	1	0	0	0	0	0	6
8:00 AM	0	1	0	0	3	1	0	0	0	0	1	0	0	2	2	0	10
8:15 AM	1	1	0	0	1	1	0	0	2	2	0	0	0	1	3	0	12
8:30 AM	1	2	0	0	0	1	1	0	0	0	0	0	0	1	2	0	8
8:45 AM	0	1	0	0	1	4	0	0	0	1	0	0	0	1	0	0	8
TOTAL VOLUMES : APPROACH %'s :	NL 4 23.53%	NT 12 70.59%	NR 1 5.88%	NU 0 0.00%	SL 9 34.62%	ST 12 46.15%	SR 5 19.23%	SU 0 0.00%	EL 4 22.22%	ET 12 66.67%	ER 2 11.11%	EU 0 0.00%	WL 0 0.00%	WT 6 37.50%	WR 10 62.50%	WU 0 0.00%	TOTAL 77
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				4 0.333	3 0.750	0 0.000	0 0.000	2 0.250	7 0.583	2 0.500	0 0.000	0 0.000	4 0.500	5 0.417	0 0.000	TOTAL 36 0.750
	0.563				0.438				0.688				0.563				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	0	4	0	0	0	3	0	0	0	1	0	0	0	0	0	0	8
4:15 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	1	0	7
4:30 PM	1	2	0	0	1	3	0	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	2	0	0	1	2	0	0	1	1	0	0	0	0	1	0	8
5:00 PM	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
5:15 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	5
5:45 PM	0	3	0	0	0	3	0	0	2	0	0	0	0	1	0	0	9
TOTAL VOLUMES : APPROACH %'s :	NL 1 5.88%	NT 16 94.12%	NR 0 0.00%	NU 0 0.00%	SL 2 10.00%	ST 18 90.00%	SR 0 0.00%	SU 0 0.00%	EL 3 42.86%	ET 4 57.14%	ER 0 0.00%	EU 0 0.00%	WL 0 0.00%	WT 3 60.00%	WR 2 40.00%	WU 0 0.00%	TOTAL 49
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:30 PM - 05:30 PM				2 0.500	6 0.500	0 0.000	0 0.000	1 0.250	3 0.750	0 0.000	0 0.000	0 0.000	0 0.000	1 0.250	0 0.000	TOTAL 20 0.625
	0.583				0.500				0.500				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy																				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL																
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU																	
7:00 AM	0	2	0	0	1	1	1	0	0	0	0	0	0	0	2	0	7																
7:15 AM	0	0	0	0	1	4	0	0	0	1	0	0	0	0	4	0	10																
7:30 AM	1	3	0	0	0	4	1	0	2	0	0	0	0	0	2	0	13																
7:45 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	4																
8:00 AM	0	5	0	0	1	4	0	0	0	0	1	0	0	0	1	0	12																
8:15 AM	1	2	1	0	0	1	0	0	0	0	0	0	0	0	2	0	7																
8:30 AM	1	2	1	0	1	0	0	0	0	0	0	0	1	0	1	0	7																
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	2	0	6																
TOTAL VOLUMES : APPROACH %'s :	NL 3 13.64%	NT 17 77.27%	NR 2 9.09%	NU 0 0.00%	SL 4 16.67%	ST 18 75.00%	SR 2 8.33%	SU 0 0.00%	EL 2 50.00%	ET 1 25.00%	ER 1 25.00%	EU 0 0.00%	WL 1 6.25%	WT 0 0.00%	WR 15 93.75%	WU 0 0.00%	TOTAL 66																
	PEAK HR : 07:30 AM - 08:30 AM				1 11 0.250				2 0 0.250				0 0 0.000																				
PEAK HR VOL : PEAK HR FACTOR :	2 0.500	11 0.550	1 0.250	0 0.000	0.700				1 11 0.250				0.650				2 0 0.250				0.375				0 0 0.000				0.750				36 0.692

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL				
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU					
4:00 PM	0	1	0	0	0	2	0	0	1	0	0	0	0	0	0	0	4				
4:15 PM	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	4				
4:30 PM	0	2	1	0	0	0	1	0	1	0	0	0	0	0	1	0	6				
4:45 PM	0	1	0	0	0	2	0	0	1	0	0	0	0	0	1	0	5				
5:00 PM	0	5	0	0	2	3	0	0	0	1	0	0	0	1	1	0	13				
5:15 PM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0	6				
5:30 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3	0	6				
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	4				
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 12 92.31%	NR 1 7.69%	NU 0 0.00%	SL 3 16.67%	ST 14 77.78%	SR 1 5.56%	SU 0 0.00%	EL 3 75.00%	ET 1 25.00%	ER 0 0.00%	EU 0 0.00%	WL 0 0.00%	WT 1 7.69%	WR 12 92.31%	WU 0 0.00%	TOTAL 48				
	PEAK HR : 04:30 PM - 05:30 PM				2 8 0.250				1 0 0.250				0 1 0.250					0 6 0.500			
PEAK HR VOL : PEAK HR FACTOR :	0 0.000	8 0.400	1 0.250	0 0.000	0.450				0.550				0.750				0.583				30 0.577

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	5	0	0	4	8	1	0	0	0	0	0	1	0	6	0	25
7:15 AM	2	5	0	0	8	14	1	0	0	1	1	0	1	0	7	0	40
7:30 AM	1	8	0	0	3	9	1	0	1	0	3	0	0	0	9	0	35
7:45 AM	0	9	0	0	7	14	1	0	1	0	1	0	0	1	10	0	44
8:00 AM	1	15	0	0	6	11	0	0	1	0	1	0	0	1	7	0	43
8:15 AM	0	14	0	0	10	17	0	0	1	0	0	0	1	2	11	0	56
8:30 AM	0	11	1	0	5	14	1	0	3	0	1	0	1	0	17	0	54
8:45 AM	0	11	0	0	9	14	1	0	0	1	0	0	0	0	12	0	48
TOTAL VOLUMES : APPROACH %'s :	NL 4 4.82%	NT 78 93.98%	NR 1 1.20%	NU 0 0.00%	SL 52 32.70%	ST 101 63.52%	SR 6 3.77%	SU 0 0.00%	EL 7 43.75%	ET 2 12.50%	ER 7 43.75%	EU 0 0.00%	WL 4 4.60%	WT 4 4.60%	WR 79 90.80%	WU 0 0.00%	TOTAL 345
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	46	0	0	26	51	2	0	4	0	5	0	1	4	37	0	178
PEAK HR FACTOR :	0.500	0.767	0.000	0.000	0.650	0.750	0.500	0.000	1.000	0.000	0.417	0.000	0.250	0.500	0.841	0.000	0.795
	0.750				0.731				0.563				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	0	4	2	0	3	6	0	0	0	0	1	0	1	0	8	0	25
4:15 PM	0	6	1	0	8	9	1	0	0	0	0	0	1	0	5	0	31
4:30 PM	0	8	0	0	2	8	1	0	0	0	0	0	0	0	2	0	21
4:45 PM	0	11	0	0	2	9	0	0	0	1	0	0	0	0	3	0	26
5:00 PM	1	4	0	0	5	3	0	0	0	1	0	0	1	0	4	0	19
5:15 PM	0	6	0	0	5	7	2	0	1	1	0	0	2	0	10	0	34
5:30 PM	0	4	0	0	4	8	0	0	0	0	0	0	0	0	8	0	24
5:45 PM	0	5	0	0	2	13	1	0	0	0	0	0	2	0	5	0	28
TOTAL VOLUMES : APPROACH %'s :	NL 1 1.92%	NT 48 92.31%	NR 3 5.77%	NU 0 0.00%	SL 31 31.31%	ST 63 63.64%	SR 5 5.05%	SU 0 0.00%	EL 1 20.00%	ET 3 60.00%	ER 1 20.00%	EU 0 0.00%	WL 7 13.46%	WT 0 0.00%	WR 45 86.54%	WU 0 0.00%	TOTAL 208
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	29	0	0	14	27	3	0	1	3	0	0	3	0	19	0	100
PEAK HR FACTOR :	0.250	0.659	0.000	0.000	0.700	0.750	0.375	0.000	0.250	0.750	0.000	0.000	0.375	0.000	0.475	0.000	0.735
	0.682				0.786				0.500				0.458				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-003
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Alder Ave				Alder Ave				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	2	8	0	0	7	11	4	0	0	3	0	0	1	0	10	0	46
7:15 AM	2	6	0	0	11	20	3	0	2	3	1	0	1	0	12	0	61
7:30 AM	2	15	0	0	3	13	2	0	3	3	3	0	0	1	11	0	56
7:45 AM	0	11	1	0	7	17	1	0	1	2	2	0	0	1	11	0	54
8:00 AM	1	21	0	0	10	16	0	0	1	0	3	0	0	3	10	0	65
8:15 AM	2	17	1	0	11	19	0	0	3	2	0	0	1	3	16	0	75
8:30 AM	2	15	2	0	6	15	2	0	3	0	1	0	2	1	20	0	69
8:45 AM	0	14	0	0	10	20	1	0	0	2	0	0	0	1	14	0	62
TOTAL VOLUMES : APPROACH %'s :	NL 11 9.02%	NT 107 87.70%	NR 4 3.28%	NU 0 0.00%	SL 65 31.10%	ST 131 62.68%	SR 13 6.22%	SU 0 0.00%	EL 13 34.21%	ET 15 39.47%	ER 10 26.32%	EU 0 0.00%	WL 5 4.20%	WT 10 8.40%	WR 104 87.39%	WU 0 0.00%	TOTAL 488
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				31 0.705	65 0.855	3 0.375	0 0.000	8 0.667	7 0.583	8 0.667	0 0.000	1 0.250	8 0.667	48 0.750	0 0.000	TOTAL 250 0.833
	0.807				0.825				0.639				0.713				

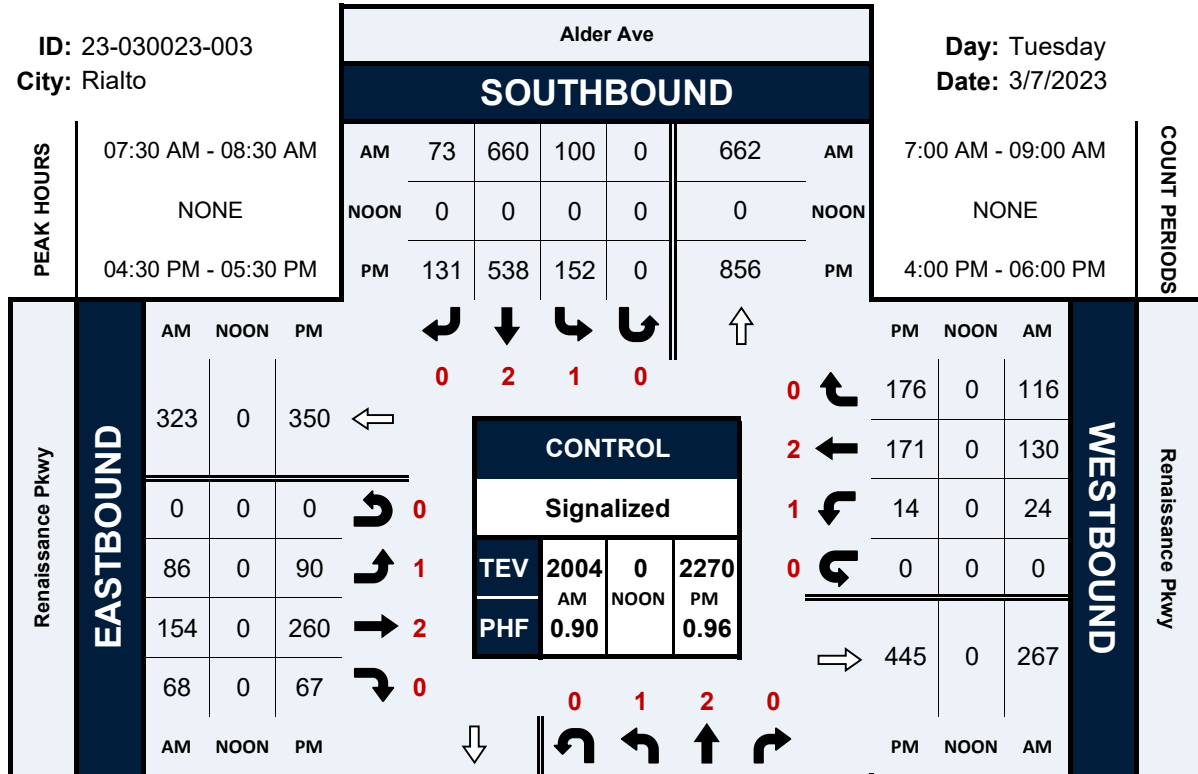
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	0	9	2	0	3	11	0	0	1	1	1	0	1	0	8	0	37
4:15 PM	0	11	1	0	9	13	1	0	0	0	0	0	1	0	6	0	42
4:30 PM	1	12	1	0	3	11	2	0	1	0	0	0	0	0	3	0	34
4:45 PM	0	14	0	0	3	13	0	0	2	2	0	0	0	0	5	0	39
5:00 PM	1	10	0	0	7	7	0	0	0	3	0	0	1	1	5	0	35
5:15 PM	0	7	0	0	5	10	2	0	1	2	0	0	2	0	13	0	42
5:30 PM	0	5	0	0	4	13	0	0	0	0	0	0	0	2	11	0	35
5:45 PM	0	8	0	0	2	17	1	0	2	0	0	0	2	1	8	0	41
TOTAL VOLUMES : APPROACH %'s :	NL 2 2.44%	NT 76 92.68%	NR 4 4.88%	NU 0 0.00%	SL 36 26.28%	ST 95 69.34%	SR 6 4.38%	SU 0 0.00%	EL 7 43.75%	ET 8 50.00%	ER 1 6.25%	EU 0 0.00%	WL 7 10.00%	WT 4 5.71%	WR 59 84.29%	WU 0 0.00%	TOTAL 305
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:30 PM - 05:30 PM				18 0.643	41 0.788	4 0.500	0 0.000	4 0.500	7 0.583	0 0.000	0 0.000	3 0.375	1 0.250	26 0.500	0 0.000	TOTAL 150 0.893
	0.821				0.926				0.688				0.500				

Alder Ave & Renaissance Pkwy

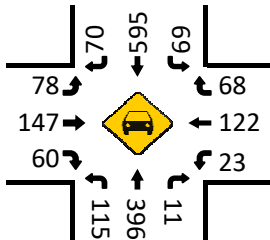
Peak Hour Turning Movement Count

ID: 23-030023-003
City: Rialto

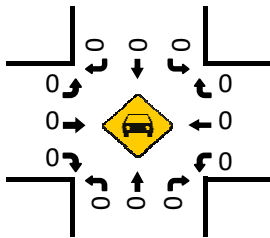
Day: Tuesday
Date: 3/7/2023



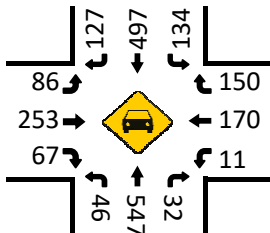
Cars (AM)



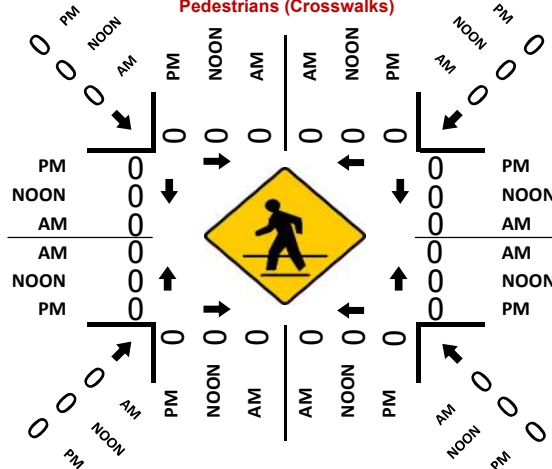
Cars (NOON)



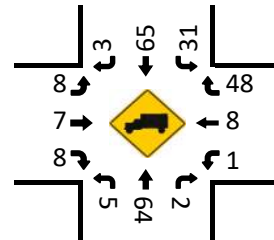
Cars (PM)



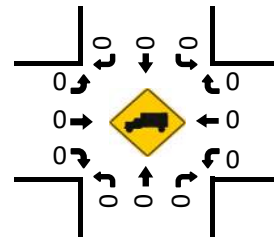
Pedestrians (Crosswalks)



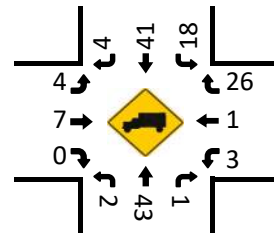
Total Trucks (AM)



Total Trucks (NOON)



Total Trucks (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - Total

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	17	54	4	0	11	42	13	0	11	32	9	0	5	71	35	0	304
7:15 AM	19	67	15	0	12	78	16	0	21	53	16	0	6	74	24	0	401
7:30 AM	40	71	42	0	6	71	29	0	26	78	16	0	15	126	29	0	549
7:45 AM	51	77	39	0	10	106	41	0	34	90	22	0	14	110	33	0	627
8:00 AM	41	82	13	0	15	98	33	0	16	84	18	0	1	111	23	0	535
8:15 AM	23	64	3	0	18	64	30	0	17	99	14	0	9	108	20	0	469
8:30 AM	11	68	1	0	19	63	8	0	19	92	12	0	9	63	19	0	384
8:45 AM	9	55	4	0	9	38	18	0	14	60	8	0	7	62	17	0	301
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	211	538	121	0	100	560	188	0	158	588	115	0	66	725	200	0	3570
	24.25%	61.84%	13.91%	0.00%	11.79%	66.04%	22.17%	0.00%	18.35%	68.29%	13.36%	0.00%	6.66%	73.16%	20.18%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	155	294	97	0	49	339	133	0	93	351	70	0	39	455	105	0	2180
PEAK HR FACTOR :	0.760	0.896	0.577	0.000	0.681	0.800	0.811	0.000	0.684	0.886	0.795	0.000	0.650	0.903	0.795	0.000	0.869
	0.817				0.830				0.880				0.881				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	13	84	11	0	27	88	33	0	19	106	15	0	14	78	13	0	501
4:15 PM	7	77	13	0	26	86	28	0	13	103	15	0	13	83	23	0	487
4:30 PM	10	86	6	0	28	98	36	0	20	94	17	0	13	80	25	0	513
4:45 PM	13	75	14	0	15	85	19	0	23	120	15	0	14	89	12	0	494
5:00 PM	10	102	8	0	19	70	26	0	13	102	8	0	9	94	14	0	475
5:15 PM	12	88	7	0	24	77	18	0	18	110	15	0	16	88	23	0	496
5:30 PM	12	91	5	0	18	83	29	0	16	79	6	0	10	77	31	0	457
5:45 PM	8	87	12	0	30	74	19	0	18	86	9	0	9	85	22	0	459
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	85	690	76	0	187	661	208	0	140	800	100	0	98	674	163	0	3882
	9.99%	81.08%	8.93%	0.00%	17.71%	62.59%	19.70%	0.00%	13.46%	76.92%	9.62%	0.00%	10.48%	72.09%	17.43%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	43	322	44	0	96	357	116	0	75	423	62	0	54	330	73	0	1995
PEAK HR FACTOR :	0.827	0.936	0.786	0.000	0.857	0.911	0.806	0.000	0.815	0.881	0.912	0.000	0.964	0.927	0.730	0.000	0.972
	0.947				0.878				0.886				0.960				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	16	54	4	0	10	42	11	0	11	30	9	0	5	67	33	0	292
7:15 AM	18	66	15	0	12	78	15	0	21	49	14	0	6	70	22	0	386
7:30 AM	40	68	41	0	5	71	28	0	24	76	14	0	15	120	24	0	526
7:45 AM	50	76	38	0	10	104	40	0	34	84	20	0	14	104	30	0	604
8:00 AM	39	81	12	0	13	95	31	0	15	78	18	0	1	107	19	0	509
8:15 AM	23	61	2	0	14	64	29	0	17	94	13	0	8	106	17	0	448
8:30 AM	11	66	1	0	16	63	7	0	17	89	12	0	9	59	16	0	366
8:45 AM	9	54	4	0	8	35	15	0	13	59	8	0	5	61	15	0	286
TOTAL VOLUMES :	NL 206	NT 526	NR 117	NU 0	SL 88	ST 552	SR 176	SU 0	EL 152	ET 559	ER 108	EU 0	WL 63	WT 694	WR 176	WU 0	TOTAL 3417
APPROACH %'s :	24.26%	61.96%	13.78%	0.00%	10.78%	67.65%	21.57%	0.00%	18.56%	68.25%	13.19%	0.00%	6.75%	74.38%	18.86%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	152	286	93	0	42	334	128	0	90	332	65	0	38	437	90	0	2087
PEAK HR FACTOR :	0.760	0.883	0.567	0.000	0.750	0.803	0.800	0.000	0.662	0.883	0.813	0.000	0.633	0.910	0.750	0.000	0.864
	0.809				0.818				0.882				0.888				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	13	84	11	0	22	87	31	0	16	102	14	0	13	74	13	0	480
4:15 PM	7	76	13	0	20	84	27	0	12	101	15	0	12	80	21	0	468
4:30 PM	10	85	6	0	26	97	36	0	19	93	17	0	13	79	22	0	503
4:45 PM	13	75	14	0	14	84	18	0	23	118	15	0	14	84	9	0	481
5:00 PM	10	101	7	0	14	70	25	0	13	101	8	0	8	90	11	0	458
5:15 PM	12	88	7	0	21	76	17	0	17	105	15	0	16	86	20	0	480
5:30 PM	12	90	5	0	17	82	28	0	15	79	6	0	10	77	29	0	450
5:45 PM	8	87	12	0	26	73	18	0	18	81	9	0	9	83	21	0	445
TOTAL VOLUMES : APPROACH %'s :	NL 85	NT 686	NR 75	NU 0	SL 160	ST 653	SR 200	SU 0	EL 133	ET 780	ER 99	EU 0	WL 95	WT 653	WR 146	WU 0	TOTAL 3765
	10.05%	81.09%	8.87%	0.00%	15.79%	64.46%	19.74%	0.00%	13.14%	77.08%	9.78%	0.00%	10.63%	73.04%	16.33%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	43	320	44	0	82	352	112	0	70	414	61	0	52	317	65	0	1932
PEAK HR FACTOR :	0.827	0.941	0.786	0.000	0.788	0.907	0.778	0.000	0.761	0.877	0.897	0.000	0.929	0.943	0.739	0.000	0.960
	0.942				0.858				0.873				0.952				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	1	0	0	0	0	0	1	0	0	2	0	0	0	4	0	0	8
7:15 AM	0	1	0	0	0	0	0	0	0	3	1	0	0	1	0	0	6
7:30 AM	0	1	0	0	0	0	0	0	1	2	2	0	0	5	1	0	12
7:45 AM	1	1	1	0	0	1	0	0	0	3	1	0	0	4	1	0	13
8:00 AM	1	0	1	0	0	1	1	0	0	2	0	0	0	3	0	0	9
8:15 AM	0	1	1	0	0	0	1	0	0	3	1	0	0	0	0	0	7
8:30 AM	0	2	0	0	1	0	0	0	0	1	0	0	0	2	1	0	7
8:45 AM	0	1	0	0	1	3	1	0	0	0	0	0	0	1	0	0	7
TOTAL VOLUMES :	NL 3	NT 7	NR 3	NU 0	SL 2	ST 5	SR 4	SU 0	EL 1	ET 16	ER 5	EU 0	WL 0	WT 20	WR 3	WU 0	TOTAL 69
APPROACH %'s :	23.08%	53.85%	23.08%	0.00%	18.18%	45.45%	36.36%	0.00%	4.55%	72.73%	22.73%	0.00%	0.00%	86.96%	13.04%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	3	3	0	0	2	2	0	1	10	4	0	0	12	2	0	41
PEAK HR FACTOR :	0.500	0.750	0.750	0.000	0.000	0.500	0.500	0.000	0.250	0.833	0.500	0.000	0.000	0.600	0.500	0.000	0.788
	0.667				0.500				0.750				0.583				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	0	0	0	0	1	0	1	0	3	2	1	0	0	4	0	0	12
4:15 PM	0	1	0	0	1	1	0	0	0	2	0	0	1	1	0	0	7
4:30 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	0	3
4:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
5:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	1	4	0	0	0	1	0	0	6
5:30 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	0	4
TOTAL VOLUMES :	NL 0	NT 3	NR 0	NU 0	SL 3	ST 4	SR 2	SU 0	EL 5	ET 10	ER 1	EU 0	WL 1	WT 9	WR 2	WU 0	TOTAL 40
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	33.33%	44.44%	22.22%	0.00%	31.25%	62.50%	6.25%	0.00%	8.33%	75.00%	16.67%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	3	2	1	0	4	4	1	0	1	6	1	0	25
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.750	0.500	0.250	0.000	0.333	0.500	0.250	0.000	0.250	0.375	0.250	0.000	0.521
	0.500				0.750				0.375				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:30 AM	0	2	1	0	0	0	0	0	1	0	0	0	0	0	2	0	6
7:45 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	3
8:00 AM	1	1	0	0	0	0	1	0	1	1	0	0	0	1	1	0	7
8:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	3
TOTAL VOLUMES : APPROACH %'s :	NL 1 14.29%	NT 5 71.43%	NR 1 14.29%	NU 0 0.00%	SL 1 25.00%	ST 1 25.00%	SR 2 50.00%	SU 0 0.00%	EL 3 50.00%	ET 3 50.00%	ER 0 0.00%	EU 0 0.00%	WL 2 22.22%	WT 2 22.22%	WR 5 55.56%	WU 0 0.00%	TOTAL 26
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				0 0.000	1 0.250	2 0.500	0 0.000	2 0.500	1 0.250	0 0.000	0 0.000	0 0.000	1 0.250	4 0.500	0 0.000	TOTAL 18 0.643
	0.583				0.375				0.375				0.625				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	0	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	1	0	3	0	0	0	0	0	0	0	0	0	1	0	5
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 0 0.00%	NR 1 100.00%	NU 0 0.00%	SL 6 85.71%	ST 1 14.29%	SR 0 0.00%	SU 0 0.00%	EL 0 0.00%	ET 3 100.00%	ER 0 0.00%	EU 0 0.00%	WL 0 0.00%	WT 1 25.00%	WR 3 75.00%	WU 0 0.00%	TOTAL 15
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:00 PM - 05:00 PM				2 0.250	1 0.250	0 0.000	0 0.000	0 0.000	1 0.250	0 0.000	0 0.000	0 0.000	1 0.250	1 0.250	0 0.000	TOTAL 6 0.375
					0.250				0.250				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd								
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL				
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU					
7:00 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	0	1	0	3				
7:15 AM	1	0	0	0	0	0	1	0	0	1	1	0	0	2	2	0	8				
7:30 AM	0	0	0	0	1	0	1	0	0	0	0	0	0	1	2	0	5				
7:45 AM	0	0	0	0	0	0	0	0	0	3	1	0	0	2	1	0	7				
8:00 AM	0	0	0	0	2	2	0	0	0	3	0	0	0	0	3	0	10				
8:15 AM	0	0	0	0	4	0	0	0	0	2	0	0	1	2	3	0	12				
8:30 AM	0	0	0	0	1	0	1	0	1	1	0	0	0	2	2	0	8				
8:45 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	2	0	5				
TOTAL VOLUMES : APPROACH %'s :	NL 1 100.00%	NT 0 0.00%	NR 0 0.00%	NU 0 0.00%	SL 9 52.94%	ST 2 11.76%	SR 6 35.29%	SU 0 0.00%	EL 2 14.29%	ET 10 71.43%	ER 2 14.29%	EU 0 0.00%	WL 1 3.85%	WT 9 34.62%	WR 16 61.54%	WU 0 0.00%	TOTAL 58				
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				7 0.438				2 0.250				1 0.250				0 0.000				TOTAL 34 0.708
0.625																		0.563		0.625	

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL				
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU					
4:00 PM	0	0	0	0	2	0	1	0	0	1	0	0	1	0	0	0	5				
4:15 PM	0	0	0	0	5	1	1	0	1	0	0	0	0	2	2	0	12				
4:30 PM	0	0	0	0	2	1	0	0	0	1	0	0	0	1	1	0	6				
4:45 PM	0	0	0	0	0	0	1	0	0	2	0	0	0	3	3	0	9				
5:00 PM	0	0	0	0	2	0	1	0	0	0	0	0	1	3	2	0	9				
5:15 PM	0	0	0	0	2	1	1	0	0	1	0	0	0	1	3	0	9				
5:30 PM	0	1	0	0	1	0	0	0	1	0	0	0	0	0	1	0	4				
5:45 PM	0	0	0	0	4	0	1	0	0	2	0	0	0	1	0	0	8				
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 1 100.00%	NR 0 0.00%	NU 0 0.00%	SL 18 66.67%	ST 3 11.11%	SR 6 22.22%	SU 0 0.00%	EL 2 22.22%	ET 7 77.78%	ER 0 0.00%	EU 0 0.00%	WL 2 8.00%	WT 11 44.00%	WR 12 48.00%	WU 0 0.00%	TOTAL 62				
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:00 PM - 05:00 PM				9 0.450				2 0.500				3 0.750				0 0.000				TOTAL 32 0.667
0.500																		0.625		0.542	

National Data & Surveying Services

Intersection Turning Movement Count

Location: Alder Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-004
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Alder Ave				Alder Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
7:00 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	4	2	0	12
7:15 AM	1	1	0	0	0	0	1	0	0	4	2	0	0	4	2	0	15
7:30 AM	0	3	1	0	1	0	1	0	2	2	2	0	0	6	5	0	23
7:45 AM	1	1	1	0	0	2	1	0	0	6	2	0	0	6	3	0	23
8:00 AM	2	1	1	0	2	3	2	0	1	6	0	0	0	4	4	0	26
8:15 AM	0	3	1	0	4	0	1	0	0	5	1	0	1	2	3	0	21
8:30 AM	0	2	0	0	3	0	1	0	2	3	0	0	0	4	3	0	18
8:45 AM	0	1	0	0	1	3	3	0	1	1	0	0	2	1	2	0	15
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	5	12	4	0	12	8	12	0	6	29	7	0	3	31	24	0	153
	23.81%	57.14%	19.05%	0.00%	37.50%	25.00%	37.50%	0.00%	14.29%	69.05%	16.67%	0.00%	5.17%	53.45%	41.38%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	3	8	4	0	7	5	5	0	3	19	5	0	1	18	15	0	93
PEAK HR FACTOR :	0.375	0.667	1.000	0.000	0.438	0.417	0.625	0.000	0.375	0.792	0.625	0.000	0.250	0.750	0.750	0.000	0.894
	0.938				0.607				0.844				0.773				

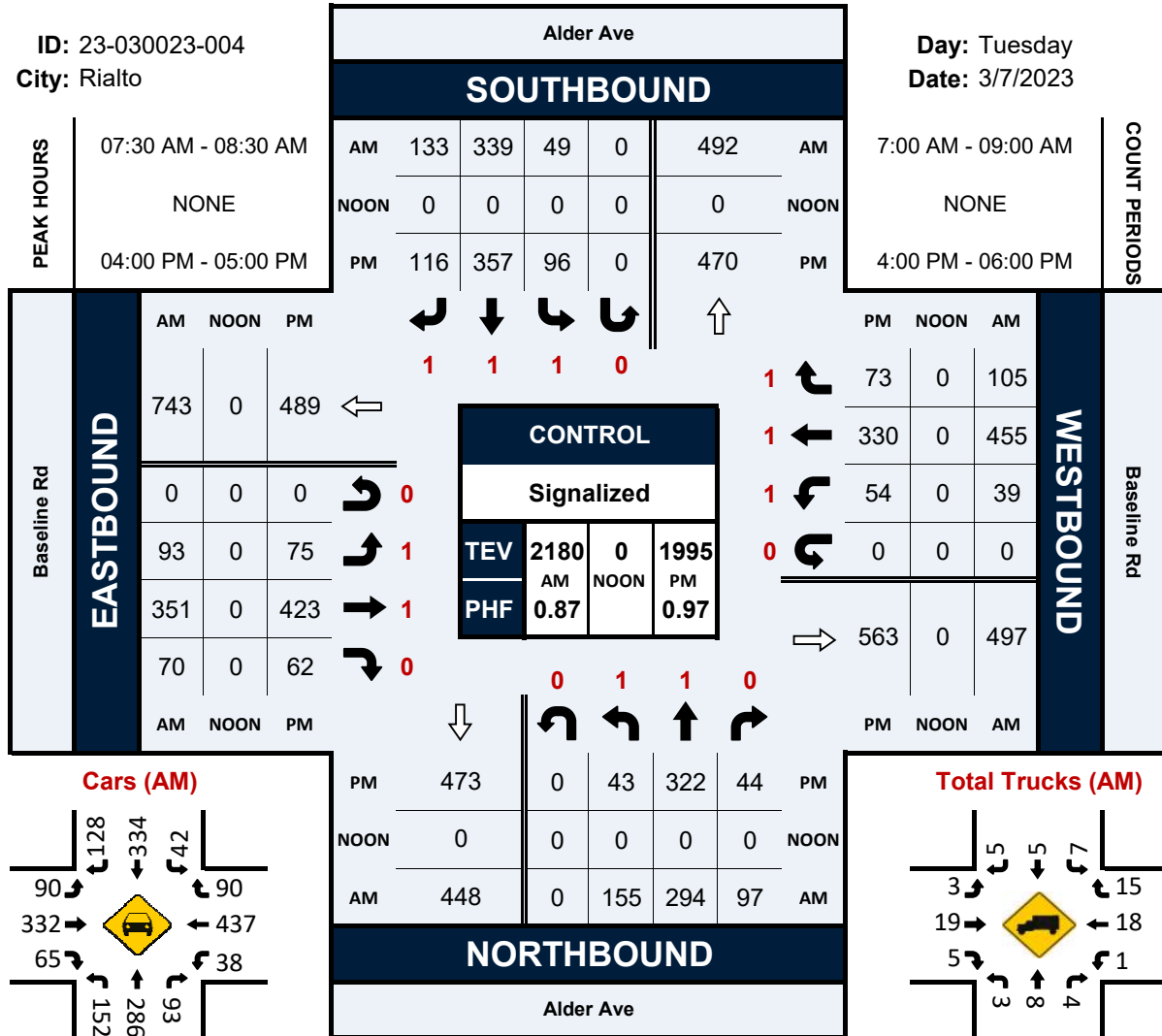
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	1 SR	0 SU	1 EL	1 ET	0 ER	0 EU	1 WL	1 WT	1 WR	0 WU	
4:00 PM	0	0	0	0	5	1	2	0	3	4	1	0	1	4	0	0	21
4:15 PM	0	1	0	0	6	2	1	0	1	2	0	0	1	3	2	0	19
4:30 PM	0	1	0	0	2	1	0	0	1	1	0	0	0	1	3	0	10
4:45 PM	0	0	0	0	1	1	1	0	0	2	0	0	0	5	3	0	13
5:00 PM	0	1	1	0	5	0	1	0	0	1	0	0	1	4	3	0	17
5:15 PM	0	0	0	0	3	1	1	0	1	5	0	0	0	2	3	0	16
5:30 PM	0	1	0	0	1	1	1	0	1	0	0	0	0	0	2	0	7
5:45 PM	0	0	0	0	4	1	1	0	0	5	0	0	0	2	1	0	14
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	4	1	0	27	8	8	0	7	20	1	0	3	21	17	0	117
	0.00%	80.00%	20.00%	0.00%	62.79%	18.60%	18.60%	0.00%	25.00%	71.43%	3.57%	0.00%	7.32%	51.22%	41.46%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	14	5	4	0	5	9	1	0	2	13	8	0	63
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.583	0.625	0.500	0.000	0.417	0.563	0.250	0.000	0.500	0.650	0.667	0.000	0.750
	0.500				0.639				0.469				0.719				

Alder Ave & Baseline Rd

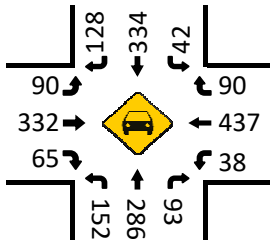
Peak Hour Turning Movement Count

ID: 23-030023-004
City: Rialto

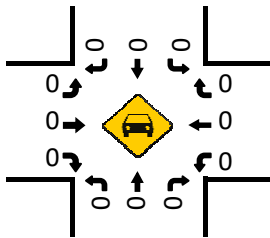
Day: Tuesday
Date: 3/7/2023



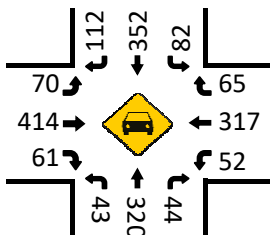
Cars (AM)



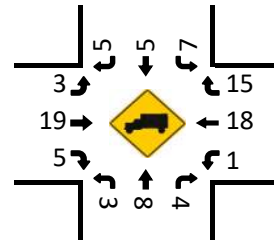
Cars (NOON)



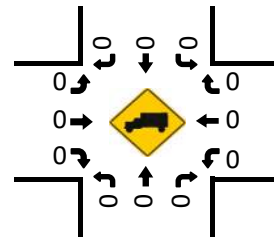
Cars (PM)



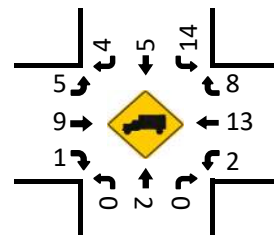
Total Trucks (AM)



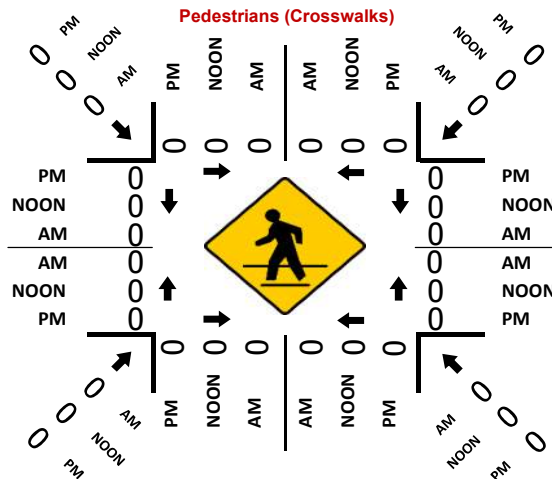
Total Trucks (NOON)



Total Trucks (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - Total

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	6	163	3	0	29	121	73	0	61	21	18	0	2	20	96	0	613
7:15 AM	15	148	2	0	43	180	79	0	45	10	15	0	4	23	95	0	659
7:30 AM	8	174	7	0	39	179	83	0	50	26	18	0	8	28	78	0	698
7:45 AM	1	162	11	0	57	175	90	0	52	19	17	0	8	32	89	0	713
8:00 AM	4	190	12	0	42	174	86	0	75	34	18	0	5	28	95	0	763
8:15 AM	32	174	7	0	58	150	73	0	51	26	26	0	5	32	85	1	720
8:30 AM	20	146	8	0	49	136	92	0	51	42	14	2	5	36	79	0	680
8:45 AM	11	126	10	0	53	146	100	0	54	20	15	0	4	24	73	0	636
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	97	1283	60	0	370	1261	676	0	439	198	141	2	41	223	690	1	5482
	6.74%	89.10%	4.17%	0.00%	16.04%	54.66%	29.30%	0.00%	56.28%	25.38%	18.08%	0.26%	4.29%	23.35%	72.25%	0.10%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	45	700	37	0	196	678	332	0	228	105	79	0	26	120	347	1	2894
PEAK HR FACTOR :	0.352	0.921	0.771	0.000	0.845	0.947	0.922	0.000	0.760	0.772	0.760	0.000	0.813	0.938	0.913	0.250	0.948
	0.918				0.936				0.811				0.957				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	28	162	14	0	95	197	128	0	90	103	20	0	11	61	84	0	993
4:15 PM	25	158	16	0	73	206	141	0	94	84	27	0	15	49	73	0	961
4:30 PM	26	196	11	0	98	203	124	0	85	100	25	0	19	44	91	0	1022
4:45 PM	22	196	26	0	69	206	146	0	92	100	30	0	18	46	78	0	1029
5:00 PM	28	191	21	0	95	210	138	0	96	100	31	0	11	52	98	0	1071
5:15 PM	30	185	17	0	79	180	145	0	102	76	24	0	12	41	89	0	980
5:30 PM	24	206	16	0	83	182	139	0	93	80	44	1	13	48	70	0	999
5:45 PM	19	172	18	0	70	204	172	0	94	79	25	0	14	65	56	0	988
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	202	1466	139	0	662	1588	1133	0	746	722	226	1	113	406	639	0	8043
	11.18%	81.13%	7.69%	0.00%	19.57%	46.94%	33.49%	0.00%	44.01%	42.60%	13.33%	0.06%	9.76%	35.06%	55.18%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	106	768	75	0	341	799	553	0	375	376	110	0	60	183	356	0	4102
PEAK HR FACTOR :	0.883	0.980	0.721	0.000	0.870	0.951	0.947	0.000	0.919	0.940	0.887	0.000	0.789	0.880	0.908	0.000	0.958
	0.972				0.955				0.948				0.930				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	6	161	3	0	29	115	69	0	60	20	18	0	2	20	95	0	598
7:15 AM	15	146	2	0	43	179	75	0	44	10	15	0	4	23	95	0	651
7:30 AM	8	169	7	0	38	174	79	0	48	26	18	0	8	28	78	0	681
7:45 AM	0	161	10	0	56	169	89	0	48	18	16	0	7	30	88	0	692
8:00 AM	3	186	12	0	42	167	85	0	74	33	18	0	3	28	93	0	744
8:15 AM	32	172	6	0	58	144	72	0	48	26	25	0	5	32	84	1	705
8:30 AM	19	141	6	0	48	132	88	0	49	42	14	2	5	36	78	0	660
8:45 AM	11	122	10	0	51	139	97	0	54	20	15	0	3	24	70	0	616
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	94	1258	56	0	365	1219	654	0	425	195	139	2	37	221	681	1	5347
	6.68%	89.35%	3.98%	0.00%	16.31%	54.47%	29.22%	0.00%	55.85%	25.62%	18.27%	0.26%	3.94%	23.51%	72.45%	0.11%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	43	688	35	0	194	654	325	0	218	103	77	0	23	118	343	1	2822
PEAK HR FACTOR :	0.336	0.925	0.729	0.000	0.836	0.940	0.913	0.000	0.736	0.780	0.770	0.000	0.719	0.922	0.922	0.250	0.948
	0.912				0.934				0.796				0.970				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	28	158	12	0	95	194	128	0	89	101	20	0	11	59	83	0	978
4:15 PM	25	156	16	0	72	198	141	0	94	83	27	0	15	47	73	0	947
4:30 PM	26	195	11	0	98	201	123	0	84	98	24	0	19	43	91	0	1013
4:45 PM	22	194	26	0	68	204	144	0	91	100	30	0	17	46	78	0	1020
5:00 PM	28	189	21	0	95	207	136	0	94	99	29	0	10	51	97	0	1056
5:15 PM	30	184	17	0	79	179	143	0	102	76	24	0	12	41	89	0	976
5:30 PM	24	204	16	0	83	181	137	0	91	80	44	1	13	48	69	0	991
5:45 PM	19	171	18	0	68	203	170	0	94	78	24	0	14	64	56	0	979
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	202	1451	137	0	658	1567	1122	0	739	715	222	1	111	399	636	0	7960
	11.28%	81.06%	7.65%	0.00%	19.66%	46.82%	33.52%	0.00%	44.07%	42.64%	13.24%	0.06%	9.69%	34.82%	55.50%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	106	762	75	0	340	791	546	0	371	373	107	0	58	181	355	0	4065
PEAK HR FACTOR :	0.883	0.977	0.721	0.000	0.867	0.955	0.948	0.000	0.909	0.933	0.892	0.000	0.763	0.887	0.915	0.000	0.962
	0.974				0.957				0.958				0.940				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	0	2	0	0	0	3	3	0	1	1	0	0	0	0	0	0	10
7:15 AM	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	4
7:30 AM	0	1	0	0	0	2	1	0	1	0	0	0	0	0	0	0	5
7:45 AM	0	1	1	0	1	5	0	0	4	1	1	0	1	1	0	0	16
8:00 AM	1	2	0	0	0	6	1	0	1	1	0	0	2	0	2	0	16
8:15 AM	0	1	1	0	0	5	0	0	2	0	1	0	0	0	1	0	11
8:30 AM	1	4	1	0	1	2	2	0	0	0	0	0	0	0	1	0	12
8:45 AM	0	3	0	0	1	5	2	0	0	0	0	0	0	0	3	0	14
TOTAL VOLUMES : APPROACH %'s :	NL 2 10.00%	NT 15 75.00%	NR 3 15.00%	NU 0 0.00%	SL 3 6.98%	ST 29 67.44%	SR 11 25.58%	SU 0 0.00%	EL 9 64.29%	ET 3 21.43%	ER 2 14.29%	EU 0 0.00%	WL 3 27.27%	WT 1 9.09%	WR 7 63.64%	WU 0 0.00%	TOTAL 88
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				1 0.250	18 0.750	2 0.500	0 0.000	8 0.500	2 0.500	2 0.500	0 0.000	3 0.375	1 0.250	3 0.375	0 0.000	TOTAL 48 0.750
	0.667				0.750				0.500				0.438				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	0	3	2	0	0	2	0	0	1	1	0	0	0	2	0	0	11
4:15 PM	0	1	0	0	0	4	0	0	0	1	0	0	0	1	0	0	7
4:30 PM	0	0	0	0	0	2	1	0	1	2	0	0	0	1	0	0	7
4:45 PM	0	2	0	0	1	1	1	0	0	0	0	0	1	0	0	0	6
5:00 PM	0	2	0	0	0	3	1	0	1	1	0	0	1	1	1	0	11
5:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	2	0	0	0	1	1	0	2	0	0	0	0	0	1	0	7
5:45 PM	0	1	0	0	2	1	1	0	0	1	1	0	0	1	0	0	8
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 11 84.62%	NR 2 15.38%	NU 0 0.00%	SL 3 13.04%	ST 15 65.22%	SR 5 21.74%	SU 0 0.00%	EL 5 41.67%	ET 6 50.00%	ER 1 8.33%	EU 0 0.00%	WL 2 20.00%	WT 6 60.00%	WR 2 20.00%	WU 0 0.00%	TOTAL 58
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:30 PM - 05:30 PM				1 0.250	7 0.583	3 0.750	0 0.000	2 0.500	3 0.375	0 0.000	0 0.000	2 0.500	2 0.500	1 0.250	0 0.000	TOTAL 25 0.568
	0.500				0.688				0.417				0.417				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	3
7:30 AM	0	1	0	0	1	0	1	0	1	0	0	0	0	0	0	0	4
7:45 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	1	0	0	1	1	0	1	0	0	0	0	0	0	0	4
8:45 AM	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0	0	4
TOTAL VOLUMES : APPROACH %'s :	NL 1 25.00%	NT 2 50.00%	NR 1 25.00%	NU 0 0.00%	SL 1 8.33%	ST 4 33.33%	SR 7 58.33%	SU 0 0.00%	EL 3 100.00%	ET 0 0.00%	ER 0 0.00%	EU 0 0.00%	WL 1 33.33%	WT 1 33.33%	WR 1 33.33%	WU 0 0.00%	TOTAL 22
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	07:30 AM - 08:30 AM				1 0.250	1 0.250	2 0.500	0 0.000	1 0.250	0 0.000	0 0.000	0 0.000	0 0.000	1 0.250	1 0.250	0 0.000	9 0.563
	0.500				0.500				0.250				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	2
4:15 PM	0	1	0	0	1	4	0	0	0	0	0	0	0	1	0	0	7
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 1 100.00%	NR 0 0.00%	NU 0 0.00%	SL 1 9.09%	ST 4 36.36%	SR 6 54.55%	SU 0 0.00%	EL 1 20.00%	ET 1 20.00%	ER 3 60.00%	EU 0 0.00%	WL 0 0.00%	WT 1 50.00%	WR 1 50.00%	WU 0 0.00%	TOTAL 19
PEAK HR : PEAK HR VOL : PEAK HR FACTOR :	04:30 PM - 05:30 PM				0 0.000	0 0.000	4 0.500	0 0.000	1 0.250	0 0.000	3 0.375	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	8 0.667
					0.500				0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	3
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	3	0	0	0	3	2	0	0	0	0	0	0	0	0	0	8
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	3
8:30 AM	0	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	8	0	0	1	9	4	0	2	0	0	0	0	0	1	0	25
	0.00%	100.00%	0.00%	0.00%	7.14%	64.29%	28.57%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	6	0	0	0	5	3	0	1	0	0	0	0	0	0	0	15
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.417	0.375	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.469
	0.500				0.400				0.250								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	3	0	0	0	2	0	0	1	0	0	0	0	0	0	0	6
	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	2	0	0	0	1	0	0	1	0	0	0	0	0	0	0	4
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	0.500				0.250				0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Renaissance Pkwy
City: Rialto
Control: Signalized

Project ID: 23-030023-005
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Ayala Dr				Ayala Dr				Renaissance Pkwy				Renaissance Pkwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
7:00 AM	0	2	0	0	0	6	4	0	1	1	0	0	0	0	1	0	15
7:15 AM	0	2	0	0	0	1	4	0	1	0	0	0	0	0	0	0	8
7:30 AM	0	5	0	0	1	5	4	0	2	0	0	0	0	0	0	0	17
7:45 AM	1	1	1	0	1	6	1	0	4	1	1	0	1	2	1	0	21
8:00 AM	1	4	0	0	0	7	1	0	1	1	0	0	2	0	2	0	19
8:15 AM	0	2	1	0	0	6	1	0	3	0	1	0	0	0	1	0	15
8:30 AM	1	5	2	0	1	4	4	0	2	0	0	0	0	0	1	0	20
8:45 AM	0	4	0	0	2	7	3	0	0	0	0	0	1	0	3	0	20
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	3	25	4	0	5	42	22	0	14	3	2	0	4	2	9	0	135
	9.38%	78.13%	12.50%	0.00%	7.25%	60.87%	31.88%	0.00%	73.68%	15.79%	10.53%	0.00%	26.67%	13.33%	60.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	12	2	0	2	24	7	0	10	2	2	0	3	2	4	0	72
PEAK HR FACTOR :	0.500	0.600	0.500	0.000	0.500	0.857	0.438	0.000	0.625	0.500	0.500	0.000	0.375	0.250	0.500	0.000	0.857
	0.800				0.825				0.583				0.563				

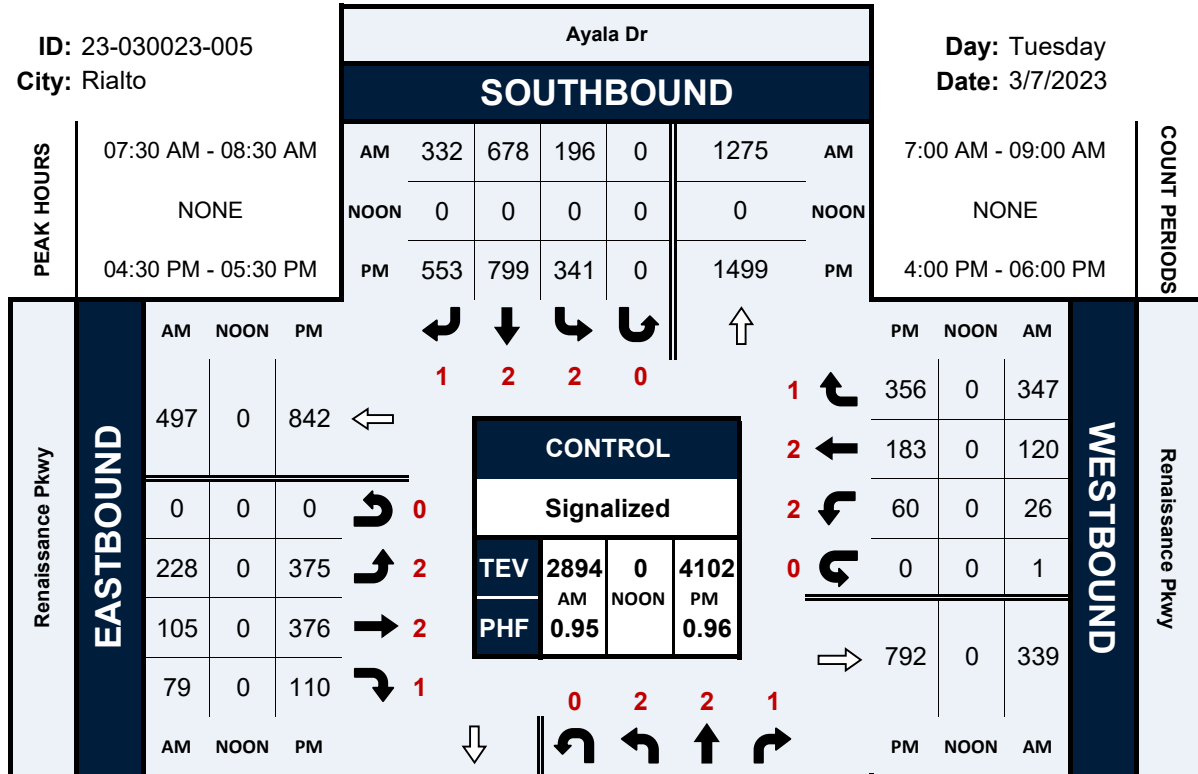
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	1 NR	0 NU	2 SL	2 ST	1 SR	0 SU	2 EL	2 ET	1 ER	0 EU	2 WL	2 WT	1 WR	0 WU	
4:00 PM	0	4	2	0	0	3	0	0	1	2	0	0	0	2	1	0	15
4:15 PM	0	2	0	0	1	8	0	0	0	1	0	0	0	2	0	0	14
4:30 PM	0	1	0	0	0	2	1	0	1	2	1	0	0	1	0	0	9
4:45 PM	0	2	0	0	1	2	2	0	1	0	0	0	1	0	0	0	9
5:00 PM	0	2	0	0	0	3	2	0	2	1	2	0	1	1	1	0	15
5:15 PM	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	4
5:30 PM	0	2	0	0	0	1	2	0	2	0	0	0	0	0	1	0	8
5:45 PM	0	1	0	0	2	1	2	0	0	1	1	0	0	1	0	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	15	2	0	4	21	11	0	7	7	4	0	2	7	3	0	83
	0.00%	88.24%	11.76%	0.00%	11.11%	58.33%	30.56%	0.00%	38.89%	38.89%	22.22%	0.00%	16.67%	58.33%	25.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	6	0	0	1	8	7	0	4	3	3	0	2	2	1	0	37
PEAK HR FACTOR :	0.000	0.750	0.000	0.000	0.250	0.667	0.875	0.000	0.500	0.375	0.375	0.000	0.500	0.500	0.250	0.000	0.617
	0.750				0.800				0.500				0.417				

Ayala Dr & Renaissance Pkwy

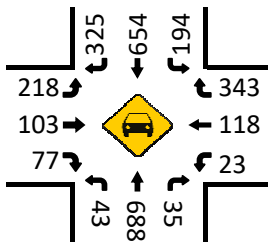
Peak Hour Turning Movement Count

ID: 23-030023-005
City: Rialto

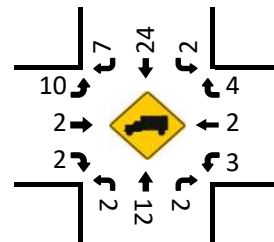
Day: Tuesday
Date: 3/7/2023



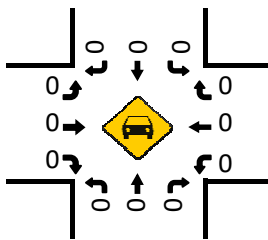
Cars (AM)



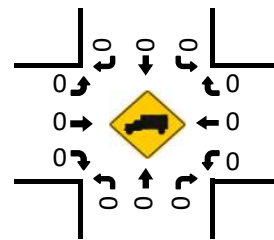
Total Trucks (AM)



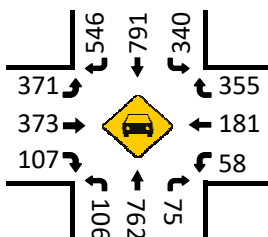
Cars (NOON)



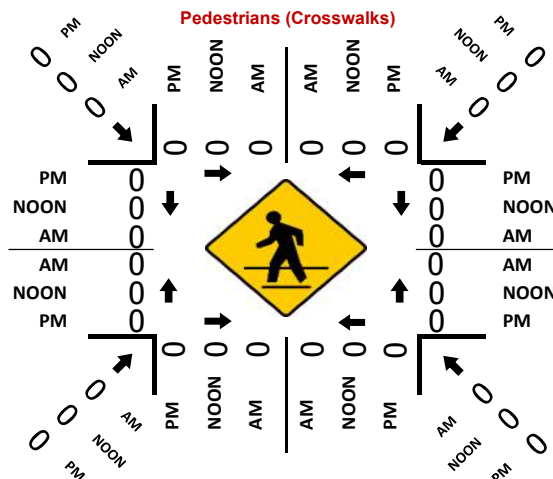
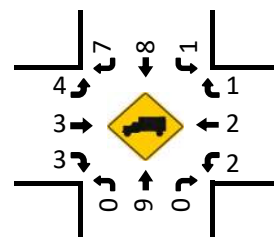
Total Trucks (NOON)



Cars (PM)



Total Trucks (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Fitzgerald Ave
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-006
Date: 3/7/2023

Data - Total

NS/EW Streets:	Ayala Dr				Ayala Dr				Fitzgerald Ave				Fitzgerald Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	4	149	0	0	30	126	0	0	0	0	0	0	0	0	40	0	349
7:15 AM	0	150	0	0	26	160	1	0	0	0	1	0	1	0	28	0	367
7:30 AM	2	165	2	0	27	186	1	1	1	0	2	0	0	0	44	0	431
7:45 AM	5	179	0	0	26	143	1	1	0	0	1	0	1	1	27	0	385
8:00 AM	7	213	1	0	37	135	4	2	0	0	0	0	1	0	36	0	436
8:15 AM	3	146	2	0	35	126	2	1	1	0	0	0	1	0	31	0	348
8:30 AM	1	135	2	0	31	137	1	0	0	0	0	0	0	0	33	0	340
8:45 AM	2	123	2	0	32	117	0	0	0	0	1	0	0	0	30	0	307
TOTAL VOLUMES : APPROACH %'s :	NL 24 1.86%	NT 1260 97.45%	NR 9 0.70%	NU 0 0.00%	SL 244 17.57%	ST 1130 81.35%	SR 10 0.72%	SU 5 0.36%	EL 2 28.57%	ET 0 0.00%	ER 5 71.43%	EU 0 0.00%	WL 4 1.46%	WT 1 0.36%	WR 269 98.18%	WU 0 0.00%	TOTAL 2963
PEAK HR VOL :	07:15 AM - 08:15 AM																TOTAL
PEAK HR FACTOR :	14 0.500	707 0.830	3 0.375	0 0.000	116 0.784	624 0.839	7 0.438	4 0.500	1 0.250	0 0.000	4 0.500	0 0.000	3 0.750	1 0.250	135 0.767	0 0.000	1619 0.928
	0.819				0.873				0.417				0.790				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	1	167	2	0	37	210	2	1	1	0	1	0	0	1	26	0	449
4:15 PM	0	179	4	1	51	188	1	3	0	0	1	0	0	1	33	0	462
4:30 PM	1	208	3	0	51	188	1	2	0	0	4	0	0	0	42	0	500
4:45 PM	2	197	0	2	53	224	0	2	0	0	0	0	0	0	28	0	508
5:00 PM	1	185	1	0	43	241	0	2	0	0	1	0	0	1	47	0	522
5:15 PM	2	217	4	0	55	188	0	0	0	0	0	0	1	1	34	0	502
5:30 PM	2	193	1	0	43	210	0	0	0	0	0	1	0	0	42	0	492
5:45 PM	0	205	2	0	41	211	0	0	0	0	2	0	0	0	31	0	492
TOTAL VOLUMES : APPROACH %'s :	NL 9 0.57%	NT 1551 98.16%	NR 17 1.08%	NU 3 0.19%	SL 374 18.26%	ST 1660 81.05%	SR 4 0.20%	SU 10 0.49%	EL 1 9.09%	ET 0 0.00%	ER 9 81.82%	EU 1 9.09%	WL 1 0.35%	WT 4 1.39%	WR 283 98.26%	WU 0 0.00%	TOTAL 3927
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	6	807	8	2	202	841	1	6	0	0	5	0	1	2	151	0	2032
PEAK HR FACTOR :	0.750	0.930	0.500	0.250	0.918	0.872	0.250	0.750	0.000	0.000	0.313	0.000	0.250	0.500	0.803	0.000	0.973
	0.923				0.918				0.313				0.802				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Fitzgerald Ave
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-006
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Ayala Dr				Ayala Dr				Fitzgerald Ave				Fitzgerald Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	4	145	0	0	29	123	0	0	0	0	0	0	0	0	40	0	341
7:15 AM	0	146	0	0	26	155	1	0	0	0	1	0	1	0	28	0	358
7:30 AM	2	162	2	0	27	183	1	1	1	0	2	0	0	0	43	0	424
7:45 AM	5	179	0	0	25	138	1	1	0	0	1	0	1	1	27	0	379
8:00 AM	7	209	1	0	37	130	3	2	0	0	0	0	1	0	35	0	425
8:15 AM	3	142	2	0	34	118	2	1	0	0	0	0	1	0	31	0	334
8:30 AM	1	128	2	0	31	132	1	0	0	0	0	0	0	0	31	0	326
8:45 AM	2	122	2	0	32	114	0	0	0	0	1	0	0	0	29	0	302
TOTAL VOLUMES : APPROACH %'s :	NL 24 1.90%	NT 1233 97.39%	NR 9 0.71%	NU 0 0.00%	SL 241 17.88%	ST 1093 81.08%	SR 9 0.67%	SU 5 0.37%	EL 1 16.67%	ET 0 0.00%	ER 5 83.33%	EU 0 0.00%	WL 4 1.49%	WT 1 0.37%	WR 264 98.14%	WU 0 0.00%	TOTAL 2889
	PEAK HR : 07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	14	696	3	0	115	606	6	4	1	0	4	0	3	1	133	0	1586
PEAK HR FACTOR :	0.500	0.833	0.375	0.000	0.777	0.828	0.500	0.500	0.250	0.000	0.500	0.000	0.750	0.250	0.773	0.000	0.933
	0.821				0.862				0.417				0.797				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	1	164	2	0	37	207	2	1	1	0	1	0	0	1	26	0	443
4:15 PM	0	178	4	1	47	185	0	3	0	0	1	0	0	1	32	0	452
4:30 PM	1	206	3	0	50	183	1	2	0	0	4	0	0	0	42	0	492
4:45 PM	2	196	0	2	52	220	0	2	0	0	0	0	0	0	28	0	502
5:00 PM	1	184	1	0	43	238	0	2	0	0	1	0	0	0	47	0	517
5:15 PM	2	216	4	0	55	187	0	0	0	0	0	0	1	1	34	0	500
5:30 PM	2	189	1	0	43	209	0	0	0	0	0	1	0	0	42	0	487
5:45 PM	0	204	2	0	41	210	0	0	0	0	2	0	0	0	30	0	489
TOTAL VOLUMES : APPROACH %'s :	NL 9 0.57%	NT 1537 98.15%	NR 17 1.09%	NU 3 0.19%	SL 368 18.22%	ST 1639 81.14%	SR 3 0.15%	SU 10 0.50%	EL 1 9.09%	ET 0 0.00%	ER 9 81.82%	EU 1 9.09%	WL 1 0.35%	WT 3 1.05%	WR 281 98.60%	WU 0 0.00%	TOTAL 3882
	PEAK HR : 04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	6	802	8	2	200	828	1	6	0	0	5	0	1	1	151	0	2011
PEAK HR FACTOR :	0.750	0.928	0.500	0.250	0.909	0.870	0.250	0.750	0.000	0.000	0.313	0.000	0.250	0.250	0.803	0.000	0.972
	0.921				0.914				0.313				0.814				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Fitzgerald Ave
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-006
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Fitzgerald Ave				Fitzgerald Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	0	3	0	0	1	1	0	0	0	0	0	0	0	0	0	0	5
7:15 AM	0	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	6
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4
7:45 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	4	0	0	0	5	1	0	0	0	0	0	0	0	1	0	11
8:15 AM	0	2	0	0	1	6	0	0	1	0	0	0	0	0	0	0	10
8:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	0	0	1	0	11
8:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3
TOTAL VOLUMES :	NL 0	NT 19	NR 0	NU 0	SL 2	ST 26	SR 1	SU 0	EL 1	ET 0	ER 0	EU 0	WL 0	WT 0	WR 4	WU 0	TOTAL 53
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	6.90%	89.66%	3.45%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	8	0	0	0	13	1	0	0	0	0	0	0	0	2	0	24
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.650	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.545
	0.500				0.583								0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	2	2	1	0	0	0	0	0	0	0	1	0	7
4:30 PM	0	2	0	0	1	4	0	0	0	0	0	0	0	0	0	0	7
4:45 PM	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	5
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 9	NR 0	NU 0	SL 4	ST 15	SR 1	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 1	WR 2	WU 0	TOTAL 32
	0.00%	100.00%	0.00%	0.00%	20.00%	75.00%	5.00%	0.00%					0.00%	33.33%	66.67%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	5	0	0	2	9	0	0	0	0	0	0	0	1	0	0	17
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.500	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.607
	0.625				0.550								0.250				

Project ID: 23-030023-006
Date: 3/7/2023

Data - 3axle

[illegible][illegible]

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Fitzgerald Ave
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-006
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Fitzgerald Ave				Fitzgerald Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES : APPROACH %'s :	NL 0 0.00%	NT 6 100.00%	NR 0 0.00%	NU 0 0.00%	SL 1 12.50%	ST 7 87.50%	SR 0 0.00%	SU 0 0.00%	EL 0	ET 0	ER 0	EU 0	WL 0 0.00%	WT 0 0.00%	WR 1 100.00%	WU 0 0.00%	TOTAL 15
	PEAK HR : 07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL : PEAK HR FACTOR :	0 0.000	3 0.375	0 0.000	0 0.000	1 0.250	5 0.625	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	9 0.750
0.375				0.500													

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 3	NR 0	NU 0	SL 0	ST 1	SR 0	SU 0	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 4
	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%									
	PEAK HR : 04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Fitzgerald Ave
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-006
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Ayala Dr				Ayala Dr				Fitzgerald Ave				Fitzgerald Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
7:00 AM	0	4	0	0	1	3	0	0	0	0	0	0	0	0	0	0	8
7:15 AM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	9
7:30 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	1	0	7
7:45 AM	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	6
8:00 AM	0	4	0	0	0	5	1	0	0	0	0	0	0	0	1	0	11
8:15 AM	0	4	0	0	1	8	0	0	1	0	0	0	0	0	0	0	14
8:30 AM	0	7	0	0	0	5	0	0	0	0	0	0	0	0	2	0	14
8:45 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	1	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	27	0	0	3	37	1	0	1	0	0	0	0	0	5	0	74
	0.00%	100.00%	0.00%	0.00%	7.32%	90.24%	2.44%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	0	11	0	0	1	18	1	0	0	0	0	0	0	0	2	0	33
PEAK HR FACTOR :	0.000	0.688	0.000	0.000	0.250	0.900	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.750
	0.688				0.833								0.500				

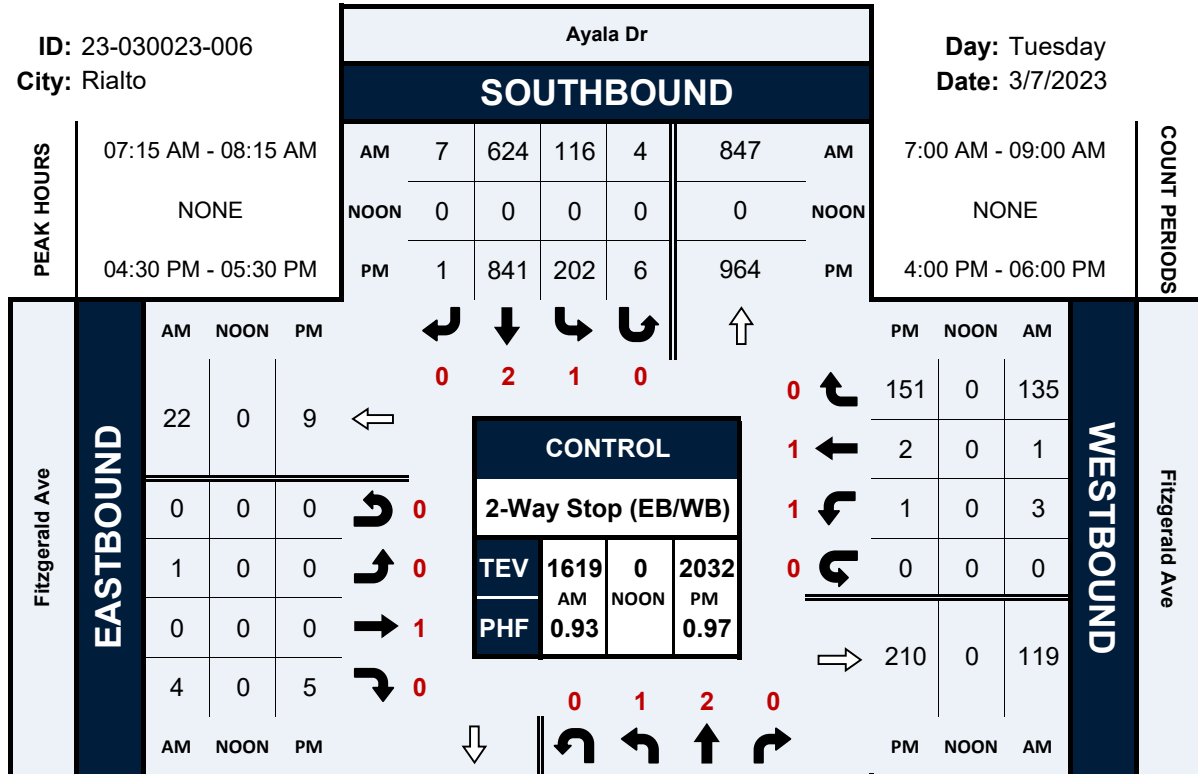
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	1 SL	2 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	1 WT	0 WR	0 WU	
4:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
4:15 PM	0	1	0	0	4	3	1	0	0	0	0	0	0	0	1	0	10
4:30 PM	0	2	0	0	1	5	0	0	0	0	0	0	0	0	0	0	8
4:45 PM	0	1	0	0	1	4	0	0	0	0	0	0	0	0	0	0	6
5:00 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	5
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	0	5
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	14	0	0	6	21	1	0	0	0	0	0	0	1	2	0	45
	0.00%	100.00%	0.00%	0.00%	21.43%	75.00%	3.57%	0.00%					0.00%	33.33%	66.67%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	0	5	0	0	2	13	0	0	0	0	0	0	0	1	0	0	21
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.500	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.656
	0.625				0.625								0.250				

Ayala Dr & Fitzgerald Ave

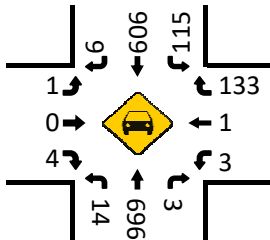
Peak Hour Turning Movement Count

ID: 23-030023-006
City: Rialto

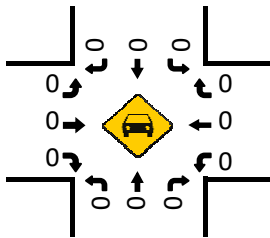
Day: Tuesday
Date: 3/7/2023



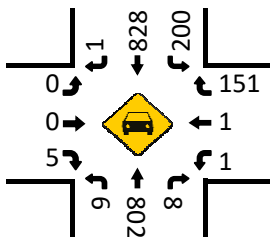
Cars (AM)



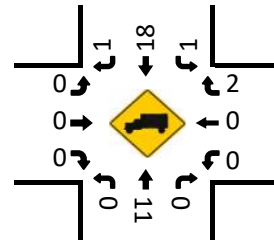
Cars (NOON)



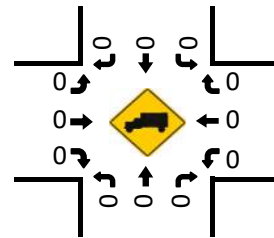
Cars (PM)



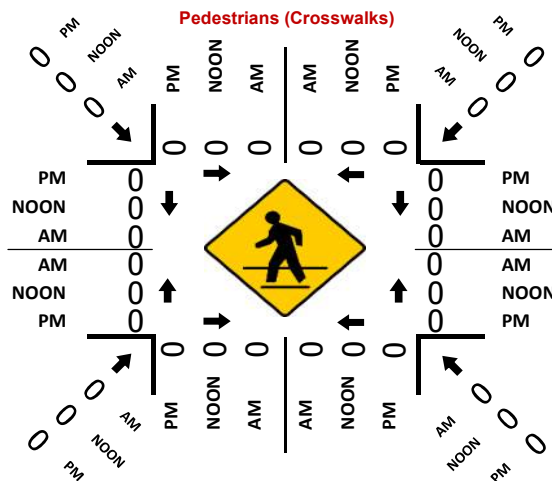
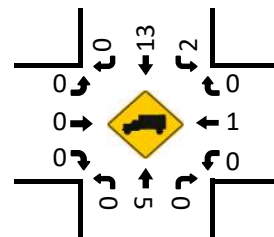
Total Trucks (AM)



Total Trucks (NOON)



Total Trucks (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - Total

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	24	109	11	0	5	106	10	6	26	37	25	0	20	58	8	1	446
7:15 AM	27	128	11	0	5	140	11	5	16	45	26	0	11	72	6	1	504
7:30 AM	49	132	13	0	14	142	18	1	25	52	31	3	6	98	8	0	592
7:45 AM	38	160	19	0	11	137	15	2	37	76	34	3	24	70	4	0	630
8:00 AM	40	157	20	0	12	112	11	2	30	72	23	1	14	77	18	0	589
8:15 AM	48	119	19	0	9	107	7	0	26	39	30	3	14	58	15	1	495
8:30 AM	29	102	10	0	3	115	9	1	17	56	31	3	23	51	8	1	459
8:45 AM	22	98	14	0	13	99	11	1	23	38	29	1	19	45	5	1	419
TOTAL VOLUMES :	NL 277	NT 1005	NR 117	NU 0	SL 72	ST 958	SR 92	SU 18	EL 200	ET 415	ER 229	EU 14	WL 131	WT 529	WR 72	WU 5	TOTAL 4134
APPROACH %'s :	19.80%	71.84%	8.36%	0.00%	6.32%	84.04%	8.07%	1.58%	23.31%	48.37%	26.69%	1.63%	17.77%	71.78%	9.77%	0.68%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	154	577	63	0	42	531	55	10	108	245	114	7	55	317	36	1	2315
PEAK HR FACTOR :	0.786	0.902	0.788	0.000	0.750	0.935	0.764	0.500	0.730	0.806	0.838	0.583	0.573	0.809	0.500	0.250	0.919
	0.915				0.911				0.790				0.913				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	33	138	22	0	36	142	18	2	28	119	39	6	13	90	10	1	697
4:15 PM	20	133	27	0	26	158	14	3	22	98	31	1	20	103	12	0	668
4:30 PM	20	179	28	0	28	149	11	3	35	105	50	2	17	61	10	0	698
4:45 PM	33	137	22	0	33	189	15	0	36	93	34	3	26	86	17	1	725
5:00 PM	37	168	22	0	37	169	21	8	27	138	47	2	19	88	12	3	798
5:15 PM	23	160	23	0	26	161	16	3	26	105	44	4	22	104	10	0	727
5:30 PM	28	163	18	0	28	147	16	0	33	75	28	2	23	83	16	0	660
5:45 PM	40	153	17	0	37	169	18	9	22	74	28	5	20	103	10	1	706
TOTAL VOLUMES :	NL 234	NT 1231	NR 179	NU 0	SL 251	ST 1284	SR 129	SU 28	EL 229	ET 807	ER 301	EU 25	WL 160	WT 718	WR 97	WU 6	TOTAL 5679
APPROACH %'s :	14.23%	74.88%	10.89%	0.00%	14.83%	75.89%	7.62%	1.65%	16.81%	59.25%	22.10%	1.84%	16.31%	73.19%	9.89%	0.61%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	113	644	95	0	124	668	63	14	124	441	175	11	84	339	49	4	2948
PEAK HR FACTOR :	0.764	0.899	0.848	0.000	0.838	0.884	0.750	0.438	0.861	0.799	0.875	0.688	0.808	0.815	0.721	0.333	0.924
	0.938				0.917				0.877				0.875				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	20	106	10	0	4	105	9	5	26	34	20	0	19	54	8	1	421
7:15 AM	23	124	6	0	5	136	11	5	16	42	19	0	10	71	6	1	475
7:30 AM	40	130	13	0	14	138	17	1	25	47	25	3	6	97	7	0	563
7:45 AM	31	160	19	0	10	134	15	2	37	72	27	3	22	67	4	0	603
8:00 AM	33	155	18	0	11	109	11	2	30	67	20	1	12	75	16	0	560
8:15 AM	36	115	18	0	8	98	7	0	26	36	24	3	14	58	15	1	459
8:30 AM	25	97	10	0	3	112	9	1	16	55	25	3	23	49	8	1	437
8:45 AM	12	97	14	0	13	97	10	1	23	37	23	1	18	44	5	1	396
TOTAL VOLUMES :	NL 220	NT 984	NR 108	NU 0	SL 68	ST 929	SR 89	SU 17	EL 199	ET 390	ER 183	EU 14	WL 124	WT 515	WR 69	WU 5	TOTAL 3914
APPROACH %'s :	16.77%	75.00%	8.23%	0.00%	6.17%	84.22%	8.07%	1.54%	25.32%	49.62%	23.28%	1.78%	17.39%	72.23%	9.68%	0.70%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	127	569	56	0	40	517	54	10	108	228	91	7	50	310	33	1	2201
PEAK HR FACTOR :	0.794	0.889	0.737	0.000	0.714	0.937	0.794	0.500	0.730	0.792	0.843	0.583	0.568	0.799	0.516	0.250	0.913
	0.895				0.913				0.781				0.895				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	31	135	22	0	36	139	18	2	28	113	32	6	13	89	10	1	675
4:15 PM	19	133	27	0	26	155	14	3	22	97	26	1	20	102	12	0	657
4:30 PM	17	177	28	0	27	145	11	3	35	104	42	2	16	60	10	0	677
4:45 PM	27	136	22	0	33	185	15	0	36	92	34	3	26	83	17	1	710
5:00 PM	33	167	22	0	37	166	21	8	27	137	40	2	19	86	12	3	780
5:15 PM	20	158	22	0	26	159	16	3	26	102	37	4	22	101	10	0	706
5:30 PM	26	161	18	0	28	147	16	0	32	75	23	2	23	83	16	0	650
5:45 PM	37	152	17	0	36	168	18	9	22	74	25	5	20	102	10	1	696
TOTAL VOLUMES :	NL 210	NT 1219	NR 178	NU 0	SL 249	ST 1264	SR 129	SU 28	EL 228	ET 794	ER 259	EU 25	WL 159	WT 706	WR 97	WU 6	TOTAL 5551
APPROACH %'s :	13.07%	75.86%	11.08%	0.00%	14.91%	75.69%	7.72%	1.68%	17.46%	60.80%	19.83%	1.91%	16.43%	72.93%	10.02%	0.62%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	97	638	94	0	123	655	63	14	124	435	153	11	83	330	49	4	2873
PEAK HR FACTOR :	0.735	0.901	0.839	0.000	0.831	0.885	0.750	0.438	0.861	0.794	0.911	0.688	0.798	0.817	0.721	0.333	0.921
	0.934				0.917				0.877				0.876				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	2	2	0	0	0	1	0	1	0	2	0	0	0	3	0	0	11
7:15 AM	0	2	5	0	0	3	0	0	0	2	0	0	1	1	0	0	14
7:30 AM	2	2	0	0	0	2	1	0	0	3	2	0	0	1	0	0	13
7:45 AM	2	0	0	0	1	2	0	0	0	2	1	0	1	1	0	0	10
8:00 AM	2	2	1	0	1	2	0	0	0	2	0	0	2	2	2	0	16
8:15 AM	2	1	1	0	1	7	0	0	0	3	1	0	0	0	0	0	16
8:30 AM	1	4	0	0	0	3	0	0	1	1	1	0	0	1	0	0	12
8:45 AM	2	1	0	0	0	1	0	0	0	0	1	0	1	1	0	0	7
TOTAL VOLUMES :	NL 13	NT 14	NR 7	NU 0	SL 3	ST 21	SR 1	SU 1	EL 1	ET 15	ER 6	EU 0	WL 5	WT 10	WR 2	WU 0	TOTAL 99
APPROACH %'s :	38.24%	41.18%	20.59%	0.00%	11.54%	80.77%	3.85%	3.85%	4.55%	68.18%	27.27%	0.00%	29.41%	58.82%	11.76%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	6	6	6	0	2	9	1	0	0	9	3	0	4	5	2	0	53
PEAK HR FACTOR :	0.750	0.750	0.300	0.000	0.500	0.750	0.250	0.000	0.000	0.750	0.375	0.000	0.500	0.625	0.250	0.000	0.828
	0.643				1.000				0.600				0.458				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	2	1	0	0	0	2	0	0	0	5	3	0	0	1	0	0	14
4:15 PM	0	0	0	0	0	2	0	0	0	1	0	0	0	1	0	0	4
4:30 PM	0	2	0	0	1	3	0	0	0	1	2	0	1	0	0	0	10
4:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:00 PM	1	1	0	0	0	3	0	0	0	0	0	0	0	1	0	0	6
5:15 PM	0	2	1	0	0	2	0	0	0	2	1	0	0	3	0	0	11
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
TOTAL VOLUMES :	NL 3	NT 9	NR 1	NU 0	SL 2	ST 14	SR 0	SU 0	EL 0	ET 9	ER 6	EU 0	WL 1	WT 7	WR 0	WU 0	TOTAL 52
APPROACH %'s :	23.08%	69.23%	7.69%	0.00%	12.50%	87.50%	0.00%	0.00%	0.00%	60.00%	40.00%	0.00%	12.50%	87.50%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	6	1	0	1	9	0	0	0	3	3	0	1	4	0	0	29
PEAK HR FACTOR :	0.250	0.750	0.250	0.000	0.250	0.750	0.000	0.000	0.000	0.375	0.375	0.000	0.250	0.333	0.000	0.000	0.659
	0.667				0.625				0.500				0.417				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	2
7:45 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
8:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15 AM	1	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	5
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45 AM	3	0	0	0	0	0	1	0	0	1	3	0	0	0	0	0	8
TOTAL VOLUMES :	NL 6	NT 2	NR 1	NU 0	SL 1	ST 2	SR 1	SU 0	EL 0	ET 3	ER 6	EU 0	WL 0	WT 2	WR 0	WU 0	TOTAL 24
APPROACH %'s :	66.67%	22.22%	11.11%	0.00%	25.00%	50.00%	25.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	2	0	0	0	0	0	0	0	0	2	2	0	0	2	0	0	8
PEAK HR FACTOR :	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.500	0.000	0.000	0.250	0.000	0.000	0.500
	0.500								0.500				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	3
4:45 PM	2	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	5
5:15 PM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL 3	NT 1	NR 0	NU 0	SL 0	ST 5	SR 0	SU 0	EL 0	ET 3	ER 11	EU 0	WL 0	WT 1	WR 0	WU 0	TOTAL 24
APPROACH %'s :	75.00%	25.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	21.43%	78.57%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	2	0	0	0	0	3	0	0	0	2	9	0	0	1	0	0	17
PEAK HR FACTOR :	0.250	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.500	0.563	0.000	0.000	0.250	0.000	0.000	0.850
	0.250				0.375				0.550				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
7:00 AM	2	1	0	0	0	0	1	0	0	1	5	0	1	1	0	0	12
7:15 AM	4	2	0	0	0	1	0	0	0	1	6	0	0	0	0	0	14
7:30 AM	7	0	0	0	0	2	0	0	0	1	3	0	0	0	1	0	14
7:45 AM	4	0	0	0	0	1	0	0	0	1	6	0	1	0	0	0	13
8:00 AM	4	0	1	0	0	1	0	0	0	3	3	0	0	0	0	0	12
8:15 AM	9	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	15
8:30 AM	3	1	0	0	0	0	0	0	0	0	4	0	0	1	0	0	9
8:45 AM	5	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	8
TOTAL VOLUMES : APPROACH %'s :	NL 38 86.36%	NT 5 11.36%	NR 1 2.27%	NU 0 0.00%	SL 0 0.00%	ST 6 85.71%	SR 1 14.29%	SU 0 0.00%	EL 0 0.00%	ET 7 17.07%	ER 34 82.93%	EU 0 0.00%	WL 2 40.00%	WT 2 40.00%	WR 1 20.00%	WU 0 0.00%	TOTAL 97
PEAK HR :	07:15 AM - 08:15 AM																TOTAL
PEAK HR VOL :	19	2	1	0	0	5	0	0	0	6	18	0	1	0	1	0	53
PEAK HR FACTOR :	0.679	0.250	0.250	0.000	0.000	0.625	0.000	0.000	0.000	0.500	0.750	0.000	0.250	0.000	0.250	0.000	0.946
	0.786				0.625				0.857				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	
4:00 PM	0	2	0	0	0	0	0	0	0	0	3	0	0	0	0	0	5
4:15 PM	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	5
4:30 PM	3	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	8
4:45 PM	4	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	8
5:00 PM	3	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	7
5:15 PM	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	6
5:30 PM	1	0	0	0	0	0	0	0	1	0	5	0	0	0	0	0	7
5:45 PM	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	6
TOTAL VOLUMES : APPROACH %'s :	NL 18 90.00%	NT 2 10.00%	NR 0 0.00%	NU 0 0.00%	SL 0 0.00%	ST 1 100.00%	SR 0 0.00%	SU 0 0.00%	EL 1 3.70%	ET 1 3.70%	ER 25 92.59%	EU 0 0.00%	WL 0 0.00%	WT 4 100.00%	WR 0 0.00%	WU 0 0.00%	TOTAL 52
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	13	0	0	0	0	1	0	0	0	1	10	0	0	4	0	0	29
PEAK HR FACTOR :	0.813	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.625	0.000	0.000	0.500	0.000	0.000	0.906
	0.813				0.250				0.688				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Ayala Dr & Baseline Rd
City: Rialto
Control: 2-Way Stop (EB/WB)

Project ID: 23-030023-007
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Ayala Dr				Ayala Dr				Baseline Rd				Baseline Rd					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL	
	7:00 AM	4	3	1	0	1	1	1	1	0	3	5	0	1	4	0	0	25
	7:15 AM	4	4	5	0	0	4	0	0	0	3	7	0	1	1	0	0	29
	7:30 AM	9	2	0	0	0	4	1	0	0	5	6	0	0	1	1	0	29
	7:45 AM	7	0	0	0	1	3	0	0	0	4	7	0	2	3	0	0	27
	8:00 AM	7	2	2	0	1	3	0	0	0	5	3	0	2	2	2	0	29
	8:15 AM	12	4	1	0	1	9	0	0	0	3	6	0	0	0	0	0	36
	8:30 AM	4	5	0	0	0	3	0	0	1	1	6	0	0	2	0	0	22
8:45 AM	10	1	0	0	0	2	1	0	0	1	6	0	1	1	0	0	23	
TOTAL VOLUMES : APPROACH %'s :	NL 57 65.52%	NT 21 24.14%	NR 9 10.34%	NU 0 0.00%	SL 4 10.81%	ST 29 78.38%	SR 3 8.11%	SU 1 2.70%	EL 1 1.39%	ET 25 34.72%	ER 46 63.89%	EU 0 0.00%	WL 7 29.17%	WT 14 58.33%	WR 3 12.50%	WU 0 0.00%	TOTAL 220	
PEAK HR VOL :	07:15 AM - 08:15 AM																TOTAL	
PEAK HR FACTOR :	27 0.750	8 0.500	7 0.350	0 0.000	2 0.500	14 0.875	1 0.250	0 0.000	0 0.000	17 0.850	23 0.821	0 0.000	5 0.625	7 0.583	3 0.375	0 0.000	114 0.983	
	0.808				0.850				0.909				0.625					

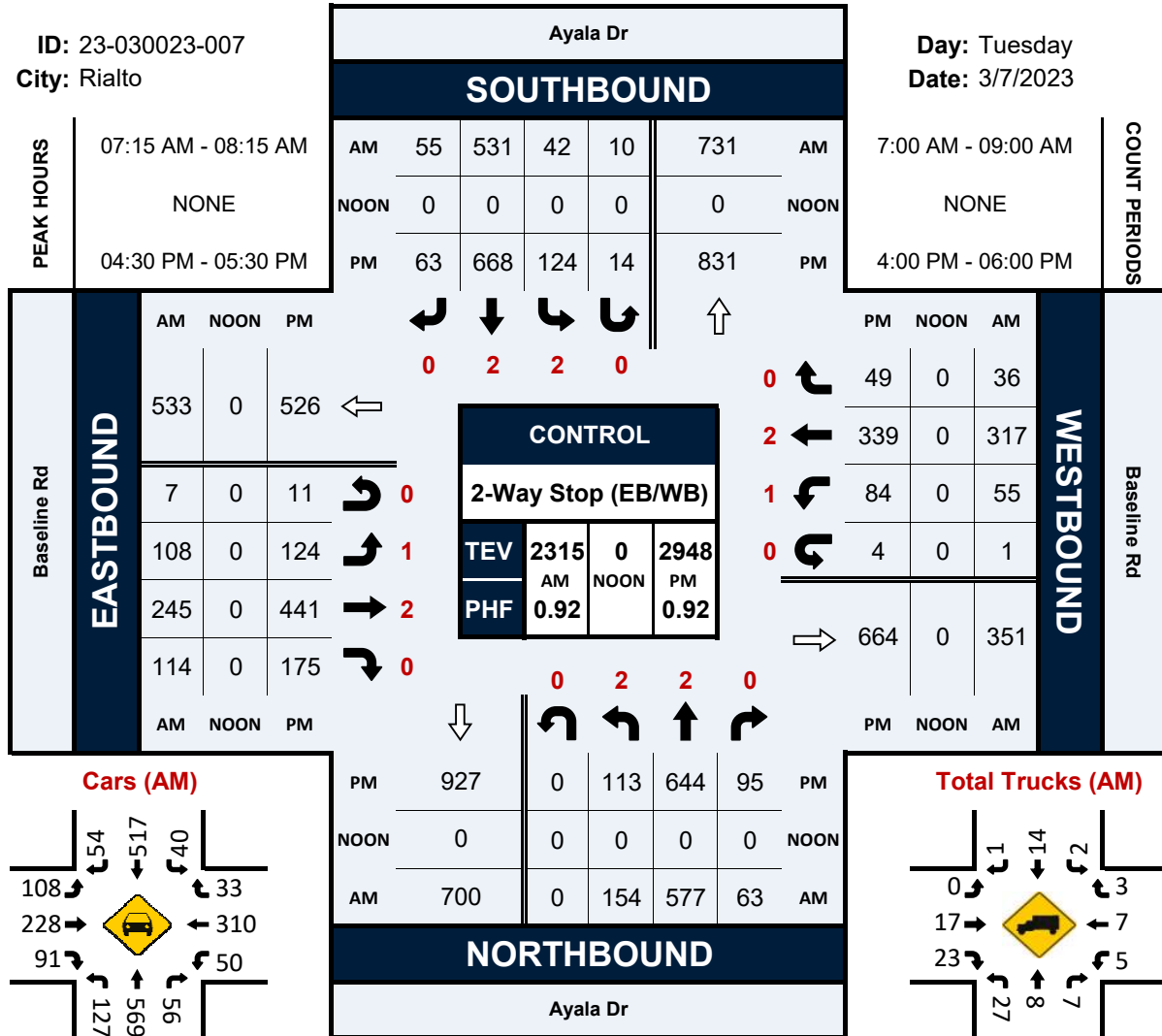
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
	2 NL	2 NT	0 NR	0 NU	2 SL	2 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1 WL	2 WT	0 WR	0 WU	TOTAL	
	4:00 PM	2	3	0	0	0	3	0	0	0	6	7	0	0	1	0	0	22
	4:15 PM	1	0	0	0	0	3	0	0	0	1	5	0	0	1	0	0	11
	4:30 PM	3	2	0	0	1	4	0	0	0	1	8	0	1	1	0	0	21
	4:45 PM	6	1	0	0	0	4	0	0	0	1	0	0	0	3	0	0	15
	5:00 PM	4	1	0	0	0	3	0	0	0	1	7	0	0	2	0	0	18
	5:15 PM	3	2	1	0	0	2	0	0	0	3	7	0	0	3	0	0	21
	5:30 PM	2	2	0	0	0	0	0	0	1	0	5	0	0	0	0	0	10
5:45 PM	3	1	0	0	1	1	0	0	0	0	3	0	0	1	0	0	10	
TOTAL VOLUMES : APPROACH %'s :	NL 24 64.86%	NT 12 32.43%	NR 1 2.70%	NU 0 0.00%	SL 2 9.09%	ST 20 90.91%	SR 0 0.00%	SU 0 0.00%	EL 1 1.79%	ET 13 23.21%	ER 42 75.00%	EU 0 0.00%	WL 1 7.69%	WT 12 92.31%	WR 0 0.00%	WU 0 0.00%	TOTAL 128	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL	
PEAK HR VOL :	16 0.667	6 0.750	1 0.250	0 0.000	1 0.250	13 0.813	0 0.000	0 0.000	0 0.000	6 0.500	22 0.688	0 0.000	1 0.250	9 0.750	0 0.000	0 0.000	75 0.893	
	0.821				0.700				0.700				0.833					

Ayala Dr & Baseline Rd

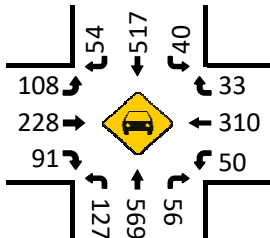
Peak Hour Turning Movement Count

ID: 23-030023-007
City: Rialto

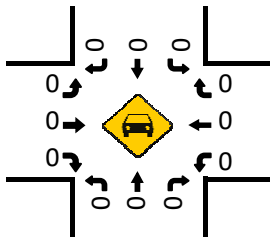
Day: Tuesday
Date: 3/7/2023



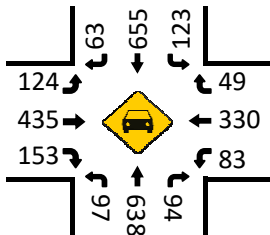
Cars (AM)



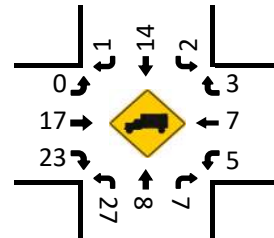
Cars (NOON)



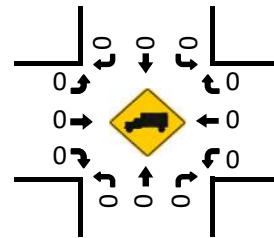
Cars (PM)



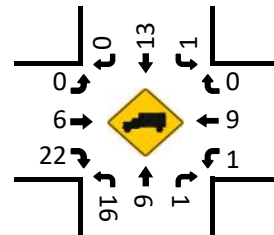
Total Trucks (AM)



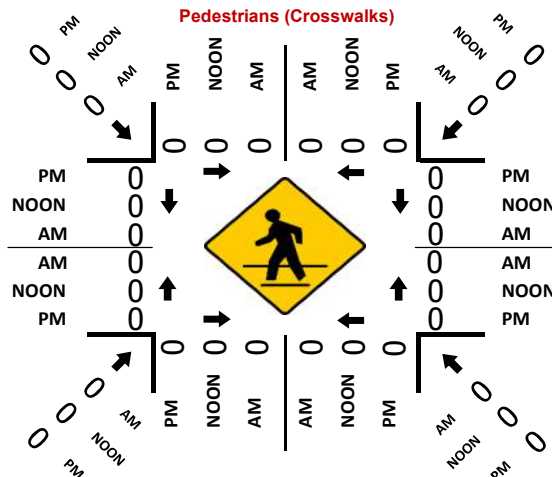
Total Trucks (NOON)



Total Trucks (PM)



Pedestrians (Crosswalks)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - Total

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	15	46	0	0	0	51	10	0	21	0	6	0	0	0	0	0	149
7:15 AM	4	35	0	0	0	39	8	0	6	0	2	0	0	0	0	0	94
7:30 AM	17	45	0	0	0	35	12	0	15	0	3	0	0	0	0	0	127
7:45 AM	4	47	0	0	0	46	19	0	7	0	3	0	0	0	0	0	126
8:00 AM	1	75	0	0	0	63	7	0	11	0	4	0	0	0	0	0	161
8:15 AM	1	93	0	0	0	56	9	0	8	0	6	0	0	0	0	0	173
8:30 AM	2	64	0	0	0	63	11	0	14	0	4	0	0	0	0	0	158
8:45 AM	3	42	0	0	0	42	10	0	4	0	4	0	0	0	0	0	105
TOTAL VOLUMES :	NL 47	NT 447	NR 0	NU 0	SL 0	ST 395	SR 86	SU 0	EL 86	ET 0	ER 32	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 1093
APPROACH %'s :	9.51%	90.49%	0.00%	0.00%	0.00%	82.12%	17.88%	0.00%	72.88%	0.00%	27.12%	0.00%					
PEAK HR VOL :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	8	279	0	0	0	228	46	0	40	0	17	0	0	0	0	0	618
PEAK HR FACTOR :	0.500	0.750	0.000	0.000	0.000	0.905	0.605	0.000	0.714	0.000	0.708	0.000	0.000	0.000	0.000	0.000	0.893
	0.763				0.926				0.792								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	3	76	0	0	0	71	7	0	16	0	14	0	0	0	0	0	187
4:15 PM	3	102	0	0	0	66	3	0	18	0	4	0	0	0	0	0	196
4:30 PM	1	61	0	0	0	106	14	0	38	0	16	0	0	0	0	0	236
4:45 PM	7	84	0	0	0	72	6	0	16	0	3	0	0	0	0	0	188
5:00 PM	5	80	0	0	0	156	26	0	22	0	12	0	0	0	0	0	301
5:15 PM	7	99	0	0	0	73	10	0	12	0	9	0	0	0	0	0	210
5:30 PM	5	88	0	0	0	72	14	0	18	0	7	0	0	0	0	0	204
5:45 PM	5	127	0	1	0	70	18	0	17	0	4	0	0	0	0	0	242
TOTAL VOLUMES :	NL 36	NT 717	NR 0	NU 1	SL 0	ST 686	SR 98	SU 0	EL 157	ET 0	ER 69	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 1764
APPROACH %'s :	4.77%	95.09%	0.00%	0.13%	0.00%	87.50%	12.50%	0.00%	69.47%	0.00%	30.53%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	22	394	0	1	0	371	68	0	69	0	32	0	0	0	0	0	957
PEAK HR FACTOR :	0.786	0.776	0.000	0.250	0.000	0.595	0.654	0.000	0.784	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.795
	0.784				0.603				0.743								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	14	45	0	0	0	49	8	0	21	0	5	0	0	0	0	0	142
7:15 AM	3	33	0	0	0	36	8	0	6	0	1	0	0	0	0	0	87
7:30 AM	16	44	0	0	0	33	12	0	15	0	3	0	0	0	0	0	123
7:45 AM	4	47	0	0	0	44	18	0	7	0	3	0	0	0	0	0	123
8:00 AM	1	73	0	0	0	61	7	0	11	0	3	0	0	0	0	0	156
8:15 AM	1	84	0	0	0	54	8	0	8	0	5	0	0	0	0	0	160
8:30 AM	2	64	0	0	0	61	9	0	14	0	3	0	0	0	0	0	153
8:45 AM	3	37	0	0	0	42	9	0	3	0	4	0	0	0	0	0	98
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	44	427	0	0	0	380	79	0	85	0	27	0	0	0	0	0	1042
	9.34%	90.66%	0.00%	0.00%	0.00%	82.79%	17.21%	0.00%	75.89%	0.00%	24.11%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	8	268	0	0	0	220	42	0	40	0	14	0	0	0	0	0	592
PEAK HR FACTOR :	0.500	0.798	0.000	0.000	0.000	0.902	0.583	0.000	0.714	0.000	0.700	0.000	0.000	0.000	0.000	0.000	0.925
	0.812				0.936				0.794								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	3	74	0	0	0	68	6	0	16	0	14	0	0	0	0	0	181
4:15 PM	3	102	0	0	0	64	3	0	18	0	4	0	0	0	0	0	194
4:30 PM	1	61	0	0	0	104	14	0	37	0	16	0	0	0	0	0	233
4:45 PM	7	83	0	0	0	72	6	0	16	0	3	0	0	0	0	0	187
5:00 PM	5	78	0	0	0	155	26	0	22	0	11	0	0	0	0	0	297
5:15 PM	7	99	0	0	0	70	10	0	11	0	9	0	0	0	0	0	206
5:30 PM	4	87	0	0	0	71	13	0	18	0	7	0	0	0	0	0	200
5:45 PM	5	125	0	1	0	70	17	0	17	0	3	0	0	0	0	0	238
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	35	709	0	1	0	674	95	0	155	0	67	0	0	0	0	0	1736
	4.70%	95.17%	0.00%	0.13%	0.00%	87.65%	12.35%	0.00%	69.82%	0.00%	30.18%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	21	389	0	1	0	366	66	0	68	0	30	0	0	0	0	0	941
PEAK HR FACTOR :	0.750	0.778	0.000	0.250	0.000	0.590	0.635	0.000	0.773	0.000	0.682	0.000	0.000	0.000	0.000	0.000	0.792
	0.784				0.597				0.742								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
8:00 AM	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0	5
8:15 AM	0	8	0	0	0	2	0	0	0	0	0	0	0	0	0	0	10
8:30 AM	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	3
8:45 AM	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	4
TOTAL VOLUMES : APPROACH %'s :	NL 2	NT 15	NR 0	NU 0	SL 0	ST 13	SR 2	SU 0	EL 0	ET 0	ER 2	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 34
	11.76%	88.24%	0.00%	0.00%	0.00%	86.67%	13.33%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	10	0	0	0	7	1	0	0	0	2	0	0	0	0	0	20
PEAK HR FACTOR :	0.000	0.313	0.000	0.000	0.000	0.875	0.250	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.500
	0.313				1.000				0.500								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
5:30 PM	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES : APPROACH %'s :	NL 1	NT 3	NR 0	NU 0	SL 0	ST 5	SR 1	SU 0	EL 2	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 12
	25.00%	75.00%	0.00%	0.00%	0.00%	83.33%	16.67%	0.00%	100.00%	0.00%	0.00%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	1	0	0	0	1	1	0	1	0	0	0	0	0	0	0	5
PEAK HR FACTOR :	0.250	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.625
	0.500				0.500				0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	3	0	0	0	1	1	0	0	0	0	0	0	0	0	0	5
	0.00%	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	3
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
	0.250				0.500												

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	1	0	0	0	5	0	0	0	0	1	0	0	0	0	0	7
	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	5
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.417
	0.250				0.375				0.250								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
7:15 AM	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL 1	NT 2	NR 0	NU 0	SL 0	ST 1	SR 4	SU 0	EL 1	ET 0	ER 3	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 12
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	0.00%	20.00%	80.00%	0.00%	25.00%	0.00%	75.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	3
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.375
					0.500				0.250								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
TOTAL VOLUMES :	NL 0	NT 4	NR 0	NU 0	SL 0	ST 2	SR 2	SU 0	EL 0	ET 0	ER 1	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 9
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	3	0	0	0	1	1	0	0	0	1	0	0	0	0	0	6
PEAK HR FACTOR :	0.000	0.750	0.000	0.000	0.000	0.250	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500
					0.750				0.500				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Miro Way
City: Rialto
Control: Signalized

Project ID: 23-030023-008
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Linden Ave				Linden Ave				Miro Way				Miro Way				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
7:00 AM	1	1	0	0	0	2	2	0	0	0	0	1	0	0	0	0	7
7:15 AM	1	2	0	0	0	3	0	0	0	0	0	1	0	0	0	0	7
7:30 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
7:45 AM	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	3
8:00 AM	0	2	0	0	0	2	0	0	0	0	0	1	0	0	0	0	5
8:15 AM	0	9	0	0	0	2	1	0	0	0	0	1	0	0	0	0	13
8:30 AM	0	0	0	0	0	2	2	0	0	0	0	1	0	0	0	0	5
8:45 AM	0	5	0	0	0	0	1	0	1	0	0	0	0	0	0	0	7
TOTAL VOLUMES : APPROACH %'s :	NL 3 13.04%	NT 20 86.96%	NR 0 0.00%	NU 0 0.00%	SL 0 0.00%	ST 15 68.18%	SR 7 31.82%	SU 0 0.00%	EL 1 16.67%	ET 0 0.00%	ER 5 83.33%	EU 0 0.00%	WL 0	WT 0	WR 0	WU 0	TOTAL 51
PEAK HR VOL :	07:45 AM - 08:45 AM																TOTAL
PEAK HR FACTOR :	0 0.000	11 0.306	0 0.000	0 0.000	0 0.000	8 1.000	4 0.500	0 0.000	0 0.000	0 0.000	3 0.750	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	26 0.500
	0.306				0.750				0.750								

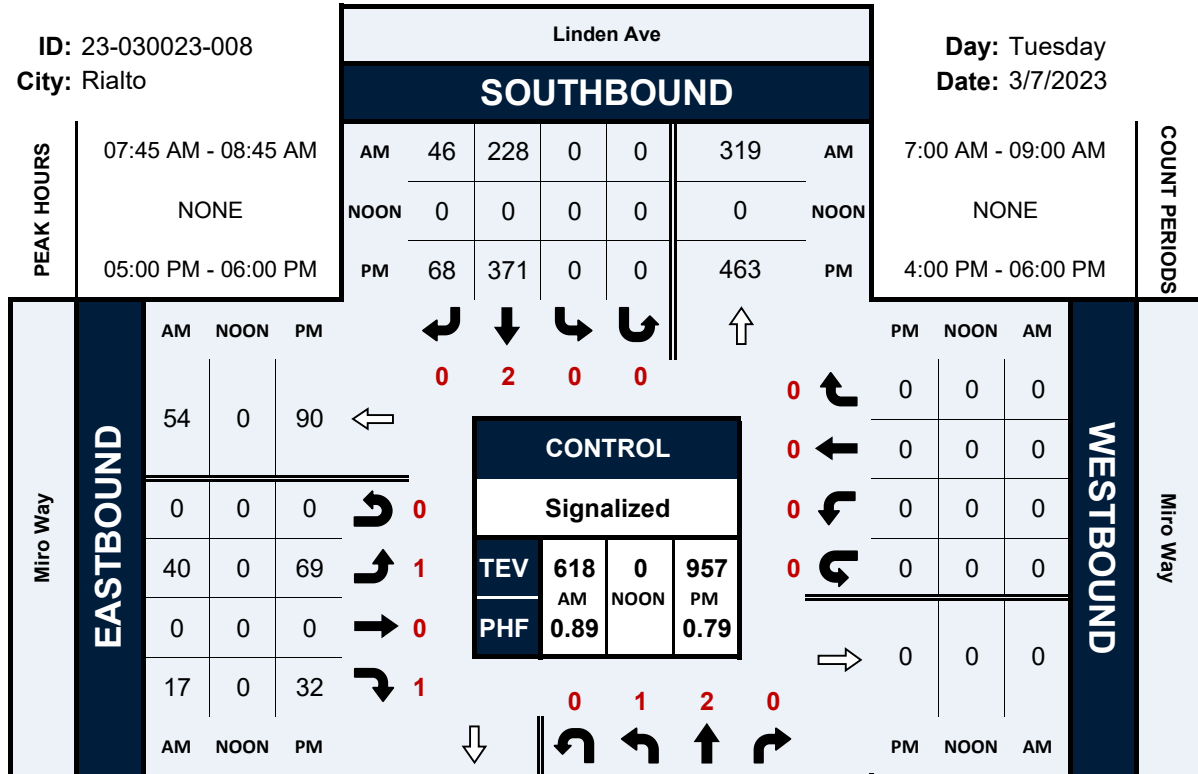
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	1 NL	2 NT	0 NR	0 NU	0 SL	2 ST	0 SR	0 SU	1 EL	0 ET	1 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	0	2	0	0	0	3	1	0	0	0	0	0	0	0	0	0	6
4:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	4
5:30 PM	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	4
TOTAL VOLUMES : APPROACH %'s :	NL 1 11.11%	NT 8 88.89%	NR 0 0.00%	NU 0 0.00%	SL 0 0.00%	ST 12 80.00%	SR 3 20.00%	SU 0 0.00%	EL 2 50.00%	ET 0 0.00%	ER 2 50.00%	EU 0 0.00%	WL 0	WT 0	WR 0	WU 0	TOTAL 28
PEAK HR VOL :	05:00 PM - 06:00 PM																TOTAL
PEAK HR FACTOR :	1 0.250	5 0.625	0 0.000	0 0.000	0 0.000	5 0.417	2 0.500	0 0.000	1 0.250	0 0.000	2 0.500	0 0.000	0 0.000	0 0.000	0 0.000	0 0.000	16 1.000
	0.750				0.583				0.750								

Linden Ave & Miro Way

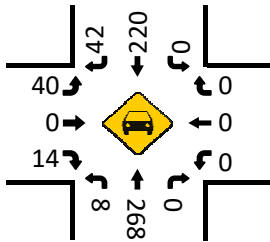
Peak Hour Turning Movement Count

ID: 23-030023-008
City: Rialto

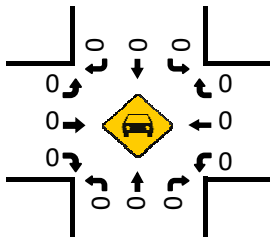
Day: Tuesday
Date: 3/7/2023



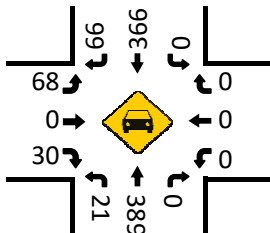
Cars (AM)



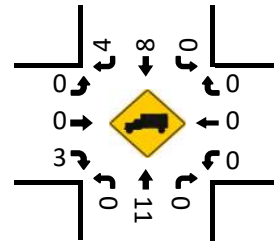
Cars (NOON)



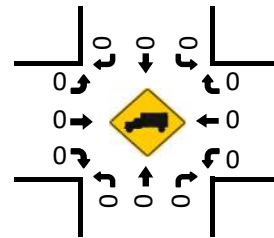
Cars (PM)



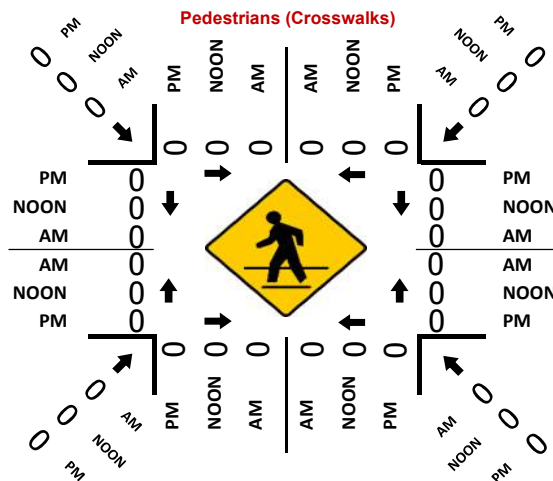
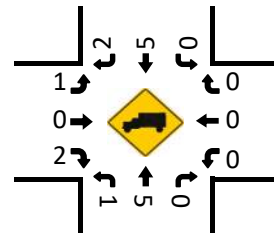
Total Trucks (AM)



Total Trucks (NOON)



Total Trucks (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - Total

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	5	22	11	0	28	16	14	0	9	49	3	0	1	53	32	0	243
7:15 AM	15	12	10	0	16	17	8	0	6	61	4	0	8	99	22	0	278
7:30 AM	11	26	15	0	13	15	9	0	7	83	6	0	2	126	26	0	339
7:45 AM	15	26	16	0	16	14	15	0	7	107	11	0	5	107	18	0	357
8:00 AM	5	40	18	0	23	30	7	0	7	87	5	0	6	80	31	0	339
8:15 AM	9	39	11	0	19	32	15	0	5	73	9	0	7	72	46	0	337
8:30 AM	7	43	12	0	25	33	12	0	8	63	9	0	4	45	23	0	284
8:45 AM	1	19	12	0	18	24	8	0	7	62	4	0	3	68	18	0	244
TOTAL VOLUMES :	NL 68	NT 227	NR 105	NU 0	SL 158	ST 181	SR 88	SU 0	EL 56	ET 585	ER 51	EU 0	WL 36	WT 650	WR 216	WU 0	TOTAL 2421
APPROACH %'s :	17.00%	56.75%	26.25%	0.00%	37.00%	42.39%	20.61%	0.00%	8.09%	84.54%	7.37%	0.00%	3.99%	72.06%	23.95%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	40	131	60	0	71	91	46	0	26	350	31	0	20	385	121	0	1372
PEAK HR FACTOR :	0.667	0.819	0.833	0.000	0.772	0.711	0.767	0.000	0.929	0.818	0.705	0.000	0.714	0.764	0.658	0.000	0.961
	0.917				0.788				0.814				0.854				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	3	31	16	0	32	30	24	0	15	143	9	0	13	92	33	0	441
4:15 PM	3	51	12	0	21	30	23	0	20	115	7	1	14	91	32	0	420
4:30 PM	5	27	8	0	49	39	31	0	17	131	2	0	9	66	16	0	400
4:45 PM	5	52	10	0	27	31	18	0	12	128	7	0	3	78	30	0	401
5:00 PM	3	32	8	0	63	47	45	0	14	131	10	0	7	92	37	0	489
5:15 PM	5	46	10	0	35	44	16	0	18	121	5	0	10	73	40	0	423
5:30 PM	7	29	10	0	23	38	21	0	24	102	7	0	9	93	39	0	402
5:45 PM	3	60	17	0	24	40	13	0	25	88	4	0	13	87	49	0	423
TOTAL VOLUMES :	NL 34	NT 328	NR 91	NU 0	SL 274	ST 299	SR 191	SU 0	EL 145	ET 959	ER 51	EU 1	WL 78	WT 672	WR 276	WU 0	TOTAL 3399
APPROACH %'s :	7.51%	72.41%	20.09%	0.00%	35.86%	39.14%	25.00%	0.00%	12.54%	82.96%	4.41%	0.09%	7.60%	65.50%	26.90%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	18	167	45	0	145	169	95	0	81	442	26	0	39	345	165	0	1737
PEAK HR FACTOR :	0.643	0.696	0.662	0.000	0.575	0.899	0.528	0.000	0.810	0.844	0.650	0.000	0.750	0.927	0.842	0.000	0.888
	0.719				0.660				0.885				0.921				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - Cars

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	5	22	10	0	27	14	14	0	9	43	3	0	1	46	29	0	223
7:15 AM	15	12	10	0	13	17	7	0	6	53	4	0	8	96	20	0	261
7:30 AM	11	26	14	0	12	14	9	0	7	74	6	0	2	116	24	0	315
7:45 AM	13	26	16	0	15	14	14	0	7	98	11	0	5	99	17	0	335
8:00 AM	5	39	18	0	23	29	7	0	7	79	5	0	6	73	30	0	321
8:15 AM	9	34	11	0	18	31	14	0	5	64	9	0	7	64	42	0	308
8:30 AM	7	43	12	0	22	32	12	0	8	57	9	0	4	37	23	0	266
8:45 AM	1	18	12	0	18	24	8	0	6	55	4	0	3	62	15	0	226
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	66	220	103	0	148	175	85	0	55	523	51	0	36	593	200	0	2255
	16.97%	56.56%	26.48%	0.00%	36.27%	42.89%	20.83%	0.00%	8.74%	83.15%	8.11%	0.00%	4.34%	71.53%	24.13%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	38	125	59	0	68	88	44	0	26	315	31	0	20	352	113	0	1279
PEAK HR FACTOR :	0.731	0.801	0.819	0.000	0.739	0.710	0.786	0.000	0.929	0.804	0.705	0.000	0.714	0.759	0.673	0.000	0.954
	0.895				0.794				0.802				0.854				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	2	30	16	0	28	30	24	0	14	133	9	0	13	89	33	0	421
4:15 PM	3	51	12	0	20	29	23	0	20	108	7	1	13	88	32	0	407
4:30 PM	5	27	8	0	48	39	30	0	17	125	2	0	9	62	16	0	388
4:45 PM	5	51	10	0	27	31	18	0	12	127	7	0	3	71	29	0	391
5:00 PM	3	32	8	0	61	47	45	0	14	124	10	0	7	87	36	0	474
5:15 PM	5	46	10	0	33	43	16	0	18	112	5	0	10	70	40	0	408
5:30 PM	7	28	10	0	22	38	21	0	24	98	7	0	9	92	38	0	394
5:45 PM	3	59	17	0	23	40	13	0	24	86	3	0	13	83	49	0	413
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	33	324	91	0	262	297	190	0	143	913	50	1	77	642	273	0	3296
	7.37%	72.32%	20.31%	0.00%	34.98%	39.65%	25.37%	0.00%	12.92%	82.48%	4.52%	0.09%	7.76%	64.72%	27.52%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	18	165	45	0	139	168	95	0	80	420	25	0	39	332	163	0	1689
PEAK HR FACTOR :	0.643	0.699	0.662	0.000	0.570	0.894	0.528	0.000	0.833	0.847	0.625	0.000	0.750	0.902	0.832	0.000	0.891
	0.722				0.657				0.887				0.921				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - 2axle

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	0	0	1	0	0	2	0	0	0	1	0	0	0	4	2	0	10
7:15 AM	0	0	0	0	1	0	1	0	0	2	0	0	0	0	1	0	5
7:30 AM	0	0	0	0	1	1	0	0	0	3	0	0	0	3	2	0	10
7:45 AM	2	0	0	0	1	0	1	0	0	2	0	0	0	2	1	0	9
8:00 AM	0	1	0	0	0	1	0	0	0	2	0	0	0	2	1	0	7
8:15 AM	0	5	0	0	0	1	1	0	0	4	0	0	0	1	3	0	15
8:30 AM	0	0	0	0	2	1	0	0	0	1	0	0	0	2	0	0	6
8:45 AM	0	1	0	0	0	0	0	0	0	3	0	0	0	0	2	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	7	1	0	5	6	3	0	0	18	0	0	0	14	12	0	68
	20.00%	70.00%	10.00%	0.00%	35.71%	42.86%	21.43%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	53.85%	46.15%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	6	0	0	2	3	2	0	0	11	0	0	0	8	7	0	41
PEAK HR FACTOR :	0.250	0.300	0.000	0.000	0.500	0.750	0.500	0.000	0.000	0.688	0.000	0.000	0.000	0.667	0.583	0.000	0.683
	0.400				0.875				0.688				0.750				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	1	1	0	0	4	0	0	0	0	5	0	0	0	2	0	0	13
4:15 PM	0	0	0	0	0	1	0	0	0	2	0	0	1	2	0	0	6
4:30 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
5:15 PM	0	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	4
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	4	0	0	4	2	0	0	0	13	0	0	1	6	0	0	31
	20.00%	80.00%	0.00%	0.00%	66.67%	33.33%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	14.29%	85.71%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	0	1	0	0	0	4	0	0	0	2	0	0	9
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.333	0.000	0.000	0.000	0.500	0.000	0.000	0.563
	0.500				0.250				0.333				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - 3axle

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	1	3	0	0	0	1	1	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	1	0	1	0	0	0	1	7	0	0	0	4	2	0	16
	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	12.50%	87.50%	0.00%	0.00%	0.00%	66.67%	33.33%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	1	0	0	0	0	0	0	2	0	0	0	3	1	0	7
PEAK HR FACTOR :	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.375	0.250	0.000	0.583
	0.250								0.500				0.500				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3
5:00 PM	0	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	5
5:15 PM	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	6	0	0	0	0	8	1	0	0	4	1	0	20
					100.00%	0.00%	0.00%	0.00%	0.00%	88.89%	11.11%	0.00%	0.00%	80.00%	20.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	4	0	0	0	0	5	1	0	0	1	0	0	11
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.417	0.250	0.000	0.000	0.250	0.000	0.000	0.550
					0.500				0.500				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - 4axle

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	0	0	0	0	1	0	0	0	0	5	0	0	0	3	1	0	10
7:15 AM	0	0	0	0	2	0	0	0	0	5	0	0	0	3	1	0	11
7:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	7	0	0	12
7:45 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10
8:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10
8:15 AM	0	0	0	0	1	0	0	0	0	5	0	0	0	7	0	0	13
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	0	10
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	6
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 4	ST 0	SR 0	SU 0	EL 0	ET 37	ER 0	EU 0	WL 0	WT 39	WR 2	WU 0	TOTAL 82
PEAK HR :	07:30 AM - 08:30 AM																
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	22	0	0	0	22	0	0	45
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.917	0.000	0.000	0.000	0.786	0.000	0.000	0.865
					0.250				0.917				0.786				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	4
4:15 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6
4:30 PM	0	0	0	0	0	0	1	0	0	3	0	0	0	4	0	0	8
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	6
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	1	0	8
5:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	0	7
5:30 PM	0	0	0	0	1	0	0	0	0	4	0	0	0	0	1	0	6
5:45 PM	0	0	0	0	1	0	0	0	1	2	0	0	0	3	0	0	7
TOTAL VOLUMES : APPROACH %'s :	NL 0	NT 0	NR 0	NU 0	SL 2	ST 0	SR 1	SU 0	EL 2	ET 25	ER 0	EU 0	WL 0	WT 20	WR 2	WU 0	TOTAL 52
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	0	0	0	0	2	0	0	0	1	13	0	0	0	10	2	0	28
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.813	0.000	0.000	0.000	0.625	0.500	0.000	0.875
					0.500				0.875				0.600				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Linden Ave & Baseline Rd
City: Rialto
Control: Signalized

Project ID: 23-030023-009
Date: 3/7/2023

Data - Total Trucks

NS/EW Streets:	Linden Ave				Linden Ave				Baseline Rd				Baseline Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
7:00 AM	0	0	1	0	1	2	0	0	0	6	0	0	0	7	3	0	20
7:15 AM	0	0	0	0	3	0	1	0	0	8	0	0	0	3	2	0	17
7:30 AM	0	0	1	0	1	1	0	0	0	9	0	0	0	10	2	0	24
7:45 AM	2	0	0	0	1	0	1	0	0	9	0	0	0	8	1	0	22
8:00 AM	0	1	0	0	0	1	0	0	0	8	0	0	0	7	1	0	18
8:15 AM	0	5	0	0	1	1	1	0	0	9	0	0	0	8	4	0	29
8:30 AM	0	0	0	0	3	1	0	0	0	6	0	0	0	8	0	0	18
8:45 AM	0	1	0	0	0	0	0	0	1	7	0	0	0	6	3	0	18
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	7	2	0	10	6	3	0	1	62	0	0	0	57	16	0	166
	18.18%	63.64%	18.18%	0.00%	52.63%	31.58%	15.79%	0.00%	1.59%	98.41%	0.00%	0.00%	0.00%	78.08%	21.92%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	2	6	1	0	3	3	2	0	0	35	0	0	0	33	8	0	93
PEAK HR FACTOR :	0.250	0.300	0.250	0.000	0.750	0.750	0.500	0.000	0.000	0.972	0.000	0.000	0.000	0.825	0.500	0.000	0.802
	0.450				0.667				0.972				0.854				

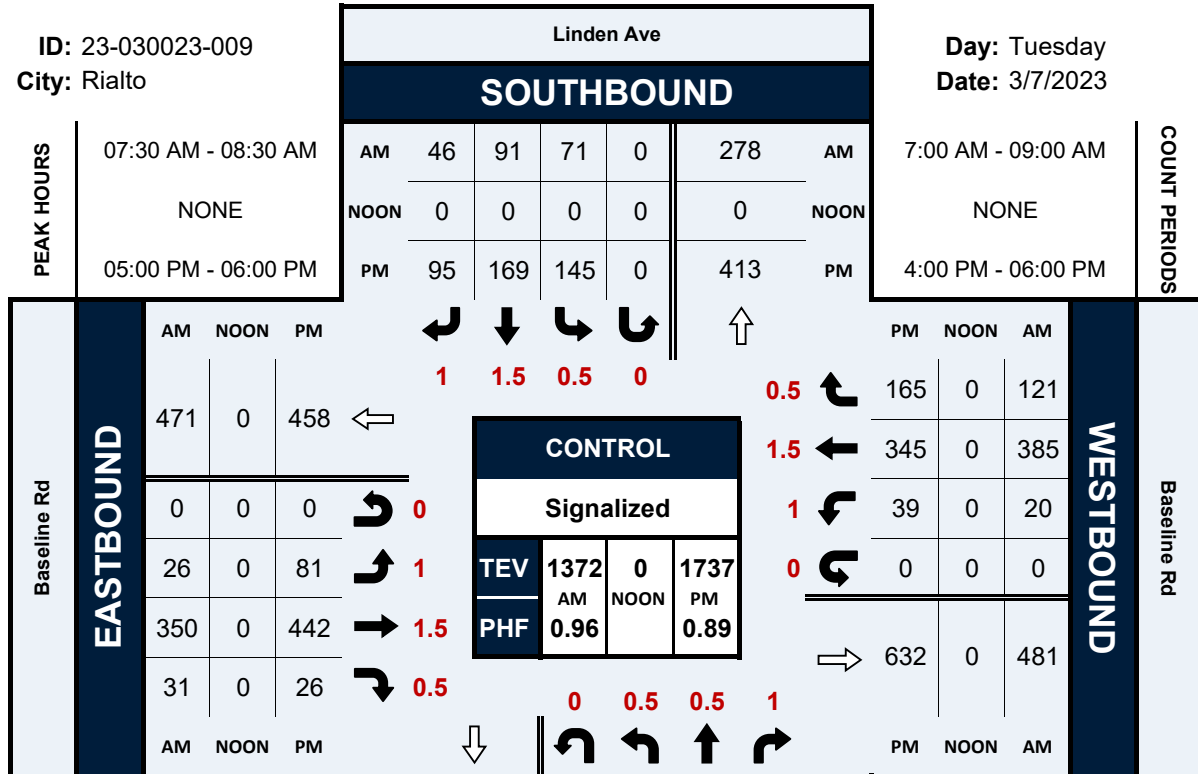
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0.5 NL	0.5 NT	1 NR	0 NU	0.5 SL	1.5 ST	1 SR	0 SU	1 EL	1.5 ET	0.5 ER	0 EU	1 WL	1.5 WT	0.5 WR	0 WU	
4:00 PM	1	1	0	0	4	0	0	0	1	10	0	0	0	3	0	0	20
4:15 PM	0	0	0	0	1	1	0	0	0	7	0	0	1	3	0	0	13
4:30 PM	0	0	0	0	1	0	1	0	0	6	0	0	0	4	0	0	12
4:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	7	1	0	10
5:00 PM	0	0	0	0	2	0	0	0	0	7	0	0	0	5	1	0	15
5:15 PM	0	0	0	0	2	1	0	0	0	9	0	0	0	3	0	0	15
5:30 PM	0	1	0	0	1	0	0	0	0	4	0	0	0	1	1	0	8
5:45 PM	0	1	0	0	1	0	0	0	1	2	1	0	0	4	0	0	10
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	4	0	0	12	2	1	0	2	46	1	0	1	30	3	0	103
	20.00%	80.00%	0.00%	0.00%	80.00%	13.33%	6.67%	0.00%	4.08%	93.88%	2.04%	0.00%	2.94%	88.24%	8.82%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	2	0	0	6	1	0	0	1	22	1	0	0	13	2	0	48
PEAK HR FACTOR :	0.000	0.500	0.000	0.000	0.750	0.250	0.000	0.000	0.250	0.611	0.250	0.000	0.000	0.650	0.500	0.000	0.800
	0.500				0.583				0.667				0.625				

Linden Ave & Baseline Rd

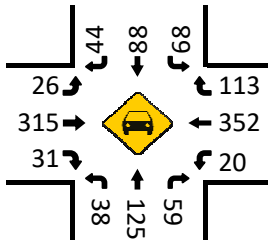
Peak Hour Turning Movement Count

ID: 23-030023-009
City: Rialto

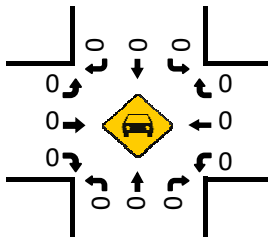
Day: Tuesday
Date: 3/7/2023



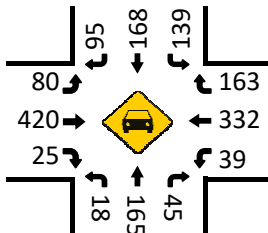
Cars (AM)



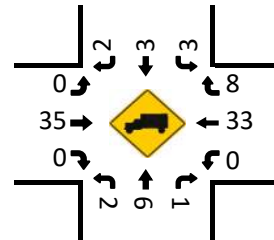
Cars (NOON)



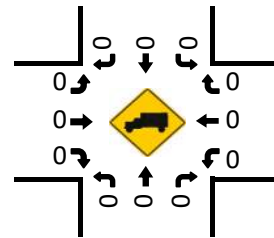
Cars (PM)



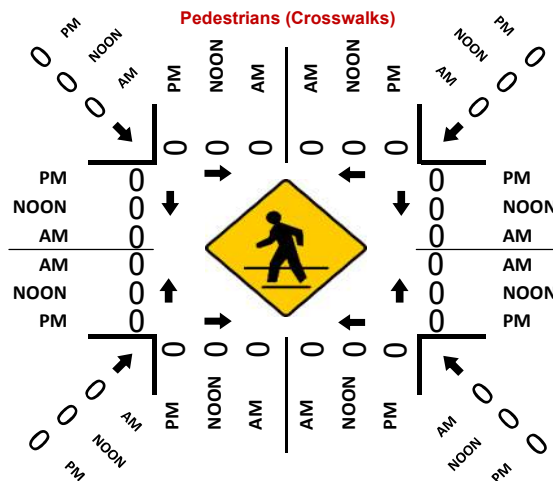
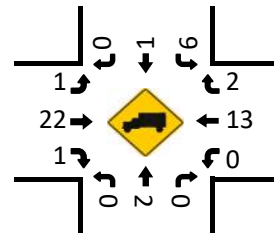
Total Trucks (AM)



Total Trucks (NOON)



Total Trucks (PM)



VOLUME

Alder Ave Bet. I-210 WB Ramps & I-210 EB Ramps

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_001

DAILY TOTALS					NB	SB						EB	WB	Total	
					9,292	6,728						0	0	16,020	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00	17	15			32		12:00	143	77			220			
00:15	36	12			48		12:15	135	78			213			
00:30	30	18			48		12:30	163	94			257			
00:45	22	105	14	59	36	164	12:45	167	608	89	338	256	946		
01:00	36	21			57		13:00	155	82			237			
01:15	33	14			47		13:15	121	63			184			
01:30	27	18			45		13:30	183	58			241			
01:45	31	127	26	79	57	206	13:45	141	600	80	283	221	883		
02:00	23	13			36		14:00	146	98			244			
02:15	21	18			39		14:15	135	112			247			
02:30	24	33			57		14:30	155	135			290			
02:45	22	90	33	97	55	187	14:45	142	578	164	509	306	1087		
03:00	22	30			52		15:00	129	149			278			
03:15	40	29			69		15:15	149	127			276			
03:30	54	33			87		15:30	140	127			267			
03:45	40	156	59	151	99	307	15:45	181	599	138	541	319	1140		
04:00	51	27			78		16:00	137	126			263			
04:15	65	32			97		16:15	130	130			260			
04:30	72	49			121		16:30	174	145			319			
04:45	96	284	74	182	170	466	16:45	147	588	132	533	279	1121		
05:00	82	34			116		17:00	172	118			290			
05:15	101	39			140		17:15	134	142			276			
05:30	114	69			183		17:30	145	130			275			
05:45	152	449	93	235	245	684	17:45	133	584	135	525	268	1109		
06:00	110	50			160		18:00	141	115			256			
06:15	115	62			177		18:15	93	108			201			
06:30	129	99			228		18:30	98	90			188			
06:45	112	466	79	290	191	756	18:45	81	413	76	389	157	802		
07:00	127	93			220		19:00	88	87			175			
07:15	143	100			243		19:15	85	90			175			
07:30	135	94			229		19:30	92	66			158			
07:45	149	554	125	412	274	966	19:45	71	336	79	322	150	658		
08:00	134	70			204		20:00	65	52			117			
08:15	143	72			215		20:15	64	67			131			
08:30	125	54			179		20:30	61	50			111			
08:45	117	519	75	271	192	790	20:45	54	244	54	223	108	467		
09:00	110	59			169		21:00	58	51			109			
09:15	118	61			179		21:15	37	43			80			
09:30	128	56			184		21:30	58	53			111			
09:45	109	465	80	256	189	721	21:45	31	184	45	192	76	376		
10:00	118	64			182		22:00	64	34			98			
10:15	124	77			201		22:15	44	43			87			
10:30	107	68			175		22:30	46	42			88			
10:45	123	472	64	273	187	745	22:45	38	192	40	159	78	351		
11:00	122	67			189		23:00	33	25			58			
11:15	121	72			193		23:15	42	28			70			
11:30	146	83			229		23:30	40	28			68			
11:45	139	528	78	300	217	828	23:45	36	151	28	109	64	260		
TOTALS	4215	2605			6820		TOTALS	5077	4123			9200			
SPLIT %	61.8%	38.2%			42.6%		SPLIT %	55.2%	44.8%			57.4%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					9,292	6,728						0	0	16,020	
AM Peak Hour	11:45	07:00			07:00		PM Peak Hour	16:30	14:30					16:30	
AM Pk Volume	580	412			966		PM Pk Volume	627	575					1164	
Pk Hr Factor	0.890	0.824			0.881		Pk Hr Factor	0.901	0.877					0.912	
7 - 9 Volume	1073	683	0	0	1756		4 - 6 Volume	1172	1058	0	0			2230	
7 - 9 Peak Hour	07:15	07:00			07:00		4 - 6 Peak Hour	16:30	16:30					16:30	
7 - 9 Pk Volume	561	412	0	0	966		4 - 6 Pk Volume	627	537	0	0			1164	
Pk Hr Factor	0.941	0.824	0.000	0.000	0.881		Pk Hr Factor	0.901	0.926	0.000	0.000			0.912	

VOLUME

Alder Ave Bet. I-210 EB Ramps & Renaissance Pkwy

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_002

DAILY TOTALS					NB	SB						EB	WB	Total	
					10,752	12,395						0	0	23,147	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00	21	31			52		12:00	138	125			263			
00:15	42	41			83		12:15	112	148			260			
00:30	35	32			67		12:30	171	167			338			
00:45	31	129	40	144	71	273	12:45	144	565	165	605	309	1170		
01:00	39	38			77		13:00	138	145			283			
01:15	31	27			58		13:15	119	165			284			
01:30	25	43			68		13:30	184	146			330			
01:45	26	121	39	147	65	268	13:45	144	585	166	622	310	1207		
02:00	23	19			42		14:00	149	161			310			
02:15	21	25			46		14:15	146	199			345			
02:30	35	29			64		14:30	209	197			406			
02:45	21	100	55	128	76	228	14:45	156	660	224	781	380	1441		
03:00	31	28			59		15:00	172	198			370			
03:15	42	49			91		15:15	160	198			358			
03:30	65	71			136		15:30	234	199			433			
03:45	62	200	118	266	180	466	15:45	215	781	242	837	457	1618		
04:00	73	48			121		16:00	200	183			383			
04:15	79	63			142		16:15	183	207			390			
04:30	131	91			222		16:30	241	207			448			
04:45	110	393	126	328	236	721	16:45	203	827	207	804	410	1631		
05:00	127	62			189		17:00	220	202			422			
05:15	123	92			215		17:15	208	216			424			
05:30	125	152			277		17:30	207	208			415			
05:45	112	487	175	481	287	968	17:45	197	832	219	845	416	1677		
06:00	132	125			257		18:00	169	196			365			
06:15	119	150			269		18:15	138	214			352			
06:30	137	182			319		18:30	133	168			301			
06:45	131	519	209	666	340	1185	18:45	108	548	170	748	278	1296		
07:00	149	183			332		19:00	107	162			269			
07:15	166	213			379		19:15	101	165			266			
07:30	162	221			383		19:30	101	129			230			
07:45	165	642	260	877	425	1519	19:45	70	379	120	576	190	955		
08:00	152	175			327		20:00	105	108			213			
08:15	166	186			352		20:15	82	138			220			
08:30	167	135			302		20:30	83	120			203			
08:45	132	617	152	648	284	1265	20:45	66	336	105	471	171	807		
09:00	117	116			233		21:00	66	98			164			
09:15	98	125			223		21:15	59	95			154			
09:30	133	121			254		21:30	64	89			153			
09:45	123	471	146	508	269	979	21:45	46	235	85	367	131	602		
10:00	109	127			236		22:00	71	64			135			
10:15	104	135			239		22:15	49	73			122			
10:30	121	125			246		22:30	52	70			122			
10:45	99	433	136	523	235	956	22:45	35	207	70	277	105	484		
11:00	123	135			258		23:00	36	43			79			
11:15	107	149			256		23:15	51	49			100			
11:30	131	145			276		23:30	67	47			114			
11:45	133	494	139	568	272	1062	23:45	37	191	39	178	76	369		
TOTALS	4606	5284			9890		TOTALS	6146	7111			13257			
SPLIT %	46.6%	53.4%			42.7%		SPLIT %	46.4%	53.6%			57.3%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					10,752	12,395						0	0	23,147	
AM Peak Hour	07:45	07:00			07:00		PM Peak Hour	16:30	17:00			16:30			
AM Pk Volume	650	877			1519		PM Pk Volume	872	845			1704			
Pk Hr Factor	0.973	0.843			0.894		Pk Hr Factor	0.905	0.965			0.951			
7 - 9 Volume	1259	1525	0	0	2784		4 - 6 Volume	1659	1649	0	0	3308			
7 - 9 Peak Hour	07:45	07:00			07:00		4 - 6 Peak Hour	16:30	17:00			16:30			
7 - 9 Pk Volume	650	877	0	0	1519		4 - 6 Pk Volume	872	845	0	0	1704			
Pk Hr Factor	0.973	0.843	0.000	0.000	0.894		Pk Hr Factor	0.905	0.965	0.000	0.000	0.951			

VOLUME

Alder Ave Bet. Renaissance Pkwy & Baseline Rd

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_003

DAILY TOTALS					NB	SB					EB	WB	Total
					9,273	9,673					0	0	18,946
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	14	22			36		12:00	136	97			233	
00:15	26	24			50		12:15	95	135			230	
00:30	25	20			45		12:30	163	144			307	
00:45	20	85	28	94	48	179	12:45	136	530	131	507	267	1037
01:00	21	22			43		13:00	125	115			240	
01:15	22	12			34		13:15	107	146			253	
01:30	21	24			45		13:30	154	113			267	
01:45	19	83	28	86	47	169	13:45	134	520	132	506	266	1026
02:00	22	12			34		14:00	129	132			261	
02:15	18	24			42		14:15	138	156			294	
02:30	31	19			50		14:30	202	167			369	
02:45	15	86	46	101	61	187	14:45	140	609	181	636	321	1245
03:00	25	24			49		15:00	171	156			327	
03:15	36	39			75		15:15	158	153			311	
03:30	43	57			100		15:30	181	158			339	
03:45	44	148	88	208	132	356	15:45	183	693	205	672	388	1365
04:00	60	41			101		16:00	154	147			301	
04:15	53	45			98		16:15	159	167			326	
04:30	100	75			175		16:30	185	157			342	
04:45	89	302	104	265	193	567	16:45	159	657	152	623	311	1280
05:00	107	45			152		17:00	172	149			321	
05:15	94	55			149		17:15	155	162			317	
05:30	104	98			202		17:30	194	158			352	
05:45	90	395	121	319	211	714	17:45	152	673	155	624	307	1297
06:00	109	67			176		18:00	192	157			349	
06:15	118	109			227		18:15	149	169			318	
06:30	111	123			234		18:30	137	124			261	
06:45	107	445	150	449	257	894	18:45	108	586	123	573	231	1159
07:00	112	155			267		19:00	105	127			232	
07:15	122	189			311		19:15	89	122			211	
07:30	128	179			307		19:30	93	94			187	
07:45	148	510	237	760	385	1270	19:45	57	344	90	433	147	777
08:00	163	155			318		20:00	84	87			171	
08:15	147	165			312		20:15	70	88			158	
08:30	128	119			247		20:30	80	97			177	
08:45	103	541	124	563	227	1104	20:45	50	284	75	347	125	631
09:00	108	93			201		21:00	51	69			120	
09:15	95	97			192		21:15	51	75			126	
09:30	97	100			197		21:30	47	69			116	
09:45	111	411	122	412	233	823	21:45	38	187	69	282	107	469
10:00	97	90			187		22:00	63	55			118	
10:15	84	113			197		22:15	43	51			94	
10:30	102	94			196		22:30	42	53			95	
10:45	99	382	114	411	213	793	22:45	21	169	56	215	77	384
11:00	121	100			221		23:00	25	43			68	
11:15	116	119			235		23:15	36	33			69	
11:30	128	121			249		23:30	64	38			102	
11:45	115	480	105	445	220	925	23:45	28	153	28	142	56	295
TOTALS	3868	4113			7981		TOTALS	5405	5560			10965	
SPLIT %	48.5%	51.5%			42.1%		SPLIT %	49.3%	50.7%			57.9%	

DAILY TOTALS					NB	SB					EB	WB	Total
					9,273	9,673					0	0	18,946
AM Peak Hour	07:30	07:00			07:30		PM Peak Hour	15:00	15:30				15:00
AM Pk Volume	586	760			1322		PM Pk Volume	693	677				1365
Pk Hr Factor	0.899	0.802			0.858		Pk Hr Factor	0.947	0.826				0.880
7 - 9 Volume	1051	1323	0	0	2374		4 - 6 Volume	1330	1247	0	0		2577
7 - 9 Peak Hour	07:30	07:00			07:30		4 - 6 Peak Hour	16:45	16:15				16:45
7 - 9 Pk Volume	586	760	0	0	1322		4 - 6 Pk Volume	680	625	0	0		1301
Pk Hr Factor	0.899	0.802	0.000	0.000	0.858		Pk Hr Factor	0.876	0.936	0.000	0.000		0.924

VOLUME

Ayala Dr Bet. Renaissance Pkwy & Fitzgerald Ave

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_004

DAILY TOTALS					NB	SB	EB					WB	Total
					12,546	13,064						0	0
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	16	34			50		12:00	195	137			332	
00:15	19	35			54		12:15	197	162			359	
00:30	12	34			46		12:30	159	189			348	
00:45	17	64	24	127	41	191	12:45	149	700	197	685	346	1385
01:00	7	22			29		13:00	163	158			321	
01:15	18	23			41		13:15	188	186			374	
01:30	14	13			27		13:30	163	200			363	
01:45	12	51	12	70	24	121	13:45	187	701	201	745	388	1446
02:00	11	11			22		14:00	182	233			415	
02:15	19	14			33		14:15	232	205			437	
02:30	20	14			34		14:30	239	256			495	
02:45	32	82	13	52	45	134	14:45	250	903	261	955	511	1858
03:00	21	18			39		15:00	226	257			483	
03:15	31	19			50		15:15	267	207			474	
03:30	39	21			60		15:30	272	262			534	
03:45	49	140	27	85	76	225	15:45	247	1012	266	992	513	2004
04:00	51	25			76		16:00	196	251			447	
04:15	61	25			86		16:15	214	238			452	
04:30	97	35			132		16:30	251	240			491	
04:45	74	283	68	153	142	436	16:45	225	886	279	1008	504	1894
05:00	108	42			150		17:00	236	286			522	
05:15	98	42			140		17:15	254	247			501	
05:30	153	76			229		17:30	234	252			486	
05:45	100	459	117	277	217	736	17:45	234	958	245	1030	479	1988
06:00	124	77			201		18:00	202	225			427	
06:15	118	90			208		18:15	219	222			441	
06:30	150	119			269		18:30	176	233			409	
06:45	166	558	161	447	327	1005	18:45	191	788	254	934	445	1722
07:00	189	160			349		19:00	163	222			385	
07:15	176	188			364		19:15	169	237			406	
07:30	213	216			429		19:30	142	141			283	
07:45	208	786	176	740	384	1526	19:45	101	575	183	783	284	1358
08:00	249	177			426		20:00	105	160			265	
08:15	179	160			339		20:15	109	163			272	
08:30	167	167			334		20:30	89	148			237	
08:45	152	747	150	654	302	1401	20:45	108	411	142	613	250	1024
09:00	154	130			284		21:00	89	122			211	
09:15	142	123			265		21:15	93	140			233	
09:30	149	129			278		21:30	70	110			180	
09:45	132	577	139	521	271	1098	21:45	53	305	127	499	180	804
10:00	128	129			257		22:00	56	89			145	
10:15	166	128			294		22:15	47	95			142	
10:30	151	135			286		22:30	47	89			136	
10:45	146	591	145	537	291	1128	22:45	31	181	55	328	86	509
11:00	158	139			297		23:00	38	59			97	
11:15	161	169			330		23:15	22	66			88	
11:30	210	137			347		23:30	31	48			79	
11:45	150	679	169	614	319	1293	23:45	18	109	42	215	60	324
TOTALS	5017	4277			9294		TOTALS	7529	8787			16316	
SPLIT %	54.0%	46.0%			36.3%		SPLIT %	46.1%	53.9%			63.7%	

DAILY TOTALS					NB	SB	EB					WB	Total
					12,546	13,064						0	0

DAILY TOTALS					NB	SB	EB	WB	Total
					12,546	13,064	0	0	25,610
AM Peak Hour	07:30	07:15		07:15	PM Peak Hour	14:45	16:45		16:30
AM Pk Volume	849	757		1603	PM Pk Volume	1015	1064		2018
Pk Hr Factor	0.852	0.876		0.934	Pk Hr Factor	0.933	0.930		0.966
7 - 9 Volume	1533	1394	0	0	4 - 6 Volume	1844	2038	0	0
7 - 9 Peak Hour	07:30	07:15		07:15	4 - 6 Peak Hour	16:30	16:45		16:30
7 - 9 Pk Volume	849	757	0	0	4 - 6 Pk Volume	966	1064	0	0
Pk Hr Factor	0.852	0.876	0.000	0.000	Pk Hr Factor	0.951	0.930	0.000	0.000

VOLUME

Ayala Dr Bet. Fitzgerald Ave & Baseline Rd

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_005

DAILY TOTALS					NB	SB					EB	WB	Total
					10,732	10,714					0	0	21,446
AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL		
00:00	15	28			43	12:00	171	112			283		
00:15	15	27			42	12:15	162	128			290		
00:30	11	27			38	12:30	142	161			303		
00:45	16	57	21	103	37 160	12:45	142	617	169	570	311 1187		
01:00	5	16			21	13:00	137	128			265		
01:15	14	17			31	13:15	154	157			311		
01:30	14	11			25	13:30	144	164			308		
01:45	13	46	9	53	22 99	13:45	157	592	163	612	320 1204		
02:00	12	8			20	14:00	153	188			341		
02:15	17	9			26	14:15	199	156			355		
02:30	17	12			29	14:30	201	214			415		
02:45	29	75	11	40	40 115	14:45	214	767	219	777	433 1544		
03:00	14	18			32	15:00	192	201			393		
03:15	26	16			42	15:15	226	173			399		
03:30	30	21			51	15:30	238	217			455		
03:45	44	114	24	79	68 193	15:45	219	875	227	818	446 1693		
04:00	41	19			60	16:00	171	212			383		
04:15	49	23			72	16:15	182	184			366		
04:30	83	33			116	16:30	211	190			401		
04:45	59	232	61	136	120 368	16:45	197	761	224	810	421 1571		
05:00	92	37			129	17:00	189	241			430		
05:15	69	39			108	17:15	226	191			417		
05:30	125	64			189	17:30	195	209			404		
05:45	81	367	85	225	166 592	17:45	206	816	208	849	414 1665		
06:00	112	54			166	18:00	178	181			359		
06:15	101	77			178	18:15	176	180			356		
06:30	126	99			225	18:30	154	197			351		
06:45	137	476	134	364	271 840	18:45	162	670	204	762	366 1432		
07:00	153	130			283	19:00	144	183			327		
07:15	148	163			311	19:15	144	199			343		
07:30	171	189			360	19:30	121	119			240		
07:45	185	657	150	632	335 1289	19:45	89	498	144	645	233 1143		
08:00	220	136			356	20:00	91	129			220		
08:15	151	123			274	20:15	96	136			232		
08:30	137	135			272	20:30	82	126			208		
08:45	126	634	119	513	245 1147	20:45	96	365	122	513	218 878		
09:00	122	100			222	21:00	75	101			176		
09:15	121	105			226	21:15	84	114			198		
09:30	133	100			233	21:30	59	90			149		
09:45	103	479	114	419	217 898	21:45	41	259	100	405	141 664		
10:00	109	106			215	22:00	48	76			124		
10:15	138	107			245	22:15	40	76			116		
10:30	144	106			250	22:30	41	71			112		
10:45	138	529	123	442	261 971	22:45	30	159	42	265	72 424		
11:00	121	108			229	23:00	31	50			81		
11:15	147	145			292	23:15	21	50			71		
11:30	192	121			313	23:30	29	37			66		
11:45	127	587	140	514	267 1101	23:45	19	100	31	168	50 268		
TOTALS	4253	3520			7773	TOTALS	6479	7194			13673		
SPLIT %	54.7%	45.3%			36.2%	SPLIT %	47.4%	52.6%			63.8%		

DAILY TOTALS					NB	SB					EB	WB	Total
					10,732	10,714					0	0	21,446
AM Peak Hour	07:30	07:15			07:15	PM Peak Hour	15:00	16:45			15:00		
AM Pk Volume	727	638			1362	PM Pk Volume	875	865			1693		
Pk Hr Factor	0.826	0.844			0.946	Pk Hr Factor	0.919	0.897			0.930		
7 - 9 Volume	1291	1145	0	0	2436	4 - 6 Volume	1577	1659	0	0	3236		
7 - 9 Peak Hour	07:30	07:15			07:15	4 - 6 Peak Hour	16:30	16:45			16:45		
7 - 9 Pk Volume	727	638	0	0	1362	4 - 6 Pk Volume	823	865	0	0	1672		
Pk Hr Factor	0.826	0.844	0.000	0.000	0.946	Pk Hr Factor	0.910	0.897	0.000	0.000	0.972		

VOLUME

Linden Ave Bet. Miro Way & Baseline Rd

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_006

DAILY TOTALS					NB	SB	EB					WB	Total
					4,336	4,726						0	0
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL	
00:00	6	18			24		12:00	54	52			106	
00:15	7	19			26		12:15	52	51			103	
00:30	3	15			18		12:30	53	58			111	
00:45	7	23	14	66	21	89	12:45	56	215	56	217	112	432
01:00	11	85			96		13:00	49	52			101	
01:15	30	17			47		13:15	35	56			91	
01:30	53	15			68		13:30	42	60			102	
01:45	20	114	14	131	34	245	13:45	57	183	69	237	126	420
02:00	2	10			12		14:00	43	55			98	
02:15	7	10			17		14:15	44	38			82	
02:30	9	15			24		14:30	49	92			141	
02:45	11	29	6	41	17	70	14:45	82	218	70	255	152	473
03:00	7	8			15		15:00	72	75			147	
03:15	10	5			15		15:15	73	78			151	
03:30	18	17			35		15:30	98	195			293	
03:45	34	69	21	51	55	120	15:45	69	312	139	487	208	799
04:00	15	61			76		16:00	78	85			163	
04:15	12	32			44		16:15	105	71			176	
04:30	25	88			113		16:30	62	122			184	
04:45	36	88	31	212	67	300	16:45	91	336	75	353	166	689
05:00	26	18			44		17:00	85	168			253	
05:15	28	22			50		17:15	106	82			188	
05:30	44	23			67		17:30	93	79			172	
05:45	83	181	29	92	112	273	17:45	132	416	73	402	205	818
06:00	70	45			115		18:00	73	70			143	
06:15	98	107			205		18:15	57	73			130	
06:30	73	62			135		18:30	58	51			109	
06:45	104	345	43	257	147	602	18:45	47	235	53	247	100	482
07:00	61	57			118		19:00	38	56			94	
07:15	39	41			80		19:15	44	42			86	
07:30	62	38			100		19:30	47	39			86	
07:45	53	215	49	185	102	400	19:45	34	163	44	181	78	344
08:00	76	67			143		20:00	34	44			78	
08:15	94	63			157		20:15	34	43			77	
08:30	67	66			133		20:30	37	42			79	
08:45	44	281	47	243	91	524	20:45	48	153	27	156	75	309
09:00	42	34			76		21:00	32	54			86	
09:15	39	43			82		21:15	29	45			74	
09:30	25	39			64		21:30	26	49			75	
09:45	53	159	28	144	81	303	21:45	27	114	35	183	62	297
10:00	38	37			75		22:00	22	42			64	
10:15	34	23			57		22:15	27	23			50	
10:30	31	36			67		22:30	29	26			55	
10:45	42	145	37	133	79	278	22:45	15	93	35	126	50	219
11:00	46	74			120		23:00	15	37			52	
11:15	62	51			113		23:15	7	19			26	
11:30	56	53			109		23:30	4	23			27	
11:45	48	212	50	228	98	440	23:45	11	37	20	99	31	136
TOTALS	1861	1783			3644		TOTALS	2475	2943			5418	
SPLIT %	51.1%	48.9%			40.2%		SPLIT %	45.7%	54.3%			59.8%	

DAILY TOTALS					NB	SB	EBWB					Total
					4,336	4,726						0
AM Peak Hour	06:00	06:15		06:15	PM Peak Hour	17:00	15:15		15:30			
AM Pk Volume	345	269		605	PM Pk Volume	416	497		840			
Pk Hr Factor	0.829	0.629		0.738	Pk Hr Factor	0.788	0.637		0.717			
7 - 9 Volume	496	428	0	0	4 - 6 Volume	752	755	0	0		1507	
7 - 9 Peak Hour	07:45	07:45		07:45	4 - 6 Peak Hour	17:00	16:30				17:00	
7 - 9 Pk Volume	290	245	0	0	4 - 6 Pk Volume	416	447	0	0		818	
Pk Hr Factor	0.771	0.914	0.000	0.000	Pk Hr Factor	0.788	0.665	0.000	0.000		0.808	

VOLUME

Baseline Rd Bet. Alder Ave & Linden Ave

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_007

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						6,212	6,485	12,697	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			12	16	28		12:00			87	80	167			
00:15			4	13	17		12:15			65	81	146			
00:30			15	11	26		12:30			103	90	193			
00:45			9	40	12	52	12:45			79	334	92	343	171	677
01:00			9	37	46		13:00			90	97	187			
01:15			12	14	26		13:15			73	100	173			
01:30			24	15	39		13:30			106	102	208			
01:45			11	56	10	76	13:45			100	369	91	390	191	759
02:00			3	9	12		14:00			94	105	199			
02:15			7	5	12		14:15			96	135	231			
02:30			5	22	27		14:30			140	117	257			
02:45			6	21	16	52	14:45			155	485	128	485	283	970
03:00			9	15	24		15:00			124	116	240			
03:15			2	11	13		15:15			130	118	248			
03:30			2	29	31		15:30			131	145	276			
03:45			12	25	49	104	15:45			155	540	119	498	274	1038
04:00			16	30	46		16:00			161	98	259			
04:15			11	42	53		16:15			151	132	283			
04:30			29	64	93		16:30			146	98	244			
04:45			24	80	66	202	16:45			152	610	101	429	253	1039
05:00			18	35	53		17:00			150	139	289			
05:15			27	33	60		17:15			146	100	246			
05:30			36	69	105		17:30			118	111	229			
05:45			38	119	75	212	17:45			121	535	98	448	219	983
06:00			39	60	99		18:00			122	105	227			
06:15			63	69	132		18:15			107	81	188			
06:30			38	65	103		18:30			90	74	164			
06:45			46	186	98	292	18:45			85	404	80	340	165	744
07:00			49	87	136		19:00			71	88	159			
07:15			75	121	196		19:15			71	67	138			
07:30			101	149	250		19:30			73	51	124			
07:45			123	348	137	494	19:45			57	272	69	275	126	547
08:00			114	107	221		20:00			50	46	96			
08:15			92	102	194		20:15			50	51	101			
08:30			102	68	170		20:30			60	42	102			
08:45			65	373	70	347	20:45			44	204	39	178	83	382
09:00			66	75	141		21:00			46	50	96			
09:15			61	63	124		21:15			35	44	79			
09:30			59	73	132		21:30			33	44	77			
09:45			62	248	72	283	21:45			36	150	26	164	62	314
10:00			57	68	125		22:00			33	25	58			
10:15			63	73	136		22:15			34	32	66			
10:30			78	55	133		22:30			34	30	64			
10:45			63	261	93	289	22:45			16	117	23	110	39	227
11:00			79	71	150		23:00			22	22	44			
11:15			86	86	172		23:15			30	26	56			
11:30			82	86	168		23:30			29	18	47			
11:45			87	334	94	337	23:45			20	101	19	85	39	186
TOTALS			2091	2740	4831		TOTALS			4121	3745	7866			
SPLIT %			43.3%	56.7%	38.0%		SPLIT %			52.4%	47.6%	62.0%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						6,212	6,485	12,697	
AM Peak Hour			07:45	07:15	07:15		PM Peak Hour			15:45	14:45	15:30			
AM Pk Volume			431	514	927		PM Pk Volume			613	507	1092			
Pk Hr Factor			0.876	0.862	0.891		Pk Hr Factor			0.952	0.874	0.965			
7 - 9 Volume	0	0	721	841	1562		4 - 6 Volume	0	0	1145	877	2022			
7 - 9 Peak Hour			07:45	07:15	07:15		4 - 6 Peak Hour			16:00	16:15	16:15			
7 - 9 Pk Volume	0	0	431	514	927		4 - 6 Pk Volume	0	0	610	470	1069			
Pk Hr Factor	0.000	0.000	0.876	0.862	0.891		Pk Hr Factor	0.000	0.000	0.947	0.845	0.925			

VOLUME

Baseline Rd Bet. Linden Ave & Ayala Dr

Day: Tuesday
Date: 3/7/2023City: Rialto
Project #: CA23_030024_008

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						7,466	6,273	13,739	
AM Period	NB	SB	EB	WB	TOTAL		PM Period	NB	SB	EB	WB	TOTAL			
00:00			21	17	38		12:00			96	73	169			
00:15			11	11	22		12:15			90	75	165			
00:30			19	11	30		12:30			113	82	195			
00:45			14	65	11	50	12:45			100	399	100	330	200	729
01:00			44	16	60		13:00			105	94	199			
01:15			13	11	24		13:15			82	89	171			
01:30			19	23	42		13:30			131	82	213			
01:45			15	91	11	61	13:45			112	430	85	350	197	780
02:00			8	5	13		14:00			113	89	202			
02:15			13	4	17		14:15			105	111	216			
02:30			10	21	31		14:30			179	100	279			
02:45			15	46	18	48	14:45			139	536	113	413	252	949
03:00			10	13	23		15:00			143	109	252			
03:15			5	10	15		15:15			131	88	219			
03:30			11	36	47		15:30			227	82	309			
03:45			25	51	52	111	15:45			191	692	97	376	288	1068
04:00			50	14	64		16:00			186	131	317			
04:15			30	34	64		16:15			146	127	273			
04:30			72	36	108		16:30			184	135	319			
04:45			32	184	73	157	16:45			161	677	118	511	279	1188
05:00			26	32	58		17:00			200	130	330			
05:15			33	39	72		17:15			159	112	271			
05:30			41	66	107		17:30			129	134	263			
05:45			42	142	72	209	17:45			127	615	131	507	258	1122
06:00			50	46	96		18:00			145	114	259			
06:15			109	36	145		18:15			107	82	189			
06:30			65	50	115		18:30			115	84	199			
06:45			65	289	98	230	18:45			95	462	85	365	180	827
07:00			87	84	171		19:00			80	81	161			
07:15			85	124	209		19:15			52	66	118			
07:30			112	151	263		19:30			82	53	135			
07:45			141	425	127	486	19:45			55	269	62	262	117	531
08:00			128	114	242		20:00			56	47	103			
08:15			108	118	226		20:15			54	48	102			
08:30			96	81	177		20:30			73	49	122			
08:45			86	418	87	400	20:45			42	225	49	193	91	418
09:00			77	71	148		21:00			53	41	94			
09:15			82	56	138		21:15			49	49	98			
09:30			80	68	148		21:30			52	47	99			
09:45			70	309	77	272	21:45			41	195	32	169	73	364
10:00			75	58	133		22:00			59	27	86			
10:15			66	79	145		22:15			31	37	68			
10:30			92	54	146		22:30			35	26	61			
10:45			65	298	101	292	22:45			25	150	16	106	41	256
11:00			89	52	141		23:00			28	15	43			
11:15			102	85	187		23:15			37	24	61			
11:30			95	79	174		23:30			30	18	48			
11:45			96	382	84	300	23:45			21	116	18	75	39	191
TOTALS			2700	2616	5316		TOTALS			4766	3657	8423			
SPLIT %			50.8%	49.2%	38.7%		SPLIT %			56.6%	43.4%	61.3%			

DAILY TOTALS					NB	SB						EB	WB	Total	
					0	0						7,466	6,273	13,739	
AM Peak Hour			07:30	07:15	07:30		PM Peak Hour			15:30	16:00	16:15			
AM Pk Volume			489	516	999		PM Pk Volume			750	511	1201			
Pk Hr Factor			0.867	0.854	0.932		Pk Hr Factor			0.826	0.946	0.910			
7 - 9 Volume	0	0	843	886	1729		4 - 6 Volume	0	0	1292	1018	2310			
7 - 9 Peak Hour			07:30	07:15	07:30		4 - 6 Peak Hour			16:30	16:00	16:15			
7 - 9 Pk Volume	0	0	489	516	999		4 - 6 Pk Volume	0	0	704	511	1201			
Pk Hr Factor	0.000	0.000	0.867	0.854	0.932		Pk Hr Factor	0.000	0.000	0.880	0.946	0.910			

APPENDIX C

PCE WORKSHEETS

Existing Peak Hour Volumes - Classification Counts

1	Alder Ave at SR-210 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	269	5	7	35	47	14.9%	127	2.7	396		356	2	7	34	43	10.8%	119	2.8	475		
NT	173	9	18	40	67	27.9%	170	2.5	343		181	9	8	29	46	20.3%	117	2.5	298		
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	7	1	1	2	4	36.4%	10	2.5	17		217	6	3	20	29	11.8%	75	2.6	292		
SR	9	2	0	0	2	18.2%	3	1.5	12		200	6	16	45	67	25.1%	176	2.6	376		
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	377	5	2	14	21	5.3%	54	2.6	431		268	1	2	7	10	3.6%	27	2.7	295		
WT	2	0	0	1	1	33.3%	3	3.0	5		2	0	1	0	1	33.3%	2	2.0	4		
WR	72	11	10	16	37	33.9%	85	2.3	157		59	3	4	17	24	28.9%	64	2.7	123		
										1,361											1,863
North Leg Volumes																					
Approach	16	3	1	2	6		13		29		417	12	19	65	96		251		668		
Depart	245	20	28	56	104		255		500		240	12	12	46	70		181		421		
Total	261	23	29	58	110	29.6%	268	2.4	529		657	24	31	111	166	20.2%	432	2.6	1,089		
South Leg Volumes																					
Approach	442	14	25	75	114		297		739		537	11	15	63	89		236		773		
Depart	384	6	3	16	25		64		448		485	7	5	27	39		102		587		
Total	826	20	28	91	139	14.4%	361	2.6	1,187		1,022	18	20	90	128	11.1%	338	2.6	1,360		
East Leg Volumes																					
Approach	451	16	12	31	59		142		593		329	4	7	24	35		93		422		
Depart	0	0	0	0	0		0		0		0	0	0	0	0		0		0		
Total	451	16	12	31	59	11.6%	142	2.4	593		329	4	7	24	35	9.6%	93	2.7	422		
West Leg Volumes																					
Approach	0	0	0	0	0		0		0		0	0	0	0	0		0		0		
Depart	280	7	7	36	50		133		413		558	8	24	79	111		297		855		
Total	280	7	7	36	50	15.2%	133	2.7	413		558	8	24	79	111	16.6%	297	2.7	855		
All Legs																					
Approach	909	33	38	108	179		452		1,361		1,283	27	41	152	220		580		1,863		
Depart	909	33	38	108	179		452		1,361		1,283	27	41	152	220		580		1,863		
Total	1,818	66	76	216	358	16.5%	904	2.5	2,722		2,566	54	82	304	440	14.6%	1,160	2.6	3,726		

Existing Peak Hour Volumes - Classification Counts

2 Alder Ave at SR-210 EB Ramps

AM Peak Hour Volumes										PM Peak Hour Volumes									
	Passenger Vehicles	Truck Volumes							Total PCE Volume	Passenger Vehicles	Truck Volumes							Total PCE Volume	
		2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE			2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE		
		1.5	2.0	3.0							1.5	2.0	3.0						
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0		
NT	306	8	12	48	68	18.2%	180	2.6	486	433	4	9	36	49	10.2%	132	2.7	565	
NR	241	2	7	25	34	12.4%	92	2.7	333	361	4	7	13	24	6.2%	59	2.5	420	
SL	2	1	1	0	2	50.0%	4	2.0	6	114	3	0	12	15	11.6%	41	2.7	155	
ST	354	3	4	18	25	6.6%	67	2.7	421	385	1	2	13	16	4.0%	45	2.8	430	
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
EL	137	9	15	39	63	31.5%	161	2.6	298	119	5	8	20	33	21.7%	84	2.5	203	
ET	1	1	0	0	1	50.0%	2	2.0	3	1	0	0	1	1	50.0%	3	3.0	4	
ER	408	9	13	56	78	16.0%	208	2.7	616	380	7	9	31	47	11.0%	122	2.6	502	
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	
2,163										2,279									
North Leg Volumes																			
Approach	356	4	5	18	27		71		427	499	4	2	25	31		86		585	
Depart	443	17	27	87	131		341		784	552	9	17	56	82		216		768	
Total	799	21	32	105	158	16.5%	412	2.6	1,211	1,051	13	19	81	113	9.7%	302	2.7	1,353	
South Leg Volumes																			
Approach	547	10	19	73	102		272		819	794	8	16	49	73		191		985	
Depart	762	12	17	74	103		275		1,037	765	8	11	44	63		167		932	
Total	1,309	22	36	147	205	13.5%	547	2.7	1,856	1,559	16	27	93	136	8.0%	358	2.6	1,917	
East Leg Volumes																			
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Depart	244	4	8	25	37		98		342	476	7	7	26	40		103		579	
Total	244	4	8	25	37	13.2%	98	2.6	342	476	7	7	26	40	7.8%	103	2.6	579	
West Leg Volumes																			
Approach	546	19	28	95	142		371		917	500	12	17	52	81		209		709	
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Total	546	19	28	95	142	20.6%	371	2.6	917	500	12	17	52	81	13.9%	209	2.6	709	
All Legs																			
Approach	1,449	33	52	186	271		714		2,163	1,793	24	35	126	185		486		2,279	
Depart	1,449	33	52	186	271		714		2,163	1,793	24	35	126	185		486		2,279	
Total	2,898	66	104	372	542	15.8%	1,428	2.6	4,326	3,586	48	70	252	370	9.4%	972	2.6	4,558	

Existing Peak Hour Volumes - Classification Counts

3 Alder Ave at Renaissance Pkwy

	AM Peak Hour Volumes								Total PCE Volume	PM Peak Hour Volumes								Total PCE Volume	
	Passenger Vehicles	Truck Volumes						Average PCE		Passenger Vehicles	Truck Volumes						Average PCE		
		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	115	1	2	2	5	4.2%	12	2.4	127	46	1	0	1	2	4.2%	5	2.5	51	
NT	396	7	11	46	64	13.9%	171	2.7	567	547	6	8	29	43	7.3%	112	2.6	659	
NR	11	1	1	0	2	15.4%	4	2.0	15	32	0	1	0	1	3.0%	2	2.0	34	
SL	69	4	1	26	31	31.0%	86	2.8	155	134	2	2	14	18	11.8%	49	2.7	183	
ST	595	3	11	51	65	9.8%	180	2.8	775	497	6	8	27	41	7.6%	106	2.6	603	
SR	70	0	1	2	3	4.1%	8	2.7	78	127	0	1	3	4	3.1%	11	2.8	138	
EL	78	2	2	4	8	9.3%	19	2.4	97	86	1	2	1	4	4.4%	9	2.3	95	
ET	147	7	0	0	7	4.5%	11	1.6	158	253	3	1	3	7	2.7%	16	2.3	269	
ER	60	2	1	5	8	11.8%	20	2.5	80	67	0	0	0	0	0.0%	0	0.0	67	
WL	23	0	0	1	1	4.2%	3	3.0	26	11	0	0	3	3	21.4%	9	3.0	20	
WT	122	4	0	4	8	6.2%	18	2.3	140	170	0	1	0	1	0.6%	2	2.0	172	
WR	68	5	6	37	48	41.4%	131	2.7	199	150	1	6	19	26	14.8%	71	2.7	221	
									2,417										2,512
North Leg Volumes																			
Approach	734	7	13	79	99		274		1,008	758	8	11	44	63		166		924	
Depart	542	14	19	87	120		321		863	783	8	16	49	73		192		975	
Total	1,276	21	32	166	219	14.6%	595	2.7	1,871	1,541	16	27	93	136	8.1%	358	2.6	1,899	
South Leg Volumes																			
Approach	522	9	14	48	71		187		709	625	7	9	30	46		119		744	
Depart	678	5	12	57	74		203		881	575	6	8	30	44		115		690	
Total	1,200	14	26	105	145	10.8%	390	2.7	1,590	1,200	13	17	60	90	7.0%	234	2.6	1,434	
East Leg Volumes																			
Approach	213	9	6	42	57		152		365	331	1	7	22	30		82		413	
Depart	227	12	2	26	40		101		328	419	5	4	17	26		67		486	
Total	440	21	8	68	97	18.1%	253	2.6	693	750	6	11	39	56	6.9%	149	2.7	899	
West Leg Volumes																			
Approach	285	11	3	9	23		50		335	406	4	3	4	11		25		431	
Depart	307	5	3	8	16		38		345	343	1	2	4	7		18		361	
Total	592	16	6	17	39	6.2%	88	2.3	680	749	5	5	8	18	2.3%	43	2.4	792	
All Legs																			
Approach	1,754	36	36	178	250		663		2,417	2,120	20	30	100	150		392		2,512	
Depart	1,754	36	36	178	250		663		2,417	2,120	20	30	100	150		392		2,512	
Total	3,508	72	72	356	500	12.5%	1,326	2.7	4,834	4,240	40	60	200	300	6.6%	784	2.6	5,024	

Existing Peak Hour Volumes - Classification Counts

4 Alder Ave at Base Line Rd

	AM Peak Hour Volumes								Total PCE Volume	PM Peak Hour Volumes								Total PCE Volume	
	Passenger Vehicles	Truck Volumes						Average PCE		Passenger Vehicles	Truck Volumes						Average PCE		
		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	152	2	1	0	3	1.9%	5	1.7	157	43	0	0	0	0	0.0%	0	0.0	43	
NT	286	3	5	0	8	2.7%	15	1.9	301	320	2	0	0	2	0.6%	3	1.5	323	
NR	93	3	1	0	4	4.1%	7	1.8	100	44	0	0	0	0	0.0%	0	0.0	44	
SL	42	0	0	7	7	14.3%	21	3.0	63	82	3	2	9	14	14.6%	36	2.6	118	
ST	334	2	1	2	5	1.5%	11	2.2	345	352	2	1	2	5	1.4%	11	2.2	363	
SR	128	2	2	1	5	3.8%	10	2.0	138	112	1	0	3	4	3.4%	11	2.8	123	
EL	90	1	2	0	3	3.2%	6	2.0	96	70	4	0	1	5	6.7%	9	1.8	79	
ET	332	10	1	8	19	5.4%	41	2.2	373	414	4	1	4	9	2.1%	20	2.2	434	
ER	65	4	0	1	5	7.1%	9	1.8	74	61	1	0	0	1	1.6%	2	2.0	63	
WL	38	0	0	1	1	2.6%	3	3.0	41	52	1	0	1	2	3.7%	5	2.5	57	
WT	437	12	1	5	18	4.0%	35	1.9	472	317	6	1	6	13	3.9%	29	2.2	346	
WR	90	2	4	9	15	14.3%	38	2.5	128	65	1	1	6	8	11.0%	22	2.8	87	
									2,288										2,080
North Leg Volumes																			
Approach	504	4	3	10	17		42		546	546	6	3	14	23		58		604	
Depart	466	6	11	9	26		59		525	455	7	1	7	15		34		489	
Total	970	10	14	19	43	4.2%	101	2.3	1,071	1,001	13	4	21	38	3.7%	92	2.4	1,093	
South Leg Volumes																			
Approach	531	8	7	0	15		27		558	407	2	0	0	2		3		410	
Depart	437	6	1	4	11		23		460	465	4	1	3	8		18		483	
Total	968	14	8	4	26	2.6%	50	1.9	1,018	872	6	1	3	10	1.1%	21	2.1	893	
East Leg Volumes																			
Approach	565	14	5	15	34		76		641	434	8	2	13	23		56		490	
Depart	467	13	2	15	30		69		536	540	7	3	13	23		56		596	
Total	1,032	27	7	30	64	5.8%	145	2.3	1,177	974	15	5	26	46	4.5%	112	2.4	1,086	
West Leg Volumes																			
Approach	487	15	3	9	27		56		543	545	9	1	5	15		31		576	
Depart	717	16	4	6	26		50		767	472	7	1	9	17		40		512	
Total	1,204	31	7	15	53	4.2%	106	2.0	1,310	1,017	16	2	14	32	3.1%	71	2.2	1,088	
All Legs																			
Approach	2,087	41	18	34	93		201		2,288	1,932	25	6	32	63		148		2,080	
Depart	2,087	41	18	34	93		201		2,288	1,932	25	6	32	63		148		2,080	
Total	4,174	82	36	68	186	4.3%	402	2.2	4,576	3,864	50	12	64	126	3.2%	296	2.3	4,160	

Existing Peak Hour Volumes - Classification Counts

5 Ayala Dr at Renaissance Pkwy

	AM Peak Hour Volumes								Total PCE Volume	PM Peak Hour Volumes								Total PCE Volume	
	Passenger Vehicles	Truck Volumes						Average PCE		Passenger Vehicles	Truck Volumes						Average PCE		
		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	43	1	1	0	2	4.4%	4	2.0	47	106	0	0	0	0	0.0%	0	0.0	106	
NT	688	5	1	6	12	1.7%	28	2.3	716	762	4	0	2	6	0.8%	12	2.0	774	
NR	35	2	0	0	2	5.4%	3	1.5	38	75	0	0	0	0	0.0%	0	0.0	75	
SL	194	1	1	0	2	1.0%	4	2.0	198	340	1	0	0	1	0.3%	2	2.0	342	
ST	654	18	1	5	24	3.5%	44	1.8	698	791	7	0	1	8	1.0%	14	1.8	805	
SR	325	2	2	3	7	2.1%	16	2.3	341	546	3	4	0	7	1.3%	13	1.9	559	
EL	218	8	1	1	10	4.4%	17	1.7	235	371	2	1	1	4	1.1%	8	2.0	379	
ET	103	2	0	0	2	1.9%	3	1.5	106	373	3	0	0	3	0.8%	5	1.7	378	
ER	77	2	0	0	2	2.5%	3	1.5	80	107	0	3	0	3	2.7%	6	2.0	113	
WL	24	3	0	0	3	11.1%	5	1.7	29	58	2	0	0	2	3.3%	3	1.5	61	
WT	118	1	1	0	2	1.7%	4	2.0	122	181	2	0	0	2	1.1%	3	1.5	184	
WR	343	3	1	0	4	1.2%	7	1.8	350	355	1	0	0	1	0.3%	2	2.0	357	
									2,960										4,133
North Leg Volumes																			
Approach	1,173	21	4	8	33		64		1,237	1,677	11	4	1	16		29		1,706	
Depart	1,249	16	3	7	26		52		1,301	1,488	7	1	3	11		22		1,510	
Total	2,422	37	7	15	59	2.4%	116	2.0	2,538	3,165	18	5	4	27	0.8%	51	1.9	3,216	
South Leg Volumes																			
Approach	766	8	2	6	16		35		801	943	4	0	2	6		12		955	
Depart	755	23	1	5	29		52		807	956	9	3	1	13		23		979	
Total	1,521	31	3	11	45	2.9%	87	1.9	1,608	1,899	13	3	3	19	1.0%	35	1.8	1,934	
East Leg Volumes																			
Approach	485	7	2	0	9		16		501	594	5	0	0	5		8		602	
Depart	332	5	1	0	6		10		342	788	4	0	0	4		7		795	
Total	817	12	3	0	15	1.8%	26	1.7	843	1,382	9	0	0	9	0.6%	15	1.7	1,397	
West Leg Volumes																			
Approach	398	12	1	1	14		23		421	851	5	4	1	10		19		870	
Depart	486	4	4	3	11		24		510	833	5	4	0	9		16		849	
Total	884	16	5	4	25	2.8%	47	1.9	931	1,684	10	8	1	19	1.1%	35	1.8	1,719	
All Legs																			
Approach	2,822	48	9	15	72		138		2,960	4,065	25	8	4	37		68		4,133	
Depart	2,822	48	9	15	72		138		2,960	4,065	25	8	4	37		68		4,133	
Total	5,644	96	18	30	144	2.5%	276	1.9	5,920	8,130	50	16	8	74	0.9%	136	1.8	8,266	

Existing Peak Hour Volumes - Classification Counts

6 Ayala Dr at Fitzgerald Ave

	AM Peak Hour Volumes									PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume	Passenger Vehicles	Truck Volumes						Average PCE	Total PCE Volume
		2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE				2-Axle 1.5	3-Axle 2.0	4-Axle 3.0	Total Trucks	Truck %-age	PCE		
NL	14	0	0	0	0	0.0%	0	0.0	14	8	0	0	0	0	0.0%	0	0.0	8
NT	696	8	0	3	11	1.6%	21	1.9	717	802	5	0	0	5	0.6%	8	1.6	810
NR	3	0	0	0	0	0.0%	0	0.0	3	8	0	0	0	0	0.0%	0	0.0	8
SL	119	0	0	1	1	0.8%	3	3.0	122	206	2	0	0	2	1.0%	3	1.5	209
ST	606	13	0	5	18	2.9%	35	1.9	641	828	9	3	1	13	1.5%	23	1.8	851
SR	6	1	0	0	1	14.3%	2	2.0	8	1	0	0	0	0	0.0%	0	0.0	1
EL	1	0	0	0	0	0.0%	0	0.0	1	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	4	0	0	0	0	0.0%	0	0.0	4	5	0	0	0	0	0.0%	0	0.0	5
WL	3	0	0	0	0	0.0%	0	0.0	3	1	0	0	0	0	0.0%	0	0.0	1
WT	1	0	0	0	0	0.0%	0	0.0	1	1	1	0	0	1	50.0%	2	2.0	3
WR	133	2	0	0	2	1.5%	3	1.5	136	151	0	0	0	0	0.0%	0	0.0	151
1,650										2,047								
North Leg Volumes																		
Approach	731	14	0	6	20		40		771	1,035	11	3	1	15		26		1,061
Depart	830	10	0	3	13		24		854	953	5	0	0	5		8		961
Total	1,561	24	0	9	33	2.1%	64	1.9	1,625	1,988	16	3	1	20	1.0%	34	1.7	2,022
South Leg Volumes																		
Approach	713	8	0	3	11		21		734	818	5	0	0	5		8		826
Depart	613	13	0	5	18		35		648	834	9	3	1	13		23		857
Total	1,326	21	0	8	29	2.1%	56	1.9	1,382	1,652	14	3	1	18	1.1%	31	1.7	1,683
East Leg Volumes																		
Approach	137	2	0	0	2		3		140	153	1	0	0	1		2		155
Depart	122	0	0	1	1		3		125	214	2	0	0	2		3		217
Total	259	2	0	1	3	1.1%	6	2.0	265	367	3	0	0	3	0.8%	5	1.7	372
West Leg Volumes																		
Approach	5	0	0	0	0		0		5	5	0	0	0	0		0		5
Depart	21	1	0	0	1		2		23	10	1	0	0	1		2		12
Total	26	1	0	0	1	3.7%	2	2.0	28	15	1	0	0	1	6.3%	2	2.0	17
All Legs																		
Approach	1,586	24	0	9	33		64		1,650	2,011	17	3	1	21		36		2,047
Depart	1,586	24	0	9	33		64		1,650	2,011	17	3	1	21		36		2,047
Total	3,172	48	0	18	66	2.0%	128	1.9	3,300	4,022	34	6	2	42	1.0%	72	1.7	4,094

Existing Peak Hour Volumes - Classification Counts

7

Ayala Dr at Miro Way - FUTURE INT

AM Peak Hour Volumes										PM Peak Hour Volumes								
	Passenger Vehicles	Truck Volumes							Total PCE Volume	Passenger Vehicles	Truck Volumes							Total PCE Volume
		2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE			2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE	
NL	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NT	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
NR	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	
ST	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
SR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
EL	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	
ER	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
WL	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	
WR	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
										0								0
North Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
South Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
East Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
West Leg Volumes																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	
All Legs																		
Approach	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0	0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0.0%	0	0.0	0	

Existing Peak Hour Volumes - Classification Counts

8 Ayala Dr at Base Line Rd

	AM Peak Hour Volumes								Total PCE Volume	PM Peak Hour Volumes								Total PCE Volume	
	Passenger Vehicles	Truck Volumes						Average PCE		Passenger Vehicles	Truck Volumes						Average PCE		
		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	127	6	2	19	27	17.5%	70	2.6	197	97	1	2	13	16	14.2%	45	2.8	142	
NT	569	6	0	2	8	1.4%	15	1.9	584	638	6	0	0	6	0.9%	9	1.5	647	
NR	56	6	0	1	7	11.1%	12	1.7	68	94	1	0	0	1	1.1%	2	2.0	96	
SL	50	2	0	0	2	3.8%	3	1.5	53	137	1	0	0	1	0.7%	2	2.0	139	
ST	517	9	0	5	14	2.6%	29	2.1	546	655	9	3	1	13	1.9%	23	1.8	678	
SR	54	1	0	0	1	1.8%	2	2.0	56	63	0	0	0	0	0.0%	0	0.0	63	
EL	115	0	0	0	0	0.0%	0	0.0	115	135	0	0	0	0	0.0%	0	0.0	135	
ET	228	9	2	6	17	6.9%	36	2.1	264	435	3	2	1	6	1.4%	12	2.0	447	
ER	91	3	2	18	23	20.2%	63	2.7	154	153	3	9	10	22	12.6%	53	2.4	206	
WL	51	4	0	1	5	8.9%	9	1.8	60	87	1	0	0	1	1.1%	2	2.0	89	
WT	310	5	2	0	7	2.2%	12	1.7	322	330	4	1	4	9	2.7%	20	2.2	350	
WR	33	2	0	1	3	8.3%	6	2.0	39	49	0	0	0	0	0.0%	0	0.0	49	
									2,458										3,041
North Leg Volumes																			
Approach	621	12	0	5	17		34		655	855	10	3	1	14		25		880	
Depart	717	8	0	3	11		21		738	822	6	0	0	6		9		831	
Total	1,338	20	0	8	28	2.0%	55	2.0	1,393	1,677	16	3	1	20	1.2%	34	1.7	1,711	
South Leg Volumes																			
Approach	752	18	2	22	42		97		849	829	8	2	13	23		56		885	
Depart	659	16	2	24	42		101		760	895	13	12	11	36		78		973	
Total	1,411	34	4	46	84	5.6%	198	2.4	1,609	1,724	21	14	24	59	3.3%	134	2.3	1,858	
East Leg Volumes																			
Approach	394	11	2	2	15		27		421	466	5	1	4	10		22		488	
Depart	334	17	2	7	26		51		385	666	5	2	1	8		16		682	
Total	728	28	4	9	41	5.3%	78	1.9	806	1,132	10	3	5	18	1.6%	38	2.1	1,170	
West Leg Volumes																			
Approach	434	12	4	24	40		99		533	723	6	11	11	28		65		788	
Depart	491	12	4	19	35		84		575	490	5	3	17	25		65		555	
Total	925	24	8	43	75	7.5%	183	2.4	1,108	1,213	11	14	28	53	4.2%	130	2.5	1,343	
All Legs																			
Approach	2,201	53	8	53	114		257		2,458	2,873	29	17	29	75		168		3,041	
Depart	2,201	53	8	53	114		257		2,458	2,873	29	17	29	75		168		3,041	
Total	4,402	106	16	106	228	4.9%	514	2.3	4,916	5,746	58	34	58	150	2.5%	336	2.2	6,082	

Existing Peak Hour Volumes - Classification Counts

9 Linden Ave at Miro Way

	AM Peak Hour Volumes								Total PCE Volume	PM Peak Hour Volumes								Total PCE Volume	
	Passenger Vehicles	Truck Volumes						Average PCE		Passenger Vehicles	Truck Volumes						Average PCE		
		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	8	0	0	0	0	0.0%	0	0.0	8	22	1	0	0	1	4.3%	2	2.0	24	
NT	268	10	1	0	11	3.9%	17	1.5	285	389	1	1	3	5	1.3%	13	2.6	402	
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	220	7	1	0	8	3.5%	13	1.6	233	366	1	3	1	5	1.3%	11	2.2	377	
SR	42	1	1	2	4	8.7%	10	2.5	52	66	1	0	1	2	2.9%	5	2.5	71	
EL	40	0	0	0	0	0.0%	0	0.0	40	68	1	0	0	1	1.4%	2	2.0	70	
ET	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
ER	14	2	0	1	3	17.6%	6	2.0	20	30	0	1	1	2	6.3%	5	2.5	35	
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	
638										979									
North Leg Volumes																			
Approach	262	8	2	2	12		23		285	432	2	3	2	7		16		448	
Depart	308	10	1	0	11		17		325	457	2	1	3	6		15		472	
Total	570	18	3	2	23	3.9%	40	1.7	610	889	4	4	5	13	1.4%	31	2.4	920	
South Leg Volumes																			
Approach	276	10	1	0	11		17		293	411	2	1	3	6		15		426	
Depart	234	9	1	1	11		19		253	396	1	4	2	7		16		412	
Total	510	19	2	1	22	4.1%	36	1.6	546	807	3	5	5	13	1.6%	31	2.4	838	
East Leg Volumes																			
Approach	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Depart	0	0	0	0	0		0		0	0	0	0	0	0		0		0	
Total	0	0	0	0	0	0.0%	0	0.0	0	0	0	0	0	0	0.0%	0	0.0	0	
West Leg Volumes																			
Approach	54	2	0	1	3		6		60	98	1	1	1	3		7		105	
Depart	50	1	1	2	4		10		60	88	2	0	1	3		7		95	
Total	104	3	1	3	7	6.3%	16	2.3	120	186	3	1	2	6	3.1%	14	2.3	200	
All Legs																			
Approach	592	20	3	3	26		46		638	941	5	5	6	16		38		979	
Depart	592	20	3	3	26		46		638	941	5	5	6	16		38		979	
Total	1,184	40	6	6	52	4.2%	92	1.8	1,276	1,882	10	10	12	32	1.7%	76	2.4	1,958	

Existing Peak Hour Volumes - Classification Counts

10 Linden Ave at Base Line Rd

AM Peak Hour Volumes										PM Peak Hour Volumes									
	Passenger Vehicles	Truck Volumes							Total PCE Volume	Passenger Vehicles	Truck Volumes							Total PCE Volume	
		2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE			2-Axle	3-Axle	4-Axle	Total Trucks	Truck %age	PCE	Average PCE		
		1.5	2.0	3.0							1.5	2.0	3.0						
NL	38	2	0	0	2	5.0%	3	1.5	41	18	0	0	0	0	0.0%	0	0.0	18	
NT	125	6	0	0	6	4.6%	9	1.5	134	165	2	0	0	2	1.2%	3	1.5	168	
NR	59	0	1	0	1	1.7%	2	2.0	61	45	0	0	0	0	0.0%	0	0.0	45	
SL	68	2	0	1	3	4.2%	6	2.0	74	139	0	4	2	6	4.1%	14	2.3	153	
ST	88	3	0	0	3	3.3%	5	1.7	93	168	1	0	0	1	0.6%	2	2.0	170	
SR	44	2	0	0	2	4.3%	3	1.5	47	95	0	0	0	0	0.0%	0	0.0	95	
EL	26	0	0	0	0	0.0%	0	0.0	26	80	0	0	1	1	1.2%	3	3.0	83	
ET	315	11	2	22	35	10.0%	87	2.5	402	420	4	5	13	22	5.0%	55	2.5	475	
ER	31	0	0	0	0	0.0%	0	0.0	31	25	0	1	0	1	3.8%	2	2.0	27	
WL	20	0	0	0	0	0.0%	0	0.0	20	39	0	0	0	0	0.0%	0	0.0	39	
WT	352	8	3	22	33	8.6%	84	2.5	436	332	2	1	10	13	3.8%	35	2.7	367	
WR	113	7	1	0	8	6.6%	13	1.6	126	163	0	0	2	2	1.2%	6	3.0	169	
1,491										1,809									
North Leg Volumes																			
Approach	200	7	0	1	8		14		214	402	1	4	2	7		16		418	
Depart	264	13	1	0	14		22		286	408	2	0	3	5		12		420	
Total	464	20	1	1	22	4.5%	36	1.6	500	810	3	4	5	12	1.5%	28	2.3	838	
South Leg Volumes																			
Approach	222	8	1	0	9		14		236	228	2	0	0	2		3		231	
Depart	139	3	0	0	3		5		144	232	1	1	0	2		4		236	
Total	361	11	1	0	12	3.2%	19	1.6	380	460	3	1	0	4	0.9%	7	1.8	467	
East Leg Volumes																			
Approach	485	15	4	22	41		97		582	534	2	1	12	15		41		575	
Depart	442	13	3	23	39		95		537	604	4	9	15	28		69		673	
Total	927	28	7	45	80	7.9%	192	2.4	1,119	1,138	6	10	27	43	3.6%	110	2.6	1,248	
West Leg Volumes																			
Approach	372	11	2	22	35		87		459	525	4	6	14	24		60		585	
Depart	434	12	3	22	37		90		524	445	2	1	10	13		35		480	
Total	806	23	5	44	72	8.2%	177	2.5	983	970	6	7	24	37	3.7%	95	2.6	1,065	
All Legs																			
Approach	1,279	41	7	45	93		212		1,491	1,689	9	11	28	48		120		1,809	
Depart	1,279	41	7	45	93		212		1,491	1,689	9	11	28	48		120		1,809	
Total	2,558	82	14	90	186	6.8%	424	2.3	2,982	3,378	18	22	56	96	2.8%	240	2.5	3,618	

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1	396	343	0	0	17	12	0	0	0	431	5	157	Alder Ave at SR-210 WB Ramps
2	0	486	333	6	421	0	298	3	616	0	0	0	Alder Ave at SR-210 EB Ramps
3	127	567	15	155	775	78	97	158	80	26	140	199	Alder Ave at Renaissance Pkwy
4	157	301	100	63	345	138	96	373	74	41	472	128	Alder Ave at Base Line Rd
5	47	716	38	198	698	341	235	106	80	29	122	350	Ayala Dr at Renaissance Pkwy
6	14	717	3	122	641	8	1	0	4	3	1	136	Ayala Dr at Fitzgerald Ave
7	0	0	0	0	0	0	0	0	0	0	0	0	Ayala Dr at Miro Way - FUTURE INT
8	197	584	68	53	546	56	115	264	154	60	322	39	Ayala Dr at Base Line Rd
9	8	285	0	0	233	52	40	0	20	0	0	0	Linden Ave at Miro Way
10	41	134	61	74	93	47	26	402	31	20	436	126	Linden Ave at Base Line Rd

Int	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
1	475	298	0	0	292	376	0	0	0	295	4	123	Alder Ave at SR-210 WB Ramps
2	0	565	420	155	430	0	203	4	502	0	0	0	Alder Ave at SR-210 EB Ramps
3	51	659	34	183	603	138	95	269	67	20	172	221	Alder Ave at Renaissance Pkwy
4	43	323	44	118	363	123	79	434	63	57	346	87	Alder Ave at Base Line Rd
5	106	774	75	342	805	559	379	378	113	61	184	357	Ayala Dr at Renaissance Pkwy
6	8	810	8	209	851	1	0	0	5	1	3	151	Ayala Dr at Fitzgerald Ave
7	0	0	0	0	0	0	0	0	0	0	0	0	Ayala Dr at Miro Way - FUTURE INT
8	142	647	96	139	678	63	135	447	206	89	350	49	Ayala Dr at Base Line Rd
9	24	402	0	0	377	71	70	0	35	0	0	0	Linden Ave at Miro Way
10	18	168	45	153	170	95	83	475	27	39	367	169	Linden Ave at Base Line Rd

APPENDIX D

INTERSECTION ANALYSIS WORKSHEETS

APPENDIX D-1

INTERSECTION ANALYSIS WORKSHEETS – EXISTING CONDITIONS

Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_AM.vistro

Scenario 1 EX AM

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

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.546	32.0	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.703	24.7	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	WB Left	0.525	27.1	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.656	35.5	D
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.352	21.5	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.296	6.7	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.411	28.4	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.119	6.3	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.284	28.8	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: Alder Ave at SR-210 WB Ramps

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):	0.546

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
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]	396	343	0	0	17	12	0	0	0	431	5	157
Peak Hour Factor	0.8530	0.8530	1.0000	1.0000	0.8530	0.8530	1.0000	1.0000	1.0000	0.8530	0.8530	0.8530
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]	116	101	0	0	5	4	0	0	0	126	1	46
Total Analysis Volume [veh/h]	464	402	0	0	20	14	0	0	0	505	6	184
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	38	52	0	0	14	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	25	54	25	25		28	28
g / C, Green / Cycle	0.28	0.61	0.28	0.28		0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.26	0.11	0.01	0.01		0.28	0.12
s, saturation flow rate [veh/h]	1810	3618	1900	1659		1810	1623
c, Capacity [veh/h]	508	2190	532	465		553	496
d1, Uniform Delay [s]	31.31	7.89	23.54	23.57		30.07	24.56
k, delay calibration	0.22	0.50	0.50	0.50		0.26	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	12.38	0.18	0.11	0.15		13.32	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.18	0.03	0.04		0.91	0.38
d, Delay for Lane Group [s/veh]	43.69	8.07	23.65	23.72		43.39	25.04
Lane Group LOS	D	A	C	C		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	11.17	1.63	0.28	0.28		12.19	3.18
50th-Percentile Queue Length [ft/ln]	279.30	40.87	6.89	6.96		304.65	79.54
95th-Percentile Queue Length [veh/ln]	16.65	2.94	0.50	0.50		17.91	5.73
95th-Percentile Queue Length [ft/ln]	416.34	73.56	12.40	12.53		447.78	143.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.69	8.07	0.00	0.00	23.66	23.72	0.00	0.00	0.00	43.39	25.04	25.04
Movement LOS	D	A			C	C				D	C	C
d_A, Approach Delay [s/veh]	27.16			23.68			0.00			38.38		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	31.97											
Intersection LOS	C											
Intersection V/C	0.546											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			1.897			2.055		
Crosswalk LOS	F			F			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1067			222			0			756		
d_b, Bicycle Delay [s]	9.80			35.56			45.00			17.42		
I_b,int, Bicycle LOS Score for Intersection	2.274			1.588			4.132			2.706		
Bicycle LOS	B			A			D			B		

Sequence

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



Intersection Level Of Service Report

Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	24.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.703

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	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	486	333	6	421	0	298	3	616	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	135	93	2	117	0	83	1	171	0	0	0
Total Analysis Volume [veh/h]	0	541	371	7	469	0	332	3	686	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	14	0	9	23	0	0	67	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	36	36	1	41	41	41	
g / C, Green / Cycle	0.40	0.40	0.01	0.45	0.46	0.46	
(v / s)_i Volume / Saturation Flow Rate	0.24	0.27	0.00	0.13	0.19	0.42	
s, saturation flow rate [veh/h]	1900	1661	1810	3618	1810	1615	
c, Capacity [veh/h]	757	662	19	1639	829	740	
d1, Uniform Delay [s]	21.44	22.46	44.24	15.46	16.22	22.98	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.18	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	3.54	5.79	11.82	0.44	0.32	8.70	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.60	0.69	0.37	0.29	0.40	0.93	
d, Delay for Lane Group [s/veh]	24.98	28.25	56.06	15.90	16.54	31.68	
Lane Group LOS	C	C	E	B	B	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.03	8.69	0.22	3.01	4.46	14.51	
50th-Percentile Queue Length [ft/ln]	200.69	217.36	5.38	75.17	111.44	362.67	
95th-Percentile Queue Length [veh/ln]	12.67	13.53	0.39	5.41	7.92	20.75	
95th-Percentile Queue Length [ft/ln]	316.86	338.26	9.69	135.30	198.00	518.83	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	25.49	28.25	56.06	15.90	0.00	16.54	16.54	31.68	0.00	0.00	0.00
Movement LOS		C	C	E	B		B	B	C			
d_A, Approach Delay [s/veh]	26.61			16.49			26.71			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	24.65											
Intersection LOS	C											
Intersection V/C	0.703											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.214			1.796		
Crosswalk LOS	F			F			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	222			422			1400			0		
d_b, Bicycle Delay [s]	35.56			28.01			4.05			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.312			1.952			3.244			4.132		
Bicycle LOS	B			A			C			D		

Sequence

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



Intersection Level Of Service Report

Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	27.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.525

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
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]	127	567	15	155	775	78	97	158	80	26	140	199
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
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]	35	157	4	43	214	22	27	44	22	7	39	55
Total Analysis Volume [veh/h]	140	627	17	171	857	86	107	175	88	29	155	220
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	35	0	17	37	0	12	26	0	12	26	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	9	42	42	10	44	44	7	19	19	3	15	15
g / C, Green / Cycle	0.10	0.47	0.47	0.11	0.49	0.49	0.08	0.21	0.21	0.03	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.09	0.25	0.25	0.06	0.07	0.07	0.02	0.08	0.14
s, saturation flow rate [veh/h]	1810	1900	1882	1810	1900	1840	1810	1900	1693	1810	1900	1615
c, Capacity [veh/h]	174	892	883	207	927	897	136	395	352	55	310	263
d1, Uniform Delay [s]	39.84	15.28	15.28	38.96	15.79	15.80	40.90	30.42	30.53	42.98	34.32	36.49
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]	8.36	1.14	1.16	7.99	2.06	2.13	9.51	0.52	0.62	7.51	1.25	6.87
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	0.80	0.36	0.36	0.82	0.52	0.52	0.79	0.35	0.36	0.52	0.50	0.84
d, Delay for Lane Group [s/veh]	48.20	16.42	16.43	46.94	17.85	17.92	50.41	30.94	31.15	50.50	35.57	43.36
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.40	4.32	4.28	4.10	6.87	6.67	2.66	2.54	2.38	0.75	3.15	5.10
50th-Percentile Queue Length [ft/ln]	84.91	108.01	107.12	102.43	171.68	166.81	66.54	63.51	59.45	18.63	78.87	127.52
95th-Percentile Queue Length [veh/ln]	6.11	7.73	7.68	7.37	11.16	10.91	4.79	4.57	4.28	1.34	5.68	8.80
95th-Percentile Queue Length [ft/ln]	152.84	193.23	191.99	184.37	279.12	272.72	119.77	114.33	107.01	33.54	141.97	220.12

Movement, Approach, & Intersection Results

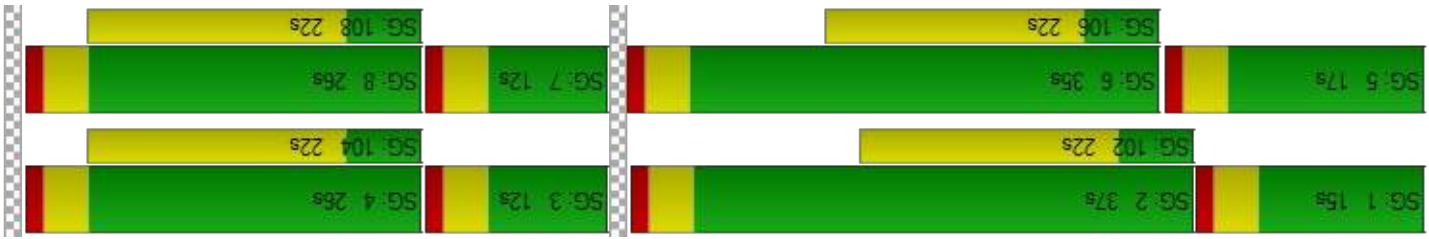
d_M, Delay for Movement [s/veh]	48.20	16.43	16.43	46.94	17.88	17.92	50.41	30.99	31.15	50.50	35.57	43.36
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	22.10			22.35			36.64			40.89		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.06											
Intersection LOS	C											
Intersection V/C	0.525											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.644	2.705	2.448
Crosswalk LOS	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	733	489
d_b, Bicycle Delay [s]	19.34	18.05	25.69
l_b,int, Bicycle LOS Score for Intersection	2.206	2.479	1.865
Bicycle LOS	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 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	35.5
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.656

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	157	301	100	63	345	138	96	373	74	41	472	128
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]	157	301	100	63	345	138	96	373	74	41	472	128
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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]	45	87	29	18	99	40	28	107	21	12	136	37
Total Analysis Volume [veh/h]	181	346	115	72	397	159	110	429	85	47	543	147
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	19	29	0	15	25	25	11	37	0	9	35	35
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	11	33	6	28	39	7	31	3	28	38
g / C, Green / Cycle	0.12	0.37	0.07	0.32	0.44	0.08	0.35	0.04	0.31	0.42
(v / s)_i Volume / Saturation Flow Rate	0.10	0.25	0.04	0.21	0.10	0.06	0.28	0.03	0.29	0.09
s, saturation flow rate [veh/h]	1810	1820	1810	1900	1615	1810	1846	1810	1900	1615
c, Capacity [veh/h]	219	667	126	598	706	141	641	70	586	682
d1, Uniform Delay [s]	38.62	24.20	40.57	26.70	15.82	40.75	26.57	42.67	30.13	16.51
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.26	0.11	0.33	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
d2, Incremental Delay [s]	7.67	5.81	4.04	5.72	0.74	9.05	5.45	10.35	16.78	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.83	0.69	0.57	0.66	0.23	0.78	0.80	0.67	0.93	0.22
d, Delay for Lane Group [s/veh]	46.29	30.00	44.61	32.43	16.56	49.80	32.02	53.02	46.91	16.67
Lane Group LOS	D	C	D	C	B	D	C	D	D	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.31	9.07	1.67	8.09	2.12	2.72	10.54	1.22	13.69	1.90
50th-Percentile Queue Length [ft/ln]	107.70	226.63	41.75	202.32	52.90	67.91	263.41	30.58	342.13	47.51
95th-Percentile Queue Length [veh/ln]	7.71	14.00	3.01	12.76	3.81	4.89	15.86	2.20	19.75	3.42
95th-Percentile Queue Length [ft/ln]	192.80	350.07	75.16	318.95	95.22	122.24	396.49	55.04	493.80	85.52

Movement, Approach, & Intersection Results

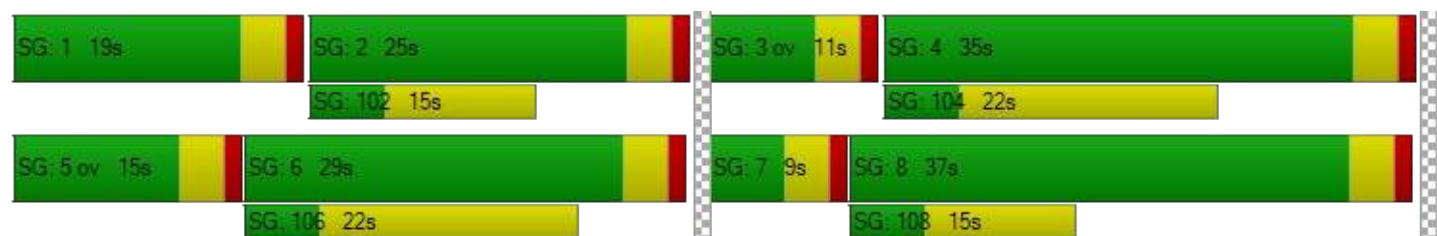
d_M, Delay for Movement [s/veh]	46.29	30.00	30.00	44.61	32.43	16.56	49.80	32.02	32.02	53.02	46.91	16.67
Movement LOS	D	C	C	D	C	B	D	C	C	D	D	B
d_A, Approach Delay [s/veh]	34.59			29.80			35.15			41.27		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	35.45											
Intersection LOS	D											
Intersection V/C	0.656											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.322			2.541			2.431			2.565		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			467			733			689		
d_b, Bicycle Delay [s]	23.47			26.45			18.05			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.619			2.596			2.589			2.776		
Bicycle LOS	B			B			B			C		

Sequence

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



Intersection Level Of Service Report

Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.352

Intersection Setup

Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	716	38	198	698	341	235	106	80	29	122	350
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]	47	716	38	198	698	341	235	106	80	29	122	350
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	12	189	10	52	184	90	62	28	21	8	32	92
Total Analysis Volume [veh/h]	50	755	40	209	736	360	248	112	84	31	129	369
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	19	39	39	12	33	33	9	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	42	48	14	52	64	8	15	23	3	10	28
g / C, Green / Cycle	0.04	0.46	0.54	0.16	0.58	0.71	0.09	0.17	0.26	0.03	0.11	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.02	0.06	0.20	0.22	0.07	0.03	0.05	0.01	0.04	0.23
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	157	1675	868	558	2088	1147	312	616	419	105	403	508
d1, Uniform Delay [s]	41.65	16.40	9.87	33.85	10.10	4.86	40.19	31.97	26.03	42.72	36.84	27.38
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	0.22
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]	1.15	0.88	0.10	0.42	0.47	0.72	4.57	0.14	0.23	1.53	0.45	3.99
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	0.32	0.45	0.05	0.37	0.35	0.31	0.79	0.18	0.20	0.29	0.32	0.73
d, Delay for Lane Group [s/veh]	42.80	17.28	9.97	34.26	10.57	5.57	44.76	32.11	26.26	44.24	37.29	31.37
Lane Group LOS	D	B	A	C	B	A	D	C	C	D	D	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.56	5.22	0.38	2.05	3.69	2.24	2.85	1.04	1.41	0.36	1.32	7.39
50th-Percentile Queue Length [ft/ln]	13.94	130.58	9.48	51.25	92.16	56.10	71.31	26.10	35.30	8.91	32.96	184.68
95th-Percentile Queue Length [veh/ln]	1.00	8.97	0.68	3.69	6.64	4.04	5.13	1.88	2.54	0.64	2.37	11.84
95th-Percentile Queue Length [ft/ln]	25.09	224.29	17.07	92.25	165.88	100.98	128.36	46.99	63.54	16.04	59.33	296.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.80	17.28	9.97	34.26	10.57	5.57	44.76	32.11	26.26	44.24	37.29	31.37
Movement LOS	D	B	A	C	B	A	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	18.44			12.99			38.07			33.57		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.52											
Intersection LOS	C											
Intersection V/C	0.352											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.832			2.968			2.732			2.719		
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]	556			778			644			578		
d_b, Bicycle Delay [s]	23.47			16.81			20.67			22.76		
I_b,int, Bicycle LOS Score for Intersection	2.257			2.636			1.926			1.996		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report

Intersection 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.296

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	14	717	3	122	641	8	1	0	4	3	1	136
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
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]	14	717	3	122	641	8	1	0	4	3	1	136
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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]	4	193	1	33	173	2	0	0	1	1	0	37
Total Analysis Volume [veh/h]	15	773	3	131	691	9	1	0	4	3	1	147
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	72	72	72	72	72	72	10	10	10	10
g / C, Green / Cycle	0.80	0.80	0.80	0.80	0.80	0.80	0.11	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.19	0.18	0.18	0.00	0.00	0.00	0.09
s, saturation flow rate [veh/h]	758	1900	1897	706	1900	1891	1259	1615	1435	1617
c, Capacity [veh/h]	622	1513	1511	581	1513	1507	97	185	219	185
d1, Uniform Delay [s]	3.71	2.34	2.34	4.68	2.28	2.28	43.81	35.37	36.76	38.84
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.07	0.41	0.41	0.90	0.36	0.36	0.04	0.05	0.02	7.70
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.26	0.26	0.23	0.23	0.23	0.01	0.02	0.01	0.80
d, Delay for Lane Group [s/veh]	3.78	2.75	2.75	5.58	2.64	2.64	43.86	35.41	36.78	46.54
Lane Group LOS	A	A	A	A	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	1.23	1.23	0.85	1.09	1.08	0.02	0.08	0.06	3.54
50th-Percentile Queue Length [ft/ln]	1.91	30.84	30.81	21.19	27.16	27.06	0.57	1.99	1.52	88.42
95th-Percentile Queue Length [veh/ln]	0.14	2.22	2.22	1.53	1.96	1.95	0.04	0.14	0.11	6.37
95th-Percentile Queue Length [ft/ln]	3.45	55.51	55.45	38.14	48.89	48.70	1.03	3.59	2.73	159.16

Movement, Approach, & Intersection Results

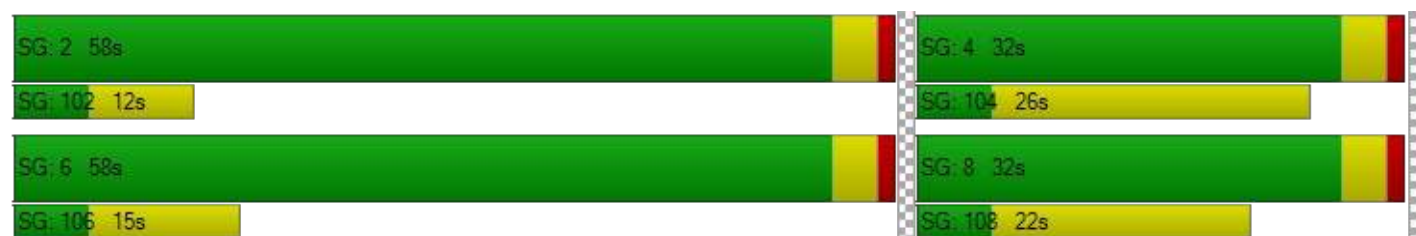
d_M, Delay for Movement [s/veh]	3.78	2.75	2.75	5.58	2.64	2.64	43.86	35.41	35.41	36.78	46.54	46.54
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.77			3.11			37.10			46.34		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.72											
Intersection LOS	A											
Intersection V/C	0.296											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.596			2.740			1.973			2.221		
Crosswalk LOS	B			B			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1200			1200			622			622		
d_b, Bicycle Delay [s]	7.20			7.20			21.36			21.36		
I_b,int, Bicycle LOS Score for Intersection	2.212			2.245			1.568			1.809		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

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):	0.411

Intersection Setup

Name												
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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	197	584	68	53	546	56	115	264	154	60	322	39
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]	197	584	68	53	546	56	115	264	154	60	322	39
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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]	54	159	18	14	149	15	31	72	42	16	88	11
Total Analysis Volume [veh/h]	214	635	74	58	594	61	125	287	168	65	350	42
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	10	33	0	9	32	0	11	39	0	9	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	6	51	51	4	49	49	7	15	15	4	12	12
g / C, Green / Cycle	0.07	0.57	0.57	0.04	0.54	0.54	0.08	0.17	0.17	0.05	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.19	0.02	0.17	0.18	0.07	0.13	0.13	0.04	0.10	0.11
s, saturation flow rate [veh/h]	3514	1900	1831	3514	1900	1839	1810	1900	1670	1810	1900	1830
c, Capacity [veh/h]	234	1076	1037	150	1030	997	141	317	279	84	258	248
d1, Uniform Delay [s]	41.74	10.46	10.46	41.93	11.43	11.44	41.11	35.75	35.85	42.44	37.55	37.59
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]	13.11	0.84	0.87	1.62	0.83	0.86	16.52	3.69	4.52	13.83	4.85	5.25
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	0.91	0.34	0.34	0.39	0.32	0.32	0.89	0.76	0.77	0.77	0.77	0.78
d, Delay for Lane Group [s/veh]	54.85	11.30	11.34	43.55	12.27	12.30	57.63	39.43	40.37	56.26	42.40	42.84
Lane Group LOS	D	B	B	D	B	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.76	3.79	3.66	0.65	3.68	3.58	3.35	5.26	4.79	1.74	4.51	4.41
50th-Percentile Queue Length [ft/ln]	68.91	94.73	91.54	16.36	91.96	89.44	83.86	131.44	119.64	43.40	112.67	110.37
95th-Percentile Queue Length [veh/ln]	4.96	6.82	6.59	1.18	6.62	6.44	6.04	9.02	8.37	3.12	7.99	7.86
95th-Percentile Queue Length [ft/ln]	124.04	170.52	164.78	29.45	165.54	160.99	150.95	225.45	209.33	78.12	199.72	196.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.85	11.32	11.34	43.55	12.28	12.30	57.63	39.58	40.37	56.26	42.59	42.84
Movement LOS	D	B	B	D	B	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	21.41			14.83			43.70			44.56		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	28.45											
Intersection LOS	C											
Intersection V/C	0.411											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.739			2.701			2.536			2.472		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	644			622			778			733		
d_b, Bicycle Delay [s]	20.67			21.36			16.81			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.321			2.148			2.038			1.937		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh): 6.3
Level Of Service: A
Volume to Capacity (v/c): 0.119**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	285	0	0	233	52	40	0	20	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 [%]	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]	8	285	0	0	233	52	40	0	20	0	0	0
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
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]	2	80	0	0	65	15	11	0	6	0	0	0
Total Analysis Volume [veh/h]	9	319	0	0	261	58	45	0	22	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	61	0	0	52	0	29	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	1	78	73	73	4	4	
g / C, Green / Cycle	0.01	0.87	0.81	0.81	0.05	0.05	
(v / s)_i Volume / Saturation Flow Rate	0.00	0.09	0.08	0.09	0.02	0.01	
s, saturation flow rate [veh/h]	1810	3618	1900	1785	1810	1615	
c, Capacity [veh/h]	21	3126	1536	1443	85	76	
d1, Uniform Delay [s]	44.19	0.91	1.81	1.82	41.91	41.44	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	13.40	0.07	0.14	0.15	5.03	2.08	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.43	0.10	0.10	0.11	0.53	0.29	
d, Delay for Lane Group [s/veh]	57.59	0.98	1.94	1.97	46.94	43.52	
Lane Group LOS	E	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.28	0.11	0.39	0.39	1.09	0.51	
50th-Percentile Queue Length [ft/ln]	6.88	2.85	9.65	9.81	27.16	12.79	
95th-Percentile Queue Length [veh/ln]	0.50	0.21	0.69	0.71	1.96	0.92	
95th-Percentile Queue Length [ft/ln]	12.39	5.13	17.37	17.65	48.88	23.01	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.59	0.98	0.00	0.00	1.96	1.97	46.94	0.00	43.52	0.00	0.00	0.00
Movement LOS	E	A			A	A	D		D			
d_A, Approach Delay [s/veh]	2.53			1.96			45.82			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	6.34											
Intersection LOS	A											
Intersection V/C	0.119											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.421			2.299			1.985			1.425		
Crosswalk LOS	B			B			A			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1267			1067			556			0		
d_b, Bicycle Delay [s]	6.05			9.80			23.47			45.00		
I_b,int, Bicycle LOS Score for Intersection	1.830			1.823			1.560			4.132		
Bicycle LOS	A			A			A			D		

Sequence

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



Intersection Level Of Service Report

Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.284

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	134	61	74	93	47	26	402	31	20	436	126
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]	41	134	61	74	93	47	26	402	31	20	436	126
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
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]	11	35	16	19	24	12	7	105	8	5	113	33
Total Analysis Volume [veh/h]	43	139	63	77	97	49	27	418	32	21	454	131
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	9	52	0	9	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	58	58	58	58	58	2	18	18	2	17	17
g / C, Green / Cycle	0.65	0.65	0.65	0.65	0.65	0.03	0.20	0.20	0.02	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.08	0.06	0.03	0.01	0.12	0.12	0.01	0.16	0.16
s, saturation flow rate [veh/h]	1686	1615	918	1729	1615	1810	1900	1853	1810	1900	1756
c, Capacity [veh/h]	1137	1042	672	1115	1042	50	377	368	42	369	341
d1, Uniform Delay [s]	6.28	5.90	12.31	6.01	5.85	43.18	32.83	32.86	43.44	34.76	34.83
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.30	0.11	0.35	0.15	0.09	8.68	1.55	1.61	8.91	4.56	5.19
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
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
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

Lane Group Results

X, volume / capacity	0.16	0.06	0.11	0.09	0.05	0.54	0.60	0.61	0.50	0.82	0.83
d, Delay for Lane Group [s/veh]	6.59	6.02	12.66	6.17	5.94	51.87	34.37	34.47	52.35	39.32	40.02
Lane Group LOS	A	A	B	A	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.30	0.42	0.87	0.66	0.33	0.71	4.59	4.52	0.56	6.68	6.31
50th-Percentile Queue Length [ft/ln]	32.40	10.58	21.65	16.52	8.15	17.71	114.78	112.90	14.04	167.10	157.82
95th-Percentile Queue Length [veh/ln]	2.33	0.76	1.56	1.19	0.59	1.27	8.11	8.00	1.01	10.92	10.43
95th-Percentile Queue Length [ft/ln]	58.32	19.05	38.97	29.73	14.68	31.87	202.63	200.03	25.27	273.09	260.83

Movement, Approach, & Intersection Results

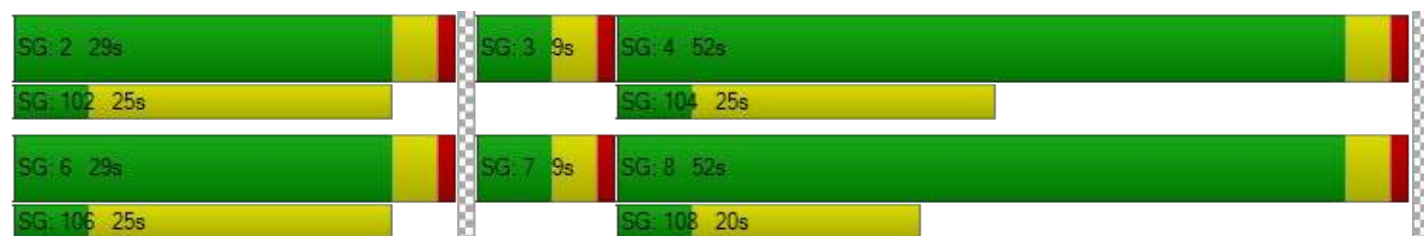
d_M, Delay for Movement [s/veh]	6.59	6.59	6.02	12.66	6.17	5.94	51.87	34.42	34.47	52.35	39.55	40.02
Movement LOS	A	A	A	B	A	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	6.44			8.36			35.41			40.10		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	28.77											
Intersection LOS	C											
Intersection V/C	0.284											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.229			2.403			2.562			2.638		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1067		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			9.80		
I_b,int, Bicycle LOS Score for Intersection	1.964			1.744			1.953			2.060		
Bicycle LOS	A			A			A			B		

Sequence

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



Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_PM.vistro

Scenario 1 EX PM

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

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	0.723	29.7	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.728	29.3	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.494	26.1	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.578	30.8	C
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.605	25.3	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.421	6.9	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.509	29.8	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.222	8.2	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.474	28.7	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	29.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.723

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
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]	475	298	0	0	292	376	0	0	0	295	4	123
Peak Hour Factor	0.9100	0.9100	1.0000	1.0000	0.9100	0.9100	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100
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]	130	82	0	0	80	103	0	0	0	81	1	34
Total Analysis Volume [veh/h]	522	327	0	0	321	413	0	0	0	324	4	135
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	53	67	0	0	14	0	0	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	28	64	32	32		18	18
g / C, Green / Cycle	0.31	0.71	0.35	0.35		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.29	0.09	0.17	0.26		0.18	0.09
s, saturation flow rate [veh/h]	1810	3618	1900	1615		1810	1622
c, Capacity [veh/h]	570	2575	669	569		361	323
d1, Uniform Delay [s]	29.65	4.11	22.73	25.38		35.15	31.56
k, delay calibration	0.12	0.50	0.50	0.50		0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	6.66	0.10	2.46	7.89		8.30	0.90
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.91	0.13	0.48	0.73		0.90	0.43
d, Delay for Lane Group [s/veh]	36.31	4.21	25.18	33.27		43.45	32.46
Lane Group LOS	D	A	C	C		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	11.51	0.81	5.59	8.63		7.59	2.69
50th-Percentile Queue Length [ft/ln]	287.63	20.31	139.85	215.67		189.86	67.16
95th-Percentile Queue Length [veh/ln]	17.07	1.46	9.47	13.44		12.11	4.84
95th-Percentile Queue Length [ft/ln]	426.70	36.56	236.82	336.10		302.85	120.89

Movement, Approach, & Intersection Results

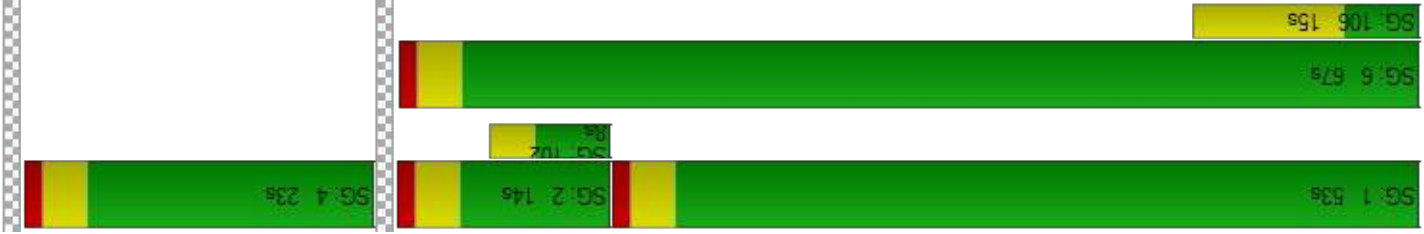
d_M, Delay for Movement [s/veh]										36.31			4.21	0.00	0.00	25.18	33.27	0.00	0.00	0.00	43.45	32.46	32.46		
Movement LOS										D		A				C	C	C		D	C	C	C		
d_A, Approach Delay [s/veh]										23.95				29.73				0.00				40.15			
Approach LOS										C				C				A				D			
d_I, Intersection Delay [s/veh]										29.69															
Intersection LOS										C															
Intersection V/C										0.723															

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.340	1.942
Crosswalk LOS	F	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1400	222	0	422
d_b, Bicycle Delay [s]	4.05	35.56	45.00	28.01
l_b,int, Bicycle LOS Score for Intersection	2.260	2.165	4.132	2.324
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report

Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.728

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	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	565	420	155	430	0	203	4	502	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	0.9550	0.9550	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	148	110	41	113	0	53	1	131	0	0	0
Total Analysis Volume [veh/h]	0	592	440	162	450	0	213	4	526	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	36	0	13	49	0	0	41	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	37	37	9	50	32	32	
g / C, Green / Cycle	0.42	0.42	0.10	0.56	0.35	0.35	
(v / s)_i Volume / Saturation Flow Rate	0.27	0.31	0.09	0.12	0.12	0.33	
s, saturation flow rate [veh/h]	1900	1651	1810	3618	1811	1615	
c, Capacity [veh/h]	787	684	181	2021	639	569	
d1, Uniform Delay [s]	21.21	22.47	40.03	10.02	21.43	27.97	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.31	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.24	7.57	14.13	0.26	0.31	15.96	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.66	0.75	0.90	0.22	0.34	0.92	
d, Delay for Lane Group [s/veh]	25.45	30.04	54.17	10.27	21.74	43.93	
Lane Group LOS	C	C	D	B	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.24	10.25	4.20	2.16	3.34	12.92	
50th-Percentile Queue Length [ft/ln]	231.08	256.21	105.02	54.00	83.52	322.99	
95th-Percentile Queue Length [veh/ln]	14.23	15.50	7.56	3.89	6.01	18.81	
95th-Percentile Queue Length [ft/ln]	355.73	387.46	189.03	97.21	150.34	470.35	

Movement, Approach, & Intersection Results

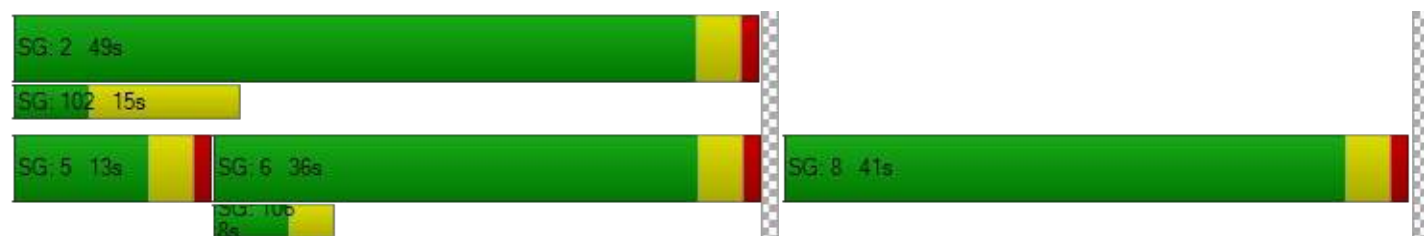
d_M, Delay for Movement [s/veh]	0.00	26.04	30.04	54.17	10.27	0.00	21.74	21.74	43.93	0.00	0.00	0.00
Movement LOS		C	C	D	B		C	C	D			
d_A, Approach Delay [s/veh]	27.75			21.89			37.45			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	29.27											
Intersection LOS	C											
Intersection V/C	0.728											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.079			2.016		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	711			1000			822			0		
d_b, Bicycle Delay [s]	18.69			11.25			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.411			2.065			2.786			4.132		
Bicycle LOS	B			B			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
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]	51	659	34	183	603	138	95	269	67	20	172	221
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	13	172	9	48	157	36	25	70	17	5	45	58
Total Analysis Volume [veh/h]	53	686	35	191	628	144	99	280	70	21	179	230
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	30	0	19	34	0	12	32	0	9	29	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	4	41	41	11	49	49	6	20	20	2	15	15
g / C, Green / Cycle	0.04	0.46	0.46	0.13	0.54	0.54	0.07	0.22	0.22	0.02	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.19	0.19	0.11	0.21	0.21	0.05	0.09	0.10	0.01	0.09	0.14
s, saturation flow rate [veh/h]	1810	1900	1868	1810	1900	1779	1810	1900	1772	1810	1900	1615
c, Capacity [veh/h]	76	866	851	228	1026	961	127	412	384	42	323	275
d1, Uniform Delay [s]	42.54	16.47	16.48	38.41	12.05	12.05	41.17	30.47	30.53	43.44	34.22	36.14
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]	10.86	1.49	1.52	7.87	1.11	1.19	9.94	0.72	0.80	8.91	1.48	6.67
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	0.70	0.42	0.42	0.84	0.39	0.39	0.78	0.44	0.44	0.50	0.55	0.84
d, Delay for Lane Group [s/veh]	53.40	17.97	18.00	46.29	13.16	13.24	51.11	31.19	31.34	52.35	35.70	42.81
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.38	5.17	5.09	4.55	4.65	4.37	2.48	3.39	3.24	0.56	3.66	5.30
50th-Percentile Queue Length [ft/ln]	34.51	129.25	127.32	113.73	116.26	109.35	62.08	84.76	80.95	14.04	91.62	132.55
95th-Percentile Queue Length [veh/ln]	2.48	8.90	8.79	8.05	8.19	7.80	4.47	6.10	5.83	1.01	6.60	9.08
95th-Percentile Queue Length [ft/ln]	62.12	222.48	219.85	201.17	204.68	195.10	111.74	152.57	145.72	25.27	164.92	226.96

Movement, Approach, & Intersection Results

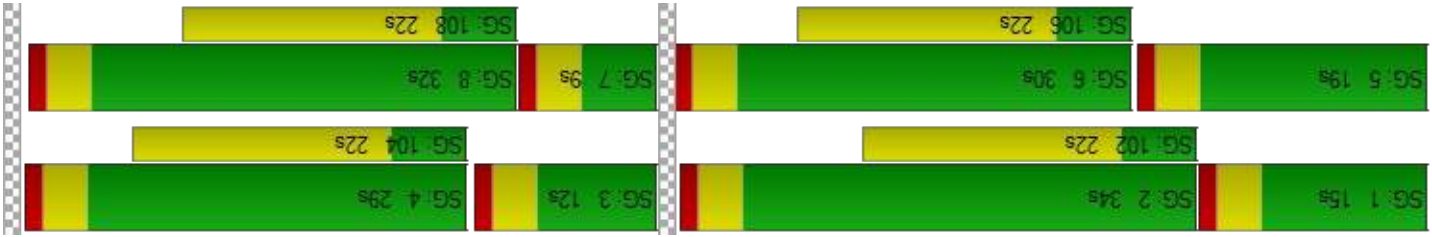
d_M, Delay for Movement [s/veh]	53.40	17.98	18.00	46.29	13.19	13.24	51.11	31.25	31.34	52.35	35.70	42.81
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	20.41			19.76			35.64			40.32		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	26.06											
Intersection LOS	C											
Intersection V/C	0.494											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.592	2.687	2.462	2.484	B	B	B	B	B	B	B	B
Crosswalk LOS	B	B	B	B	B	B	B	B	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	667	20.00	23.47	556	556	556	556	556	556	556	556
d_b, Bicycle Delay [s]	22.76	20.00	21.36	23.47	556	556	556	556	556	556	556	556
l_b,int, Bicycle LOS Score for Intersection	2.198	2.354	1.930	1.914	A	A	A	A	A	A	A	A
Bicycle LOS	B	B	A	A	A	A	A	A	A	A	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	30.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.578

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	43	323	44	118	363	123	79	434	63	57	346	87
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]	43	323	44	118	363	123	79	434	63	57	346	87
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
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]	11	83	11	30	93	32	20	112	16	15	89	22
Total Analysis Volume [veh/h]	44	332	45	121	373	127	81	447	65	59	356	90
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	17	26	0	13	22	22	24	42	0	9	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	3	35	8	40	49	6	27	4	25	37
g / C, Green / Cycle	0.04	0.39	0.08	0.44	0.55	0.06	0.30	0.04	0.28	0.41
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.07	0.20	0.08	0.04	0.28	0.03	0.19	0.06
s, saturation flow rate [veh/h]	1810	1861	1810	1900	1615	1810	1858	1810	1900	1615
c, Capacity [veh/h]	70	733	153	836	884	115	559	78	533	661
d1, Uniform Delay [s]	42.62	20.71	40.43	17.57	9.99	41.32	30.38	42.60	28.69	16.64
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.19	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
d2, Incremental Delay [s]	8.88	2.57	8.90	1.73	0.34	7.67	10.43	13.84	1.46	0.09
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.63	0.51	0.79	0.45	0.14	0.71	0.92	0.76	0.67	0.14
d, Delay for Lane Group [s/veh]	51.50	23.28	49.33	19.30	10.33	48.99	40.81	56.44	30.14	16.73
Lane Group LOS	D	C	D	B	B	D	D	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.13	6.32	2.97	5.55	1.25	1.99	11.94	1.58	6.82	1.15
50th-Percentile Queue Length [ft/ln]	28.19	157.92	74.29	138.76	31.13	49.69	298.45	39.57	170.62	28.71
95th-Percentile Queue Length [veh/ln]	2.03	10.44	5.35	9.41	2.24	3.58	17.60	2.85	11.11	2.07
95th-Percentile Queue Length [ft/ln]	50.74	260.97	133.73	235.35	56.03	89.45	440.11	71.23	277.73	51.67

Movement, Approach, & Intersection Results

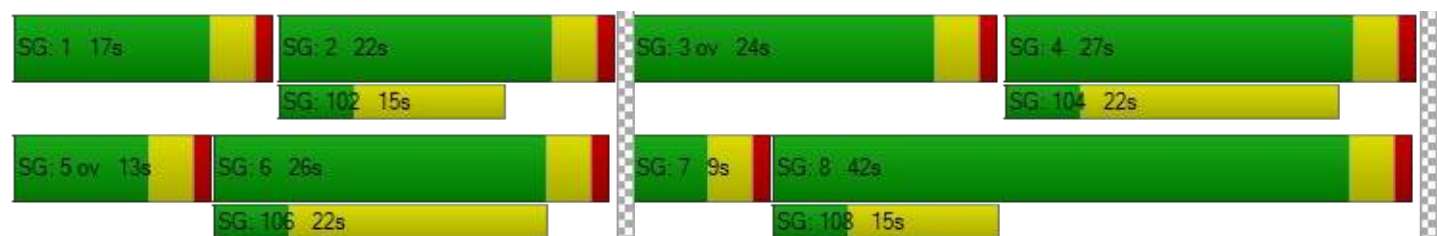
d_M, Delay for Movement [s/veh]	51.50	23.28	23.28	49.33	19.30	10.33	48.99	40.81	40.81	56.44	30.14	16.73
Movement LOS	D	C	C	D	B	B	D	D	D	E	C	B
d_A, Approach Delay [s/veh]	26.23			23.32			41.93			30.83		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	30.82											
Intersection LOS	C											
Intersection V/C	0.578											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.240			2.521			2.306			2.519		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			400			844			511		
d_b, Bicycle Delay [s]	25.69			28.80			15.02			24.94		
I_b,int, Bicycle LOS Score for Intersection	2.254			2.584			2.538			2.393		
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 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.605

Intersection Setup

Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	774	75	342	805	559	379	378	113	61	184	357
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]	106	774	75	342	805	559	379	378	113	61	184	357
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
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]	28	202	20	89	210	146	99	99	29	16	48	93
Total Analysis Volume [veh/h]	111	808	78	357	840	584	396	395	118	64	192	373
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	15	35	35	17	37	37	9	29	29
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	40	48	11	46	63	13	19	28	4	10	25
g / C, Green / Cycle	0.06	0.44	0.53	0.12	0.51	0.70	0.14	0.22	0.32	0.04	0.12	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.05	0.10	0.23	0.36	0.11	0.11	0.07	0.02	0.05	0.23
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	195	1593	855	430	1834	1124	508	778	509	156	417	455
d1, Uniform Delay [s]	41.45	18.14	10.47	38.59	14.24	6.52	37.12	31.12	22.77	41.84	37.21	30.18
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	0.23
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]	2.59	1.16	0.21	4.22	0.83	1.72	2.65	0.51	0.23	1.71	0.80	7.41
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	0.57	0.51	0.09	0.83	0.46	0.52	0.78	0.51	0.23	0.41	0.46	0.82
d, Delay for Lane Group [s/veh]	44.04	19.30	10.68	42.82	15.07	8.23	39.77	31.64	23.00	43.56	38.00	37.59
Lane Group LOS	D	B	B	D	B	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.26	6.04	0.78	4.04	5.38	4.86	4.32	3.77	1.84	0.72	2.00	8.24
50th-Percentile Queue Length [ft/ln]	31.45	150.88	19.47	100.97	134.40	121.38	107.90	94.13	46.11	18.04	49.90	206.12
95th-Percentile Queue Length [veh/ln]	2.26	10.06	1.40	7.27	9.18	8.47	7.72	6.78	3.32	1.30	3.59	12.95
95th-Percentile Queue Length [ft/ln]	56.62	251.60	35.04	181.75	229.47	211.72	193.08	169.44	83.00	32.48	89.81	323.85

Movement, Approach, & Intersection Results

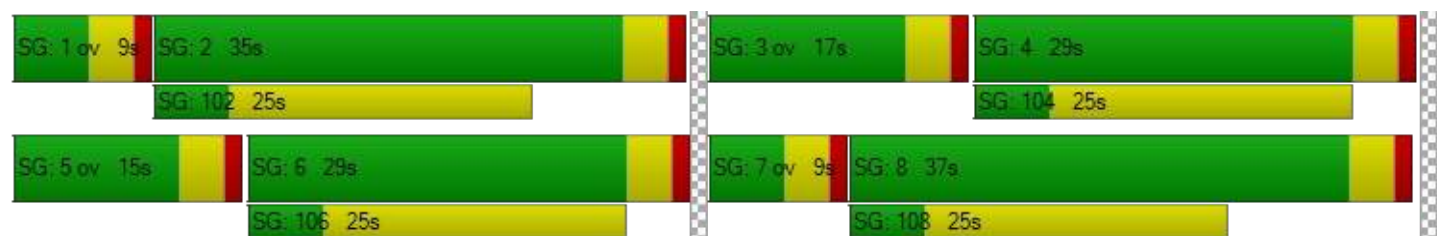
d_M, Delay for Movement [s/veh]	44.04	19.30	10.68	42.82	15.07	8.23	39.77	31.64	23.00	43.56	38.00	37.59
Movement LOS	D	B	B	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.38			18.39			34.06			38.33		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	25.29											
Intersection LOS	C											
Intersection V/C	0.605											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0			9.0			9.0			9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00			0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.877			3.063			2.846			2.799		
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]	556			689			733			556		
d_b, Bicycle Delay [s]	23.47			19.34			18.05			23.47		
I_b,int, Bicycle LOS Score for Intersection	2.382			3.029			2.310			2.079		
Bicycle LOS	B			C			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 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.421

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	8	810	8	209	851	1	0	0	5	1	3	151
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
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]	8	810	8	209	851	1	0	0	5	1	3	151
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	2	208	2	54	219	0	0	0	1	0	1	39
Total Analysis Volume [veh/h]	8	832	8	215	875	1	0	0	5	1	3	155
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	71	71	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.22	0.32	0.23	0.23	0.00	0.00	0.00	0.10
s, saturation flow rate [veh/h]	643	1900	1894	665	1900	1899	1248	1615	1434	1620
c, Capacity [veh/h]	524	1501	1496	541	1501	1500	99	196	228	196
d1, Uniform Delay [s]	4.39	2.55	2.55	6.26	2.58	2.58	0.00	34.87	36.20	38.52
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.05	0.47	0.47	2.18	0.49	0.49	0.00	0.05	0.01	7.55
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.28	0.28	0.40	0.29	0.29	0.00	0.03	0.00	0.81
d, Delay for Lane Group [s/veh]	4.44	3.02	3.02	8.43	3.07	3.07	0.00	34.92	36.21	46.07
Lane Group LOS	A	A	A	A	A	A	A	C	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	1.46	1.45	1.84	1.54	1.54	0.00	0.10	0.02	3.76
50th-Percentile Queue Length [ft/ln]	1.18	36.46	36.36	45.96	38.44	38.43	0.00	2.47	0.50	93.95
95th-Percentile Queue Length [veh/ln]	0.08	2.63	2.62	3.31	2.77	2.77	0.00	0.18	0.04	6.76
95th-Percentile Queue Length [ft/ln]	2.12	65.63	65.45	82.73	69.20	69.18	0.00	4.44	0.90	169.11

Movement, Approach, & Intersection Results

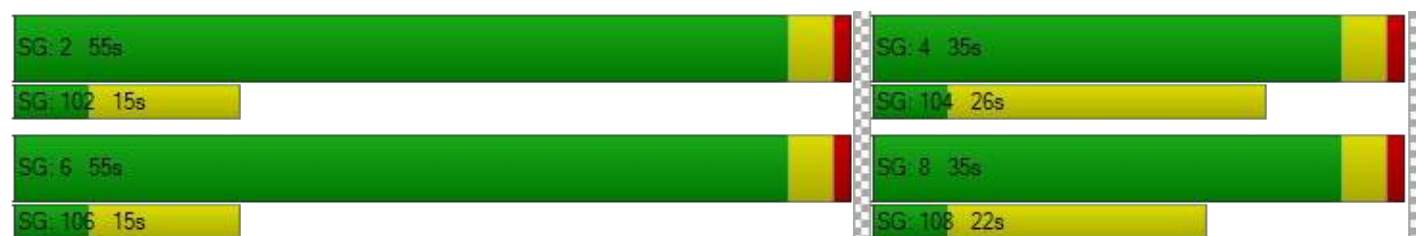
d_M, Delay for Movement [s/veh]	4.44	3.02	3.02	8.43	3.07	3.07	0.00	34.92	34.92	36.21	46.07	46.07
Movement LOS	A	A	A	A	A	A	A	C	C	D	D	D
d_A, Approach Delay [s/veh]	3.03			4.13			34.92			46.00		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	6.93											
Intersection LOS	A											
Intersection V/C	0.421											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.640			2.792			1.959			2.372		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1133			689			689		
d_b, Bicycle Delay [s]	8.45			8.45			19.34			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.259			2.460			1.568			1.822		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report

Intersection 8: Ayala Dr at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.509

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	142	647	96	139	678	63	135	447	206	89	350	49
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]	142	647	96	139	678	63	135	447	206	89	350	49
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
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]	38	175	26	38	183	17	37	121	56	24	95	13
Total Analysis Volume [veh/h]	154	700	104	150	734	68	146	484	223	96	379	53
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	9	32	0	9	32	0	12	38	0	11	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	5	42	42	5	42	42	8	21	21	6	19	19
g / C, Green / Cycle	0.06	0.47	0.47	0.06	0.47	0.47	0.09	0.23	0.23	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.22	0.04	0.21	0.21	0.08	0.20	0.20	0.05	0.12	0.12
s, saturation flow rate [veh/h]	3514	1900	1815	3514	1900	1844	1810	1900	1700	1810	1900	1820
c, Capacity [veh/h]	195	890	850	195	890	864	161	438	391	123	398	381
d1, Uniform Delay [s]	41.98	16.23	16.23	41.93	16.18	16.18	40.63	33.17	33.18	41.28	31.81	31.84
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]	6.94	1.72	1.80	6.23	1.69	1.74	16.90	4.78	5.36	10.18	1.20	1.28
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	0.79	0.46	0.46	0.77	0.46	0.46	0.91	0.85	0.85	0.78	0.55	0.56
d, Delay for Lane Group [s/veh]	48.91	17.95	18.03	48.16	17.88	17.93	57.53	37.95	38.54	51.46	33.00	33.12
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.86	5.88	5.63	1.79	5.80	5.64	3.91	8.18	7.39	2.42	4.33	4.20
50th-Percentile Queue Length [ft/ln]	46.43	146.89	140.81	44.82	144.93	140.96	97.86	204.47	184.82	60.45	108.29	104.94
95th-Percentile Queue Length [veh/ln]	3.34	9.85	9.52	3.23	9.75	9.53	7.05	12.87	11.85	4.35	7.74	7.56
95th-Percentile Queue Length [ft/ln]	83.57	246.27	238.11	80.68	243.65	238.32	176.15	321.72	296.30	108.81	193.62	188.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.91	17.99	18.03	48.16	17.90	17.93	57.53	38.09	38.54	51.46	33.05	33.12
Movement LOS	D	B	B	D	B	B	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	22.96			22.67			41.53			36.41		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	29.85											
Intersection LOS	C											
Intersection V/C	0.509											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.781			2.755			2.585			2.548		
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]	622			622			756			733		
d_b, Bicycle Delay [s]	21.36			21.36			17.42			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.350			2.345			2.263			1.995		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):8.2
A
0.222**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	402	0	0	377	71	70	0	35	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 [%]	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]	24	402	0	0	377	71	70	0	35	0	0	0
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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]	8	126	0	0	119	22	22	0	11	0	0	0
Total Analysis Volume [veh/h]	30	506	0	0	474	89	88	0	44	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	49	0	0	40	0	41	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	3	76	69	69	6	6	
g / C, Green / Cycle	0.03	0.84	0.77	0.77	0.07	0.07	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.15	0.16	0.05	0.03	
s, saturation flow rate [veh/h]	1810	3618	1900	1800	1810	1615	
c, Capacity [veh/h]	53	3035	1453	1377	131	117	
d1, Uniform Delay [s]	43.10	1.36	2.92	2.95	40.72	39.83	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.93	0.12	0.30	0.34	5.92	2.01	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.56	0.17	0.19	0.20	0.67	0.38	
d, Delay for Lane Group [s/veh]	52.02	1.48	3.21	3.28	46.64	41.84	
Lane Group LOS	D	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.78	0.38	1.10	1.12	2.10	0.98	
50th-Percentile Queue Length [ft/ln]	19.62	9.47	27.49	27.94	52.39	24.62	
95th-Percentile Queue Length [veh/ln]	1.41	0.68	1.98	2.01	3.77	1.77	
95th-Percentile Queue Length [ft/ln]	35.31	17.04	49.47	50.28	94.31	44.32	

Movement, Approach, & Intersection Results

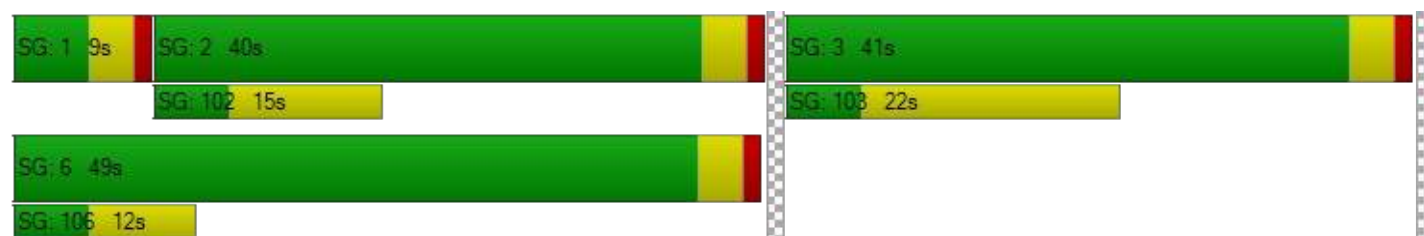
d_M, Delay for Movement [s/veh]	52.02	1.48	0.00	0.00	3.24	3.28	46.64	0.00	41.84	0.00	0.00	0.00
Movement LOS	D	A			A	A	D		D			
d_A, Approach Delay [s/veh]	4.30			3.25			45.04			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	8.19											
Intersection LOS	A											
Intersection V/C	0.222											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.507			2.415			2.023			1.425		
Crosswalk LOS	B			B			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1000			800			822			0		
d_b, Bicycle Delay [s]	11.25			16.20			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.002			2.024			1.560			4.132		
Bicycle LOS	B			B			A			D		

Sequence

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



Intersection Level Of Service Report

Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.474

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	168	45	153	170	95	83	475	27	39	367	169
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]	18	168	45	153	170	95	83	475	27	39	367	169
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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]	5	47	13	43	48	27	23	134	8	11	103	48
Total Analysis Volume [veh/h]	20	189	51	172	191	107	93	535	30	44	413	190
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	10	52	0	9	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	54	54	54	54	54	6	21	21	3	18	18
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.07	0.23	0.23	0.04	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.25	0.11	0.07	0.05	0.15	0.15	0.02	0.17	0.17
s, saturation flow rate [veh/h]	1793	1615	677	1729	1615	1810	1900	1865	1810	1900	1701
c, Capacity [veh/h]	1118	967	485	1036	967	119	438	429	68	384	343
d1, Uniform Delay [s]	8.13	7.47	22.33	8.13	7.75	41.41	31.36	31.38	42.74	34.39	34.47
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.37	0.10	2.02	0.39	0.23	10.58	1.64	1.68	10.09	4.51	5.33
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
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
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

Lane Group Results

X, volume / capacity	0.19	0.05	0.35	0.18	0.11	0.78	0.65	0.65	0.65	0.82	0.83
d, Delay for Lane Group [s/veh]	8.50	7.57	24.35	8.53	7.98	51.99	33.01	33.06	52.83	38.91	39.81
Lane Group LOS	A	A	C	A	A	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.79	0.40	2.97	1.64	0.88	2.36	5.69	5.60	1.14	6.97	6.40
50th-Percentile Queue Length [ft/ln]	44.67	10.07	74.22	41.04	21.95	58.92	142.18	139.97	28.62	174.19	159.97
95th-Percentile Queue Length [veh/ln]	3.22	0.72	5.34	2.96	1.58	4.24	9.60	9.48	2.06	11.30	10.55
95th-Percentile Queue Length [ft/ln]	80.41	18.12	133.60	73.88	39.51	106.05	239.95	236.98	51.51	282.41	263.69

Movement, Approach, & Intersection Results

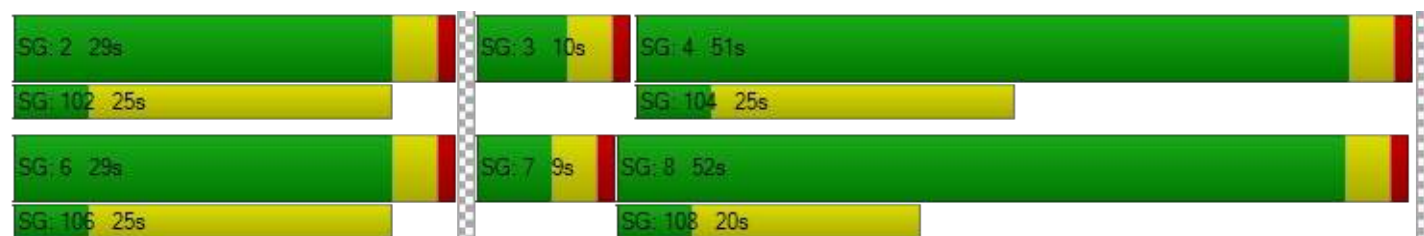
d_M, Delay for Movement [s/veh]	8.50	8.50	7.57	24.35	8.53	7.98	51.99	33.03	33.06	52.83	39.12	39.81
Movement LOS	A	A	A	C	A	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.32			14.19			35.71			40.25		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	28.69											
Intersection LOS	C											
Intersection V/C	0.474											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.261			2.485			2.563			2.820		
Crosswalk LOS	B			B			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1044		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			10.27		
I_b,int, Bicycle LOS Score for Intersection	1.989			1.947			2.102			2.093		
Bicycle LOS	A			A			B			B		

Sequence

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



APPENDIX D-2

INTERSECTION ANALYSIS WORKSHEETS – OPENING YEAR 2024

Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_AM.vistro

Scenario 2 OY 2024 AM

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

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	NB Left	0.557	32.2	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.717	25.2	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	WB Left	0.537	27.4	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.669	36.1	D
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.362	21.7	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.302	6.8	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.419	28.8	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.122	6.3	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.291	28.7	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	32.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
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]	404	350	0	0	17	12	0	0	0	440	5	160
Peak Hour Factor	0.8530	0.8530	1.0000	1.0000	0.8530	0.8530	1.0000	1.0000	1.0000	0.8530	0.8530	0.8530
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]	118	103	0	0	5	4	0	0	0	129	1	47
Total Analysis Volume [veh/h]	474	410	0	0	20	14	0	0	0	516	6	188
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	38	52	0	0	14	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	26	54	24	24		28	28
g / C, Green / Cycle	0.29	0.60	0.27	0.27		0.31	0.31
(v / s)_i Volume / Saturation Flow Rate	0.26	0.11	0.01	0.01		0.29	0.12
s, saturation flow rate [veh/h]	1810	3618	1900	1659		1810	1623
c, Capacity [veh/h]	518	2169	511	446		564	506
d1, Uniform Delay [s]	31.07	8.14	24.27	24.30		29.83	24.22
k, delay calibration	0.23	0.50	0.50	0.50		0.27	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	12.91	0.19	0.12	0.16		13.89	0.48
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.19	0.03	0.04		0.92	0.38
d, Delay for Lane Group [s/veh]	43.98	8.33	24.39	24.46		43.72	24.70
Lane Group LOS	D	A	C	C		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	11.47	1.71	0.28	0.28		12.52	3.22
50th-Percentile Queue Length [ft/ln]	286.76	42.63	7.03	7.10		312.97	80.62
95th-Percentile Queue Length [veh/ln]	17.02	3.07	0.51	0.51		18.32	5.80
95th-Percentile Queue Length [ft/ln]	425.62	76.74	12.65	12.78		458.04	145.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.98	8.33	0.00	0.00	24.40	24.46	0.00	0.00	0.00	43.72	24.70	24.70
Movement LOS	D	A			C	C				D	C	C
d_A, Approach Delay [s/veh]	27.45			24.42			0.00			38.52		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	32.22											
Intersection LOS	C											
Intersection V/C	0.557											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			1.907			2.062		
Crosswalk LOS	F			F			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1067			222			0			756		
d_b, Bicycle Delay [s]	9.80			35.56			45.00			17.42		
I_b,int, Bicycle LOS Score for Intersection	2.289			1.588			4.132			2.731		
Bicycle LOS	B			A			D			B		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	25.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.717

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	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	496	340	6	429	0	304	3	628	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	138	95	2	119	0	85	1	175	0	0	0
Total Analysis Volume [veh/h]	0	552	379	7	478	0	339	3	699	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	14	0	9	23	0	0	67	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	35	35	1	40	42	42	
g / C, Green / Cycle	0.39	0.39	0.01	0.45	0.47	0.47	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.28	0.00	0.13	0.19	0.43	
s, saturation flow rate [veh/h]	1900	1661	1810	3618	1810	1615	
c, Capacity [veh/h]	741	648	19	1610	844	753	
d1, Uniform Delay [s]	22.16	23.25	44.24	15.97	15.82	22.62	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.19	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.00	6.72	11.82	0.47	0.31	9.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.63	0.72	0.37	0.30	0.41	0.93	
d, Delay for Lane Group [s/veh]	26.16	29.96	56.06	16.44	16.13	31.65	
Lane Group LOS	C	C	E	B	B	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	8.43	9.19	0.22	3.13	4.49	14.78	
50th-Percentile Queue Length [ft/ln]	210.84	229.78	5.38	78.30	112.14	369.59	
95th-Percentile Queue Length [veh/ln]	13.20	14.16	0.39	5.64	7.96	21.09	
95th-Percentile Queue Length [ft/ln]	329.91	354.09	9.69	140.94	198.98	527.23	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	26.76	29.96	56.06	16.44	0.00	16.13	16.13	31.65	0.00	0.00	0.00
Movement LOS		C	C	E	B		B	B	C			
d_A, Approach Delay [s/veh]	28.06			17.01			26.55			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	25.24											
Intersection LOS	C											
Intersection V/C	0.717											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.224			1.804		
Crosswalk LOS	F			F			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	222			422			1400			0		
d_b, Bicycle Delay [s]	35.56			28.01			4.05			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.328			1.960			3.277			4.132		
Bicycle LOS	B			A			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

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):	0.537

Intersection Setup

Name												
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	0	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	130	578	15	158	791	80	99	161	82	27	143	203
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
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]	36	160	4	44	219	22	27	45	23	7	40	56
Total Analysis Volume [veh/h]	144	639	17	175	875	88	110	178	91	30	158	225
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	35	0	17	37	0	12	26	0	12	26	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	9	42	42	10	43	43	7	19	19	3	15	15
g / C, Green / Cycle	0.10	0.46	0.46	0.12	0.48	0.48	0.08	0.21	0.21	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.10	0.26	0.26	0.06	0.07	0.08	0.02	0.08	0.14
s, saturation flow rate [veh/h]	1810	1900	1883	1810	1900	1840	1810	1900	1690	1810	1900	1615
c, Capacity [veh/h]	178	878	870	211	913	884	140	403	358	56	315	268
d1, Uniform Delay [s]	39.73	15.74	15.74	38.86	16.35	16.36	40.81	30.16	30.26	42.95	34.14	36.37
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]	8.35	1.22	1.24	8.01	2.25	2.33	9.43	0.51	0.61	7.56	1.23	6.92
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	0.38	0.38	0.83	0.54	0.54	0.79	0.35	0.36	0.53	0.50	0.84
d, Delay for Lane Group [s/veh]	48.08	16.97	16.98	46.87	18.60	18.68	50.24	30.67	30.88	50.51	35.37	43.28
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.49	4.50	4.46	4.19	7.21	7.00	2.73	2.59	2.42	0.77	3.21	5.22
50th-Percentile Queue Length [ft/ln]	87.23	112.43	111.51	104.76	180.16	175.12	68.26	64.73	60.45	19.25	80.16	130.39
95th-Percentile Queue Length [veh/ln]	6.28	7.98	7.92	7.54	11.61	11.35	4.91	4.66	4.35	1.39	5.77	8.96
95th-Percentile Queue Length [ft/ln]	157.02	199.38	198.11	188.57	290.22	283.63	122.87	116.51	108.81	34.65	144.29	224.02

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.08	16.97	16.98	46.87	18.64	18.68	50.24	30.72	30.88	50.51	35.37	43.28
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	22.57			22.98			36.42			40.78		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	27.42											
Intersection LOS	C											
Intersection V/C	0.537											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.652	2.713
Crosswalk LOS	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	733
d_b, Bicycle Delay [s]	19.34	18.05
l_b,int, Bicycle LOS Score for Intersection	2.220	2.498
Bicycle LOS	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 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.669

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	157	301	100	63	345	138	96	373	74	41	472	128
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	160	307	102	64	352	141	98	380	75	42	481	131
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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]	46	88	29	18	101	41	28	109	22	12	138	38
Total Analysis Volume [veh/h]	184	353	117	74	405	162	113	437	86	48	554	151
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	19	29	0	15	25	25	11	37	0	9	35	35
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	11	32	6	28	39	7	32	4	28	39
g / C, Green / Cycle	0.12	0.36	0.07	0.31	0.43	0.08	0.35	0.04	0.31	0.43
(v / s)_i Volume / Saturation Flow Rate	0.10	0.26	0.04	0.21	0.10	0.06	0.28	0.03	0.29	0.09
s, saturation flow rate [veh/h]	1810	1820	1810	1900	1615	1810	1846	1810	1900	1615
c, Capacity [veh/h]	222	655	129	585	695	141	650	71	596	693
d1, Uniform Delay [s]	38.55	24.87	40.48	27.38	16.23	40.82	26.36	42.66	29.93	16.17
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.26	0.11	0.34	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
d2, Incremental Delay [s]	7.68	6.65	4.00	6.59	0.79	10.10	5.67	10.54	17.48	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.83	0.72	0.57	0.69	0.23	0.80	0.80	0.67	0.93	0.22
d, Delay for Lane Group [s/veh]	46.23	31.52	44.49	33.97	17.02	50.93	32.03	53.21	47.40	16.33
Lane Group LOS	D	C	D	C	B	D	C	D	D	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.38	9.52	1.71	8.48	2.19	2.83	10.74	1.25	14.06	1.93
50th-Percentile Queue Length [ft/ln]	109.44	237.88	42.83	212.11	54.86	70.66	268.42	31.27	351.45	48.23
95th-Percentile Queue Length [veh/ln]	7.81	14.57	3.08	13.26	3.95	5.09	16.11	2.25	20.21	3.47
95th-Percentile Queue Length [ft/ln]	195.23	364.35	77.10	331.53	98.75	127.18	402.76	56.29	505.18	86.81

Movement, Approach, & Intersection Results

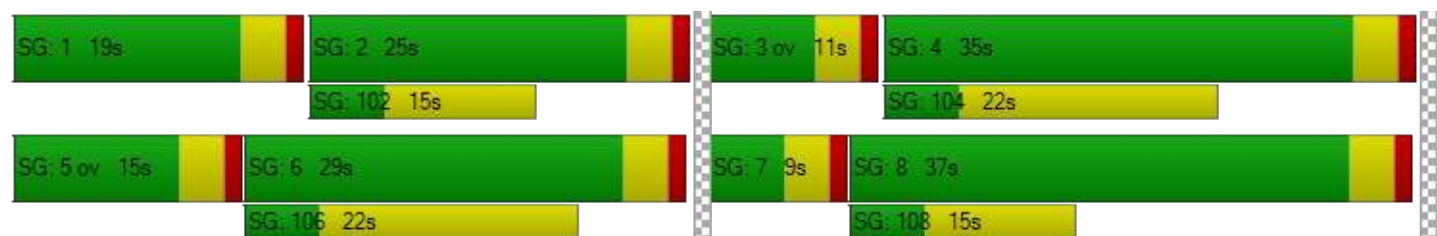
d_M, Delay for Movement [s/veh]	46.23	31.52	31.52	44.49	33.97	17.02	50.93	32.03	32.03	53.21	47.40	16.33
Movement LOS	D	C	C	D	C	B	D	C	C	D	D	B
d_A, Approach Delay [s/veh]	35.66			30.90			35.39			41.54		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	36.11											
Intersection LOS	D											
Intersection V/C	0.669											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.329			2.547			2.441			2.571		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			467			733			689		
d_b, Bicycle Delay [s]	23.47			26.45			18.05			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.639			2.617			2.609			2.802		
Bicycle LOS	B			B			B			C		

Sequence

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



Intersection Level Of Service Report
Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.362

Intersection Setup

Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	716	38	198	698	341	235	106	80	29	122	350
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	48	730	39	202	712	348	240	108	82	30	124	357
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	13	193	10	53	188	92	63	28	22	8	33	94
Total Analysis Volume [veh/h]	51	770	41	213	751	367	253	114	86	32	131	377
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	19	39	39	12	33	33	9	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	42	48	14	52	64	8	15	23	3	10	28
g / C, Green / Cycle	0.05	0.46	0.54	0.16	0.58	0.71	0.09	0.17	0.26	0.03	0.11	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.03	0.06	0.21	0.23	0.07	0.03	0.05	0.01	0.04	0.23
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	161	1674	869	559	2084	1145	312	614	420	108	403	509
d1, Uniform Delay [s]	41.56	16.50	9.86	33.88	10.21	4.92	40.25	32.03	26.02	42.67	36.86	27.55
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	0.23
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]	1.11	0.91	0.10	0.43	0.49	0.74	5.01	0.14	0.24	1.52	0.46	4.50
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	0.32	0.46	0.05	0.38	0.36	0.32	0.81	0.19	0.20	0.30	0.32	0.74
d, Delay for Lane Group [s/veh]	42.67	17.41	9.96	34.31	10.70	5.66	45.27	32.18	26.26	44.19	37.33	32.05
Lane Group LOS	D	B	A	C	B	A	D	C	C	D	D	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.57	5.36	0.39	2.09	3.80	2.32	2.93	1.06	1.45	0.37	1.34	7.65
50th-Percentile Queue Length [ft/ln]	14.18	133.98	9.71	52.29	94.90	57.89	73.23	26.61	36.16	9.19	33.50	191.28
95th-Percentile Queue Length [veh/ln]	1.02	9.16	0.70	3.76	6.83	4.17	5.27	1.92	2.60	0.66	2.41	12.19
95th-Percentile Queue Length [ft/ln]	25.53	228.90	17.48	94.12	170.82	104.20	131.82	47.90	65.09	16.54	60.30	304.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.67	17.41	9.96	34.31	10.70	5.66	45.27	32.18	26.26	44.19	37.33	32.05
Movement LOS	D	B	A	C	B	A	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	18.55			13.09			38.36			34.05		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.71											
Intersection LOS	C											
Intersection V/C	0.362											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.837			2.976			2.735			2.722		
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]	556			778			644			578		
d_b, Bicycle Delay [s]	23.47			16.81			20.67			22.76		
I_b,int, Bicycle LOS Score for Intersection	2.271			2.658			1.933			2.005		
Bicycle LOS	B			B			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.302

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	14	717	3	122	641	8	1	0	4	3	1	136
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	14	731	3	124	654	8	1	0	4	3	1	139
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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]	4	197	1	33	176	2	0	0	1	1	0	37
Total Analysis Volume [veh/h]	15	788	3	134	705	9	1	0	4	3	1	150
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	72	72	72	72	72	72	10	10	10	10
g / C, Green / Cycle	0.80	0.80	0.80	0.80	0.80	0.80	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.19	0.19	0.19	0.00	0.00	0.00	0.09
s, saturation flow rate [veh/h]	748	1900	1897	696	1900	1892	1256	1615	1435	1617
c, Capacity [veh/h]	613	1510	1508	571	1510	1503	97	188	222	188
d1, Uniform Delay [s]	3.80	2.40	2.40	4.83	2.34	2.34	43.83	35.22	36.62	38.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.07	0.42	0.42	0.96	0.37	0.37	0.04	0.04	0.02	7.71
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.26	0.26	0.23	0.24	0.24	0.01	0.02	0.01	0.80
d, Delay for Lane Group [s/veh]	3.87	2.82	2.82	5.80	2.71	2.71	43.87	35.26	36.64	46.45
Lane Group LOS	A	A	A	A	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	1.29	1.29	0.89	1.14	1.13	0.02	0.08	0.06	3.61
50th-Percentile Queue Length [ft/ln]	1.95	32.23	32.19	22.29	28.39	28.28	0.57	1.99	1.52	90.14
95th-Percentile Queue Length [veh/ln]	0.14	2.32	2.32	1.60	2.04	2.04	0.04	0.14	0.11	6.49
95th-Percentile Queue Length [ft/ln]	3.51	58.01	57.95	40.12	51.10	50.91	1.03	3.58	2.73	162.26

Movement, Approach, & Intersection Results

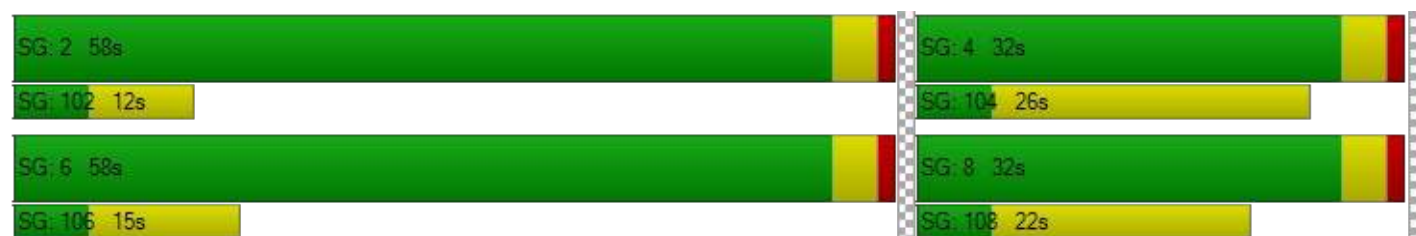
d_M, Delay for Movement [s/veh]	3.87	2.82	2.82	5.80	2.71	2.71	43.87	35.26	35.26	36.64	46.45	46.45
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.84			3.20			36.98			46.26		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.79											
Intersection LOS	A											
Intersection V/C	0.302											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.602			2.746			1.973			2.227		
Crosswalk LOS	B			B			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1200			1200			622			622		
d_b, Bicycle Delay [s]	7.20			7.20			21.36			21.36		
I_b,int, Bicycle LOS Score for Intersection	2.225			2.259			1.568			1.814		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.419

Intersection Setup

Name												
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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	197	584	68	53	546	56	115	264	154	60	322	39
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	201	596	69	54	557	57	117	269	157	61	328	40
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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]	55	162	19	15	152	16	32	73	43	17	89	11
Total Analysis Volume [veh/h]	219	649	75	59	606	62	127	293	171	66	357	44
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	10	33	0	9	32	0	11	39	0	9	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	6	51	51	4	49	49	7	15	15	4	12	12
g / C, Green / Cycle	0.07	0.56	0.56	0.04	0.54	0.54	0.08	0.17	0.17	0.05	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.19	0.02	0.18	0.18	0.07	0.13	0.13	0.04	0.11	0.11
s, saturation flow rate [veh/h]	3514	1900	1832	3514	1900	1839	1810	1900	1670	1810	1900	1828
c, Capacity [veh/h]	234	1070	1032	151	1025	992	141	321	282	85	263	253
d1, Uniform Delay [s]	41.81	10.65	10.65	41.91	11.61	11.62	41.16	35.69	35.79	42.40	37.43	37.48
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]	15.56	0.88	0.91	1.63	0.87	0.90	18.09	3.78	4.62	13.65	4.86	5.26
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	0.93	0.34	0.34	0.39	0.33	0.33	0.90	0.76	0.78	0.77	0.77	0.78
d, Delay for Lane Group [s/veh]	57.36	11.53	11.56	43.55	12.48	12.51	59.25	39.48	40.42	56.05	42.29	42.74
Lane Group LOS	E	B	B	D	B	B	E	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.89	3.92	3.79	0.67	3.80	3.69	3.46	5.37	4.88	1.76	4.61	4.51
50th-Percentile Queue Length [ft/ln]	72.35	98.12	94.83	16.64	94.93	92.31	86.56	134.29	122.10	43.95	115.22	112.76
95th-Percentile Queue Length [veh/ln]	5.21	7.06	6.83	1.20	6.83	6.65	6.23	9.17	8.51	3.16	8.13	7.99
95th-Percentile Queue Length [ft/ln]	130.24	176.61	170.70	29.96	170.87	166.15	155.81	229.31	212.72	79.11	203.24	199.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.36	11.55	11.56	43.55	12.49	12.51	59.25	39.63	40.42	56.05	42.48	42.74
Movement LOS	E	B	B	D	B	B	E	D	D	E	D	D
d_A, Approach Delay [s/veh]	22.19			15.01			44.07			44.42		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	28.82											
Intersection LOS	C											
Intersection V/C	0.419											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.745			2.706			2.541			2.476		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	644			622			778			733		
d_b, Bicycle Delay [s]	20.67			21.36			16.81			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.338			2.159			2.047			1.945		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):6.3
A
0.122**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	285	0	0	233	52	40	0	20	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	8	291	0	0	238	53	41	0	20	0	0	0
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
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]	2	81	0	0	67	15	11	0	6	0	0	0
Total Analysis Volume [veh/h]	9	326	0	0	267	59	46	0	22	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	61	0	0	52	0	29	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	1	78	73	73	4	4	
g / C, Green / Cycle	0.01	0.86	0.81	0.81	0.05	0.05	
(v / s)_i Volume / Saturation Flow Rate	0.00	0.09	0.09	0.09	0.03	0.01	
s, saturation flow rate [veh/h]	1810	3618	1900	1786	1810	1615	
c, Capacity [veh/h]	21	3125	1535	1443	85	76	
d1, Uniform Delay [s]	44.19	0.92	1.82	1.83	41.92	41.41	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	13.40	0.07	0.14	0.16	5.18	2.05	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.43	0.10	0.11	0.11	0.54	0.29	
d, Delay for Lane Group [s/veh]	57.59	0.98	1.96	1.99	47.09	43.47	
Lane Group LOS	E	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.28	0.12	0.40	0.40	1.11	0.51	
50th-Percentile Queue Length [ft/ln]	6.88	2.95	9.91	10.07	27.80	12.77	
95th-Percentile Queue Length [veh/ln]	0.50	0.21	0.71	0.73	2.00	0.92	
95th-Percentile Queue Length [ft/ln]	12.39	5.31	17.85	18.13	50.05	22.99	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.59	0.98	0.00	0.00	1.97	1.99	47.09	0.00	43.47	0.00	0.00	0.00
Movement LOS	E	A			A	A	D		D			
d_A, Approach Delay [s/veh]	2.50			1.97			45.92			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	6.32											
Intersection LOS	A											
Intersection V/C	0.122											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.423			2.303			1.986			1.425		
Crosswalk LOS	B			B			A			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1267			1067			556			0		
d_b, Bicycle Delay [s]	6.05			9.80			23.47			45.00		
I_b,int, Bicycle LOS Score for Intersection	1.836			1.829			1.560			4.132		
Bicycle LOS	A			A			A			D		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.291

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	134	61	74	93	47	26	402	31	20	436	126
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	42	137	62	75	95	48	27	410	32	20	445	129
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
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]	11	36	16	20	25	12	7	107	8	5	116	34
Total Analysis Volume [veh/h]	44	143	65	78	99	50	28	427	33	21	463	134
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	9	52	0	9	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	58	58	58	58	58	3	18	18	2	18	18
g / C, Green / Cycle	0.64	0.64	0.64	0.64	0.64	0.03	0.20	0.20	0.02	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.09	0.06	0.03	0.02	0.12	0.12	0.01	0.16	0.16
s, saturation flow rate [veh/h]	1686	1615	912	1729	1615	1810	1900	1853	1810	1900	1756
c, Capacity [veh/h]	1130	1035	665	1108	1035	51	385	375	42	375	347
d1, Uniform Delay [s]	6.45	6.05	12.51	6.16	5.99	43.15	32.59	32.62	43.44	34.61	34.68
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.32	0.12	0.36	0.16	0.09	8.69	1.52	1.59	8.91	4.56	5.18
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
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
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

Lane Group Results

X, volume / capacity	0.17	0.06	0.12	0.09	0.05	0.54	0.60	0.61	0.50	0.82	0.83
d, Delay for Lane Group [s/veh]	6.76	6.16	12.87	6.32	6.08	51.84	34.12	34.21	52.35	39.17	39.86
Lane Group LOS	A	A	B	A	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.36	0.44	0.89	0.69	0.34	0.73	4.68	4.60	0.56	6.82	6.43
50th-Percentile Queue Length [ft/ln]	33.94	11.11	22.18	17.16	8.46	18.33	116.95	114.98	14.04	170.42	160.77
95th-Percentile Queue Length [veh/ln]	2.44	0.80	1.60	1.24	0.61	1.32	8.23	8.12	1.01	11.10	10.59
95th-Percentile Queue Length [ft/ln]	61.10	20.00	39.92	30.88	15.23	32.99	205.63	202.91	25.27	277.46	264.75

Movement, Approach, & Intersection Results

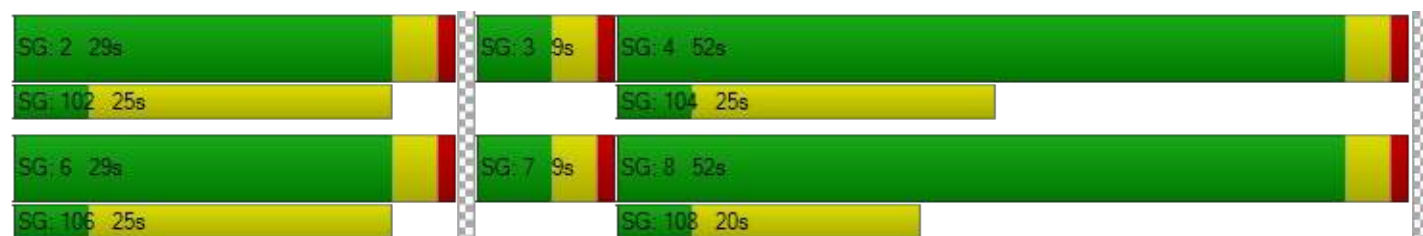
d_M, Delay for Movement [s/veh]	6.76	6.76	6.16	12.87	6.32	6.08	51.84	34.16	34.21	52.35	39.40	39.86
Movement LOS	A	A	A	B	A	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	6.61			8.52			35.18			39.94		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	28.67											
Intersection LOS	C											
Intersection V/C	0.291											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.405			2.568			2.644		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1067		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			9.80		
I_b,int, Bicycle LOS Score for Intersection	1.975			1.747			1.962			2.069		
Bicycle LOS	A			A			A			B		

Sequence

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



Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_PM.vistro

Scenario 2 OY 2024 PM

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

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	0.739	30.5	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.741	30.1	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.504	26.2	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.588	31.1	C
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.616	25.6	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.434	7.0	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.519	30.2	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.226	8.2	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.489	28.8	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	30.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.739

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
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]	485	304	0	0	298	384	0	0	0	301	4	125
Peak Hour Factor	0.9100	0.9100	1.0000	1.0000	0.9100	0.9100	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100
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]	133	84	0	0	82	105	0	0	0	83	1	34
Total Analysis Volume [veh/h]	533	334	0	0	327	422	0	0	0	331	4	137
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	53	67	0	0	14	0	0	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	29	64	31	31		18	18
g / C, Green / Cycle	0.32	0.71	0.34	0.34		0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.29	0.09	0.17	0.26		0.18	0.09
s, saturation flow rate [veh/h]	1810	3618	1900	1615		1810	1622
c, Capacity [veh/h]	581	2563	651	554		367	329
d1, Uniform Delay [s]	29.38	4.21	23.48	26.31		35.02	31.34
k, delay calibration	0.12	0.50	0.50	0.50		0.12	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	7.08	0.11	2.75	9.57		9.04	0.89
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.13	0.50	0.76		0.90	0.43
d, Delay for Lane Group [s/veh]	36.47	4.32	26.23	35.88		44.07	32.23
Lane Group LOS	D	A	C	D		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	11.79	0.85	5.84	9.20		7.83	2.71
50th-Percentile Queue Length [ft/ln]	294.77	21.18	146.11	230.10		195.73	67.86
95th-Percentile Queue Length [veh/ln]	17.42	1.52	9.81	14.18		12.42	4.89
95th-Percentile Queue Length [ft/ln]	435.56	38.12	245.23	354.49		310.45	122.15

Movement, Approach, & Intersection Results

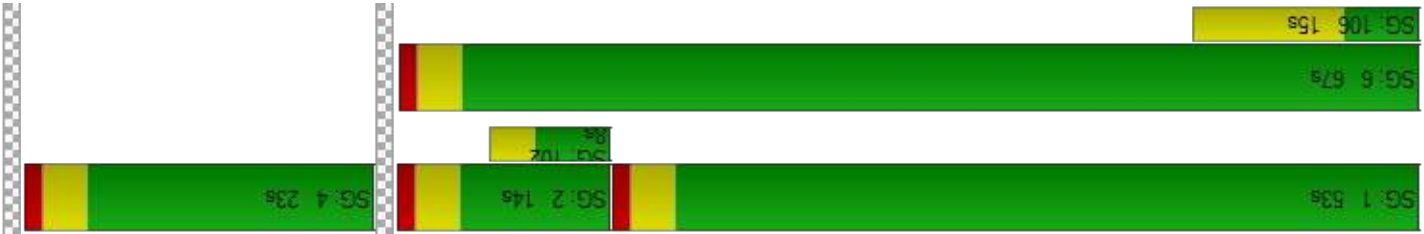
d_M, Delay for Movement [s/veh]										36.47		4.32		0.00		0.00		26.23		35.88		0.00		0.00		0.00		44.07		32.23		32.23	
Movement LOS										D		A								D		C						D		C		C	
d_A, Approach Delay [s/veh]										24.08						31.67						0.00						40.53					
Approach LOS										C						C						A						D					
d_I, Intersection Delay [s/veh]										30.52																							
Intersection LOS										C																							
Intersection V/C										0.739																							

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	0.00	36.45
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.360	1.946
Crosswalk LOS	F	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1400	222	0	422
d_b, Bicycle Delay [s]	4.05	35.56	45.00	28.01
l_b,int, Bicycle LOS Score for Intersection	2.275	2.178	4.132	2.338
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	30.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.741

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	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	576	428	158	439	0	207	4	512	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	0.9550	0.9550	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	151	112	41	115	0	54	1	134	0	0	0
Total Analysis Volume [veh/h]	0	603	448	165	460	0	217	4	536	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	36	0	13	49	0	0	41	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	37	37	9	50	32	32	
g / C, Green / Cycle	0.41	0.41	0.10	0.55	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.28	0.32	0.09	0.13	0.12	0.33	
s, saturation flow rate [veh/h]	1900	1652	1810	3618	1811	1615	
c, Capacity [veh/h]	776	675	181	2001	649	578	
d1, Uniform Delay [s]	21.76	23.09	40.11	10.30	21.12	27.75	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.32	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	4.71	8.64	15.88	0.27	0.31	16.59	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.78	0.91	0.23	0.34	0.93	
d, Delay for Lane Group [s/veh]	26.46	31.73	55.98	10.57	21.43	44.34	
Lane Group LOS	C	C	E	B	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.64	10.78	4.36	2.25	3.37	13.24	
50th-Percentile Queue Length [ft/ln]	241.11	269.39	108.98	56.34	84.37	331.08	
95th-Percentile Queue Length [veh/ln]	14.74	16.16	7.78	4.06	6.07	19.21	
95th-Percentile Queue Length [ft/ln]	368.44	403.98	194.59	101.40	151.86	480.29	

Movement, Approach, & Intersection Results

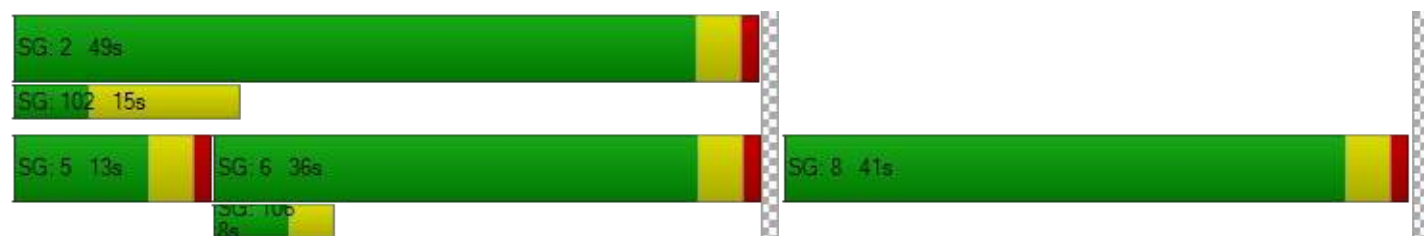
d_M, Delay for Movement [s/veh]	0.00	27.14	31.73	55.98	10.57	0.00	21.43	21.43	44.34	0.00	0.00	0.00
Movement LOS		C	C	E	B		C	C	D			
d_A, Approach Delay [s/veh]	29.10			22.56			37.65			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	30.08											
Intersection LOS	C											
Intersection V/C	0.741											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.085			2.026		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	711			1000			822			0		
d_b, Bicycle Delay [s]	18.69			11.25			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.427			2.075			2.809			4.132		
Bicycle LOS	B			B			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

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):	0.504

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	52	672	35	187	615	141	97	274	68	20	175	225
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	14	175	9	49	160	37	25	71	18	5	46	59
Total Analysis Volume [veh/h]	54	700	36	195	641	147	101	285	71	21	182	234
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	30	0	19	34	0	12	32	0	9	29	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	4	41	41	12	48	48	6	20	20	2	16	16
g / C, Green / Cycle	0.04	0.45	0.45	0.13	0.54	0.54	0.07	0.22	0.22	0.02	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.11	0.21	0.21	0.06	0.10	0.10	0.01	0.10	0.14
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1779	1810	1900	1772	1810	1900	1615
c, Capacity [veh/h]	77	855	840	232	1018	953	129	419	391	42	328	279
d1, Uniform Delay [s]	42.53	16.92	16.92	38.32	12.33	12.33	41.10	30.23	30.30	43.44	34.07	36.03
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]	11.10	1.60	1.63	7.89	1.17	1.25	9.85	0.71	0.79	8.91	1.47	6.69
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	0.70	0.43	0.43	0.84	0.40	0.40	0.78	0.44	0.44	0.50	0.56	0.84
d, Delay for Lane Group [s/veh]	53.63	18.52	18.56	46.20	13.51	13.59	50.95	30.95	31.09	52.35	35.54	42.72
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.41	5.39	5.30	4.64	4.83	4.55	2.53	3.44	3.28	0.56	3.72	5.39
50th-Percentile Queue Length [ft/ln]	35.24	134.64	132.60	116.05	120.82	113.65	63.21	85.88	81.98	14.04	92.96	134.78
95th-Percentile Queue Length [veh/ln]	2.54	9.19	9.08	8.18	8.44	8.04	4.55	6.18	5.90	1.01	6.69	9.20
95th-Percentile Queue Length [ft/ln]	63.43	229.78	227.02	204.38	210.96	201.07	113.78	154.58	147.56	25.27	167.33	229.98

Movement, Approach, & Intersection Results

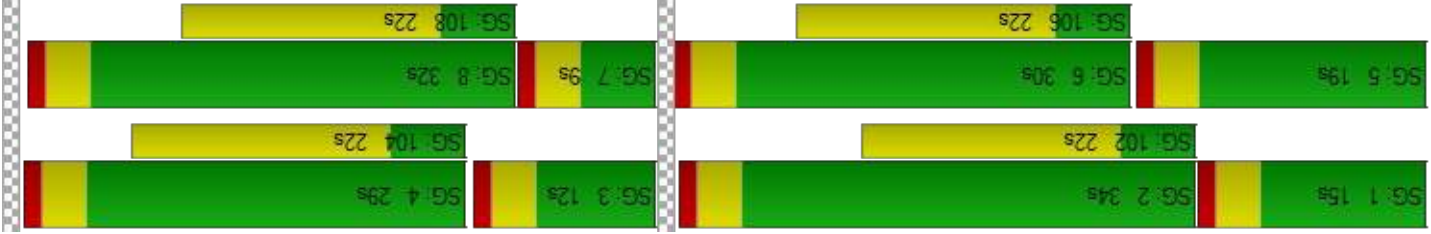
d_M, Delay for Movement [s/veh]	53.63	18.54	18.56	46.20	13.54	13.59	50.95	31.00	31.09	52.35	35.54	42.72
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	20.94			20.02			35.42			40.19		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	26.24											
Intersection LOS	C											
Intersection V/C	0.504											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.598	2.695	2.465	2.487
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	667	21.36	556
d_b, Bicycle Delay [s]	22.76	20.00	23.47	
l_b,int, Bicycle LOS Score for Intersection	2.211	2.371	1.937	1.920
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.588

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	43	323	44	118	363	123	79	434	63	57	346	87
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	44	329	45	120	370	125	81	443	64	58	353	89
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
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]	11	85	12	31	95	32	21	114	16	15	91	23
Total Analysis Volume [veh/h]	45	338	46	123	381	129	83	456	66	60	363	92
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	17	26	0	13	22	22	24	42	0	9	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	3	35	8	39	49	6	28	4	26	37
g / C, Green / Cycle	0.04	0.39	0.09	0.43	0.54	0.06	0.31	0.04	0.29	0.42
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.07	0.20	0.08	0.05	0.28	0.03	0.19	0.06
s, saturation flow rate [veh/h]	1810	1861	1810	1900	1615	1810	1859	1810	1900	1615
c, Capacity [veh/h]	71	721	155	824	877	117	569	78	540	669
d1, Uniform Delay [s]	42.60	21.28	40.37	18.05	10.21	41.24	30.14	42.60	28.48	16.36
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.20	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
d2, Incremental Delay [s]	9.03	2.81	8.87	1.86	0.35	7.56	10.87	14.21	1.46	0.09
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.63	0.53	0.79	0.46	0.15	0.71	0.92	0.76	0.67	0.14
d, Delay for Lane Group [s/veh]	51.63	24.09	49.25	19.91	10.56	48.80	41.01	56.81	29.94	16.46
Lane Group LOS	D	C	D	B	B	D	D	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.15	6.57	3.02	5.79	1.28	2.03	12.22	1.62	6.94	1.16
50th-Percentile Queue Length [ft/ln]	28.85	164.36	75.45	144.67	32.09	50.79	305.48	40.38	173.56	29.05
95th-Percentile Queue Length [veh/ln]	2.08	10.78	5.43	9.73	2.31	3.66	17.95	2.91	11.26	2.09
95th-Percentile Queue Length [ft/ln]	51.94	269.49	135.81	243.30	57.76	91.42	448.80	72.68	281.58	52.29

Movement, Approach, & Intersection Results

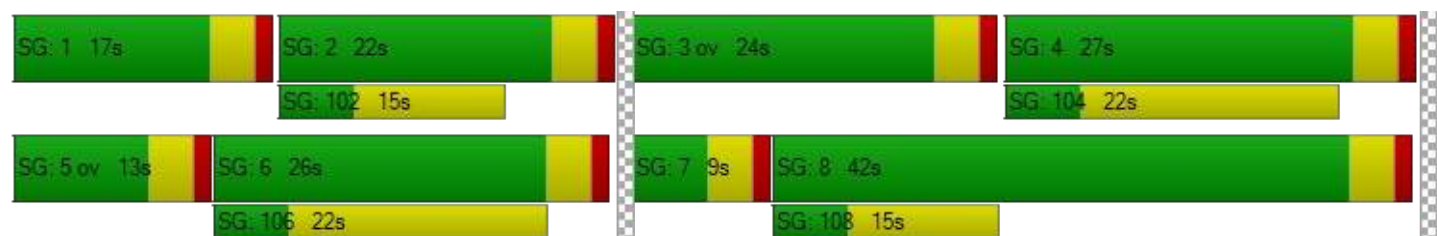
d_M, Delay for Movement [s/veh]	51.63	24.09	24.09	49.25	19.91	10.56	48.80	41.01	41.01	56.81	29.94	16.46
Movement LOS	D	C	C	D	B	B	D	D	D	E	C	B
d_A, Approach Delay [s/veh]	26.98			23.71			42.08			30.66		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.09											
Intersection LOS	C											
Intersection V/C	0.588											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.246			2.525			2.313			2.524		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			400			844			511		
d_b, Bicycle Delay [s]	25.69			28.80			15.02			24.94		
I_b,int, Bicycle LOS Score for Intersection	2.267			2.604			2.558			2.409		
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 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	25.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.616

Intersection Setup

Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	774	75	342	805	559	379	378	113	61	184	357
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	108	789	77	349	821	570	387	386	115	62	188	364
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
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]	28	206	20	91	214	149	101	101	30	16	49	95
Total Analysis Volume [veh/h]	113	824	80	364	857	595	404	403	120	65	196	380
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	15	35	35	17	37	37	9	29	29
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	39	47	11	45	62	13	20	29	4	11	26
g / C, Green / Cycle	0.06	0.44	0.53	0.12	0.50	0.69	0.14	0.22	0.32	0.04	0.12	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.23	0.05	0.10	0.24	0.37	0.11	0.11	0.07	0.02	0.05	0.24
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	195	1586	852	430	1827	1121	508	784	511	158	424	458
d1, Uniform Delay [s]	41.47	18.38	10.56	38.68	14.45	6.67	37.22	31.07	22.70	41.82	37.08	30.18
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	0.23
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]	2.70	1.22	0.22	4.71	0.87	1.80	2.90	0.52	0.23	1.71	0.79	8.09
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	0.58	0.52	0.09	0.85	0.47	0.53	0.80	0.51	0.23	0.41	0.46	0.83
d, Delay for Lane Group [s/veh]	44.17	19.60	10.78	43.39	15.31	8.48	40.11	31.60	22.93	43.53	37.87	38.27
Lane Group LOS	D	B	B	D	B	A	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.28	6.23	0.80	4.15	5.56	5.07	4.43	3.84	1.87	0.73	2.03	8.49
50th-Percentile Queue Length [ft/ln]	32.08	155.73	20.11	103.77	138.94	126.68	110.69	95.98	46.78	18.32	50.82	212.14
95th-Percentile Queue Length [veh/ln]	2.31	10.32	1.45	7.47	9.42	8.76	7.88	6.91	3.37	1.32	3.66	13.26
95th-Percentile Queue Length [ft/ln]	57.74	258.06	36.19	186.78	235.59	218.97	196.97	172.77	84.20	32.97	91.47	331.58

Movement, Approach, & Intersection Results

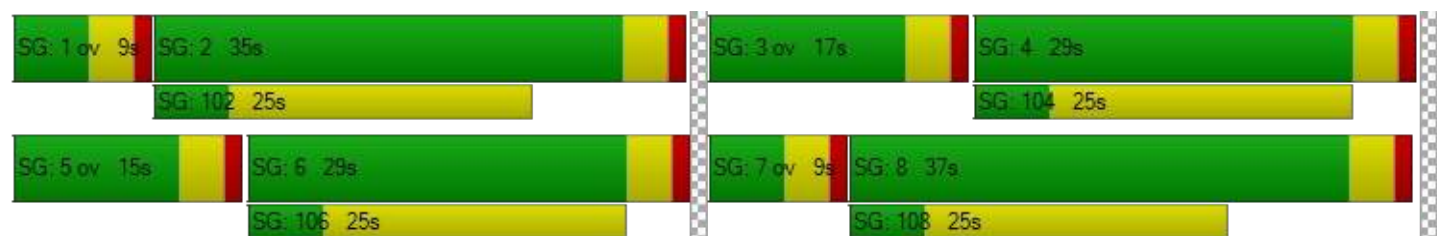
d_M, Delay for Movement [s/veh]	44.17	19.60	10.78	43.39	15.31	8.48	40.11	31.60	22.93	43.53	37.87	38.27
Movement LOS	D	B	B	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.64			18.70			34.19			38.68		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	25.55											
Intersection LOS	C											
Intersection V/C	0.616											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.882			3.072			2.850			2.803		
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]	556			689			733			556		
d_b, Bicycle Delay [s]	23.47			19.34			18.05			23.47		
I_b,int, Bicycle LOS Score for Intersection	2.399			3.058			2.324			2.088		
Bicycle LOS	B			C			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 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.434

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	8	810	8	209	851	1	0	0	5	1	3	151
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	8	826	8	213	868	1	0	0	5	1	3	154
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	2	212	2	55	223	0	0	0	1	0	1	40
Total Analysis Volume [veh/h]	8	849	8	219	892	1	0	0	5	1	3	158
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	71	71	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.23	0.33	0.24	0.24	0.00	0.00	0.00	0.10
s, saturation flow rate [veh/h]	633	1900	1894	655	1900	1899	1245	1615	1434	1620
c, Capacity [veh/h]	514	1497	1492	531	1497	1497	99	199	231	199
d1, Uniform Delay [s]	4.50	2.61	2.61	6.52	2.64	2.64	0.00	34.71	36.06	38.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.06	0.48	0.48	2.36	0.51	0.51	0.00	0.05	0.01	7.55
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.29	0.29	0.41	0.30	0.30	0.00	0.03	0.00	0.81
d, Delay for Lane Group [s/veh]	4.55	3.09	3.10	8.88	3.15	3.15	0.00	34.76	36.07	45.97
Lane Group LOS	A	A	A	A	A	A	A	C	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	1.52	1.52	1.95	1.61	1.61	0.00	0.10	0.02	3.83
50th-Percentile Queue Length [ft/ln]	1.20	38.12	38.02	48.63	40.17	40.15	0.00	2.46	0.50	95.65
95th-Percentile Queue Length [veh/ln]	0.09	2.74	2.74	3.50	2.89	2.89	0.00	0.18	0.04	6.89
95th-Percentile Queue Length [ft/ln]	2.16	68.62	68.43	87.54	72.30	72.28	0.00	4.43	0.90	172.17

Movement, Approach, & Intersection Results

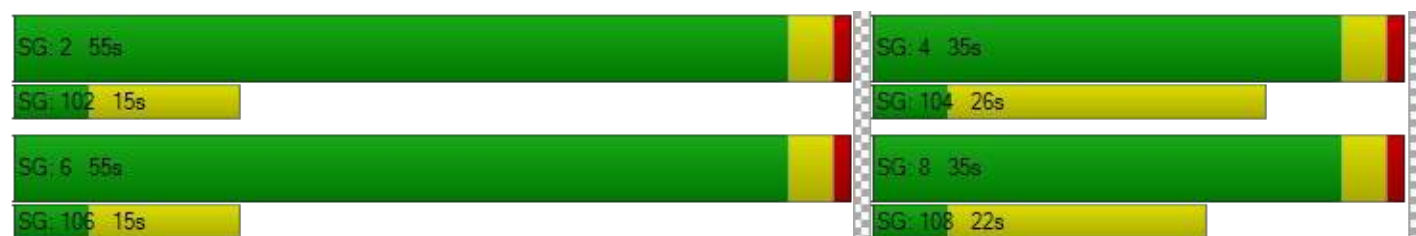
d_M, Delay for Movement [s/veh]	4.55	3.09	3.10	8.88	3.15	3.15	0.00	34.76	34.76	36.07	45.97	45.97
Movement LOS	A	A	A	A	A	A	A	C	C	D	D	D
d_A, Approach Delay [s/veh]	3.11			4.28			34.76			45.91		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	7.02											
Intersection LOS	A											
Intersection V/C	0.434											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.647			2.799			1.959			2.380		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1133			689			689		
d_b, Bicycle Delay [s]	8.45			8.45			19.34			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.273			2.477			1.568			1.827		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	30.2
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	142	647	96	139	678	63	135	447	206	89	350	49
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	145	660	98	142	692	64	138	456	210	91	357	50
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
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]	39	179	27	38	187	17	37	123	57	25	97	14
Total Analysis Volume [veh/h]	157	714	106	154	749	69	149	494	227	98	386	54
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	9	32	0	9	32	0	12	38	0	11	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	5	42	42	5	42	42	8	21	21	6	19	19
g / C, Green / Cycle	0.06	0.46	0.46	0.06	0.46	0.46	0.09	0.23	0.23	0.07	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.04	0.22	0.22	0.04	0.22	0.22	0.08	0.20	0.20	0.05	0.12	0.12
s, saturation flow rate [veh/h]	3514	1900	1815	3514	1900	1844	1810	1900	1700	1810	1900	1820
c, Capacity [veh/h]	195	880	841	195	880	854	161	445	398	125	408	390
d1, Uniform Delay [s]	42.02	16.63	16.63	41.98	16.59	16.59	40.71	33.00	33.01	41.22	31.47	31.51
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]	7.54	1.85	1.93	6.94	1.81	1.87	19.24	4.80	5.36	10.10	1.16	1.23
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	0.80	0.48	0.48	0.79	0.47	0.47	0.93	0.85	0.86	0.78	0.55	0.55
d, Delay for Lane Group [s/veh]	49.55	18.48	18.57	48.91	18.40	18.45	59.95	37.80	38.37	51.31	32.63	32.74
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.91	6.11	5.86	1.86	6.03	5.86	4.09	8.33	7.53	2.46	4.39	4.25
50th-Percentile Queue Length [ft/ln]	47.69	152.73	146.42	46.43	150.68	146.58	102.24	208.33	188.22	61.59	109.65	106.21
95th-Percentile Queue Length [veh/ln]	3.43	10.16	9.83	3.34	10.05	9.83	7.36	13.07	12.03	4.43	7.82	7.63
95th-Percentile Queue Length [ft/ln]	85.84	254.07	245.64	83.57	251.33	245.86	184.04	326.69	300.72	110.87	195.52	190.71

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.55	18.52	18.57	48.91	18.42	18.45	59.95	37.93	38.37	51.31	32.67	32.74
Movement LOS	D	B	B	D	B	B	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	23.51			23.26			41.81			36.08		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	30.19											
Intersection LOS	C											
Intersection V/C	0.519											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.788			2.761			2.590			2.553		
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]	622			622			756			733		
d_b, Bicycle Delay [s]	21.36			21.36			17.42			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.366			2.362			2.277			2.003		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):8.2
A
0.226**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	402	0	0	377	71	70	0	35	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	24	410	0	0	385	72	71	0	36	0	0	0
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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]	8	129	0	0	121	23	22	0	11	0	0	0
Total Analysis Volume [veh/h]	30	516	0	0	484	91	89	0	45	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	49	0	0	40	0	41	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	3	76	69	69	6	6	
g / C, Green / Cycle	0.03	0.84	0.77	0.77	0.07	0.07	
(v / s)_i Volume / Saturation Flow Rate	0.02	0.14	0.15	0.16	0.05	0.03	
s, saturation flow rate [veh/h]	1810	3618	1900	1799	1810	1615	
c, Capacity [veh/h]	53	3033	1452	1375	132	118	
d1, Uniform Delay [s]	43.10	1.37	2.95	2.98	40.68	39.79	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.93	0.12	0.31	0.35	5.90	2.03	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.56	0.17	0.20	0.21	0.68	0.38	
d, Delay for Lane Group [s/veh]	52.02	1.49	3.25	3.32	46.58	41.83	
Lane Group LOS	D	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.78	0.39	1.13	1.15	2.12	1.01	
50th-Percentile Queue Length [ft/ln]	19.62	9.82	28.33	28.80	52.95	25.18	
95th-Percentile Queue Length [veh/ln]	1.41	0.71	2.04	2.07	3.81	1.81	
95th-Percentile Queue Length [ft/ln]	35.31	17.67	50.99	51.84	95.30	45.32	

Movement, Approach, & Intersection Results

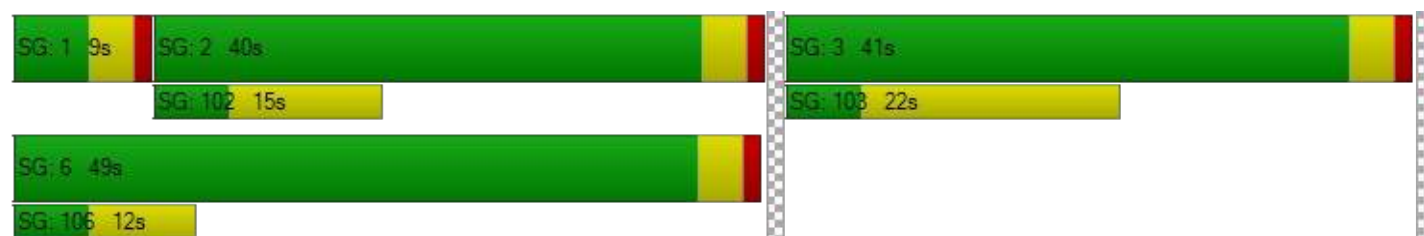
d_M, Delay for Movement [s/veh]	52.02	1.49	0.00	0.00	3.28	3.32	46.58	0.00	41.83	0.00	0.00	0.00
Movement LOS	D	A			A	A	D		D			
d_A, Approach Delay [s/veh]	4.27			3.29			44.98			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	8.17											
Intersection LOS	A											
Intersection V/C	0.226											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.511			2.420			2.025			1.425		
Crosswalk LOS	B			B			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1000			800			822			0		
d_b, Bicycle Delay [s]	11.25			16.20			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.010			2.034			1.560			4.132		
Bicycle LOS	B			B			A			D		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	28.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.489

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	168	45	153	170	95	83	475	27	39	367	169
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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]	18	171	46	156	173	97	85	485	28	40	374	172
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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]	5	48	13	44	49	27	24	137	8	11	105	48
Total Analysis Volume [veh/h]	20	193	52	176	195	109	96	546	32	45	421	194
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	10	52	0	9	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	54	54	54	54	54	6	21	21	3	18	18
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.07	0.23	0.23	0.04	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.26	0.11	0.07	0.05	0.15	0.15	0.02	0.17	0.17
s, saturation flow rate [veh/h]	1796	1615	667	1729	1615	1810	1900	1863	1810	1900	1701
c, Capacity [veh/h]	1112	960	477	1028	960	121	445	436	68	390	349
d1, Uniform Delay [s]	8.33	7.64	22.85	8.33	7.93	41.40	31.18	31.19	42.72	34.24	34.32
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.38	0.11	2.19	0.41	0.24	11.20	1.64	1.69	10.25	4.53	5.32
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
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
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

Lane Group Results

X, volume / capacity	0.19	0.05	0.37	0.19	0.11	0.80	0.66	0.66	0.66	0.83	0.84
d, Delay for Lane Group [s/veh]	8.71	7.74	25.05	8.74	8.17	52.59	32.82	32.87	52.98	38.76	39.64
Lane Group LOS	A	A	C	A	A	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.85	0.42	3.09	1.71	0.91	2.45	5.81	5.71	1.17	7.10	6.51
50th-Percentile Queue Length [ft/ln]	46.32	10.43	77.35	42.65	22.73	61.21	145.23	142.84	29.30	177.58	162.85
95th-Percentile Queue Length [veh/ln]	3.33	0.75	5.57	3.07	1.64	4.41	9.76	9.63	2.11	11.47	10.70
95th-Percentile Queue Length [ft/ln]	83.37	18.77	139.23	76.76	40.91	110.18	244.05	240.85	52.74	286.85	267.49

Movement, Approach, & Intersection Results

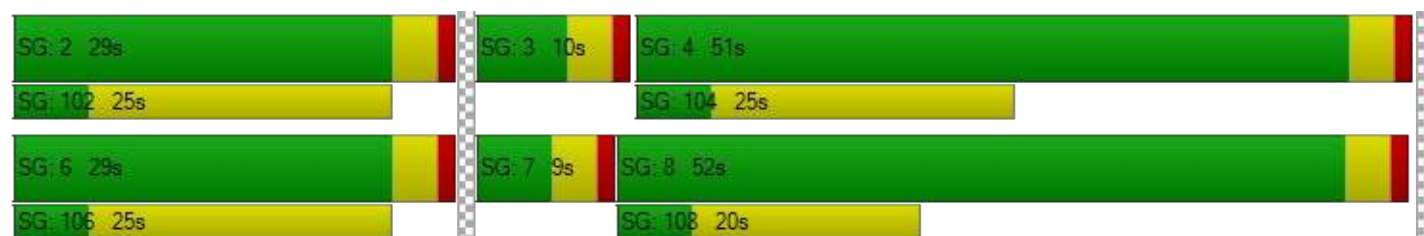
d_M, Delay for Movement [s/veh]	8.71	8.71	7.74	25.05	8.74	8.17	52.59	32.85	32.87	52.98	38.97	39.64
Movement LOS	A	A	A	C	A	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.52			14.59			35.66			40.12		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	28.75											
Intersection LOS	C											
Intersection V/C	0.489											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.263			2.489			2.568			2.831		
Crosswalk LOS	B			B			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1044		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			10.27		
I_b,int, Bicycle LOS Score for Intersection	1.997			1.956			2.116			2.104		
Bicycle LOS	A			A			B			B		

Sequence

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



APPENDIX D-3

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2024 PLUS PROJECT

Miro Way and Ayala Drive Warehouse

Vistro File: K:\...\Miro Way_AM.vistro

Scenario 3 OY 2024 WP AM

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

2/11/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	0.583	33.0	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.744	26.7	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	WB Left	0.555	27.5	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.692	37.2	D
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.364	21.6	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.306	6.7	A
7	Ayala Dr at Miro Wy	Two-way stop	HCM 7th Edition	EB Left	0.118	27.6	D
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.440	32.1	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.125	7.4	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.313	29.1	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	33.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.583

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	0	0	0	0	0	0	0	0	31	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]	413	350	0	0	17	12	0	0	0	471	5	160
Peak Hour Factor	0.8530	0.8530	1.0000	1.0000	0.8530	0.8530	1.0000	1.0000	1.0000	0.8530	0.8530	0.8530
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]	121	103	0	0	5	4	0	0	0	138	1	47
Total Analysis Volume [veh/h]	484	410	0	0	20	14	0	0	0	552	6	188
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	38	52	0	0	14	0	0	0	0	0	38	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	26	52	22	22		30	30
g / C, Green / Cycle	0.29	0.58	0.25	0.25		0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.27	0.11	0.01	0.01		0.31	0.12
s, saturation flow rate [veh/h]	1810	3618	1900	1659		1810	1623
c, Capacity [veh/h]	529	2102	465	406		597	535
d1, Uniform Delay [s]	30.79	8.91	25.91	25.95		29.07	22.94
k, delay calibration	0.24	0.50	0.50	0.50		0.31	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	13.19	0.21	0.15	0.19		15.80	0.41
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.20	0.04	0.04		0.92	0.36
d, Delay for Lane Group [s/veh]	43.98	9.11	26.06	26.14		44.87	23.36
Lane Group LOS	D	A	C	C		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	11.74	1.81	0.29	0.30		13.64	3.12
50th-Percentile Queue Length [ft/ln]	293.40	45.33	7.33	7.41		341.00	77.95
95th-Percentile Queue Length [veh/ln]	17.35	3.26	0.53	0.53		19.70	5.61
95th-Percentile Queue Length [ft/ln]	433.85	81.59	13.19	13.33		492.43	140.32

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.98	9.11	0.00	0.00	26.07	26.14	0.00	0.00	0.00	44.87	23.36	23.36
Movement LOS	D	A			C	C				D	C	C
d_A, Approach Delay [s/veh]	27.99			26.10			0.00			39.27		
Approach LOS	C			C			A			D		
d_I, Intersection Delay [s/veh]	32.98											
Intersection LOS	C											
Intersection V/C	0.583											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			1.916			2.080		
Crosswalk LOS	F			F			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1067			222			0			756		
d_b, Bicycle Delay [s]	9.80			35.56			45.00			17.42		
I_b,int, Bicycle LOS Score for Intersection	2.297			1.588			4.132			2.791		
Bicycle LOS	B			A			D			C		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.744

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	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	9	9	0	31	0	0	0	30	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	505	349	6	460	0	304	3	658	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	141	97	2	128	0	85	1	183	0	0	0
Total Analysis Volume [veh/h]	0	562	389	7	512	0	339	3	733	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	14	0	9	23	0	0	67	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	33	33	1	38	44	44	
g / C, Green / Cycle	0.37	0.37	0.01	0.42	0.49	0.49	
(v / s)_i Volume / Saturation Flow Rate	0.25	0.29	0.00	0.14	0.19	0.45	
s, saturation flow rate [veh/h]	1900	1660	1810	3618	1810	1615	
c, Capacity [veh/h]	702	614	19	1535	881	786	
d1, Uniform Delay [s]	23.86	25.07	44.24	17.37	14.62	21.71	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.21	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	5.19	9.26	11.82	0.59	0.28	9.94	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.68	0.78	0.37	0.33	0.39	0.93	
d, Delay for Lane Group [s/veh]	29.05	34.32	56.06	17.96	14.89	31.65	
Lane Group LOS	C	C	E	B	B	C	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	9.17	10.15	0.22	3.56	4.26	15.52	
50th-Percentile Queue Length [ft/ln]	229.21	253.66	5.38	88.91	106.57	388.04	
95th-Percentile Queue Length [veh/ln]	14.13	15.37	0.39	6.40	7.65	21.98	
95th-Percentile Queue Length [ft/ln]	353.36	384.26	9.69	160.03	191.22	549.56	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	29.86	34.32	56.06	17.96	0.00	14.89	14.89	31.65	0.00	0.00	0.00
Movement LOS		C	C	E	B		B	B	C			
d_A, Approach Delay [s/veh]	31.69			18.47			26.32			0.00		
Approach LOS	C			B			C			A		
d_I, Intersection Delay [s/veh]	26.72											
Intersection LOS	C											
Intersection V/C	0.744											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.240			1.814		
Crosswalk LOS	F			F			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	222			422			1400			0		
d_b, Bicycle Delay [s]	35.56			28.01			4.05			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.344			1.988			3.333			4.132		
Bicycle LOS	B			A			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	27.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.555

Intersection Setup

Name												
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	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	18	0	0	61	0	0	2	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]	130	596	15	158	852	80	99	163	82	27	144	203
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
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]	36	165	4	44	236	22	27	45	23	7	40	56
Total Analysis Volume [veh/h]	144	659	17	175	942	88	110	180	91	30	159	225
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	35	0	17	37	0	12	26	0	12	26	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	14	0	0	14	0	0	10	0	0	14	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	9	42	42	10	43	43	7	19	19	3	15	15
g / C, Green / Cycle	0.10	0.46	0.46	0.12	0.48	0.48	0.08	0.21	0.21	0.03	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.08	0.18	0.18	0.10	0.27	0.28	0.06	0.07	0.08	0.02	0.08	0.14
s, saturation flow rate [veh/h]	1810	1900	1883	1810	1900	1844	1810	1900	1692	1810	1900	1615
c, Capacity [veh/h]	178	878	870	211	913	886	140	403	359	56	315	268
d1, Uniform Delay [s]	39.73	15.84	15.84	38.86	16.75	16.76	40.81	30.18	30.28	42.95	34.16	36.37
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]	8.35	1.29	1.30	8.01	2.60	2.69	9.43	0.52	0.62	7.56	1.25	6.91
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

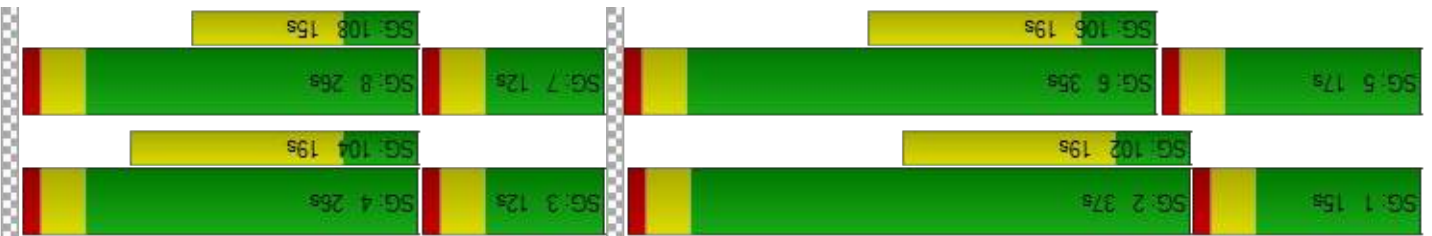
X, volume / capacity	0.81	0.39	0.39	0.83	0.57	0.57	0.79	0.35	0.36	0.53	0.50	0.84
d, Delay for Lane Group [s/veh]	48.08	17.13	17.14	46.87	19.35	19.45	50.24	30.69	30.90	50.51	35.40	43.28
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.49	4.67	4.63	4.19	7.92	7.72	2.73	2.61	2.44	0.77	3.23	5.22
50th-Percentile Queue Length [ft/ln]	87.23	116.69	115.76	104.76	197.96	193.04	68.26	65.24	60.95	19.25	80.73	130.38
95th-Percentile Queue Length [veh/ln]	6.28	8.21	8.16	7.54	12.53	12.28	4.91	4.70	4.39	1.39	5.81	8.96
95th-Percentile Queue Length [ft/ln]	157.02	205.26	203.98	188.57	313.34	306.98	122.87	117.43	109.70	34.65	145.31	224.01

d_M, Delay for Movement [s/veh]	48.08	17.14	17.14	17.14	D	B	B	D	B	B	D	C	D	D
Movement LOS				D	B	B	D	B	B	D	C	C	D	D
d_A, Approach Delay [s/veh]	22.57			23.39			36.41			40.78				
Approach LOS	C			C			D			D				
d_I, Intersection Delay [s/veh]	27.46													
Intersection LOS	C													
Intersection V/C	0.555													

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.669	2.730	2.452	2.455
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	689	733	489	489
d_b, Bicycle Delay [s]	19.34	18.05	25.69	25.69
l_b,int, Bicycle LOS Score for Intersection	2.236	2.554	1.874	1.901
Bicycle LOS	B	B	A	A

Sequence

[illegible]

Intersection Level Of Service Report
Intersection 4: Alder Ave at Base Line Rd

Control Type:

Signalized

Delay (sec / veh):

37.2

Analysis Method:

HCM 7th Edition

Level Of Service:

D

Analysis Period:

15 minutes

Volume to Capacity (v/c):

0.692

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	157	301	100	63	345	138	96	373	74	41	472	128
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	61	0	0	0	3	0	0	1	18
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]	160	307	102	125	352	141	98	383	75	42	482	149
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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]	46	88	29	36	101	41	28	110	22	12	139	43
Total Analysis Volume [veh/h]	184	353	117	144	405	162	113	441	86	48	555	171
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	19	29	0	15	25	25	11	37	0	9	35	35
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	11	30	9	28	39	7	32	4	28	41
g / C, Green / Cycle	0.12	0.33	0.10	0.31	0.43	0.08	0.35	0.04	0.31	0.46
(v / s)_i Volume / Saturation Flow Rate	0.10	0.26	0.08	0.21	0.10	0.06	0.29	0.03	0.29	0.11
s, saturation flow rate [veh/h]	1810	1820	1810	1900	1615	1810	1847	1810	1900	1615
c, Capacity [veh/h]	222	601	181	584	694	141	651	71	597	741
d1, Uniform Delay [s]	38.55	27.20	39.62	27.43	16.27	40.82	26.38	42.66	29.89	14.76
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.27	0.11	0.34	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
d2, Incremental Delay [s]	7.68	9.75	7.81	6.65	0.79	10.10	5.89	10.54	17.45	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.83	0.78	0.80	0.69	0.23	0.80	0.81	0.67	0.93	0.23
d, Delay for Lane Group [s/veh]	46.23	36.95	47.44	34.08	17.06	50.93	32.27	53.21	47.34	14.91
Lane Group LOS	D	D	D	C	B	D	C	D	D	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.38	10.40	3.46	8.50	2.20	2.83	10.87	1.25	14.07	2.07
50th-Percentile Queue Length [ft/ln]	109.44	260.07	86.57	212.50	54.95	70.66	271.72	31.27	351.86	51.78
95th-Percentile Queue Length [veh/ln]	7.81	15.69	6.23	13.28	3.96	5.09	16.28	2.25	20.23	3.73
95th-Percentile Queue Length [ft/ln]	195.23	392.31	155.82	332.04	98.91	127.18	406.89	56.29	505.68	93.21

Movement, Approach, & Intersection Results

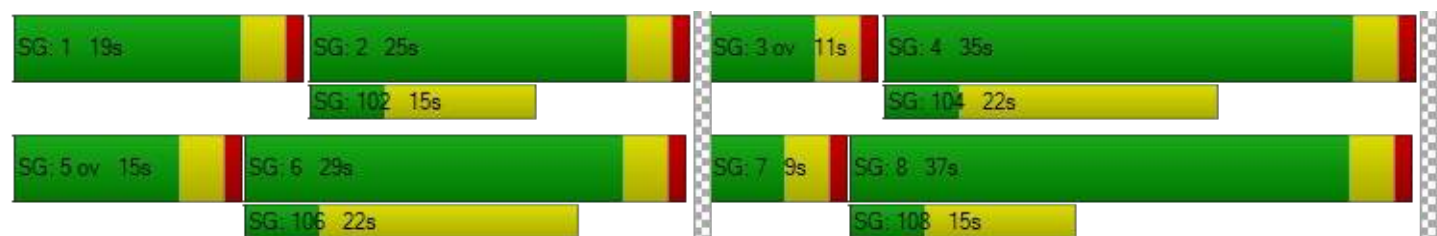
d_M, Delay for Movement [s/veh]	46.23	36.95	36.95	47.44	34.08	17.06	50.93	32.27	32.27	53.21	47.34	14.91
Movement LOS	D	D	D	D	C	B	D	C	C	D	D	B
d_A, Approach Delay [s/veh]	39.56			32.91			35.57			40.54		
Approach LOS	D			C			D			D		
d_I, Intersection Delay [s/veh]	37.21											
Intersection LOS	D											
Intersection V/C	0.692											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.329			2.564			2.443			2.589		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			467			733			689		
d_b, Bicycle Delay [s]	23.47			26.45			18.05			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.639			2.733			2.616			2.837		
Bicycle LOS	B			B			B			C		

Sequence

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



Intersection Level Of Service Report
Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	21.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	726	38	198	711	328	225	106	80	29	122	350
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	3	1	0	17	0	0	0	2	2	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]	49	744	40	202	742	335	230	108	84	32	124	357
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	13	196	11	53	196	88	61	28	22	8	33	94
Total Analysis Volume [veh/h]	52	785	42	213	783	353	243	114	89	34	131	377
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	19	39	39	12	33	33	9	30	30
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	42	49	14	52	64	8	15	23	3	10	28
g / C, Green / Cycle	0.05	0.46	0.54	0.16	0.57	0.71	0.09	0.17	0.26	0.03	0.11	0.31
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.03	0.06	0.22	0.22	0.07	0.03	0.06	0.01	0.04	0.23
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	167	1674	871	559	2078	1143	312	610	421	112	403	509
d1, Uniform Delay [s]	41.44	16.58	9.81	33.88	10.40	4.92	40.13	32.13	26.05	42.59	36.86	27.55
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	0.23
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]	1.05	0.95	0.10	0.43	0.52	0.70	4.19	0.15	0.25	1.51	0.46	4.50
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	0.31	0.47	0.05	0.38	0.38	0.31	0.78	0.19	0.21	0.30	0.32	0.74
d, Delay for Lane Group [s/veh]	42.49	17.53	9.92	34.31	10.93	5.62	44.32	32.27	26.30	44.10	37.33	32.05
Lane Group LOS	D	B	A	C	B	A	D	C	C	D	D	C
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.58	5.50	0.40	2.09	4.02	2.22	2.78	1.07	1.50	0.39	1.34	7.65
50th-Percentile Queue Length [ft/ln]	14.42	137.38	9.92	52.29	100.61	55.48	69.46	26.66	37.48	9.74	33.50	191.28
95th-Percentile Queue Length [veh/ln]	1.04	9.34	0.71	3.76	7.24	3.99	5.00	1.92	2.70	0.70	2.41	12.19
95th-Percentile Queue Length [ft/ln]	25.95	233.49	17.86	94.12	181.09	99.86	125.02	47.99	67.46	17.52	60.30	304.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.49	17.53	9.92	34.31	10.93	5.62	44.32	32.27	26.30	44.10	37.33	32.05
Movement LOS	D	B	A	C	B	A	D	C	C	D	D	C
d_A, Approach Delay [s/veh]	18.64			13.23			37.64			34.08		
Approach LOS	B			B			D			C		
d_I, Intersection Delay [s/veh]	21.61											
Intersection LOS	C											
Intersection V/C	0.364											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.844			2.979			2.732			2.722		
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]	556			778			644			578		
d_b, Bicycle Delay [s]	23.47			16.81			20.67			22.76		
I_b,int, Bicycle LOS Score for Intersection	2.285			2.673			1.928			2.007		
Bicycle LOS	B			B			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.306

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	14	727	3	122	654	8	1	0	4	3	1	136
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	5	0	0	21	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]	14	747	3	124	688	8	1	0	4	3	1	139
Peak Hour Factor	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280	0.9280
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]	4	201	1	33	185	2	0	0	1	1	0	37
Total Analysis Volume [veh/h]	15	805	3	134	741	9	1	0	4	3	1	150
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	72	72	72	72	72	72	10	10	10	10
g / C, Green / Cycle	0.80	0.80	0.80	0.80	0.80	0.80	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.20	0.20	0.20	0.00	0.00	0.00	0.09
s, saturation flow rate [veh/h]	723	1900	1898	685	1900	1892	1256	1615	1435	1617
c, Capacity [veh/h]	593	1510	1508	562	1510	1503	97	188	222	188
d1, Uniform Delay [s]	3.89	2.41	2.41	4.90	2.37	2.37	43.83	35.22	36.62	38.75
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.08	0.44	0.44	1.00	0.39	0.40	0.04	0.04	0.02	7.71
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.03	0.27	0.27	0.24	0.25	0.25	0.01	0.02	0.01	0.80
d, Delay for Lane Group [s/veh]	3.96	2.85	2.85	5.90	2.76	2.76	43.87	35.26	36.64	46.45
Lane Group LOS	A	A	A	A	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	No	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.08	1.32	1.32	0.90	1.21	1.20	0.02	0.08	0.06	3.61
50th-Percentile Queue Length [ft/ln]	1.99	33.12	33.08	22.61	30.18	30.08	0.57	1.99	1.52	90.14
95th-Percentile Queue Length [veh/ln]	0.14	2.38	2.38	1.63	2.17	2.17	0.04	0.14	0.11	6.49
95th-Percentile Queue Length [ft/ln]	3.59	59.61	59.55	40.69	54.33	54.14	1.03	3.58	2.73	162.26

Movement, Approach, & Intersection Results

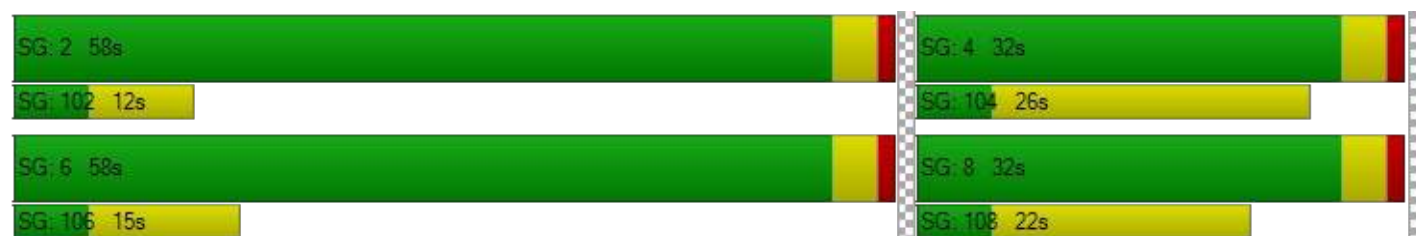
d_M, Delay for Movement [s/veh]	3.96	2.85	2.85	5.90	2.76	2.76	43.87	35.26	35.26	36.64	46.45	46.45
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.87			3.24			36.98			46.26		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.71											
Intersection LOS	A											
Intersection V/C	0.306											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.612			2.755			1.973			2.227		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1200			1200			622			622		
d_b, Bicycle Delay [s]	7.20			7.20			21.36			21.36		
I_b,int, Bicycle LOS Score for Intersection	2.239			2.289			1.568			1.814		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 7: Ayala Dr at Miro WyControl Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutesDelay (sec / veh): 27.6
Level Of Service: D
Volume to Capacity (v/c): 0.118**Intersection Setup**

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

Volumes

Name						
Base Volume Input [veh/h]	0	729	646	15	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	33	0	0	21	5	10
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]	33	744	659	36	20	10
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]	9	196	173	9	5	3
Total Analysis Volume [veh/h]	35	783	694	38	21	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.01	0.01	0.00	0.12	0.02
d_M, Delay for Movement [s/veh]	9.12	0.00	0.00	0.00	27.57	13.02
Movement LOS	A	A	A	A	D	B
95th-Percentile Queue Length [veh/ln]	0.06	0.03	0.00	0.00	0.46	0.46
95th-Percentile Queue Length [ft/ln]	1.49	0.74	0.00	0.00	11.51	11.51
d_A, Approach Delay [s/veh]	0.39		0.00		22.57	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.66					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

Control Type: Signalized
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 32.1
Level Of Service: C
Volume to Capacity (v/c): 0.440

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	197	584	68	53	546	54	110	264	154	60	322	39
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	5	0	0	1	0	9	30	0	2	0	0	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]	206	596	69	55	557	64	142	269	159	61	328	43
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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]	56	162	19	15	152	17	39	73	43	17	89	12
Total Analysis Volume [veh/h]	224	649	75	60	606	70	155	293	173	66	357	47
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	10	33	0	9	32	0	11	39	0	9	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	6	51	51	4	49	49	7	15	15	4	12	12
g / C, Green / Cycle	0.07	0.56	0.56	0.04	0.54	0.54	0.08	0.17	0.17	0.05	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.19	0.19	0.02	0.18	0.18	0.09	0.13	0.13	0.04	0.11	0.11
s, saturation flow rate [veh/h]	3514	1900	1832	3514	1900	1832	1810	1900	1668	1810	1900	1824
c, Capacity [veh/h]	234	1068	1029	152	1023	987	141	322	283	85	264	254
d1, Uniform Delay [s]	41.87	10.71	10.71	41.90	11.69	11.70	41.50	35.64	35.73	42.40	37.38	37.43
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]	18.62	0.89	0.92	1.65	0.89	0.92	66.26	3.77	4.56	13.65	4.85	5.27
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	0.96	0.35	0.35	0.39	0.34	0.34	1.10	0.76	0.78	0.77	0.78	0.78
d, Delay for Lane Group [s/veh]	60.49	11.60	11.63	43.55	12.58	12.62	107.76	39.41	40.28	56.05	42.23	42.71
Lane Group LOS	E	B	B	D	B	B	F	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.05	3.94	3.81	0.68	3.87	3.75	5.67	5.40	4.89	1.76	4.65	4.54
50th-Percentile Queue Length [ft/ln]	76.30	98.51	95.21	16.92	96.83	93.84	141.72	135.01	122.17	43.95	116.13	113.48
95th-Percentile Queue Length [veh/ln]	5.49	7.09	6.86	1.22	6.97	6.76	9.88	9.21	8.51	3.16	8.18	8.03
95th-Percentile Queue Length [ft/ln]	137.35	177.32	171.38	30.46	174.30	168.90	246.90	230.29	212.81	79.11	204.50	200.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	60.49	11.61	11.63	43.55	12.60	12.62	107.76	39.55	40.28	56.05	42.44	42.71
Movement LOS	E	B	B	D	B	B	F	D	D	E	D	D
d_A, Approach Delay [s/veh]	23.16			15.12			56.78			44.37		
Approach LOS	C			B			E			D		
d_I, Intersection Delay [s/veh]	32.15											
Intersection LOS	C											
Intersection V/C	0.440											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.746			2.712			2.549			2.476		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	644			622			778			733		
d_b, Bicycle Delay [s]	20.67			21.36			16.81			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.342			2.167			2.072			1.947		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh): 7.4
Level Of Service: A
Volume to Capacity (v/c): 0.125**Intersection Setup**

Name												
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	0	0	0	0	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	0
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	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												
Base Volume Input [veh/h]	6	285	0	0	233	39	30	15	15	0	15	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	39	2	0	0	0	0	0	12	0	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]	6	291	39	2	238	40	31	15	15	12	15	1
Peak Hour Factor	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930
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]	2	81	11	1	67	11	9	4	4	3	4	0
Total Analysis Volume [veh/h]	7	326	44	2	267	45	35	17	17	13	17	1
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	1.0	0.0	0.0	1.0	0.0
Split [s]	16	64	0	0	48	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	14	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	0.0	2.0	0.0	0.0	2.0	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	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	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	L	C	C	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	74	74	69	69	8	8	8
g / C, Green / Cycle	0.01	0.82	0.82	0.77	0.77	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.10	0.09	0.09	0.02	0.02	0.02
s, saturation flow rate [veh/h]	1810	1900	1822	1896	1641	1417	1746	1568
c, Capacity [veh/h]	18	1555	1492	1490	1254	151	162	202
d1, Uniform Delay [s]	44.29	1.64	1.65	2.74	2.75	38.05	37.80	37.68
k, delay calibration	0.11	0.50	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	1.00
d2, Incremental Delay [s]	13.31	0.16	0.17	0.15	0.19	0.77	0.64	0.35
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.12	0.12	0.11	0.12	0.23	0.21	0.15
d, Delay for Lane Group [s/veh]	57.60	1.80	1.81	2.89	2.94	38.82	38.44	38.03
Lane Group LOS	E	A	A	A	A	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.22	0.41	0.40	0.61	0.55	0.74	0.72	0.64
50th-Percentile Queue Length [ft/ln]	5.50	10.22	10.04	15.19	13.74	18.61	17.90	16.10
95th-Percentile Queue Length [veh/ln]	0.40	0.74	0.72	1.09	0.99	1.34	1.29	1.16
95th-Percentile Queue Length [ft/ln]	9.90	18.39	18.07	27.34	24.73	33.50	32.22	28.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.60	1.81	1.81	1.81	2.89	2.91	2.94	38.82	38.44	38.03	38.03	38.03
Movement LOS	E	A	A	A	A	A	A	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.84				2.91			38.63			38.03	
Approach LOS	A				A			D			D	
d_I, Intersection Delay [s/veh]	7.37											
Intersection LOS	A											
Intersection V/C	0.125											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0									
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00									
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00									
d_p, Pedestrian Delay [s]	36.45	36.45									
l_p,int, Pedestrian LOS Score for Intersection	2.451	2.347									
Crosswalk LOS	B	B									
s_b, Saturation Flow Rate of the bicycle lane	2000	2000									
c_b, Capacity of the bicycle lane [bicycles/h]	1333	978									
d_b, Bicycle Delay [s]	5.00	11.76									
l_b,int, Bicycle LOS Score for Intersection	1.871	1.819									
Bicycle LOS	A	A									

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.313

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	134	61	69	93	47	26	402	31	20	436	124
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	2	0	10	34	30	0	0	9	5
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]	42	137	62	72	95	58	61	440	32	20	454	131
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
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]	11	36	16	19	25	15	16	114	8	5	118	34
Total Analysis Volume [veh/h]	44	143	65	75	99	60	63	458	33	21	472	136
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	9	52	0	9	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	56	56	56	56	56	4	20	20	2	18	18
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.05	0.22	0.22	0.02	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.08	0.06	0.04	0.03	0.13	0.13	0.01	0.17	0.17
s, saturation flow rate [veh/h]	1684	1615	910	1729	1615	1810	1900	1856	1810	1900	1756
c, Capacity [veh/h]	1095	1003	645	1074	1003	82	422	413	42	381	352
d1, Uniform Delay [s]	7.17	6.73	13.28	6.85	6.71	42.51	31.30	31.32	43.44	34.47	34.54
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.34	0.12	0.37	0.17	0.11	14.20	1.30	1.34	8.91	4.57	5.18
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
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
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

Lane Group Results

X, volume / capacity	0.17	0.06	0.12	0.09	0.06	0.77	0.59	0.59	0.50	0.83	0.83
d, Delay for Lane Group [s/veh]	7.51	6.85	13.64	7.02	6.82	56.72	32.59	32.66	52.35	39.04	39.71
Lane Group LOS	A	A	B	A	A	E	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.46	0.48	0.89	0.74	0.44	1.69	4.88	4.79	0.56	6.94	6.54
50th-Percentile Queue Length [ft/ln]	36.62	11.98	22.13	18.51	11.02	42.30	121.92	119.77	14.04	173.44	163.52
95th-Percentile Queue Length [veh/ln]	2.64	0.86	1.59	1.33	0.79	3.05	8.50	8.38	1.01	11.26	10.73
95th-Percentile Queue Length [ft/ln]	65.91	21.57	39.83	33.31	19.84	76.14	212.46	209.51	25.27	281.43	268.37

Movement, Approach, & Intersection Results

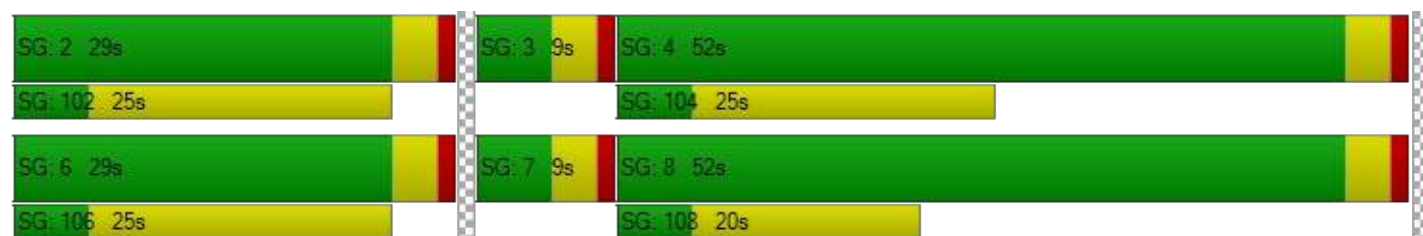
d_M, Delay for Movement [s/veh]	7.51	7.51	6.85	13.64	7.02	6.82	56.72	32.62	32.66	52.35	39.27	39.71
Movement LOS	A	A	A	B	A	A	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	7.34			9.09			35.37			39.80		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	29.12											
Intersection LOS	C											
Intersection V/C	0.313											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.414			2.584			2.647		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1067		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			9.80		
I_b,int, Bicycle LOS Score for Intersection	1.975			1.753			2.017			2.079		
Bicycle LOS	A			A			B			B		

Sequence

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



Miro Way and Ayala Drive Warehouse

Vistro File: K:\...\Miro Way_PM.vistro

Scenario 3 OY 2024 WP PM

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

2/11/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	0.764	32.5	C
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	0.769	31.9	C
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.521	26.2	C
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.602	31.1	C
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.612	25.5	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.447	7.0	A
7	Ayala Dr at Miro Wy	Two-way stop	HCM 7th Edition	EB Left	0.397	47.9	E
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.528	30.5	C
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.248	10.4	B
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.497	29.1	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	32.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.764

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	30	0	0	0	0	0	0	0	0	11	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]	515	304	0	0	298	384	0	0	0	312	4	125
Peak Hour Factor	0.9100	0.9100	1.0000	1.0000	0.9100	0.9100	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100
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]	141	84	0	0	82	105	0	0	0	86	1	34
Total Analysis Volume [veh/h]	566	334	0	0	327	422	0	0	0	343	4	137
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	53	67	0	0	14	0	0	0	0	0	23	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	31	63	29	29		19	19
g / C, Green / Cycle	0.34	0.70	0.32	0.32		0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.31	0.09	0.17	0.26		0.19	0.09
s, saturation flow rate [veh/h]	1810	3618	1900	1615		1810	1622
c, Capacity [veh/h]	616	2543	605	514		377	338
d1, Uniform Delay [s]	28.50	4.37	25.26	28.31		34.81	30.90
k, delay calibration	0.15	0.50	0.50	0.50		0.13	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	8.10	0.11	3.45	13.73		10.37	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	0.92	0.13	0.54	0.82		0.91	0.42
d, Delay for Lane Group [s/veh]	36.60	4.48	28.71	42.04		45.18	31.72
Lane Group LOS	D	A	C	D		D	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	12.61	0.87	6.16	10.04		8.24	2.69
50th-Percentile Queue Length [ft/ln]	315.29	21.83	154.08	250.92		206.07	67.22
95th-Percentile Queue Length [veh/ln]	18.44	1.57	10.23	15.23		12.95	4.84
95th-Percentile Queue Length [ft/ln]	460.90	39.30	255.86	380.81		323.78	121.00

Movement, Approach, & Intersection Results

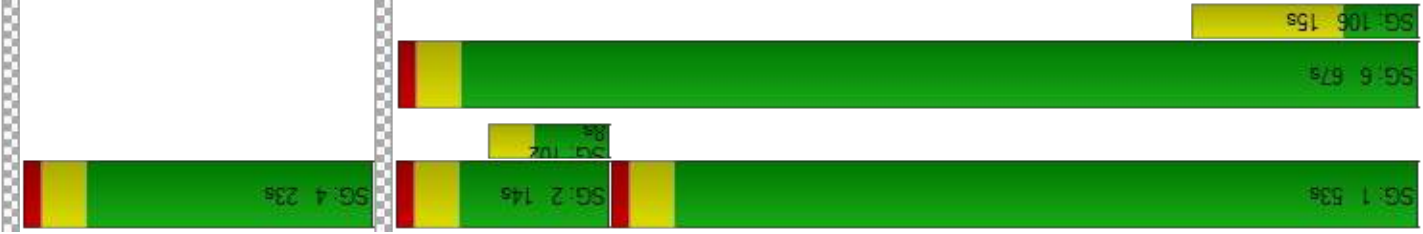
d_M, Delay for Movement [s/veh]												36.60	4.48	0.00	0.00	28.71	42.04	0.00	0.00	0.00	45.18	31.72	31.72	
Movement LOS												D	A			C	D					D	C	C
d_A, Approach Delay [s/veh]												24.68			36.22			0.00			41.26			
Approach LOS												C			D			A			D			
d_I, Intersection Delay [s/veh]												32.50												
Intersection LOS												C												
Intersection V/C												0.764												

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.392	1.952
Crosswalk LOS	F	F	B	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1400	222	0	422
d_b, Bicycle Delay [s]	4.05	35.56	45.00	28.01
l_b,int, Bicycle LOS Score for Intersection	2.302	2.178	4.132	2.358
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	31.9
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.769

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	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	30	31	0	11	0	0	0	12	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	606	459	158	450	0	207	4	524	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	0.9550	0.9550	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	159	120	41	118	0	54	1	137	0	0	0
Total Analysis Volume [veh/h]	0	635	481	165	471	0	217	4	549	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	36	0	13	49	0	0	41	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	36	36	9	49	33	33	
g / C, Green / Cycle	0.40	0.40	0.10	0.55	0.36	0.36	
(v / s)_i Volume / Saturation Flow Rate	0.29	0.34	0.09	0.13	0.12	0.34	
s, saturation flow rate [veh/h]	1900	1649	1810	3618	1811	1615	
c, Capacity [veh/h]	763	662	181	1975	661	590	
d1, Uniform Delay [s]	22.82	24.36	40.11	10.66	20.66	27.48	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.33	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	6.11	12.39	15.88	0.29	0.29	17.46	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.73	0.84	0.91	0.24	0.33	0.93	
d, Delay for Lane Group [s/veh]	28.93	36.75	55.98	10.95	20.95	44.94	
Lane Group LOS	C	D	E	B	C	D	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	10.82	12.45	4.36	2.37	3.33	13.68	
50th-Percentile Queue Length [ft/ln]	270.56	311.21	108.98	59.14	83.20	341.95	
95th-Percentile Queue Length [veh/ln]	16.22	18.23	7.78	4.26	5.99	19.74	
95th-Percentile Queue Length [ft/ln]	405.44	455.87	194.59	106.44	149.76	493.58	

Movement, Approach, & Intersection Results

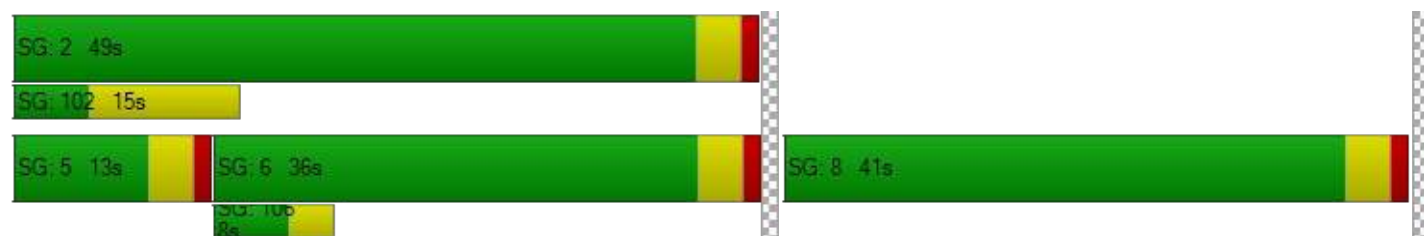
d_M, Delay for Movement [s/veh]	0.00	29.88	36.75	55.98	10.95	0.00	20.95	20.95	44.94	0.00	0.00	0.00
Movement LOS		C	D	E	B		C	C	D			
d_A, Approach Delay [s/veh]	32.84			22.63			38.06			0.00		
Approach LOS	C			C			D			A		
d_I, Intersection Delay [s/veh]	31.86											
Intersection LOS	C											
Intersection V/C	0.769											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.092			2.059		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	711			1000			822			0		
d_b, Bicycle Delay [s]	18.69			11.25			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.480			2.084			2.830			4.132		
Bicycle LOS	B			B			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

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):	0.521

Intersection Setup

Name												
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	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	61	0	0	23	0	0	1	0	0	2	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]	52	733	35	187	638	141	97	275	68	20	177	225
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	14	191	9	49	166	37	25	72	18	5	46	59
Total Analysis Volume [veh/h]	54	764	36	195	665	147	101	286	71	21	184	234
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	30	0	19	34	0	12	32	0	9	29	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	14	0	0	14	0	0	10	0	0	14	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	4	41	41	12	48	48	6	20	20	2	16	16
g / C, Green / Cycle	0.04	0.45	0.45	0.13	0.54	0.54	0.07	0.22	0.22	0.02	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.21	0.11	0.22	0.22	0.06	0.10	0.10	0.01	0.10	0.14
s, saturation flow rate [veh/h]	1810	1900	1870	1810	1900	1782	1810	1900	1772	1810	1900	1615
c, Capacity [veh/h]	77	855	841	232	1018	955	129	419	391	42	328	279
d1, Uniform Delay [s]	42.53	17.28	17.29	38.32	12.44	12.44	41.10	30.24	30.30	43.44	34.11	36.03
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]	11.10	1.86	1.90	7.89	1.23	1.31	9.85	0.72	0.79	8.91	1.50	6.68
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	0.70	0.47	0.47	0.84	0.41	0.41	0.78	0.44	0.44	0.50	0.56	0.84
d, Delay for Lane Group [s/veh]	53.63	19.15	19.18	46.20	13.67	13.75	50.95	30.96	31.09	52.35	35.61	42.70
Lane Group LOS	D	B	B	D	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.41	6.00	5.91	4.64	5.02	4.73	2.53	3.45	3.29	0.56	3.77	5.39
50th-Percentile Queue Length [ft/ln]	35.24	149.92	147.77	116.05	125.50	118.28	63.21	86.14	82.23	14.04	94.13	134.76
95th-Percentile Queue Length [veh/ln]	2.54	10.01	9.90	8.18	8.69	8.30	4.55	6.20	5.92	1.01	6.78	9.20
95th-Percentile Queue Length [ft/ln]	63.43	250.32	247.45	204.38	217.37	207.46	113.78	155.05	148.01	25.27	169.43	229.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.63	19.16	19.18	46.20	13.70	13.75	50.95	31.01	31.09	52.35	35.61	42.70
Movement LOS	D	B	B	D	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.34			20.00			35.42			40.19		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	26.19											
Intersection LOS	C											
Intersection V/C	0.521											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.616	2.712	2.466	2.488
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	578	667	622	556
d_b, Bicycle Delay [s]	22.76	20.00	21.36	23.47
l_b,int, Bicycle LOS Score for Intersection	2.264	2.390	1.937	1.922
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	31.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.602

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	43	323	44	118	363	123	79	434	63	57	346	87
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	23	0	0	0	1	0	0	3	61
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]	44	329	45	143	370	125	81	444	64	58	356	150
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
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]	11	85	12	37	95	32	21	114	16	15	92	39
Total Analysis Volume [veh/h]	45	338	46	147	381	129	83	457	66	60	366	154
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	17	26	0	13	22	22	24	42	0	9	27	27
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	3	34	9	39	49	6	28	4	26	39
g / C, Green / Cycle	0.04	0.37	0.10	0.43	0.54	0.06	0.31	0.04	0.29	0.43
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.08	0.20	0.08	0.05	0.28	0.03	0.19	0.10
s, saturation flow rate [veh/h]	1810	1861	1810	1900	1615	1810	1859	1810	1900	1615
c, Capacity [veh/h]	71	694	180	823	876	117	570	78	541	692
d1, Uniform Delay [s]	42.60	22.28	39.74	18.08	10.23	41.24	30.12	42.60	28.50	16.24
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.20	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
d2, Incremental Delay [s]	9.03	3.16	8.80	1.87	0.35	7.56	10.91	14.21	1.48	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.63	0.55	0.82	0.46	0.15	0.71	0.92	0.76	0.68	0.22
d, Delay for Lane Group [s/veh]	51.63	25.44	48.53	19.95	10.59	48.80	41.03	56.81	29.98	16.40
Lane Group LOS	D	C	D	B	B	D	D	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.15	6.79	3.58	5.79	1.29	2.03	12.25	1.62	7.01	1.97
50th-Percentile Queue Length [ft/ln]	28.85	169.87	89.51	144.85	32.14	50.79	306.17	40.38	175.24	49.19
95th-Percentile Queue Length [veh/ln]	2.08	11.07	6.44	9.74	2.31	3.66	17.99	2.91	11.35	3.54
95th-Percentile Queue Length [ft/ln]	51.94	276.74	161.11	243.54	57.85	91.42	449.65	72.68	283.79	88.54

Movement, Approach, & Intersection Results

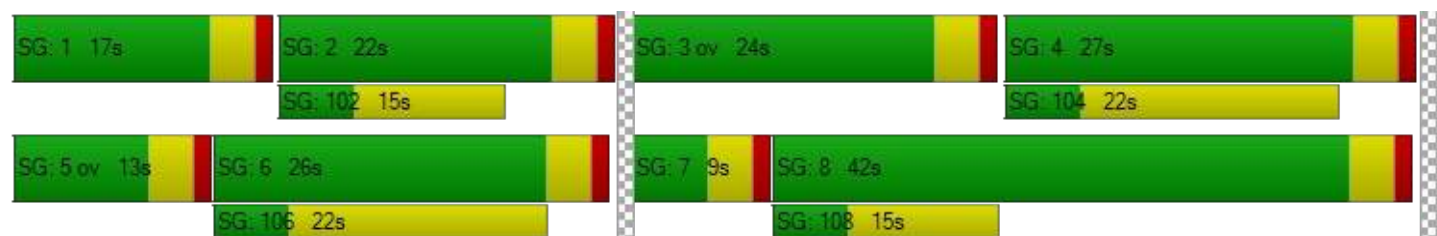
d_M, Delay for Movement [s/veh]	51.63	25.44	25.44	48.53	19.95	10.59	48.80	41.03	41.03	56.81	29.98	16.40
Movement LOS	D	C	C	D	B	B	D	D	D	E	C	B
d_A, Approach Delay [s/veh]	28.19			24.51			42.09			29.15		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	31.08											
Intersection LOS	C											
Intersection V/C	0.602											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.246			2.542			2.314			2.541		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			400			844			511		
d_b, Bicycle Delay [s]	25.69			28.80			15.02			24.94		
I_b,int, Bicycle LOS Score for Intersection	2.267			2.644			2.560			2.517		
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 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	25.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.612

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	792	75	342	823	541	361	378	113	61	184	357
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	17	2	0	6	0	0	0	1	1	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]	110	825	79	349	845	552	368	386	116	63	188	364
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
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]	29	215	21	91	221	144	96	101	30	16	49	95
Total Analysis Volume [veh/h]	115	861	82	364	882	576	384	403	121	66	196	380
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	15	35	35	17	37	37	9	29	29
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	39	47	11	45	62	13	20	29	4	11	26
g / C, Green / Cycle	0.06	0.44	0.53	0.12	0.50	0.69	0.14	0.22	0.32	0.05	0.12	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.24	0.05	0.10	0.24	0.36	0.11	0.11	0.07	0.02	0.05	0.24
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	195	1586	853	430	1827	1121	508	783	511	159	424	458
d1, Uniform Delay [s]	41.50	18.63	10.56	38.68	14.58	6.55	36.98	31.09	22.73	41.81	37.08	30.18
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	0.23
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]	2.81	1.34	0.22	4.71	0.92	1.69	2.33	0.53	0.24	1.73	0.79	8.09
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	0.59	0.54	0.10	0.85	0.48	0.51	0.76	0.51	0.24	0.42	0.46	0.83
d, Delay for Lane Group [s/veh]	44.31	19.97	10.78	43.39	15.49	8.24	39.31	31.62	22.97	43.53	37.87	38.27
Lane Group LOS	D	B	B	D	B	A	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.31	6.61	0.82	4.15	5.78	4.81	4.15	3.84	1.89	0.74	2.03	8.49
50th-Percentile Queue Length [ft/ln]	32.71	165.17	20.62	103.77	144.39	120.17	103.83	96.02	47.23	18.60	50.82	212.14
95th-Percentile Queue Length [veh/ln]	2.36	10.82	1.48	7.47	9.72	8.40	7.48	6.91	3.40	1.34	3.66	13.26
95th-Percentile Queue Length [ft/ln]	58.88	270.55	37.12	186.78	242.93	210.07	186.89	172.84	85.01	33.48	91.47	331.58

Movement, Approach, & Intersection Results

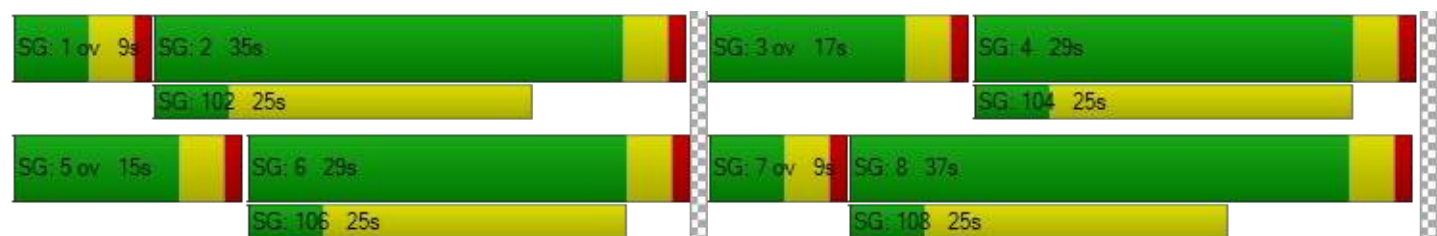
d_M, Delay for Movement [s/veh]	44.31	19.97	10.78	43.39	15.49	8.24	39.31	31.62	22.97	43.53	37.87	38.27
Movement LOS	D	B	B	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	21.90			18.77			33.72			38.69		
Approach LOS	C			B			C			D		
d_I, Intersection Delay [s/veh]	25.47											
Intersection LOS	C											
Intersection V/C	0.612											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.892			3.076			2.845			2.803		
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]	556			689			733			556		
d_b, Bicycle Delay [s]	23.47			19.34			18.05			23.47		
I_b,int, Bicycle LOS Score for Intersection	2.432			3.063			2.309			2.089		
Bicycle LOS	B			C			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 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	7.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	8	828	8	209	869	1	0	0	5	1	3	151
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	21	0	0	8	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]	8	866	8	213	894	1	0	0	5	1	3	154
Peak Hour Factor	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730	0.9730
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]	2	223	2	55	230	0	0	0	1	0	1	40
Total Analysis Volume [veh/h]	8	890	8	219	919	1	0	0	5	1	3	158
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	71	71	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.35	0.24	0.24	0.00	0.00	0.00	0.10
s, saturation flow rate [veh/h]	617	1900	1894	630	1900	1899	1245	1615	1434	1620
c, Capacity [veh/h]	501	1497	1493	512	1497	1497	99	199	231	199
d1, Uniform Delay [s]	4.58	2.65	2.65	6.84	2.67	2.67	0.00	34.71	36.06	38.43
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.06	0.52	0.52	2.61	0.53	0.53	0.00	0.05	0.01	7.55
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.30	0.30	0.43	0.31	0.31	0.00	0.03	0.00	0.81
d, Delay for Lane Group [s/veh]	4.64	3.16	3.17	9.44	3.20	3.20	0.00	34.76	36.07	45.97
Lane Group LOS	A	A	A	A	A	A	A	C	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	1.62	1.62	2.04	1.67	1.67	0.00	0.10	0.02	3.83
50th-Percentile Queue Length [ft/ln]	1.22	40.54	40.43	50.89	41.79	41.78	0.00	2.46	0.50	95.65
95th-Percentile Queue Length [veh/ln]	0.09	2.92	2.91	3.66	3.01	3.01	0.00	0.18	0.04	6.89
95th-Percentile Queue Length [ft/ln]	2.19	72.97	72.77	91.60	75.22	75.20	0.00	4.43	0.90	172.17

Movement, Approach, & Intersection Results

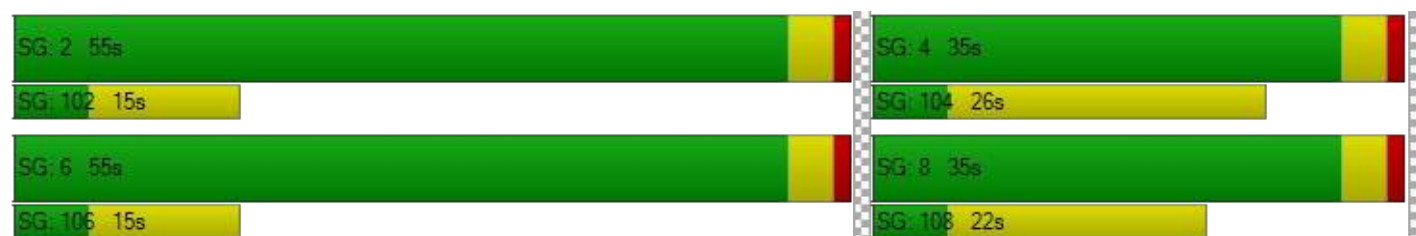
d_M, Delay for Movement [s/veh]	4.64	3.16	3.17	9.44	3.20	3.20	0.00	34.76	34.76	36.07	45.97	45.97
Movement LOS	A	A	A	A	A	A	A	C	C	D	D	D
d_A, Approach Delay [s/veh]	3.18			4.40			34.76			45.91		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	7.01											
Intersection LOS	A											
Intersection V/C	0.447											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.660			2.810			1.959			2.380		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1133			689			689		
d_b, Bicycle Delay [s]	8.45			8.45			19.34			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.307			2.499			1.568			1.827		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 7: Ayala Dr at Miro WyControl Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutesDelay (sec / veh): 47.9
Level Of Service: E
Volume to Capacity (v/c): 0.397**Intersection Setup**

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

Volumes

Name						
Base Volume Input [veh/h]	0	817	851	24	27	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	8	21	33
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]	13	833	868	32	49	33
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	219	228	8	13	9
Total Analysis Volume [veh/h]	14	877	914	34	52	35
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.40	0.06
d_M, Delay for Movement [s/veh]	9.93	0.00	0.00	0.00	47.93	27.06
Movement LOS	A	A	A	A	E	D
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	2.19	2.19
95th-Percentile Queue Length [ft/ln]	0.59	0.29	0.00	0.00	54.87	54.87
d_A, Approach Delay [s/veh]	0.16		0.00		39.54	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	1.86					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

Control Type:

Signalized

Delay (sec / veh):

30.5

Analysis Method:

HCM 7th Edition

Level Of Service:

C

Analysis Period:

15 minutes

Volume to Capacity (v/c):

0.528

Intersection Setup												
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	142	647	96	139	678	57	126	447	206	89	350	49
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	0	0	3	0	30	12	0	5	0	0	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]	147	660	98	145	692	88	141	456	215	91	357	51
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
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]	40	179	27	39	187	24	38	123	58	25	97	14
Total Analysis Volume [veh/h]	159	714	106	157	749	95	153	494	233	98	386	55
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	9	32	0	9	32	0	12	38	0	11	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	5	42	42	5	42	42	8	21	21	6	19	19
g / C, Green / Cycle	0.06	0.46	0.46	0.06	0.46	0.46	0.09	0.24	0.24	0.07	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.05	0.22	0.22	0.04	0.23	0.23	0.08	0.20	0.20	0.05	0.12	0.12
s, saturation flow rate [veh/h]	3514	1900	1815	3514	1900	1826	1810	1900	1697	1810	1900	1819
c, Capacity [veh/h]	195	877	838	195	877	843	161	448	400	125	411	393
d1, Uniform Delay [s]	42.04	16.75	16.75	42.02	16.88	16.88	40.81	32.92	32.92	41.22	31.33	31.37
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]	7.98	1.87	1.95	7.54	1.96	2.04	23.02	4.80	5.37	10.10	1.13	1.20
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	0.48	0.48	0.80	0.49	0.49	0.95	0.86	0.86	0.78	0.55	0.55
d, Delay for Lane Group [s/veh]	50.02	18.62	18.70	49.55	18.84	18.92	63.82	37.72	38.29	51.31	32.46	32.57
Lane Group LOS	D	B	B	D	B	B	E	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.94	6.14	5.88	1.91	6.35	6.13	4.35	8.41	7.58	2.46	4.38	4.24
50th-Percentile Queue Length [ft/ln]	48.56	153.45	147.11	47.69	158.86	153.14	108.83	210.18	189.47	61.59	109.62	106.11
95th-Percentile Queue Length [veh/ln]	3.50	10.20	9.86	3.43	10.49	10.18	7.77	13.16	12.09	4.43	7.82	7.62
95th-Percentile Queue Length [ft/ln]	87.40	255.03	246.57	85.84	262.21	254.61	194.37	329.05	302.35	110.87	195.47	190.58

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.02	18.65	18.70	49.55	18.87	18.92	63.82	37.85	38.29	51.31	32.51	32.57
Movement LOS	D	B	B	D	B	B	E	D	D	D	C	C
d_A, Approach Delay [s/veh]	23.75			23.69			42.48			35.94		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	30.52											
Intersection LOS	C											
Intersection V/C	0.528											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.789			2.767			2.598			2.554		
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]	622			622			756			733		
d_b, Bicycle Delay [s]	21.36			21.36			17.42			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.367			2.385			2.286			2.004		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):10.4
B
0.248**Intersection Setup**

Name												
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	0	0	0	0	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	0
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	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												
Base Volume Input [veh/h]	18	402	0	0	377	53	52	27	26	0	24	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	14	1	0	0	0	0	0	39	0	2
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]	18	410	14	1	385	54	53	28	27	39	24	2
Peak Hour Factor	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950
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]	6	129	4	0	121	17	17	9	8	12	8	1
Total Analysis Volume [veh/h]	23	516	18	1	484	68	67	35	34	49	30	3
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	1.0	0.0	0.0	1.0	0.0
Split [s]	10	41	0	0	31	0	0	49	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	14	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	0.0	2.0	0.0	0.0	2.0	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	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	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	L	C	C	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	72	72	66	66	10	10	10
g / C, Green / Cycle	0.02	0.80	0.80	0.73	0.73	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.14	0.14	0.16	0.16	0.05	0.04	0.08
s, saturation flow rate [veh/h]	1810	1900	1878	1899	1652	1398	1748	1038
c, Capacity [veh/h]	44	1524	1506	1433	1212	106	190	177
d1, Uniform Delay [s]	43.38	2.05	2.05	3.79	3.80	38.42	37.20	39.64
k, delay calibration	0.11	0.50	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	1.00
d2, Incremental Delay [s]	9.12	0.25	0.26	0.32	0.40	6.15	1.16	1.88
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.52	0.18	0.18	0.21	0.21	0.63	0.36	0.46
d, Delay for Lane Group [s/veh]	52.50	2.30	2.31	4.11	4.20	44.57	38.35	41.52
Lane Group LOS	D	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.61	0.74	0.74	1.44	1.29	1.58	1.46	1.85
50th-Percentile Queue Length [ft/ln]	15.33	18.62	18.48	36.03	32.20	39.47	36.39	46.25
95th-Percentile Queue Length [veh/ln]	1.10	1.34	1.33	2.59	2.32	2.84	2.62	3.33
95th-Percentile Queue Length [ft/ln]	27.59	33.52	33.26	64.86	57.96	71.05	65.50	83.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.50	2.30	2.31	4.11	4.15	4.20	44.57	38.35	38.35	41.52	41.52	41.52
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	4.38			4.15			41.42			41.52		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.37											
Intersection LOS	B											
Intersection V/C	0.248											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.590			2.506			2.025			1.784		
Crosswalk LOS	B			B			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	822			600			1000			1000		
d_b, Bicycle Delay [s]	15.61			22.05			11.25			11.25		
I_b,int, Bicycle LOS Score for Intersection	2.019			2.016			1.784			1.695		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.497

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	168	45	144	170	95	83	475	27	39	367	163
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
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	5	0	34	12	12	0	0	30	2
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]	18	171	46	152	173	131	97	497	28	40	404	168
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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]	5	48	13	43	49	37	27	140	8	11	114	47
Total Analysis Volume [veh/h]	20	193	52	171	195	148	109	560	32	45	455	189
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	10	52	0	9	51	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	53	53	53	53	53	6	22	22	3	19	19
g / C, Green / Cycle	0.59	0.59	0.59	0.59	0.59	0.07	0.24	0.24	0.04	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.26	0.11	0.09	0.06	0.16	0.16	0.02	0.18	0.18
s, saturation flow rate [veh/h]	1791	1615	664	1729	1615	1810	1900	1864	1810	1900	1714
c, Capacity [veh/h]	1095	948	470	1015	948	121	459	450	68	404	365
d1, Uniform Delay [s]	8.64	7.92	23.13	8.64	8.44	41.71	30.71	30.72	42.72	33.91	33.97
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.40	0.11	2.17	0.42	0.35	20.51	1.56	1.60	10.25	4.56	5.27
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
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
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

Lane Group Results

X, volume / capacity	0.19	0.05	0.36	0.19	0.16	0.90	0.65	0.65	0.66	0.83	0.84
d, Delay for Lane Group [s/veh]	9.03	8.03	25.30	9.06	8.79	62.22	32.27	32.31	52.98	38.47	39.24
Lane Group LOS	A	A	C	A	A	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.90	0.43	3.02	1.75	1.30	3.06	5.90	5.80	1.17	7.41	6.82
50th-Percentile Queue Length [ft/ln]	47.50	10.69	75.55	43.73	32.52	76.48	147.47	145.05	29.30	185.17	170.39
95th-Percentile Queue Length [veh/ln]	3.42	0.77	5.44	3.15	2.34	5.51	9.88	9.75	2.11	11.87	11.10
95th-Percentile Queue Length [ft/ln]	85.50	19.24	136.00	78.71	58.54	137.66	247.05	243.80	52.74	296.75	277.42

Movement, Approach, & Intersection Results

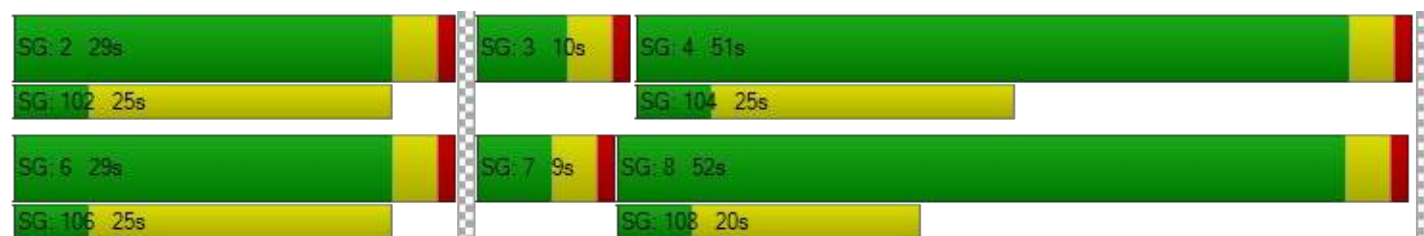
d_M, Delay for Movement [s/veh]	9.03	9.03	8.03	25.30	9.06	8.79	62.22	32.29	32.31	52.98	38.67	39.24
Movement LOS	A	A	A	C	A	A	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.84			14.39			36.94			39.76		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	29.06											
Intersection LOS	C											
Intersection V/C	0.497											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.263			2.497			2.588			2.832		
Crosswalk LOS	B			B			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1044		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			10.27		
I_b,int, Bicycle LOS Score for Intersection	1.997			1.984			2.138			2.128		
Bicycle LOS	A			A			B			B		

Sequence

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



APPENDIX D-4

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2024 CUMULATIVE

Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_AM.vistro

Scenario 4 OY 2024 Cum AM

Report File: \\...\\4. OY CUM AM.pdf

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	1.039	94.7	F
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	EB Right	1.210	135.6	F
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	WB Right	0.952	86.6	F
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.773	48.7	D
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.406	22.7	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.342	6.6	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	NB Left	0.512	36.3	D
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.133	5.9	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.324	29.1	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	94.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.039

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	210	292	0	0	291	89	0	0	0	339	0	89
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]	614	642	0	0	308	101	0	0	0	779	5	249
Peak Hour Factor	0.8530	0.8530	1.0000	1.0000	0.8530	0.8530	1.0000	1.0000	1.0000	0.8530	0.8530	0.8530
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]	180	188	0	0	90	30	0	0	0	228	1	73
Total Analysis Volume [veh/h]	720	753	0	0	361	118	0	0	0	913	6	292
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	34	49	0	0	15	0	0	0	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	30	45	11	11		37	37
g / C, Green / Cycle	0.33	0.50	0.12	0.12		0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.40	0.21	0.13	0.14		0.50	0.18
s, saturation flow rate [veh/h]	1810	3618	1900	1748		1810	1620
c, Capacity [veh/h]	603	1809	232	214		744	666
d1, Uniform Delay [s]	30.00	14.21	39.50	39.50		26.50	19.12
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	102.76	0.71	67.44	97.88		114.00	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.19	0.42	1.03	1.12		1.23	0.45
d, Delay for Lane Group [s/veh]	132.76	14.92	106.94	137.38		140.50	19.60
Lane Group LOS	F	B	F	F		F	B
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	29.69	4.75	9.39	10.45		38.51	4.41
50th-Percentile Queue Length [ft/ln]	742.17	118.75	234.82	261.20		962.81	110.26
95th-Percentile Queue Length [veh/ln]	43.11	8.32	14.61	16.51		55.78	7.85
95th-Percentile Queue Length [ft/ln]	1077.63	208.10	365.30	412.68		1394.46	196.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	132.76	14.92	0.00	0.00	117.19	137.38	0.00	0.00	0.00	140.50	19.60	19.60
Movement LOS	F	B			F	F				F	B	B
d_A, Approach Delay [s/veh]	72.52			122.16			0.00			110.75		
Approach LOS	E			F			A			F		
d_I, Intersection Delay [s/veh]	94.67											
Intersection LOS	F											
Intersection V/C	1.039											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.248			2.307		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1000			244			0			822		
d_b, Bicycle Delay [s]	11.25			34.67			45.00			15.61		
I_b,int, Bicycle LOS Score for Intersection	2.775			1.955			4.132			3.558		
Bicycle LOS	C			A			D			D		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	135.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.210

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	413	210	89	542	0	89	0	339	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	909	550	95	971	0	393	3	967	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	253	153	26	270	0	109	1	269	0	0	0
Total Analysis Volume [veh/h]	0	1012	612	106	1081	0	438	3	1077	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	35	0	9	44	0	0	46	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	31	31	5	40	42	42	
g / C, Green / Cycle	0.34	0.34	0.06	0.44	0.47	0.47	
(v / s)_i Volume / Saturation Flow Rate	0.43	0.48	0.06	0.30	0.24	0.67	
s, saturation flow rate [veh/h]	1900	1677	1810	3618	1810	1615	
c, Capacity [veh/h]	654	578	101	1608	845	754	
d1, Uniform Delay [s]	29.50	29.50	42.50	19.81	16.92	24.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.50	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	121.02	192.82	56.80	2.26	0.50	200.71	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.24	1.41	1.05	0.67	0.52	1.43	
d, Delay for Lane Group [s/veh]	150.52	222.32	99.30	22.07	17.42	224.71	
Lane Group LOS	F	F	F	C	B	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	35.48	42.84	3.79	8.99	6.21	56.78	
50th-Percentile Queue Length [ft/ln]	887.07	1070.93	94.81	224.70	155.25	1419.61	
95th-Percentile Queue Length [veh/ln]	51.70	64.89	6.83	13.90	10.30	86.33	
95th-Percentile Queue Length [ft/ln]	1292.42	1622.20	170.66	347.62	257.42	2158.19	

Movement, Approach, & Intersection Results

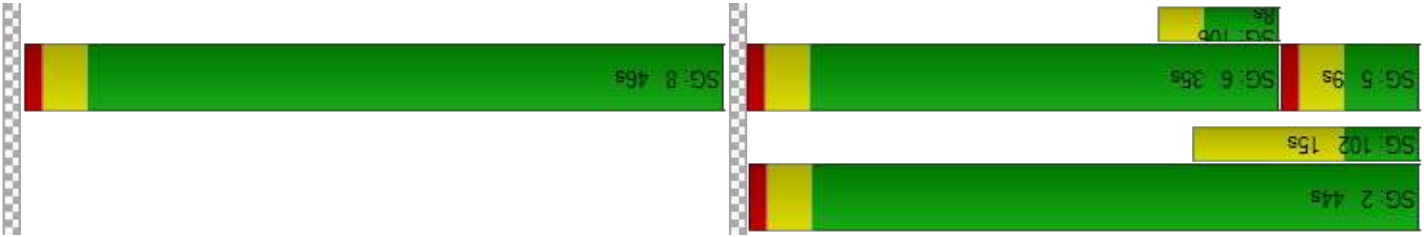
d_M, Delay for Movement [s/veh]	0.00	164.71	222.32	99.30	22.07	0.00	17.42	17.42	224.71	0.00	0.00	0.00
Movement LOS		F	F	F	C		B	B	F			
d_A, Approach Delay [s/veh]	186.42			28.97			164.49			0.00		
Approach LOS	F			C			F			A		
d_I, Intersection Delay [s/veh]	135.56											
Intersection LOS	F											
Intersection V/C	1.210											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0			9.0			9.0				
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00			0.00	
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00			0.00	
d_p, Pedestrian Delay [s]	0.00	0.00			36.45			36.45			2.128	
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000			2.456			2.128			B	
Crosswalk LOS	F	F			B			B				
s_b, Saturation Flow Rate of the bicycle lane	2000	2000			2000			2000			2000	
c_b, Capacity of the bicycle lane [bicycles/h]	689	889			933			45.00			0	
d_b, Bicycle Delay [s]	19.34	13.89			12.80			4.132			D	
l_b,int, Bicycle LOS Score for Intersection	2.899	2.539			4.064			4.132			D	
Bicycle LOS	C	B			D			D				

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	86.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.952

Intersection Setup

Name												
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	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	370	0	331	533	18	18	70	3	0	74	235
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]	131	948	15	489	1324	98	117	231	85	27	217	438
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
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]	36	262	4	135	366	27	32	64	24	7	60	121
Total Analysis Volume [veh/h]	145	1049	17	541	1465	108	129	256	94	30	240	485
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	11	26	0	27	42	0	10	26	0	11	27	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	7	22	22	23	38	38	6	26	26	3	23	23
g / C, Green / Cycle	0.08	0.24	0.24	0.26	0.42	0.42	0.07	0.29	0.29	0.03	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.28	0.28	0.30	0.41	0.42	0.07	0.10	0.10	0.02	0.13	0.30
s, saturation flow rate [veh/h]	1810	1900	1889	1810	1900	1855	1810	1900	1730	1810	1900	1615
c, Capacity [veh/h]	141	464	462	462	802	783	121	554	504	56	486	413
d1, Uniform Delay [s]	41.50	34.00	34.00	33.50	25.63	26.00	42.00	24.98	25.04	42.98	28.54	33.50
k, delay calibration	0.11	0.50	0.50	0.38	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.38
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]	43.24	90.07	90.32	92.99	27.36	33.17	57.97	0.34	0.39	7.82	0.78	96.82
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	1.03	1.15	1.15	1.17	0.98	1.00	1.07	0.33	0.33	0.54	0.49	1.18
d, Delay for Lane Group [s/veh]	84.74	124.07	124.32	126.49	52.99	59.17	99.97	25.32	25.43	50.80	29.32	130.32
Lane Group LOS	F	F	F	F	D	F	F	C	C	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.77	21.46	21.37	21.71	21.61	22.89	4.59	3.02	2.83	0.77	4.43	19.82
50th-Percentile Queue Length [ft/ln]	119.22	536.46	534.24	542.86	540.28	572.22	114.64	75.46	70.64	19.32	110.63	495.48
95th-Percentile Queue Length [veh/ln]	8.43	31.42	31.32	32.05	29.24	30.83	8.25	5.43	5.09	1.39	7.88	29.64
95th-Percentile Queue Length [ft/ln]	210.80	785.61	782.88	801.27	730.88	770.79	206.35	135.84	127.16	34.78	196.88	741.07

Movement, Approach, & Intersection Results

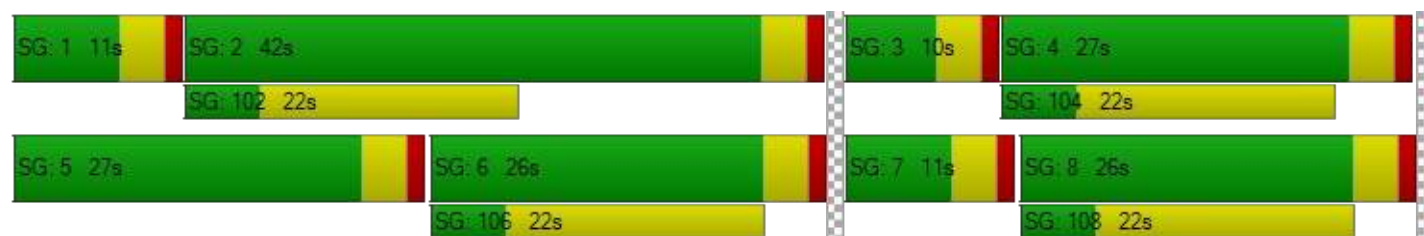
d_M, Delay for Movement [s/veh]	84.74	124.19	124.32	126.49	55.86	59.17	99.97	25.35	25.43	50.80	29.32	130.32
Movement LOS	F	F	F	F	E	E	F	C	C	D	C	F
d_A, Approach Delay [s/veh]	119.47			74.10			45.46			95.06		
Approach LOS	F			E			D			F		
d_I, Intersection Delay [s/veh]	86.61											
Intersection LOS	F											
Intersection V/C	0.952											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.847			3.038			2.491			2.607		
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]	489			844			489			511		
d_b, Bicycle Delay [s]	25.69			15.02			25.69			24.94		
I_b,int, Bicycle LOS Score for Intersection	2.559			3.304			1.955			2.182		
Bicycle LOS	B			C			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	48.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.773

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	157	301	100	63	345	138	96	373	74	41	472	128
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	13	20	0	108	18	60	29	32	5	0	35	39
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]	173	327	102	172	370	201	127	412	80	42	516	170
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	94	29	49	106	58	37	119	23	12	148	49
Total Analysis Volume [veh/h]	199	376	117	198	426	231	146	474	92	48	594	196
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	21	29	0	19	27	27	10	33	0	9	32	32
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	12	28	12	28	38	6	30	4	28	44
g / C, Green / Cycle	0.13	0.31	0.13	0.31	0.42	0.07	0.34	0.04	0.31	0.49
(v / s)_i Volume / Saturation Flow Rate	0.11	0.27	0.11	0.22	0.14	0.08	0.31	0.03	0.31	0.12
s, saturation flow rate [veh/h]	1810	1824	1810	1900	1615	1810	1847	1810	1900	1615
c, Capacity [veh/h]	239	568	240	594	684	121	625	71	591	789
d1, Uniform Delay [s]	38.10	29.22	38.01	27.41	17.44	42.00	28.40	42.66	31.00	13.41
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.38	0.11	0.41	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
d2, Incremental Delay [s]	7.44	16.26	6.99	7.27	1.33	110.51	15.49	10.54	34.53	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.83	0.87	0.82	0.72	0.34	1.21	0.91	0.67	1.00	0.25
d, Delay for Lane Group [s/veh]	45.55	45.47	45.00	34.69	18.78	152.51	43.89	53.21	65.53	13.57
Lane Group LOS	D	D	D	C	B	F	D	D	F	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.70	12.24	4.65	9.05	3.36	6.35	13.83	1.25	17.97	2.25
50th-Percentile Queue Length [ft/ln]	117.60	305.97	116.18	226.15	83.91	158.65	345.71	31.27	449.32	56.20
95th-Percentile Queue Length [veh/ln]	8.26	17.98	8.18	13.98	6.04	11.08	19.93	2.25	25.01	4.05
95th-Percentile Queue Length [ft/ln]	206.53	449.41	204.57	349.46	151.04	277.00	498.17	56.29	625.14	101.16

Movement, Approach, & Intersection Results

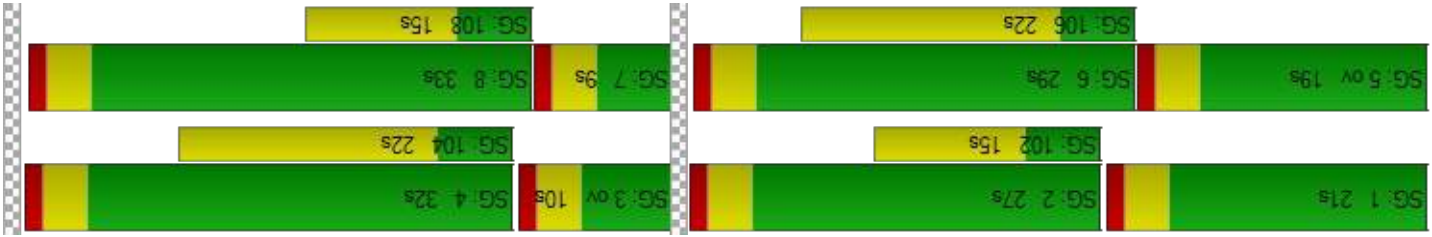
d_M, Delay for Movement [s/veh]	45.55	45.47	45.47	45.00	34.69	18.78	152.51	43.89	43.89	53.21	65.53	13.57
Movement LOS	D	D	D	D	C	B	F	D	D	D	F	B
d_A, Approach Delay [s/veh]	45.49			32.77			66.16			52.67		
Approach LOS	D			C			E			D		
d_I, Intersection Delay [s/veh]	48.68											
Intersection LOS	D											
Intersection V/C	0.773											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351
Crosswalk LOS	B	B	B	B	B	B	B	B	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	556	556	556	556	556	556	556	556	556	556	556
d_b, Bicycle Delay [s]	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47	23.47
l_b,int, Bicycle LOS Score for Intersection	2.701	2.701	2.701	2.701	2.701	2.701	2.701	2.701	2.701	2.701	2.701	2.701
Bicycle LOS	B	B	B	B	B	B	B	B	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 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	22.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.406

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	716	38	198	698	341	235	106	80	29	122	350
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	14	149	19	19	152	0	0	7	7	17	4	16
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]	62	879	58	221	864	348	240	115	89	47	128	373
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	16	232	15	58	228	92	63	30	23	12	34	98
Total Analysis Volume [veh/h]	65	927	61	233	911	367	253	121	94	50	135	393
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	15	35	35	12	37	37	9	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	44	52	11	50	62	8	15	24	4	11	26
g / C, Green / Cycle	0.05	0.49	0.57	0.12	0.56	0.69	0.09	0.17	0.27	0.04	0.12	0.29
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.04	0.07	0.25	0.23	0.07	0.03	0.06	0.01	0.04	0.24
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	187	1771	927	430	2021	1118	312	616	433	141	439	465
d1, Uniform Delay [s]	41.10	15.76	8.48	37.13	11.71	5.52	40.25	32.06	25.61	42.06	36.08	30.14
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	0.25
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]	1.11	1.11	0.14	1.07	0.73	0.79	5.01	0.15	0.25	1.51	0.39	9.37
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	0.35	0.52	0.07	0.54	0.45	0.33	0.81	0.20	0.22	0.35	0.31	0.84
d, Delay for Lane Group [s/veh]	42.21	16.87	8.61	38.20	12.44	6.31	45.27	32.21	25.86	43.57	36.47	39.51
Lane Group LOS	D	B	A	D	B	A	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.72	6.44	0.53	2.44	5.18	2.54	2.93	1.13	1.57	0.57	1.36	8.95
50th-Percentile Queue Length [ft/ln]	17.91	160.88	13.21	61.05	129.53	63.57	73.23	28.25	39.15	14.13	34.02	223.74
95th-Percentile Queue Length [veh/ln]	1.29	10.60	0.95	4.40	8.91	4.58	5.27	2.03	2.82	1.02	2.45	13.86
95th-Percentile Queue Length [ft/ln]	32.25	264.88	23.78	109.89	222.86	114.43	131.82	50.85	70.46	25.43	61.24	346.39

Movement, Approach, & Intersection Results

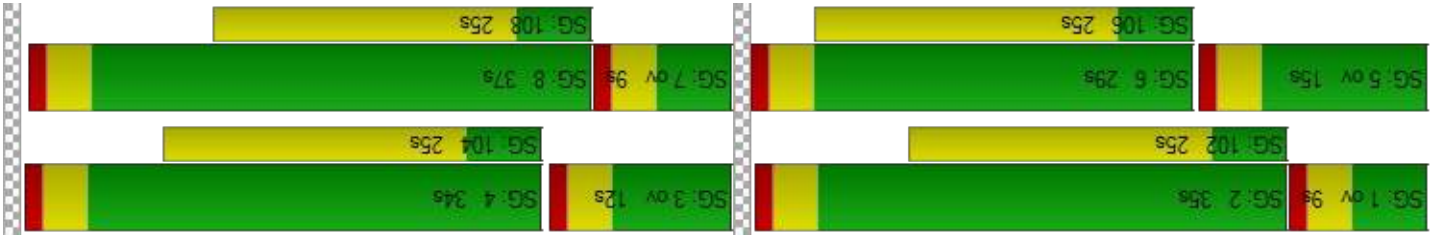
d_M, Delay for Movement [s/veh]	42.21	16.87	8.61	38.20	12.44	6.31	45.27	32.21	25.86	43.57	36.47	39.51
Movement LOS	D	B	A	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	17.95			14.92			37.99			39.15		
Approach LOS	B			B			D			D		
d_I, Intersection Delay [s/veh]	22.68											
Intersection LOS	C											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.889	3.025	2.740
Crosswalk LOS	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	689	733
d_b, Bicycle Delay [s]	23.47	19.34	18.05
l_b,int, Bicycle LOS Score for Intersection	2.428	2.806	1.946
Bicycle LOS	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.342

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	14	717	3	122	641	8	1	0	4	3	1	136
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	107	0	19	146	0	0	0	0	0	0	3
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]	14	838	3	143	800	8	1	0	4	3	1	142
Peak Hour Factor	0.9500	0.9280	0.9500	0.9280	0.9280	0.9280	0.9280	0.9500	0.9500	0.9500	0.9500	0.9280
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]	4	226	1	39	216	2	0	0	1	1	0	38
Total Analysis Volume [veh/h]	15	903	3	154	862	9	1	0	4	3	1	153
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	71	71	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.24	0.25	0.23	0.23	0.00	0.00	0.00	0.10
s, saturation flow rate [veh/h]	646	1900	1898	625	1900	1893	1252	1615	1435	1617
c, Capacity [veh/h]	529	1506	1504	513	1506	1501	97	191	224	191
d1, Uniform Delay [s]	4.27	2.54	2.54	5.66	2.51	2.51	43.84	35.06	36.48	38.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.10	0.51	0.51	1.50	0.49	0.49	0.04	0.04	0.02	7.70
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.03	0.30	0.30	0.30	0.29	0.29	0.01	0.02	0.01	0.80
d, Delay for Lane Group [s/veh]	4.37	3.05	3.05	7.16	3.00	3.00	43.88	35.11	36.50	46.36
Lane Group LOS	A	A	A	A	A	A	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.09	1.57	1.57	1.19	1.49	1.49	0.02	0.08	0.06	3.67
50th-Percentile Queue Length [ft/ln]	2.17	39.20	39.16	29.79	37.28	37.16	0.57	1.98	1.51	91.86
95th-Percentile Queue Length [veh/ln]	0.16	2.82	2.82	2.14	2.68	2.68	0.04	0.14	0.11	6.61
95th-Percentile Queue Length [ft/ln]	3.90	70.57	70.50	53.62	67.10	66.89	1.03	3.56	2.72	165.34

Movement, Approach, & Intersection Results

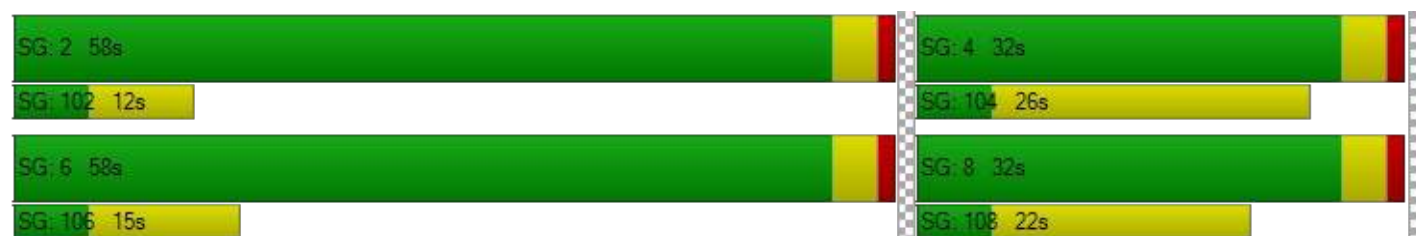
d_M, Delay for Movement [s/veh]	4.37	3.05	3.05	7.16	3.00	3.00	43.88	35.11	35.11	36.50	46.36	46.36
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.07			3.62			36.86			46.17		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.63											
Intersection LOS	A											
Intersection V/C	0.342											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.655			2.794			1.973			2.263		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1200			1200			622			622		
d_b, Bicycle Delay [s]	7.20			7.20			21.36			21.36		
I_b,int, Bicycle LOS Score for Intersection	2.319			2.405			1.568			1.819		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line RdControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):36.3
D
0.512**Intersection Setup**

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	197	584	68	53	546	56	115	264	154	60	322	39
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	42	91	24	18	103	12	22	117	33	21	53	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]	243	687	93	72	660	69	139	386	190	82	381	48
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	187	25	20	180	19	38	105	52	22	104	13
Total Analysis Volume [veh/h]	264	748	101	78	718	75	151	420	207	89	415	52
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	10	33	0	9	32	0	11	36	0	12	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	6	45	45	4	44	44	7	19	19	6	17	17
g / C, Green / Cycle	0.07	0.50	0.50	0.05	0.49	0.49	0.08	0.21	0.21	0.06	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.02	0.21	0.21	0.08	0.17	0.17	0.05	0.12	0.13
s, saturation flow rate [veh/h]	3514	1900	1822	3514	1900	1838	1810	1900	1691	1810	1900	1827
c, Capacity [veh/h]	234	957	918	168	921	891	141	394	350	115	367	353
d1, Uniform Delay [s]	42.00	14.36	14.36	41.73	15.16	15.16	41.50	34.25	34.28	41.50	33.49	33.52
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]	69.26	1.55	1.61	1.99	1.51	1.56	56.44	4.88	5.58	10.50	1.92	2.04
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	1.13	0.45	0.45	0.46	0.44	0.44	1.07	0.84	0.84	0.77	0.65	0.65
d, Delay for Lane Group [s/veh]	111.26	15.91	15.98	43.72	16.67	16.73	97.94	39.13	39.86	52.00	35.41	35.56
Lane Group LOS	F	B	B	D	B	B	F	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	4.82	5.75	5.53	0.88	5.49	5.33	5.28	7.33	6.62	2.26	4.89	4.75
50th-Percentile Queue Length [ft/ln]	120.50	143.70	138.37	22.03	137.36	133.22	132.12	183.15	165.54	56.43	122.16	118.67
95th-Percentile Queue Length [veh/ln]	8.68	9.68	9.39	1.59	9.34	9.11	9.26	11.76	10.84	4.06	8.51	8.32
95th-Percentile Queue Length [ft/ln]	216.89	242.00	234.83	39.65	233.46	227.87	231.59	294.12	271.04	101.57	212.79	207.99

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	111.26	15.94	15.98	43.72	16.70	16.73	97.94	39.28	39.86	52.00	35.47	35.56
Movement LOS	F	B	B	D	B	B	F	D	D	D	D	D
d_A, Approach Delay [s/veh]	38.55			19.12			50.82			38.13		
Approach LOS	D			B			D			D		
d_I, Intersection Delay [s/veh]	36.26											
Intersection LOS	D											
Intersection V/C	0.512											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.800			2.750			2.600			2.527		
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]	644			622			711			733		
d_b, Bicycle Delay [s]	20.67			21.36			18.69			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.478			2.278			2.201			2.018		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh): 5.9
Level Of Service: A
Volume to Capacity (v/c): 0.133**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	8	285	0	0	233	52	40	0	20	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	17	0	0	40	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]	8	308	0	0	278	53	41	0	20	0	0	0
Peak Hour Factor	0.9500	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.9500	0.8930	0.8930	0.8930
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]	2	86	0	0	78	15	11	0	5	0	0	0
Total Analysis Volume [veh/h]	8	345	0	0	311	59	46	0	21	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	61	0	0	52	0	29	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	1	78	73	73	4	4	
g / C, Green / Cycle	0.01	0.87	0.81	0.81	0.05	0.05	
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.10	0.10	0.03	0.01	
s, saturation flow rate [veh/h]	1810	3618	1900	1799	1810	1615	
c, Capacity [veh/h]	19	3126	1538	1456	85	76	
d1, Uniform Delay [s]	44.26	0.92	1.81	1.82	41.94	41.41	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	14.38	0.07	0.16	0.18	5.26	1.95	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.42	0.11	0.12	0.13	0.54	0.28	
d, Delay for Lane Group [s/veh]	58.64	0.99	1.97	2.00	47.20	43.36	
Lane Group LOS	E	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.25	0.12	0.45	0.46	1.11	0.49	
50th-Percentile Queue Length [ft/ln]	6.28	3.11	11.22	11.39	27.85	12.18	
95th-Percentile Queue Length [veh/ln]	0.45	0.22	0.81	0.82	2.00	0.88	
95th-Percentile Queue Length [ft/ln]	11.30	5.60	20.20	20.50	50.12	21.92	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.64	0.99	0.00	0.00	1.99	2.00	47.20	0.00	43.36	0.00	0.00	0.00
Movement LOS	E	A			A	A	D		D			
d_A, Approach Delay [s/veh]	2.30			1.99			46.00			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	5.86											
Intersection LOS	A											
Intersection V/C	0.133											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.435			2.318			1.985			1.425		
Crosswalk LOS	B			B			A			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1267			1067			556			0		
d_b, Bicycle Delay [s]	6.05			9.80			23.47			45.00		
I_b,int, Bicycle LOS Score for Intersection	1.851			1.865			1.560			4.132		
Bicycle LOS	A			A			A			D		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.324

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	134	61	74	93	47	26	402	31	20	436	126
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	33	0	7	4	127	0	0	57	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]	42	137	62	108	95	55	31	537	32	20	502	142
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
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]	11	36	16	28	25	14	8	140	8	5	131	37
Total Analysis Volume [veh/h]	44	143	65	112	99	57	32	559	33	21	522	148
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	9	52	0	9	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	56	56	56	56	56	3	20	20	2	20	20
g / C, Green / Cycle	0.62	0.62	0.62	0.62	0.62	0.03	0.22	0.22	0.02	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.12	0.06	0.04	0.02	0.16	0.16	0.01	0.18	0.18
s, saturation flow rate [veh/h]	1686	1615	911	1729	1615	1810	1900	1863	1810	1900	1758
c, Capacity [veh/h]	1091	998	643	1068	998	56	428	420	42	414	383
d1, Uniform Delay [s]	7.29	6.84	13.85	6.97	6.81	43.02	32.02	32.04	43.44	33.69	33.74
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.34	0.13	0.59	0.17	0.11	8.82	2.05	2.11	8.91	4.59	5.12
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
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
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

Lane Group Results

X, volume / capacity	0.17	0.07	0.17	0.09	0.06	0.57	0.70	0.70	0.50	0.84	0.84
d, Delay for Lane Group [s/veh]	7.63	6.97	14.44	7.14	6.92	51.84	34.08	34.15	52.35	38.28	38.86
Lane Group LOS	A	A	B	A	A	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.48	0.48	1.38	0.75	0.42	0.83	6.09	5.99	0.56	7.61	7.15
50th-Percentile Queue Length [ft/ln]	37.05	12.12	34.45	18.72	10.57	20.82	152.15	149.78	14.04	190.30	178.73
95th-Percentile Queue Length [veh/ln]	2.67	0.87	2.48	1.35	0.76	1.50	10.13	10.01	1.01	12.14	11.53
95th-Percentile Queue Length [ft/ln]	66.68	21.82	62.01	33.70	19.03	37.47	253.30	250.14	25.27	303.42	288.36

Movement, Approach, & Intersection Results

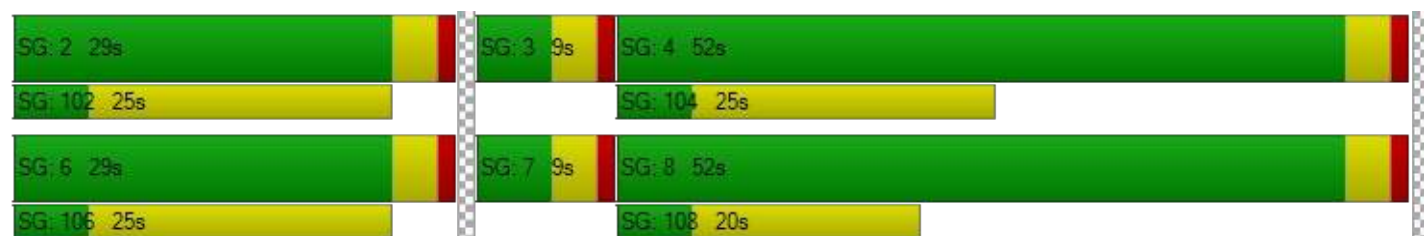
d_M, Delay for Movement [s/veh]	7.63	7.63	6.97	14.44	7.14	6.92	51.84	34.11	34.15	52.35	38.48	38.86
Movement LOS	A	A	A	B	A	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	7.46			10.14			35.02			38.98		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	29.09											
Intersection LOS	C											
Intersection V/C	0.324											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.417			2.607			2.739		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1067		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			9.80		
I_b,int, Bicycle LOS Score for Intersection	1.975			1.781			2.074			2.130		
Bicycle LOS	A			A			B			B		

Sequence

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



Miro Way and Ayala Drive Warehouse

Vistro File: \\...\\Miro Way_PM.vistro

Scenario 4 OY 2024 Cum PM

Report File: \\...\\4. OY CUM PM.pdf

5/16/2024

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	1.139	130.1	F
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	NB Right	1.177	131.7	F
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.961	82.9	F
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.661	33.7	C
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.673	26.1	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.512	7.4	A
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	NB Left	0.632	37.4	D
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.232	7.4	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.570	29.0	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	130.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.139

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	317	255	0	0	255	91	0	0	0	204	0	88
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]	802	559	0	0	553	475	0	0	0	505	4	213
Peak Hour Factor	0.9100	0.9100	1.0000	1.0000	0.9100	0.9100	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100
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]	220	154	0	0	152	130	0	0	0	139	1	59
Total Analysis Volume [veh/h]	881	614	0	0	608	522	0	0	0	555	4	234
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	37	65	0	0	28	0	0	0	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	33	61	24	24		21	21
g / C, Green / Cycle	0.37	0.68	0.27	0.27		0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.49	0.17	0.30	0.35		0.31	0.15
s, saturation flow rate [veh/h]	1810	3618	1900	1634		1810	1619
c, Capacity [veh/h]	663	2452	507	436		422	378
d1, Uniform Delay [s]	28.50	5.63	33.00	33.00		34.50	31.01
k, delay calibration	0.50	0.50	0.50	0.50		0.39	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	157.79	0.25	75.44	149.73		154.33	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.33	0.25	1.12	1.30		1.31	0.63
d, Delay for Lane Group [s/veh]	186.29	5.87	108.44	182.73		188.83	32.74
Lane Group LOS	F	A	F	F		F	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	42.65	2.00	21.29	27.30		27.07	4.73
50th-Percentile Queue Length [ft/ln]	1066.19	49.89	532.29	682.41		676.70	118.13
95th-Percentile Queue Length [veh/ln]	63.31	3.59	30.77	41.20		40.88	8.29
95th-Percentile Queue Length [ft/ln]	1582.72	89.80	769.29	1030.11		1022.05	207.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	186.29	5.87	0.00	0.00	113.69	182.73	0.00	0.00	0.00	188.83	32.74	32.74
Movement LOS	F	A			F	F				F	C	C
d_A, Approach Delay [s/veh]	112.19			145.58			0.00			141.99		
Approach LOS	F			F			A			F		
d_I, Intersection Delay [s/veh]	130.15											
Intersection LOS	F											
Intersection V/C	1.139											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.797			2.103		
Crosswalk LOS	F			F			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1356			533			0			467		
d_b, Bicycle Delay [s]	4.67			24.20			45.00			26.45		
I_b,int, Bicycle LOS Score for Intersection	2.793			2.492			4.132			2.868		
Bicycle LOS	C			B			D			C		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	131.7
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.177

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	483	316	89	369	0	88	0	205	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	1059	744	247	808	0	295	4	717	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	0.9550	0.9550	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	277	195	65	212	0	77	1	188	0	0	0
Total Analysis Volume [veh/h]	0	1109	779	259	846	0	309	4	751	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	41	0	14	55	0	0	35	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	37	37	10	51	31	31	
g / C, Green / Cycle	0.41	0.41	0.11	0.57	0.34	0.34	
(v / s)_i Volume / Saturation Flow Rate	0.50	0.57	0.14	0.23	0.17	0.47	
s, saturation flow rate [veh/h]	1900	1658	1810	3618	1811	1615	
c, Capacity [veh/h]	781	682	201	2050	624	556	
d1, Uniform Delay [s]	26.50	26.50	40.00	11.03	23.38	29.50	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.50	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	105.70	182.07	137.82	0.62	0.63	169.14	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.21	1.38	1.29	0.41	0.50	1.35	
d, Delay for Lane Group [s/veh]	132.20	208.57	177.82	11.64	24.01	198.64	
Lane Group LOS	F	F	F	B	C	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	38.64	48.19	12.07	4.56	5.22	37.60	
50th-Percentile Queue Length [ft/ln]	965.90	1204.74	301.78	114.10	130.47	939.89	
95th-Percentile Queue Length [veh/ln]	55.47	72.60	19.50	8.07	8.97	56.65	
95th-Percentile Queue Length [ft/ln]	1386.72	1815.06	487.48	201.69	224.14	1416.19	

Movement, Approach, & Intersection Results

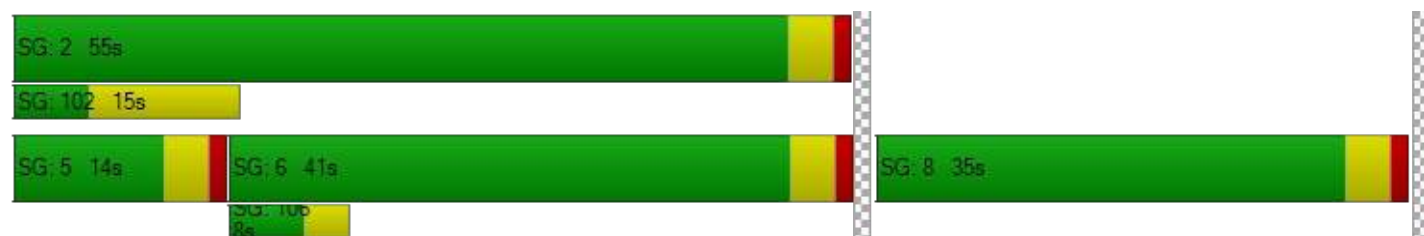
d_M, Delay for Movement [s/veh]	0.00	143.56	208.57	177.82	11.64	0.00	24.01	24.01	198.64	0.00	0.00	0.00
Movement LOS		F	F	F	B		C	C	F			
d_A, Approach Delay [s/veh]	170.38			50.59			147.27			0.00		
Approach LOS	F			D			F			A		
d_I, Intersection Delay [s/veh]	131.70											
Intersection LOS	F											
Intersection V/C	1.177											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.235			2.441		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	822			1133			689			0		
d_b, Bicycle Delay [s]	15.61			8.45			19.34			45.00		
I_b,int, Bicycle LOS Score for Intersection	3.117			2.471			3.315			4.132		
Bicycle LOS	C			B			C			D		

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	82.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.961

Intersection Setup

Name												
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	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	3	485	0	214	346	15	15	65	1	0	64	297
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]	55	1157	35	401	961	156	112	339	69	20	239	522
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	14	301	9	104	250	41	29	88	18	5	62	136
Total Analysis Volume [veh/h]	57	1205	36	418	1001	163	117	353	72	21	249	544
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	21	29	0	22	30	0	9	30	0	9	30	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	4	25	25	18	39	39	5	29	29	2	26	26
g / C, Green / Cycle	0.04	0.28	0.28	0.20	0.44	0.44	0.06	0.32	0.32	0.02	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.33	0.33	0.23	0.31	0.32	0.06	0.11	0.12	0.01	0.13	0.34
s, saturation flow rate [veh/h]	1810	1900	1881	1810	1900	1809	1810	1900	1790	1810	1900	1615
c, Capacity [veh/h]	78	528	522	362	825	786	101	611	576	42	549	467
d1, Uniform Delay [s]	42.52	32.50	32.50	36.00	20.89	21.07	42.50	23.40	23.43	43.46	26.19	32.00
k, delay calibration	0.11	0.50	0.50	0.23	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.46
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]	12.02	99.65	100.34	83.68	5.27	5.89	95.05	0.35	0.38	9.20	0.59	94.38
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	0.73	1.18	1.18	1.16	0.72	0.73	1.16	0.36	0.36	0.51	0.45	1.17
d, Delay for Lane Group [s/veh]	54.54	132.15	132.84	119.68	26.16	26.96	137.55	23.75	23.81	52.66	26.77	126.38
Lane Group LOS	D	F	F	F	C	C	F	C	C	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	25.70	25.53	16.15	10.85	10.72	4.86	3.52	3.36	0.56	4.36	22.00
50th-Percentile Queue Length [ft/ln]	37.51	642.41	638.36	403.87	271.13	267.94	121.51	87.97	84.06	14.10	108.93	550.06
95th-Percentile Queue Length [veh/ln]	2.70	37.47	37.28	24.46	16.25	16.09	8.75	6.33	6.05	1.02	7.78	32.48
95th-Percentile Queue Length [ft/ln]	67.52	936.64	931.92	611.42	406.15	402.16	218.72	158.34	151.30	25.38	194.52	812.08

Movement, Approach, & Intersection Results

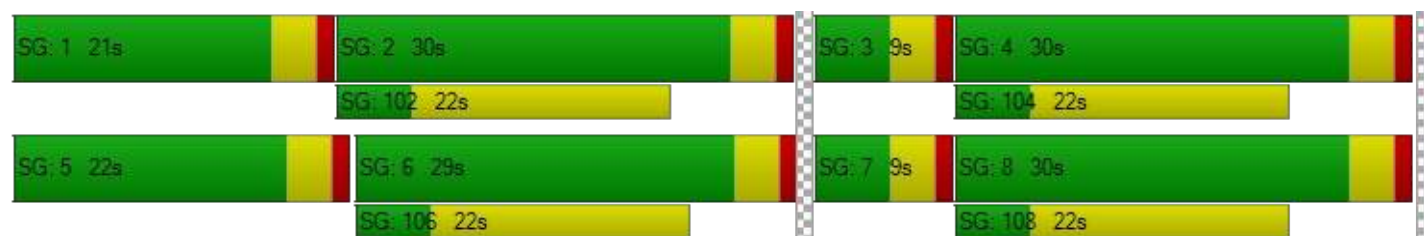
d_M, Delay for Movement [s/veh]	54.54	132.48	132.84	119.68	26.49	26.96	137.55	23.77	23.81	52.66	26.77	126.38
Movement LOS	D	F	F	F	C	C	F	C	C	D	C	F
d_A, Approach Delay [s/veh]	129.07			51.16			48.34			94.01		
Approach LOS	F			D			D			F		
d_I, Intersection Delay [s/veh]	82.91											
Intersection LOS	F											
Intersection V/C	0.961											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.768			2.974			2.499			2.617		
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]	556			578			578			578		
d_b, Bicycle Delay [s]	23.47			22.76			22.76			22.76		
I_b,int, Bicycle LOS Score for Intersection	2.630			2.865			2.007			2.231		
Bicycle LOS	B			C			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 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	33.7
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.661

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	43	323	44	118	363	123	79	434	63	57	346	87
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	5	18	0	46	17	30	61	52	13	0	50	113
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]	49	347	45	166	387	155	142	495	77	58	403	202
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
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]	13	89	12	43	100	40	37	127	20	15	104	52
Total Analysis Volume [veh/h]	50	357	46	171	398	159	146	509	79	60	415	208
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	16	26	0	14	24	24	15	41	0	9	35	35
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	29	10	36	49	9	31	4	26	40
g / C, Green / Cycle	0.04	0.33	0.11	0.40	0.54	0.10	0.34	0.04	0.28	0.44
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.09	0.21	0.10	0.08	0.32	0.03	0.22	0.13
s, saturation flow rate [veh/h]	1810	1862	1810	1900	1615	1810	1856	1810	1900	1615
c, Capacity [veh/h]	74	609	201	755	876	182	632	78	538	709
d1, Uniform Delay [s]	42.55	25.99	39.27	20.68	10.46	39.60	28.64	42.60	29.57	16.26
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.27	0.11	0.16	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
d2, Incremental Delay [s]	10.04	5.56	9.63	2.63	0.46	7.97	14.29	14.21	3.42	0.23
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.67	0.66	0.85	0.53	0.18	0.80	0.93	0.76	0.77	0.29
d, Delay for Lane Group [s/veh]	52.59	31.56	48.89	23.31	10.92	47.58	42.94	56.81	32.99	16.49
Lane Group LOS	D	C	D	C	B	D	D	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.29	8.11	4.19	6.68	1.62	3.52	14.22	1.62	8.49	2.71
50th-Percentile Queue Length [ft/ln]	32.32	202.68	104.74	166.88	40.44	87.91	355.42	40.38	212.33	67.63
95th-Percentile Queue Length [veh/ln]	2.33	12.78	7.54	10.91	2.91	6.33	20.40	2.91	13.27	4.87
95th-Percentile Queue Length [ft/ln]	58.18	319.42	188.53	272.82	72.78	158.24	510.01	72.68	331.82	121.73

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.59	31.56	31.56	48.89	23.31	10.92	47.58	42.94	42.94	56.81	32.99	16.49
Movement LOS	D	C	C	D	C	B	D	D	D	E	C	B
d_A, Approach Delay [s/veh]	33.88			26.61			43.86			30.06		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	33.66											
Intersection LOS	C											
Intersection V/C	0.661											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.263			2.582			2.383			2.576		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			444			822			689		
d_b, Bicycle Delay [s]	25.69			27.22			15.61			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.307			2.761			2.771			2.687		
Bicycle LOS	B			C			C			B		

Sequence

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



Intersection Level Of Service Report
Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.673

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	774	75	342	805	559	379	378	113	61	184	357
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	11	183	24	23	166	0	0	6	14	18	8	16
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]	119	972	101	372	987	570	387	392	129	80	196	380
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
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]	31	254	26	97	258	149	101	102	34	21	51	99
Total Analysis Volume [veh/h]	124	1015	105	388	1030	595	404	409	135	84	205	397
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	16	36	36	16	36	36	9	29	29
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	39	47	12	46	62	12	19	28	4	11	27
g / C, Green / Cycle	0.06	0.43	0.53	0.13	0.51	0.69	0.13	0.21	0.31	0.05	0.12	0.30
(v / s)_i Volume / Saturation Flow Rate	0.04	0.28	0.07	0.11	0.28	0.37	0.11	0.11	0.08	0.02	0.06	0.25
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	195	1568	852	469	1849	1113	469	745	494	174	442	484
d1, Uniform Delay [s]	41.61	20.08	10.75	38.00	15.03	6.89	38.19	31.99	23.65	41.65	36.76	29.24
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	0.26
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]	3.40	2.08	0.30	3.81	1.22	1.84	4.82	0.63	0.30	2.06	0.76	7.93
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	0.64	0.65	0.12	0.83	0.56	0.53	0.86	0.55	0.27	0.48	0.46	0.82
d, Delay for Lane Group [s/veh]	45.00	22.16	11.05	41.81	16.25	8.74	43.01	32.62	23.95	43.71	37.52	37.17
Lane Group LOS	D	C	B	D	B	A	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.42	8.41	1.07	4.34	7.03	5.18	4.60	3.98	2.17	0.95	2.12	8.76
50th-Percentile Queue Length [ft/ln]	35.61	210.24	26.85	108.60	175.83	129.42	115.01	99.39	54.27	23.72	52.95	219.07
95th-Percentile Queue Length [veh/ln]	2.56	13.17	1.93	7.76	11.38	8.91	8.12	7.16	3.91	1.71	3.81	13.62
95th-Percentile Queue Length [ft/ln]	64.09	329.14	48.34	194.05	284.57	222.70	202.96	178.91	97.68	42.69	95.31	340.44

Movement, Approach, & Intersection Results

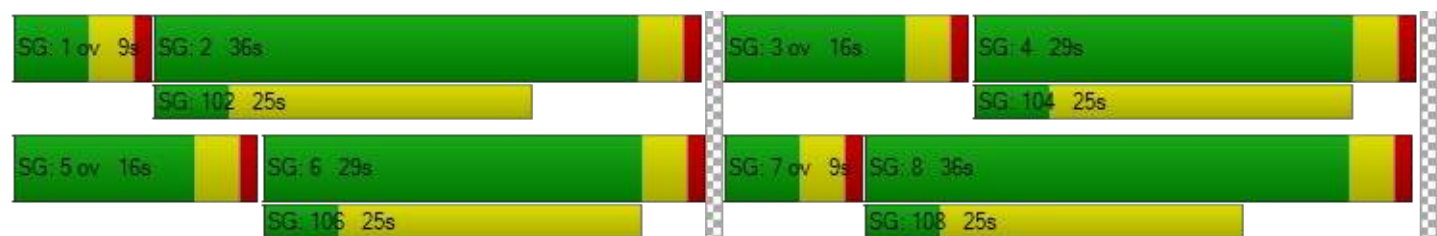
d_M, Delay for Movement [s/veh]	45.00	22.16	11.05	41.81	16.25	8.74	43.01	32.62	23.95	43.71	37.52	37.17
Movement LOS	D	C	B	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	23.50			18.96			35.81			38.08		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	26.06											
Intersection LOS	C											
Intersection V/C	0.673											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.943			3.129			2.856			2.817		
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]	556			711			711			556		
d_b, Bicycle Delay [s]	23.47			18.69			18.69			23.47		
I_b,int, Bicycle LOS Score for Intersection	2.586			3.220			2.342			2.126		
Bicycle LOS	B			C			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 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	7.4
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.512

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	8	810	8	209	851	1	0	0	5	1	3	151
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	168	0	7	125	0	0	0	0	0	0	9
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]	8	994	8	220	993	1	0	0	5	1	3	163
Peak Hour Factor	0.9500	0.9730	0.9500	0.9730	0.9730	0.9730	0.9730	0.9500	0.9500	0.9500	0.9500	0.9730
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]	2	255	2	57	255	0	0	0	1	0	1	42
Total Analysis Volume [veh/h]	8	1022	8	226	1021	1	0	0	5	1	3	168
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	70	70	70	70	70	70	12	12	12	12
g / C, Green / Cycle	0.78	0.78	0.78	0.78	0.78	0.78	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.27	0.27	0.41	0.27	0.27	0.00	0.00	0.00	0.11
s, saturation flow rate [veh/h]	561	1900	1895	556	1900	1899	1233	1615	1434	1619
c, Capacity [veh/h]	452	1485	1481	449	1485	1485	99	209	240	210
d1, Uniform Delay [s]	5.16	2.95	2.95	8.61	2.94	2.94	0.00	34.21	35.57	38.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.07	0.64	0.65	4.00	0.63	0.63	0.00	0.05	0.01	7.51
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.35	0.35	0.50	0.34	0.34	0.00	0.02	0.00	0.82
d, Delay for Lane Group [s/veh]	5.23	3.59	3.59	12.61	3.57	3.57	0.00	34.25	35.57	45.64
Lane Group LOS	A	A	A	B	A	A	A	C	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	2.07	2.07	2.60	2.05	2.05	0.00	0.10	0.02	4.05
50th-Percentile Queue Length [ft/ln]	1.34	51.80	51.68	65.00	51.16	51.14	0.00	2.44	0.50	101.29
95th-Percentile Queue Length [veh/ln]	0.10	3.73	3.72	4.68	3.68	3.68	0.00	0.18	0.04	7.29
95th-Percentile Queue Length [ft/ln]	2.41	93.24	93.02	117.00	92.08	92.06	0.00	4.39	0.89	182.32

Movement, Approach, & Intersection Results

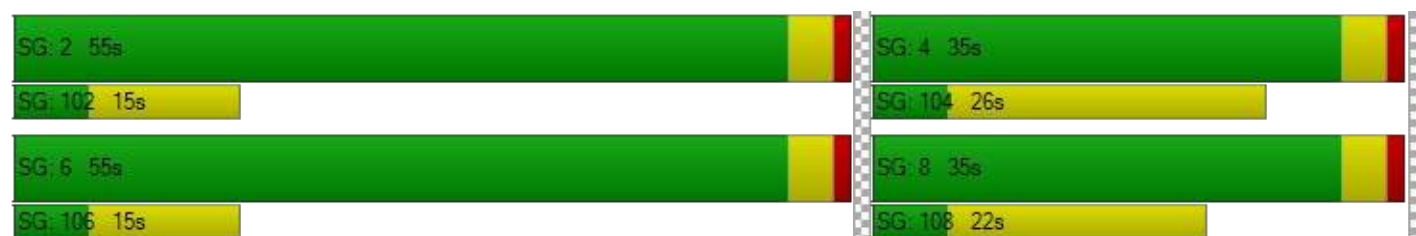
d_M, Delay for Movement [s/veh]	5.23	3.59	3.59	12.61	3.57	3.57	0.00	34.25	34.25	35.57	45.64	45.64
Movement LOS	A	A	A	B	A	A	A	C	C	D	D	D
d_A, Approach Delay [s/veh]	3.60			5.21			34.25			45.58		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	7.41											
Intersection LOS	A											
Intersection V/C	0.512											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.705			2.851			1.959			2.395		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1133			689			689		
d_b, Bicycle Delay [s]	8.45			8.45			19.34			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.416			2.589			1.568			1.843		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line RdControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):37.4
D
0.632**Intersection Setup**

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	142	647	96	139	678	63	135	447	206	89	350	49
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	51	114	35	10	108	19	15	65	56	39	125	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]	196	774	133	152	800	83	153	521	266	130	482	77
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
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]	53	209	36	41	216	22	41	141	72	35	130	21
Total Analysis Volume [veh/h]	212	838	144	165	866	90	166	564	288	141	522	83
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	9	32	0	9	32	0	12	37	0	12	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	5	37	37	5	37	37	8	24	24	8	24	24
g / C, Green / Cycle	0.06	0.41	0.41	0.06	0.41	0.41	0.09	0.27	0.27	0.09	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.26	0.27	0.05	0.26	0.26	0.09	0.24	0.24	0.08	0.16	0.16
s, saturation flow rate [veh/h]	3514	1900	1804	3514	1900	1838	1810	1900	1686	1810	1900	1810
c, Capacity [veh/h]	195	772	733	195	772	747	161	516	458	161	516	492
d1, Uniform Delay [s]	42.50	21.58	21.60	42.12	21.32	21.32	41.00	31.32	31.32	40.51	28.52	28.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.19	0.20	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]	56.03	4.25	4.50	9.56	3.87	4.01	41.49	8.28	9.22	13.77	1.12	1.18
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	1.09	0.65	0.65	0.85	0.63	0.63	1.03	0.87	0.87	0.88	0.60	0.60
d, Delay for Lane Group [s/veh]	98.53	25.83	26.10	51.68	25.19	25.33	82.49	39.60	40.54	54.28	29.65	29.72
Lane Group LOS	F	C	C	D	C	C	F	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.66	9.08	8.70	2.05	8.62	8.37	5.37	10.27	9.24	3.66	5.83	5.58
50th-Percentile Queue Length [ft/ln]	91.54	226.95	217.48	51.34	215.48	209.34	134.14	256.87	231.00	91.43	145.87	139.62
95th-Percentile Queue Length [veh/ln]	6.59	14.02	13.54	3.70	13.43	13.12	9.27	15.53	14.23	6.58	9.80	9.46
95th-Percentile Queue Length [ft/ln]	164.77	350.48	338.41	92.41	335.85	327.98	231.64	388.30	355.63	164.57	244.91	236.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	98.53	25.94	26.10	51.68	25.25	25.33	82.49	39.79	40.54	54.28	29.68	29.72
Movement LOS	F	C	C	D	C	C	F	D	D	D	C	C
d_A, Approach Delay [s/veh]	38.85			29.15			46.96			34.33		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	37.38											
Intersection LOS	D											
Intersection V/C	0.632											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.859	2.813	2.661	2.617
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]	622	622	733	733
d_b, Bicycle Delay [s]	21.36	21.36	18.05	18.05
l_b,int, Bicycle LOS Score for Intersection	2.545	2.484	2.399	2.175
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh): 7.4
Level Of Service: A
Volume to Capacity (v/c): 0.232**Intersection Setup**

Name												
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	0	0	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	0
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	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	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	24	402	0	0	377	71	70	0	35	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	44	0	0	28	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]	24	454	0	0	413	72	71	0	36	0	0	0
Peak Hour Factor	0.9500	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.9500	0.7950	0.7950	0.7950
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]	6	143	0	0	130	23	22	0	9	0	0	0
Total Analysis Volume [veh/h]	25	571	0	0	519	91	89	0	38	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	3	0	0	0	0	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	Lead	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	5	0	0	0	0	0
Maximum Green [s]	30	30	0	0	30	0	30	0	0	0	0	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Split [s]	9	49	0	0	40	0	41	0	0	0	0	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Walk [s]	0	5	0	0	5	0	5	0	0	0	0	0
Pedestrian Clearance [s]	0	7	0	0	10	0	17	0	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]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	2.0	0.0	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	L	C	C	C	L	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	2	76	69	69	6	6	
g / C, Green / Cycle	0.03	0.84	0.77	0.77	0.07	0.07	
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.16	0.17	0.05	0.02	
s, saturation flow rate [veh/h]	1810	3618	1900	1805	1810	1615	
c, Capacity [veh/h]	47	3035	1460	1387	131	117	
d1, Uniform Delay [s]	43.28	1.39	2.87	2.90	40.74	39.67	
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.11	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	8.94	0.14	0.33	0.37	6.11	1.60	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	0.53	0.19	0.21	0.22	0.68	0.33	
d, Delay for Lane Group [s/veh]	52.22	1.52	3.20	3.27	46.85	41.28	
Lane Group LOS	D	A	A	A	D	D	
Critical Lane Group	Yes	No	No	Yes	Yes	No	
50th-Percentile Queue Length [veh/ln]	0.66	0.44	1.18	1.20	2.13	0.84	
50th-Percentile Queue Length [ft/ln]	16.53	10.92	29.44	29.92	53.13	21.08	
95th-Percentile Queue Length [veh/ln]	1.19	0.79	2.12	2.15	3.83	1.52	
95th-Percentile Queue Length [ft/ln]	29.76	19.66	52.98	53.86	95.63	37.95	

Movement, Approach, & Intersection Results

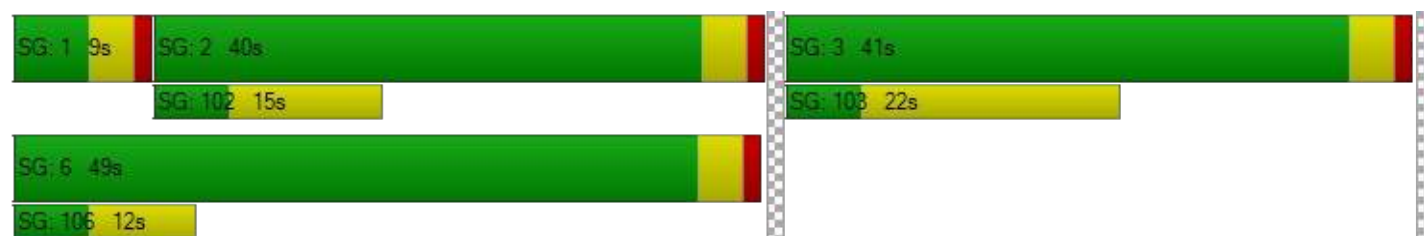
d_M, Delay for Movement [s/veh]	52.22	1.52	0.00	0.00	3.23	3.27	46.85	0.00	41.28	0.00	0.00	0.00
Movement LOS	D	A			A	A	D		D			
d_A, Approach Delay [s/veh]	3.65			3.23			45.18			0.00		
Approach LOS	A			A			D			A		
d_I, Intersection Delay [s/veh]	7.42											
Intersection LOS	A											
Intersection V/C	0.232											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.526			2.442			2.021			1.425		
Crosswalk LOS	B			B			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1000			800			822			0		
d_b, Bicycle Delay [s]	11.25			16.20			15.61			45.00		
I_b,int, Bicycle LOS Score for Intersection	2.051			2.063			1.560			4.132		
Bicycle LOS	B			B			A			D		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.570

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	168	45	153	170	95	83	475	27	39	367	169
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	17	0	11	8	82	0	0	143	36
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]	18	171	46	173	173	108	93	567	28	40	517	208
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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]	5	48	13	49	49	30	26	160	8	11	146	59
Total Analysis Volume [veh/h]	20	193	52	195	195	122	105	639	32	45	582	234
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	13	40	0	10	37	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	48	48	48	48	48	7	27	27	3	23	23
g / C, Green / Cycle	0.53	0.53	0.53	0.53	0.53	0.07	0.30	0.30	0.04	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.29	0.11	0.08	0.06	0.18	0.18	0.02	0.23	0.23
s, saturation flow rate [veh/h]	1805	1615	682	1729	1615	1810	1900	1868	1810	1900	1717
c, Capacity [veh/h]	1005	860	443	921	860	135	562	553	70	493	446
d1, Uniform Delay [s]	11.08	10.16	25.42	11.09	10.64	40.92	27.15	27.16	42.67	31.84	31.85
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.14	0.14
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
d2, Incremental Delay [s]	0.48	0.13	3.15	0.52	0.35	9.32	1.04	1.06	9.67	6.23	6.91
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
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
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

Lane Group Results

X, volume / capacity	0.21	0.06	0.44	0.21	0.14	0.78	0.60	0.60	0.65	0.87	0.87
d, Delay for Lane Group [s/veh]	11.56	10.30	28.57	11.61	10.98	50.24	28.19	28.22	52.34	38.07	38.76
Lane Group LOS	B	B	C	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.24	0.50	3.73	2.07	1.24	2.61	6.22	6.13	1.16	9.50	8.68
50th-Percentile Queue Length [ft/ln]	56.05	12.61	93.16	51.63	31.05	65.18	155.56	153.16	29.09	237.49	217.05
95th-Percentile Queue Length [veh/ln]	4.04	0.91	6.71	3.72	2.24	4.69	10.31	10.19	2.09	14.55	13.51
95th-Percentile Queue Length [ft/ln]	100.89	22.69	167.69	92.93	55.89	117.33	257.83	254.65	52.36	363.85	337.86

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.56	11.56	10.30	28.57	11.61	10.98	50.24	28.20	28.22	52.34	38.25	38.76
Movement LOS	B	B	B	C	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	11.31			17.92			31.19			39.12		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	29.02											
Intersection LOS	C											
Intersection V/C	0.570											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.263			2.505			2.622			2.919		
Crosswalk LOS	B			B			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	800			800			800			733		
d_b, Bicycle Delay [s]	16.20			16.20			16.20			18.05		
I_b,int, Bicycle LOS Score for Intersection	1.997			1.982			2.200			2.270		
Bicycle LOS	A			A			B			B		

Sequence

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



APPENDIX D-5

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2024 CUMULATIVE PLUS
PROJECT

Miro Way and Ayala Drive Warehouse

Vistro File: K:\...\Miro Way_AM.vistro

Scenario 5 OY 2024 Cum WP AM

Report File: K:\...\5. OY CUM WP AM.pdf

2/11/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	WB Left	1.065	103.0	F
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	EB Right	1.236	143.2	F
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Right	0.957	92.1	F
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.812	51.7	D
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	EB Left	0.407	22.6	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.346	6.6	A
7	Ayala Dr at Miro Wy	Two-way stop	HCM 7th Edition	EB Left	0.163	37.5	E
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.517	41.7	D
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.155	8.5	A
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	EB Left	0.345	29.3	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	103.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.065

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	210	292	0	0	291	89	0	0	0	339	0	89
Site-Generated Trips [veh/h]	9	0	0	0	0	0	0	0	0	31	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]	623	642	0	0	308	101	0	0	0	810	5	249
Peak Hour Factor	0.8530	0.8530	1.0000	1.0000	0.8530	0.8530	1.0000	1.0000	1.0000	0.8530	0.8530	0.8530
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]	183	188	0	0	90	30	0	0	0	237	1	73
Total Analysis Volume [veh/h]	730	753	0	0	361	118	0	0	0	950	6	292
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	34	49	0	0	15	0	0	0	0	0	41	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	30	45	11	11		37	37
g / C, Green / Cycle	0.33	0.50	0.12	0.12		0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.40	0.21	0.13	0.14		0.53	0.18
s, saturation flow rate [veh/h]	1810	3618	1900	1748		1810	1620
c, Capacity [veh/h]	603	1809	232	214		744	666
d1, Uniform Delay [s]	30.00	14.21	39.50	39.50		26.50	19.12
k, delay calibration	0.50	0.50	0.50	0.50		0.50	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	109.47	0.71	67.44	97.88		134.96	0.47
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.21	0.42	1.03	1.12		1.28	0.45
d, Delay for Lane Group [s/veh]	139.47	14.92	106.94	137.38		161.46	19.60
Lane Group LOS	F	B	F	F		F	B
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	30.81	4.75	9.39	10.45		42.84	4.41
50th-Percentile Queue Length [ft/ln]	770.27	118.75	234.82	261.20		1071.10	110.26
95th-Percentile Queue Length [veh/ln]	44.89	8.32	14.61	16.51		62.76	7.85
95th-Percentile Queue Length [ft/ln]	1122.18	208.10	365.30	412.68		1569.04	196.36

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	139.47	14.92	0.00	0.00	117.19	137.38	0.00	0.00	0.00	161.46	19.60	19.60
Movement LOS	F	B			F	F				F	B	B
d_A, Approach Delay [s/veh]	76.22			122.16			0.00			127.59		
Approach LOS	E			F			A			F		
d_I, Intersection Delay [s/veh]	103.05											
Intersection LOS	F											
Intersection V/C	1.065											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.258			2.325		
Crosswalk LOS	F			F			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1000			244			0			822		
d_b, Bicycle Delay [s]	11.25			34.67			45.00			15.61		
I_b,int, Bicycle LOS Score for Intersection	2.783			1.955			4.132			3.619		
Bicycle LOS	C			A			D			D		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	143.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.236

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	413	210	89	542	0	89	0	339	0	0	0
Site-Generated Trips [veh/h]	0	9	9	0	31	0	0	0	30	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	918	559	95	1002	0	393	3	997	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	256	156	26	279	0	109	1	278	0	0	0
Total Analysis Volume [veh/h]	0	1022	622	106	1116	0	438	3	1110	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	35	0	9	44	0	0	46	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	31	31	5	40	42	42	
g / C, Green / Cycle	0.34	0.34	0.06	0.44	0.47	0.47	
(v / s)_i Volume / Saturation Flow Rate	0.43	0.49	0.06	0.31	0.24	0.69	
s, saturation flow rate [veh/h]	1900	1676	1810	3618	1810	1615	
c, Capacity [veh/h]	654	577	101	1608	845	754	
d1, Uniform Delay [s]	29.50	29.50	42.50	20.08	16.92	24.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.50	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	127.41	200.64	56.80	2.50	0.50	219.96	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.26	1.42	1.05	0.69	0.52	1.47	
d, Delay for Lane Group [s/veh]	156.91	230.14	99.30	22.58	17.42	243.96	
Lane Group LOS	F	F	F	C	B	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	36.64	44.07	3.79	9.44	6.21	60.81	
50th-Percentile Queue Length [ft/ln]	916.11	1101.79	94.81	235.93	155.25	1520.35	
95th-Percentile Queue Length [veh/ln]	53.55	66.93	6.83	14.48	10.30	93.14	
95th-Percentile Queue Length [ft/ln]	1338.79	1673.26	170.66	361.88	257.42	2328.59	

Movement, Approach, & Intersection Results

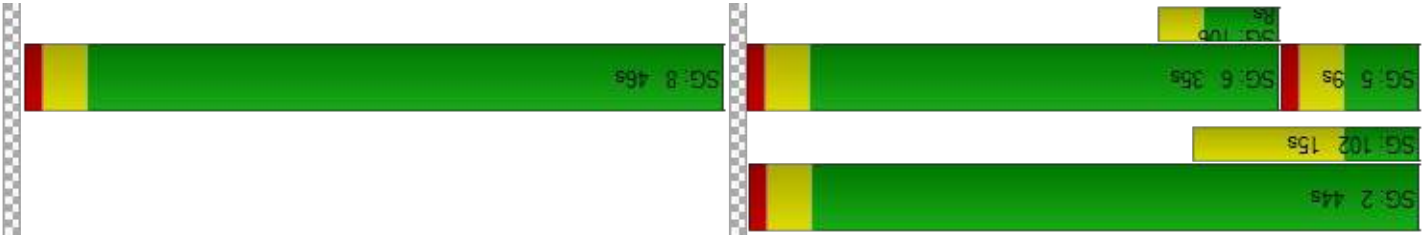
d_M, Delay for Movement [s/veh]	0.00	171.24	230.14	99.30	22.58	0.00	17.42	17.42	243.96	0.00	0.00	0.00
Movement LOS		F	F	F	C		B	B	F			
d_A, Approach Delay [s/veh]	193.53			29.24			179.55			0.00		
Approach LOS	F			C			F			A		
d_I, Intersection Delay [s/veh]	143.17											
Intersection LOS	F											
Intersection V/C	1.236											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0			9.0			9.0		9.0		
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00		0.00		
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00		0.00		
d_p, Pedestrian Delay [s]	0.00	0.00			0.00			36.45		36.45		
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000			2.472			2.138		B		
Crosswalk LOS	F	F			B			B		2000		
s_b, Saturation Flow Rate of the bicycle lane	2000	2000			2000			2000		2000		
c_b, Capacity of the bicycle lane [bicycles/h]	689	889			933			0		45.00		
d_b, Bicycle Delay [s]	19.34	13.89			12.80			4.132		D		
l_b,int, Bicycle LOS Score for Intersection	2.916	2.568			4.119			4.132		D		
Bicycle LOS	C	B			D			D				

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	92.1
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	1	370	0	331	533	18	18	70	3	0	74	235
Site-Generated Trips [veh/h]	0	18	0	0	61	0	0	2	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]	131	966	15	489	1385	98	117	233	85	27	218	438
Peak Hour Factor	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040	0.9040
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]	36	267	4	135	383	27	32	64	24	7	60	121
Total Analysis Volume [veh/h]	145	1069	17	541	1532	108	129	258	94	30	241	485
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	11	26	0	27	42	0	10	26	0	11	27	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	7	22	22	23	38	38	6	26	26	3	23	23
g / C, Green / Cycle	0.08	0.24	0.24	0.26	0.42	0.42	0.07	0.29	0.29	0.03	0.26	0.26
(v / s)_i Volume / Saturation Flow Rate	0.08	0.29	0.29	0.30	0.43	0.44	0.07	0.10	0.10	0.02	0.13	0.30
s, saturation flow rate [veh/h]	1810	1900	1890	1810	1900	1857	1810	1900	1731	1810	1900	1615
c, Capacity [veh/h]	141	464	462	462	802	784	121	554	504	56	486	413
d1, Uniform Delay [s]	41.50	34.00	34.00	33.50	26.00	26.00	42.00	24.99	25.05	42.98	28.56	33.50
k, delay calibration	0.11	0.50	0.50	0.38	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.38
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]	43.24	98.27	98.54	92.99	37.50	44.79	57.97	0.34	0.39	7.82	0.79	96.82
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	1.03	1.17	1.17	1.17	1.02	1.05	1.07	0.33	0.34	0.54	0.50	1.18
d, Delay for Lane Group [s/veh]	84.74	132.27	132.54	126.49	63.50	70.79	99.97	25.34	25.44	50.80	29.35	130.32
Lane Group LOS	F	F	F	F	F	F	F	C	C	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.77	22.52	22.43	21.71	24.41	25.44	4.59	3.04	2.84	0.77	4.45	19.82
50th-Percentile Queue Length [ft/ln]	119.22	562.89	560.66	542.86	610.17	636.01	114.64	75.94	71.10	19.32	111.17	495.48
95th-Percentile Queue Length [veh/ln]	8.43	33.08	32.97	32.05	33.05	34.85	8.25	5.47	5.12	1.39	7.91	29.64
95th-Percentile Queue Length [ft/ln]	210.80	827.03	824.29	801.27	826.17	871.18	206.35	136.68	127.97	34.78	197.63	741.07

Movement, Approach, & Intersection Results

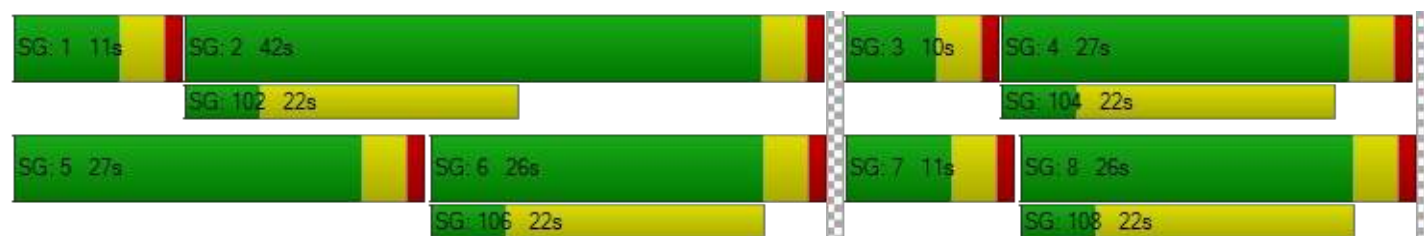
d_M, Delay for Movement [s/veh]	84.74	132.40	132.54	126.49	66.89	70.79	99.97	25.37	25.44	50.80	29.35	130.32
Movement LOS	F	F	F	F	E	E	F	C	C	D	C	F
d_A, Approach Delay [s/veh]	126.79			81.86			45.39			94.98		
Approach LOS	F			F			D			F		
d_I, Intersection Delay [s/veh]	92.12											
Intersection LOS	F											
Intersection V/C	0.957											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.864			3.055			2.491			2.608		
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]	489			844			489			511		
d_b, Bicycle Delay [s]	25.69			15.02			25.69			24.94		
I_b,int, Bicycle LOS Score for Intersection	2.575			3.359			1.956			2.183		
Bicycle LOS	B			C			A			B		

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alder Ave at Base Line RdControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):51.7
D
0.812**Intersection Setup**

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	157	301	100	63	345	138	96	373	74	41	472	128
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	13	20	0	108	18	60	29	32	5	0	35	39
Site-Generated Trips [veh/h]	0	0	0	61	0	0	0	3	0	0	1	18
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]	173	327	102	233	370	201	127	415	80	42	517	188
Peak Hour Factor	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690	0.8690
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	94	29	67	106	58	37	119	23	12	149	54
Total Analysis Volume [veh/h]	199	376	117	268	426	231	146	478	92	48	595	216
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	21	29	0	19	27	27	10	33	0	9	32	32
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	12	25	15	28	38	6	30	4	28	47
g / C, Green / Cycle	0.13	0.28	0.17	0.31	0.42	0.07	0.34	0.04	0.31	0.52
(v / s)_i Volume / Saturation Flow Rate	0.11	0.27	0.15	0.22	0.14	0.08	0.31	0.03	0.31	0.13
s, saturation flow rate [veh/h]	1810	1824	1810	1900	1615	1810	1847	1810	1900	1615
c, Capacity [veh/h]	239	507	302	594	684	121	625	71	591	843
d1, Uniform Delay [s]	38.10	32.17	36.68	27.41	17.44	42.00	28.48	42.66	31.00	11.86
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.39	0.11	0.41	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
d2, Incremental Delay [s]	7.44	33.88	8.76	7.27	1.33	110.51	16.33	10.54	35.00	0.16
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.83	0.97	0.89	0.72	0.34	1.21	0.91	0.67	1.01	0.26
d, Delay for Lane Group [s/veh]	45.55	66.05	45.44	34.69	18.78	152.51	44.82	53.21	66.00	12.02
Lane Group LOS	D	E	D	C	B	F	D	D	F	B
Critical Lane Group	No	Yes	Yes	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.70	15.02	6.38	9.05	3.36	6.35	14.09	1.25	18.05	2.30
50th-Percentile Queue Length [ft/ln]	117.60	375.46	159.51	226.15	83.91	158.65	352.19	31.27	451.25	57.41
95th-Percentile Queue Length [veh/ln]	8.26	21.37	10.52	13.98	6.04	11.08	20.24	2.25	25.13	4.13
95th-Percentile Queue Length [ft/ln]	206.53	534.34	263.07	349.46	151.04	277.00	506.08	56.29	628.15	103.34

Movement, Approach, & Intersection Results

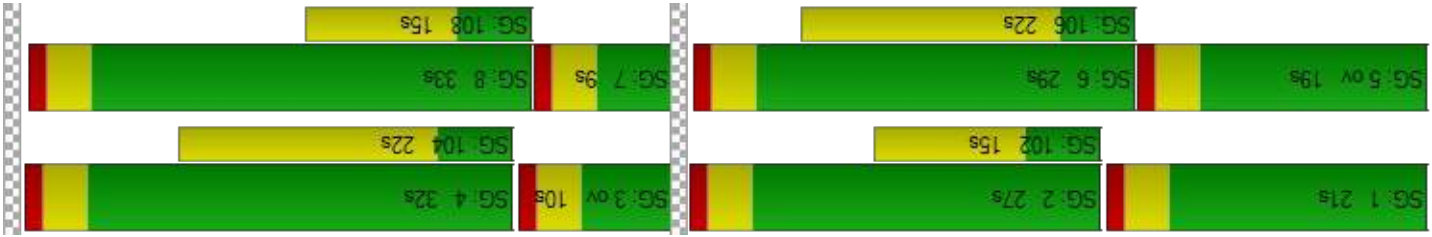
d_M, Delay for Movement [s/veh]	45.55	66.05	66.05	45.44	34.69	18.78	152.51	44.82	44.82	53.21	66.00	12.02
Movement LOS	D	E	E	D	C	B	F	D	D	D	F	B
d_A, Approach Delay [s/veh]	60.15				33.83				66.78			
Approach LOS	E				C				E			
d_I, Intersection Delay [s/veh]	51.74											
Intersection LOS	D											
Intersection V/C	0.812											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.351	2.626	2.508	2.637
Crosswalk LOS	B	B	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	511	644	622
d_b, Bicycle Delay [s]	23.47	24.94	20.67	21.36
l_b,int, Bicycle LOS Score for Intersection	2.701	3.086	2.741	2.977
Bicycle LOS	B	C	B	C

Sequence

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



Intersection Level Of Service Report

Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.407

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	47	726	38	198	711	328	225	106	80	29	122	350
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	14	149	19	19	152	0	0	7	7	17	4	16
Site-Generated Trips [veh/h]	1	3	1	0	17	0	0	0	2	2	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]	63	893	59	221	894	335	230	115	91	49	128	373
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480
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]	17	235	16	58	236	88	61	30	24	13	34	98
Total Analysis Volume [veh/h]	66	942	62	233	943	353	243	121	96	52	135	393
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	15	35	35	12	37	37	9	34	34
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	44	52	11	50	62	8	15	24	4	11	26
g / C, Green / Cycle	0.05	0.49	0.57	0.12	0.56	0.69	0.09	0.17	0.27	0.04	0.12	0.29
(v / s)_i Volume / Saturation Flow Rate	0.02	0.26	0.04	0.07	0.26	0.22	0.07	0.03	0.06	0.01	0.04	0.24
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	191	1771	929	430	2017	1116	312	613	433	144	439	465
d1, Uniform Delay [s]	41.02	15.85	8.45	37.13	11.91	5.50	40.13	32.12	25.63	42.02	36.08	30.14
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	0.25
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]	1.08	1.15	0.14	1.07	0.78	0.74	4.19	0.16	0.26	1.53	0.39	9.37
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	0.35	0.53	0.07	0.54	0.47	0.32	0.78	0.20	0.22	0.36	0.31	0.84
d, Delay for Lane Group [s/veh]	42.10	16.99	8.59	38.20	12.69	6.24	44.32	32.27	25.88	43.54	36.47	39.51
Lane Group LOS	D	B	A	D	B	A	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.73	6.58	0.54	2.44	5.45	2.43	2.78	1.13	1.60	0.59	1.36	8.95
50th-Percentile Queue Length [ft/ln]	18.16	164.48	13.40	61.05	136.24	60.75	69.46	28.28	40.01	14.68	34.02	223.74
95th-Percentile Queue Length [veh/ln]	1.31	10.79	0.97	4.40	9.28	4.37	5.00	2.04	2.88	1.06	2.45	13.86
95th-Percentile Queue Length [ft/ln]	32.68	269.64	24.13	109.89	231.95	109.36	125.02	50.90	72.02	26.43	61.24	346.39

Movement, Approach, & Intersection Results

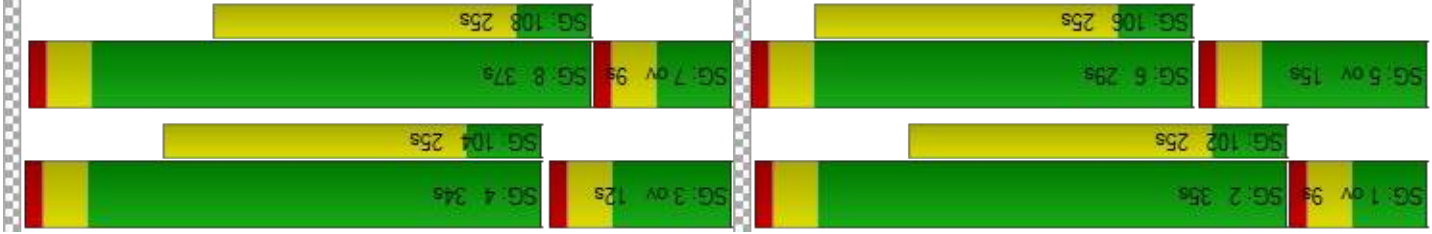
d_M, Delay for Movement [s/veh]												42.10	16.99	8.59	38.20	12.69	6.24	44.32	32.27	25.88	43.54	36.47	39.51	
Movement LOS												D	B	A	18.06			15.09			37.30			39.16
d_A, Approach Delay [s/veh]																								
Approach LOS																								
d_I, Intersection Delay [s/veh]																								
Intersection LOS																								
Intersection V/C																								
0.407																								

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.896	3.028	2.737
Crosswalk LOS	C	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	556	689	733
d_b, Bicycle Delay [s]	23.47	19.34	18.05
l_b,int, Bicycle LOS Score for Intersection	2.442	2.821	1.939
Bicycle LOS	B	C	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	6.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.346

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	14	727	3	122	654	8	1	0	4	3	1	136
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	107	0	19	146	0	0	0	0	0	0	3
Site-Generated Trips [veh/h]	0	5	0	0	21	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]	14	854	3	143	834	8	1	0	4	3	1	142
Peak Hour Factor	0.9500	0.9280	0.9500	0.9280	0.9280	0.9280	0.9280	0.9500	0.9500	0.9500	0.9500	0.9280
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]	4	230	1	39	225	2	0	0	1	1	0	38
Total Analysis Volume [veh/h]	15	920	3	154	899	9	1	0	4	3	1	153
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	58	0	0	58	0	0	32	0	0	32	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	7	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	71	71	71	71	71	71	11	11	11	11
g / C, Green / Cycle	0.79	0.79	0.79	0.79	0.79	0.79	0.12	0.12	0.12	0.12
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.24	0.25	0.24	0.24	0.00	0.00	0.00	0.10
s, saturation flow rate [veh/h]	624	1900	1898	615	1900	1893	1252	1615	1435	1617
c, Capacity [veh/h]	512	1506	1504	505	1506	1501	97	191	224	191
d1, Uniform Delay [s]	4.38	2.55	2.55	5.75	2.54	2.54	43.84	35.06	36.48	38.66
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.11	0.53	0.53	1.56	0.52	0.52	0.04	0.04	0.02	7.70
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.03	0.31	0.31	0.31	0.30	0.30	0.01	0.02	0.01	0.80
d, Delay for Lane Group [s/veh]	4.48	3.08	3.08	7.31	3.06	3.06	43.88	35.11	36.50	46.36
Lane Group LOS	A	A	A	A	A	A	D	D	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.09	1.61	1.61	1.21	1.58	1.57	0.02	0.08	0.06	3.67
50th-Percentile Queue Length [ft/ln]	2.22	40.19	40.15	30.26	39.38	39.26	0.57	1.98	1.51	91.86
95th-Percentile Queue Length [veh/ln]	0.16	2.89	2.89	2.18	2.84	2.83	0.04	0.14	0.11	6.61
95th-Percentile Queue Length [ft/ln]	3.99	72.34	72.27	54.47	70.88	70.67	1.03	3.56	2.72	165.34

Movement, Approach, & Intersection Results

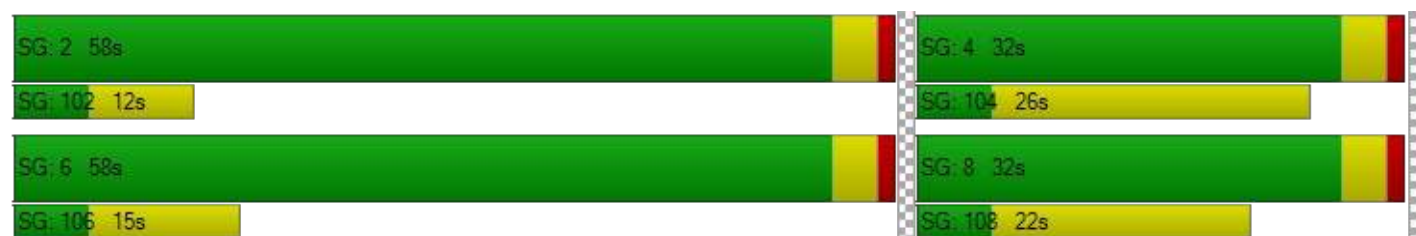
d_M, Delay for Movement [s/veh]	4.48	3.08	3.08	7.31	3.06	3.06	43.88	35.11	35.11	36.50	46.36	46.36
Movement LOS	A	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.10			3.67			36.86			46.17		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	6.59											
Intersection LOS	A											
Intersection V/C	0.346											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.665			2.803			1.973			2.263		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1200			1200			622			622		
d_b, Bicycle Delay [s]	7.20			7.20			21.36			21.36		
I_b,int, Bicycle LOS Score for Intersection	2.333			2.436			1.568			1.819		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 7: Ayala Dr at Miro WyControl Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutesDelay (sec / veh): 37.5
Level Of Service: E
Volume to Capacity (v/c): 0.163**Intersection Setup**

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

Volumes

Name						
Base Volume Input [veh/h]	0	729	646	15	15	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	107	146	0	0	0
Site-Generated Trips [veh/h]	33	0	0	21	5	10
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]	33	851	805	36	20	10
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]	9	224	212	9	5	3
Total Analysis Volume [veh/h]	35	896	847	38	21	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.01	0.01	0.00	0.16	0.02
d_M, Delay for Movement [s/veh]	9.70	0.00	0.00	0.00	37.48	15.86
Movement LOS	A	A	A	A	E	C
95th-Percentile Queue Length [veh/ln]	0.06	0.03	0.00	0.00	0.65	0.65
95th-Percentile Queue Length [ft/ln]	1.49	0.74	0.00	0.00	16.15	16.15
d_A, Approach Delay [s/veh]	0.36		0.00		30.05	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	0.70					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

Control Type: Signalized
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 41.7
Level Of Service: D
Volume to Capacity (v/c): 0.517

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	197	584	68	53	546	54	110	264	154	60	322	39
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	42	91	24	18	103	12	22	117	33	21	53	8
Site-Generated Trips [veh/h]	5	0	0	1	0	9	30	0	2	0	0	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]	248	687	93	73	660	76	164	386	192	82	381	51
Peak Hour Factor	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190	0.9190
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	187	25	20	180	21	45	105	52	22	104	14
Total Analysis Volume [veh/h]	270	748	101	79	718	83	178	420	209	89	415	55
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	10	33	0	9	32	0	11	36	0	12	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	6	45	45	4	44	44	7	19	19	6	17	17
g / C, Green / Cycle	0.07	0.50	0.50	0.05	0.48	0.48	0.08	0.21	0.21	0.06	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.02	0.21	0.21	0.10	0.17	0.18	0.05	0.13	0.13
s, saturation flow rate [veh/h]	3514	1900	1822	3514	1900	1832	1810	1900	1690	1810	1900	1823
c, Capacity [veh/h]	234	956	916	169	920	887	141	395	351	115	368	353
d1, Uniform Delay [s]	42.00	14.40	14.41	41.72	15.24	15.24	41.50	34.23	34.26	41.50	33.48	33.51
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]	79.46	1.55	1.62	2.02	1.55	1.61	131.13	4.91	5.58	10.50	1.94	2.06
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	1.15	0.45	0.45	0.47	0.44	0.44	1.26	0.84	0.84	0.77	0.65	0.65
d, Delay for Lane Group [s/veh]	121.46	15.95	16.03	43.74	16.79	16.85	172.63	39.14	39.84	52.00	35.42	35.57
Lane Group LOS	F	B	B	D	B	B	F	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.15	5.76	5.55	0.89	5.59	5.40	8.20	7.36	6.63	2.26	4.92	4.78
50th-Percentile Queue Length [ft/ln]	128.80	143.98	138.65	22.31	139.65	135.05	205.12	183.98	165.86	56.43	123.11	119.40
95th-Percentile Queue Length [veh/ln]	9.25	9.69	9.41	1.61	9.46	9.21	13.88	11.81	10.86	4.06	8.56	8.36
95th-Percentile Queue Length [ft/ln]	231.22	242.37	235.21	40.16	236.56	230.34	347.08	295.21	271.47	101.57	214.09	209.00

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	121.46	15.99	16.03	43.74	16.82	16.85	172.63	39.29	39.84	52.00	35.48	35.57
Movement LOS	F	B	B	D	B	B	F	D	D	D	D	D
d_A, Approach Delay [s/veh]	41.44			19.24			68.84			38.12		
Approach LOS	D			B			E			D		
d_I, Intersection Delay [s/veh]	41.65											
Intersection LOS	D											
Intersection V/C	0.517											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.801			2.757			2.608			2.527		
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]	644			622			711			733		
d_b, Bicycle Delay [s]	20.67			21.36			18.69			18.05		
I_b,int, Bicycle LOS Score for Intersection	2.483			2.286			2.225			2.021		
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh):
Level Of Service:
Volume to Capacity (v/c):8.5
A
0.155**Intersection Setup**

Name												
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	0	0	0	0	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	0
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	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												
Base Volume Input [veh/h]	6	285	0	0	233	39	30	15	15	0	15	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	17	0	12	40	0	0	0	0	0	0	37
Site-Generated Trips [veh/h]	0	0	39	2	0	0	0	0	0	12	0	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]	6	308	39	14	278	40	31	15	15	12	15	38
Peak Hour Factor	0.9500	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.8930	0.9500	0.8930	0.8930	0.8930
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]	2	86	11	4	78	11	9	4	4	3	4	11
Total Analysis Volume [veh/h]	6	345	44	16	311	45	35	17	16	13	17	43
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	1.0	0.0	0.0	1.0	0.0
Split [s]	16	64	0	0	48	0	0	26	0	0	26	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	14	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	0.0	2.0	0.0	0.0	2.0	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	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	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	L	C	C	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	1	74	74	69	69	8	8	8
g / C, Green / Cycle	0.01	0.82	0.82	0.76	0.76	0.09	0.09	0.09
(v / s)_i Volume / Saturation Flow Rate	0.00	0.10	0.11	0.11	0.11	0.03	0.02	0.04
s, saturation flow rate [veh/h]	1810	1900	1826	1802	1655	1364	1750	1663
c, Capacity [veh/h]	16	1552	1491	1419	1264	130	165	204
d1, Uniform Delay [s]	44.37	1.69	1.69	2.80	2.82	38.27	37.62	38.54
k, delay calibration	0.11	0.50	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	1.00
d2, Incremental Delay [s]	14.38	0.17	0.18	0.20	0.23	1.10	0.59	1.06
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.38	0.13	0.13	0.14	0.14	0.27	0.20	0.36
d, Delay for Lane Group [s/veh]	58.75	1.85	1.87	3.00	3.05	39.37	38.20	39.60
Lane Group LOS	E	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.19	0.44	0.43	0.73	0.68	0.76	0.69	1.57
50th-Percentile Queue Length [ft/ln]	4.87	11.06	10.87	18.21	16.98	18.93	17.30	39.18
95th-Percentile Queue Length [veh/ln]	0.35	0.80	0.78	1.31	1.22	1.36	1.25	2.82
95th-Percentile Queue Length [ft/ln]	8.77	19.91	19.57	32.77	30.56	34.07	31.14	70.52

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.75	1.86	1.87	3.00	3.02	3.05	39.37	38.20	38.20	39.60	39.60	39.60
Movement LOS	E	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	2.73			3.03			38.80			39.60		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	8.51											
Intersection LOS	A											
Intersection V/C	0.155											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.463	2.376	1.986	1.812
Crosswalk LOS	B	B	A	A
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1333	978	489	489
d_b, Bicycle Delay [s]	5.00	11.76	25.69	25.69
l_b,int, Bicycle LOS Score for Intersection	1.885	1.867	1.672	1.680
Bicycle LOS	A	A	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.345

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	41	134	61	69	93	47	26	402	31	20	436	124
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	33	0	7	4	127	0	0	57	13
Site-Generated Trips [veh/h]	0	0	0	2	0	10	34	30	0	0	9	5
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]	42	137	62	105	95	65	65	567	32	20	511	144
Peak Hour Factor	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610	0.9610
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]	11	36	16	27	25	17	17	148	8	5	133	37
Total Analysis Volume [veh/h]	44	143	65	109	99	68	68	590	33	21	532	150
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	29	0	0	29	0	9	52	0	9	52	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	54	54	54	54	54	4	22	22	2	20	20
g / C, Green / Cycle	0.60	0.60	0.60	0.60	0.60	0.05	0.25	0.25	0.02	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.12	0.06	0.04	0.04	0.17	0.17	0.01	0.19	0.19
s, saturation flow rate [veh/h]	1684	1615	909	1729	1615	1810	1900	1865	1810	1900	1758
c, Capacity [veh/h]	1055	964	622	1032	964	88	468	460	42	420	389
d1, Uniform Delay [s]	8.11	7.62	14.72	7.75	7.63	42.32	30.61	30.62	43.44	33.54	33.58
k, delay calibration	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.37	0.13	0.61	0.18	0.14	13.31	1.67	1.71	8.91	4.60	5.11
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
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
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

Lane Group Results

X, volume / capacity	0.18	0.07	0.18	0.10	0.07	0.77	0.67	0.67	0.50	0.84	0.85
d, Delay for Lane Group [s/veh]	8.48	7.75	15.33	7.94	7.77	55.64	32.29	32.34	52.35	38.14	38.70
Lane Group LOS	A	A	B	A	A	E	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.60	0.52	1.39	0.81	0.55	1.80	6.23	6.13	0.56	7.74	7.27
50th-Percentile Queue Length [ft/ln]	39.89	13.05	34.82	20.16	13.68	45.05	155.67	153.19	14.04	193.54	181.68
95th-Percentile Queue Length [veh/ln]	2.87	0.94	2.51	1.45	0.98	3.24	10.32	10.19	1.01	12.30	11.69
95th-Percentile Queue Length [ft/ln]	71.80	23.49	62.68	36.29	24.62	81.10	257.98	254.68	25.27	307.61	292.20

Movement, Approach, & Intersection Results

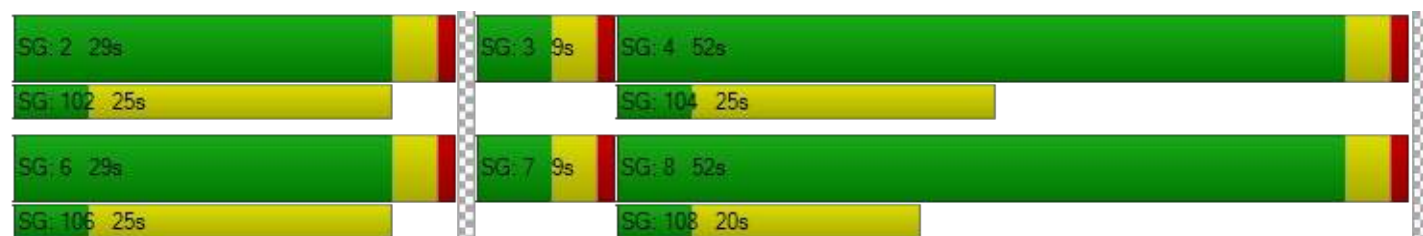
d_M, Delay for Movement [s/veh]	8.48	8.48	7.75	15.33	7.94	7.77	55.64	32.31	32.34	52.35	38.33	38.70
Movement LOS	A	A	A	B	A	A	E	C	C	D	D	D
d_A, Approach Delay [s/veh]	8.29			10.82			34.61			38.82		
Approach LOS	A			B			C			D		
d_I, Intersection Delay [s/veh]	29.28											
Intersection LOS	C											
Intersection V/C	0.345											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.231			2.426			2.624			2.742		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	556			556			1067			1067		
d_b, Bicycle Delay [s]	23.47			23.47			9.80			9.80		
I_b,int, Bicycle LOS Score for Intersection	1.975			1.787			2.130			2.140		
Bicycle LOS	A			A			B			B		

Sequence

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



Miro Way and Ayala Drive Warehouse

Vistro File: K:\...\Miro Way_PM.vistro

Scenario 5 OY 2024 Cum WP PM

Report File: K:\...\5. OY CUM WP PM.pdf

2/11/2025

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Alder Ave at SR-210 WB Ramps	Signalized	HCM 7th Edition	NB Left	1.164	138.6	F
2	Alder Ave at SR-210 EB Ramps	Signalized	HCM 7th Edition	SB Left	1.205	136.3	F
3	Alder Ave at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Right	0.978	90.8	F
4	Alder Ave at Base Line Rd	Signalized	HCM 7th Edition	SB Left	0.674	34.5	C
5	Ayala Dr at Renaissance Pkwy	Signalized	HCM 7th Edition	NB Left	0.677	26.0	C
6	Ayala Dr at Fitzgerald Ave	Signalized	HCM 6th Edition	WB Right	0.528	7.5	A
7	Ayala Dr at Miro Wy	Two-way stop	HCM 7th Edition	EB Left	0.557	79.7	F
8	Ayala Dr at Base Line Rd	Signalized	HCM 7th Edition	NB Left	0.642	38.1	D
9	Linden Ave at Miro Wy	Signalized	HCM 7th Edition	NB Left	0.294	10.2	B
10	Linden Ave at Base Line Rd	Signalized	HCM 7th Edition	WB Left	0.579	29.1	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: Alder Ave at SR-210 WB Ramps

Control Type:	Signalized	Delay (sec / veh):	138.6
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.164

Intersection Setup

Name												
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	0	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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		
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
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	1.0200	1.0200	1.0000	1.0000	1.0200	1.0200	1.0000	1.0000	1.0000	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	317	255	0	0	255	91	0	0	0	204	0	88
Site-Generated Trips [veh/h]	30	0	0	0	0	0	0	0	0	11	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]	832	559	0	0	553	475	0	0	0	516	4	213
Peak Hour Factor	0.9100	0.9100	1.0000	1.0000	0.9100	0.9100	1.0000	1.0000	1.0000	0.9100	0.9100	0.9100
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]	229	154	0	0	152	130	0	0	0	142	1	59
Total Analysis Volume [veh/h]	914	614	0	0	608	522	0	0	0	567	4	234
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	37	65	0	0	28	0	0	0	0	0	25	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	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	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
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	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	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
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	C		L	C
C, Cycle Length [s]	90	90	90	90		90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00		4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00		2.00	2.00
g_i, Effective Green Time [s]	33	61	24	24		21	21
g / C, Green / Cycle	0.37	0.68	0.27	0.27		0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.51	0.17	0.30	0.35		0.31	0.15
s, saturation flow rate [veh/h]	1810	3618	1900	1634		1810	1619
c, Capacity [veh/h]	663	2452	507	436		422	378
d1, Uniform Delay [s]	28.50	5.63	33.00	33.00		34.50	31.01
k, delay calibration	0.50	0.50	0.50	0.50		0.41	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00
d2, Incremental Delay [s]	179.28	0.25	75.44	149.73		166.87	1.73
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00

Lane Group Results

X, volume / capacity	1.38	0.25	1.12	1.30		1.34	0.63
d, Delay for Lane Group [s/veh]	207.78	5.87	108.44	182.73		201.37	32.74
Lane Group LOS	F	A	F	F		F	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	46.61	2.00	21.29	27.30		28.54	4.73
50th-Percentile Queue Length [ft/ln]	1165.20	49.89	532.29	682.41		713.45	118.13
95th-Percentile Queue Length [veh/ln]	69.79	3.59	30.77	41.20		43.22	8.29
95th-Percentile Queue Length [ft/ln]	1744.78	89.80	769.29	1030.11		1080.48	207.25

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	207.78	5.87	0.00	0.00	113.69	182.73	0.00	0.00	0.00	201.37	32.74	32.74
Movement LOS	F	A			F	F				F	C	C
d_A, Approach Delay [s/veh]	126.65			145.58			0.00			151.51		
Approach LOS	F			F			A			F		
d_I, Intersection Delay [s/veh]	138.61											
Intersection LOS	F											
Intersection V/C	1.164											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0			0.0			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]	0.00			0.00			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	0.000			0.000			2.829			2.109		
Crosswalk LOS	F			F			C			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1356			533			0			467		
d_b, Bicycle Delay [s]	4.67			24.20			45.00			26.45		
I_b,int, Bicycle LOS Score for Intersection	2.820			2.492			4.132			2.888		
Bicycle LOS	C			B			D			C		

Sequence

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



Intersection Level Of Service Report
Intersection 2: Alder Ave at SR-210 EB Ramps

Control Type:	Signalized	Delay (sec / veh):	136.3
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.205

Intersection Setup

Name												
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	0	0	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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					
Crosswalk	No			No			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	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	1.0200	1.0200	1.0200	1.0200	1.0000	1.0200	1.0200	1.0200	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	483	316	89	369	0	88	0	205	0	0	0
Site-Generated Trips [veh/h]	0	30	31	0	11	0	0	0	12	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	1089	775	247	819	0	295	4	729	0	0	0
Peak Hour Factor	1.0000	0.9550	0.9550	0.9550	0.9550	1.0000	0.9550	0.9550	0.9550	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	285	203	65	214	0	77	1	191	0	0	0
Total Analysis Volume [veh/h]	0	1140	812	259	858	0	309	4	763	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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	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	50	0	10	60	0	0	30	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	3	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	C	R	
C, Cycle Length [s]	90	90	90	90	90	90	
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	
g_i, Effective Green Time [s]	46	46	6	56	26	26	
g / C, Green / Cycle	0.51	0.51	0.07	0.62	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.51	0.59	0.14	0.24	0.17	0.47	
s, saturation flow rate [veh/h]	1900	1657	1810	3618	1811	1615	
c, Capacity [veh/h]	971	847	121	2251	523	467	
d1, Uniform Delay [s]	22.00	22.00	42.00	8.42	27.51	32.00	
k, delay calibration	0.50	0.50	0.11	0.50	0.11	0.50	
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	
d2, Incremental Delay [s]	30.11	82.10	522.10	0.49	1.10	295.53	
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	

Lane Group Results

X, volume / capacity	1.01	1.15	2.15	0.38	0.60	1.64	
d, Delay for Lane Group [s/veh]	52.11	104.10	564.10	8.91	28.61	327.53	
Lane Group LOS	F	F	F	A	C	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	26.67	35.48	20.14	3.84	5.80	48.07	
50th-Percentile Queue Length [ft/ln]	666.76	887.11	503.47	96.08	144.90	1201.81	
95th-Percentile Queue Length [veh/ln]	35.28	50.31	32.50	6.92	9.74	74.95	
95th-Percentile Queue Length [ft/ln]	882.12	1257.67	812.60	172.94	243.61	1873.83	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	59.59	104.10	564.10	8.91	0.00	28.61	28.61	327.53	0.00	0.00	0.00
Movement LOS		E	F	F	A		C	C	F			
d_A, Approach Delay [s/veh]	78.10			137.64			240.58			0.00		
Approach LOS	E			F			F			A		
d_I, Intersection Delay [s/veh]	136.32											
Intersection LOS	F											
Intersection V/C	1.205											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0			9.0			9.0			
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00			
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00			0.00			0.00			
d_p, Pedestrian Delay [s]	0.00	0.00			36.45			36.45			
l_p,int, Pedestrian LOS Score for Intersection	0.000	0.000			2.241			2.473			
Crosswalk LOS	F	F			B			B			
s_b, Saturation Flow Rate of the bicycle lane	2000	2000			2000			2000			
c_b, Capacity of the bicycle lane [bicycles/h]	1022	1244			578			0			
d_b, Bicycle Delay [s]	10.76	6.42			22.76			45.00			
l_b,int, Bicycle LOS Score for Intersection	3.170	2.481			3.335			4.132			
Bicycle LOS	C	B			C			D			

Sequence

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



Intersection Level Of Service Report
Intersection 3: Alder Ave at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	90.8
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.978

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	3	485	0	214	346	15	15	65	1	0	64	297
Site-Generated Trips [veh/h]	0	61	0	0	23	0	0	1	0	0	2	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]	55	1218	35	401	984	156	112	340	69	20	241	522
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
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]	14	317	9	104	256	41	29	89	18	5	63	136
Total Analysis Volume [veh/h]	57	1269	36	418	1025	163	117	354	72	21	251	544
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	21	29	0	22	30	0	9	30	0	9	30	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	17	0	0	17	0	0	17	0	0	17	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	4	25	25	18	39	39	5	29	29	2	26	26
g / C, Green / Cycle	0.04	0.28	0.28	0.20	0.44	0.44	0.06	0.32	0.32	0.02	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.03	0.34	0.35	0.23	0.32	0.32	0.06	0.11	0.12	0.01	0.13	0.34
s, saturation flow rate [veh/h]	1810	1900	1882	1810	1900	1811	1810	1900	1791	1810	1900	1615
c, Capacity [veh/h]	78	528	523	362	825	787	101	611	576	42	549	467
d1, Uniform Delay [s]	42.52	32.50	32.50	36.00	21.07	21.27	42.50	23.40	23.44	43.46	26.22	32.00
k, delay calibration	0.11	0.50	0.50	0.23	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.46
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]	12.02	123.98	124.91	83.68	5.63	6.32	95.05	0.35	0.38	9.20	0.60	94.38
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	0.73	1.24	1.24	1.16	0.73	0.74	1.16	0.36	0.36	0.51	0.46	1.17
d, Delay for Lane Group [s/veh]	54.54	156.48	157.41	119.68	26.70	27.59	137.55	23.76	23.82	52.66	26.81	126.38
Lane Group LOS	D	F	F	F	C	C	F	C	C	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	29.26	29.11	16.15	11.20	11.11	4.86	3.53	3.37	0.56	4.40	22.00
50th-Percentile Queue Length [ft/ln]	37.51	731.59	727.86	403.87	280.06	277.78	121.51	88.20	84.28	14.10	109.95	550.06
95th-Percentile Queue Length [veh/ln]	2.70	43.10	42.93	24.46	16.69	16.58	8.75	6.35	6.07	1.02	7.84	32.48
95th-Percentile Queue Length [ft/ln]	67.52	1077.40	1073.24	611.42	417.28	414.44	218.72	158.76	151.71	25.38	195.94	812.08

Movement, Approach, & Intersection Results

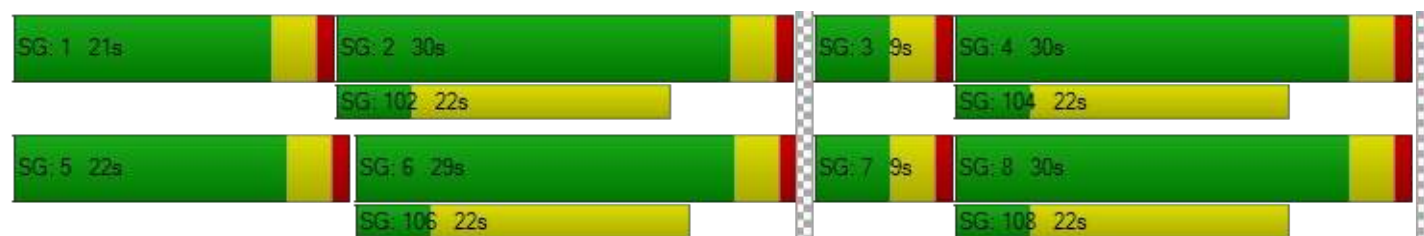
d_M, Delay for Movement [s/veh]	54.54	156.93	157.41	119.68	27.07	27.59	137.55	23.78	23.82	52.66	26.81	126.38
Movement LOS	D	F	F	F	C	C	F	C	C	D	C	F
d_A, Approach Delay [s/veh]	152.66			51.22			48.30			93.85		
Approach LOS	F			D			D			F		
d_I, Intersection Delay [s/veh]	90.82											
Intersection LOS	F											
Intersection V/C	0.978											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.785			2.991			2.499			2.618		
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]	556			578			578			578		
d_b, Bicycle Delay [s]	23.47			22.76			22.76			22.76		
I_b,int, Bicycle LOS Score for Intersection	2.683			2.885			2.008			2.233		
Bicycle LOS	B			C			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 4: Alder Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	34.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.674

Intersection Setup

Name												
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	1	0	1	1	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	0	0	0	0	0	0	0	0	0	0
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	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												
Base Volume Input [veh/h]	43	323	44	118	363	123	79	434	63	57	346	87
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	5	18	0	46	17	30	61	52	13	0	50	113
Site-Generated Trips [veh/h]	0	0	0	23	0	0	0	1	0	0	3	61
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]	49	347	45	189	387	155	142	496	77	58	406	263
Peak Hour Factor	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720	0.9720
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]	13	89	12	49	100	40	37	128	20	15	104	68
Total Analysis Volume [veh/h]	50	357	46	194	398	159	146	510	79	60	418	271
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap
Signal Group	1	6	0	5	2	2	3	8	0	7	4	4
Auxiliary Signal Groups						2,3						4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	0	5	10	10	5	10	0	5	10	10
Maximum Green [s]	30	30	0	30	30	30	30	30	0	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0
Split [s]	16	26	0	14	24	24	15	41	0	9	35	35
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0	3.0	3.0	3.0
Walk [s]	0	5	0	0	5	5	0	5	0	0	5	5
Pedestrian Clearance [s]	0	17	0	0	10	10	0	10	0	0	17	17
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	2.0	2.0	2.0	0.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No	No	No	No		No	No	No
Maximum Recall	No	No		No	No	No	No	No		No	No	No
Pedestrian Recall	No	No		No	No	No	No	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	L	C	L	C	R	L	C	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	0.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	4	29	10	36	49	9	31	4	26	40
g / C, Green / Cycle	0.04	0.33	0.11	0.40	0.54	0.10	0.34	0.04	0.28	0.44
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.11	0.21	0.10	0.08	0.32	0.03	0.22	0.17
s, saturation flow rate [veh/h]	1810	1862	1810	1900	1615	1810	1856	1810	1900	1615
c, Capacity [veh/h]	74	608	201	754	875	182	633	78	539	710
d1, Uniform Delay [s]	42.55	26.03	39.83	20.72	10.48	39.60	28.62	42.60	29.59	16.99
k, delay calibration	0.11	0.50	0.11	0.50	0.50	0.11	0.27	0.11	0.16	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
d2, Incremental Delay [s]	10.04	5.60	22.14	2.64	0.46	7.97	14.33	14.21	3.56	0.34
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.67	0.66	0.96	0.53	0.18	0.80	0.93	0.76	0.77	0.38
d, Delay for Lane Group [s/veh]	52.59	31.63	61.96	23.36	10.94	47.58	42.96	56.81	33.15	17.33
Lane Group LOS	D	C	E	C	B	D	D	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.29	8.12	5.44	6.68	1.62	3.52	14.25	1.62	8.58	3.69
50th-Percentile Queue Length [ft/ln]	32.32	202.94	135.96	167.08	40.49	87.91	356.14	40.38	214.56	92.28
95th-Percentile Queue Length [veh/ln]	2.33	12.79	9.26	10.92	2.92	6.33	20.44	2.91	13.39	6.64
95th-Percentile Queue Length [ft/ln]	58.18	319.76	231.58	273.07	72.89	158.24	510.89	72.68	334.67	166.10

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.59	31.63	31.63	61.96	23.36	10.94	47.58	42.96	42.96	56.81	33.15	17.33
Movement LOS	D	C	C	E	C	B	D	D	D	E	C	B
d_A, Approach Delay [s/veh]	33.94			30.70			43.87			29.32		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	34.46											
Intersection LOS	C											
Intersection V/C	0.674											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.263			2.599			2.384			2.594		
Crosswalk LOS	B			B			B			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	489			444			822			689		
d_b, Bicycle Delay [s]	25.69			27.22			15.61			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.307			2.799			2.772			2.795		
Bicycle LOS	B			C			C			C		

Sequence

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



Intersection Level Of Service Report
Intersection 5: Ayala Dr at Renaissance Pkwy

Control Type:	Signalized	Delay (sec / veh):	26.0
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.677

Intersection Setup												
Name												
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	1	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	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	106	792	75	342	823	541	361	378	113	61	184	357
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	11	183	24	23	166	0	0	6	14	18	8	16
Site-Generated Trips [veh/h]	2	17	2	0	6	0	0	0	1	1	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]	121	1008	103	372	1011	552	368	392	130	81	196	380
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
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]	32	263	27	97	264	144	96	102	34	21	51	99
Total Analysis Volume [veh/h]	126	1052	108	388	1055	576	384	409	136	85	205	397
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]	90
Active Pattern	Pattern 1
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	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap
Signal Group	1	6	6	5	2	2	3	8	8	7	4	4
Auxiliary Signal Groups			6,7			2,3			1,8			4,5
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	10	10	5	10	10	5	10	10	5	10	10
Maximum Green [s]	30	30	30	30	30	30	30	30	30	30	30	30
Amber [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	9	29	29	16	36	36	16	36	36	9	29	29
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	5	5	0	5	5	0	5	5	0	5	5
Pedestrian Clearance [s]	0	20	20	0	20	20	0	20	20	0	20	20
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	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Maximum Recall	No	No	No	No	No	No	No	No	No	No	No	No
Pedestrian Recall	No	No	No	No	No	No	No	No	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	L	C	R	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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	0.00	2.00	2.00	0.00	2.00	2.00	0.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	5	39	47	12	46	62	12	19	28	4	11	27
g / C, Green / Cycle	0.06	0.43	0.53	0.13	0.51	0.69	0.13	0.21	0.31	0.05	0.12	0.30
(v / s)_i Volume / Saturation Flow Rate	0.04	0.29	0.07	0.11	0.29	0.36	0.11	0.11	0.08	0.02	0.06	0.25
s, saturation flow rate [veh/h]	3514	3618	1615	3514	3618	1615	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	195	1568	853	469	1849	1113	469	743	493	177	442	484
d1, Uniform Delay [s]	41.63	20.37	10.74	38.00	15.18	6.77	37.95	32.05	23.72	41.60	36.76	29.24
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	0.26
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]	3.55	2.31	0.31	3.81	1.28	1.72	3.61	0.64	0.30	2.02	0.76	7.93
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	0.65	0.67	0.13	0.83	0.57	0.52	0.82	0.55	0.28	0.48	0.46	0.82
d, Delay for Lane Group [s/veh]	45.18	22.68	11.05	41.81	16.47	8.49	41.56	32.69	24.02	43.62	37.52	37.17
Lane Group LOS	D	C	B	D	B	A	D	C	C	D	D	D
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.45	8.87	1.11	4.34	7.28	4.91	4.28	3.98	2.19	0.96	2.12	8.76
50th-Percentile Queue Length [ft/ln]	36.26	221.69	27.63	108.60	182.03	122.77	107.09	99.50	54.77	23.97	52.95	219.07
95th-Percentile Queue Length [veh/ln]	2.61	13.75	1.99	7.76	11.71	8.55	7.68	7.16	3.94	1.73	3.81	13.62
95th-Percentile Queue Length [ft/ln]	65.27	343.78	49.73	194.05	292.66	213.63	191.94	179.10	98.59	43.14	95.31	340.44

Movement, Approach, & Intersection Results

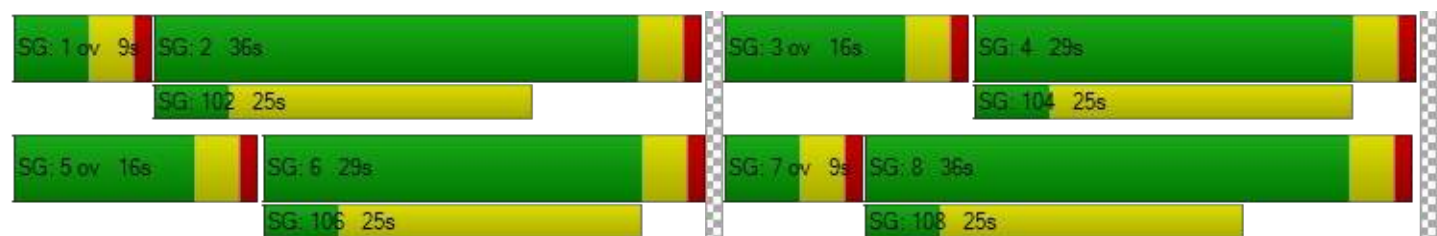
d_M, Delay for Movement [s/veh]	45.18	22.68	11.05	41.81	16.47	8.49	41.56	32.69	24.02	43.62	37.52	37.17
Movement LOS	D	C	B	D	B	A	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	23.91			19.06			35.08			38.07		
Approach LOS	C			B			D			D		
d_I, Intersection Delay [s/veh]	26.01											
Intersection LOS	C											
Intersection V/C	0.677											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.952			3.132			2.851			2.817		
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]	556			711			711			556		
d_b, Bicycle Delay [s]	23.47			18.69			18.69			23.47		
I_b,int, Bicycle LOS Score for Intersection	2.621			3.225			2.326			2.126		
Bicycle LOS	B			C			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 6: Ayala Dr at Fitzgerald Ave

Control Type:	Signalized	Delay (sec / veh):	7.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.528

Intersection Setup

Name												
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	1	0	0	1	0	0	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	1	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	49.21	0.00	0.00	0.00	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												
Base Volume Input [veh/h]	8	828	8	209	869	1	0	0	5	1	3	151
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
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	168	0	7	125	0	0	0	0	0	0	9
Site-Generated Trips [veh/h]	0	21	0	0	8	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]	8	1034	8	220	1019	1	0	0	5	1	3	163
Peak Hour Factor	0.9500	0.9730	0.9500	0.9730	0.9730	0.9730	0.9730	0.9500	0.9500	0.9500	0.9500	0.9730
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]	2	266	2	57	262	0	0	0	1	0	1	42
Total Analysis Volume [veh/h]	8	1063	8	226	1047	1	0	0	5	1	3	168
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	0	18	0	0	18	0	0	34	0	0	34	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	55	0	0	55	0	0	35	0	0	35	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	10	0	0	17	0	0	21	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]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	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
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	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	0.00	2.00	0.00	0.00	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	70	70	70	70	70	70	12	12	12	12
g / C, Green / Cycle	0.78	0.78	0.78	0.78	0.78	0.78	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.28	0.28	0.42	0.28	0.28	0.00	0.00	0.00	0.11
s, saturation flow rate [veh/h]	547	1900	1895	535	1900	1899	1233	1615	1434	1619
c, Capacity [veh/h]	441	1485	1481	432	1485	1485	99	209	240	210
d1, Uniform Delay [s]	5.25	2.99	2.99	9.11	2.96	2.96	0.00	34.21	35.57	38.13
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	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
d2, Incremental Delay [s]	0.08	0.68	0.69	4.47	0.66	0.66	0.00	0.05	0.01	7.51
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
Rp, platoon ratio	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

Lane Group Results

X, volume / capacity	0.02	0.36	0.36	0.52	0.35	0.35	0.00	0.02	0.00	0.82
d, Delay for Lane Group [s/veh]	5.33	3.67	3.68	13.59	3.62	3.62	0.00	34.25	35.57	45.64
Lane Group LOS	A	A	A	B	A	A	A	C	D	D
Critical Lane Group	No	No	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.05	2.19	2.18	2.74	2.12	2.12	0.00	0.10	0.02	4.05
50th-Percentile Queue Length [ft/ln]	1.36	54.71	54.59	68.61	52.98	52.97	0.00	2.44	0.50	101.29
95th-Percentile Queue Length [veh/ln]	0.10	3.94	3.93	4.94	3.81	3.81	0.00	0.18	0.04	7.29
95th-Percentile Queue Length [ft/ln]	2.45	98.48	98.26	123.50	95.36	95.34	0.00	4.39	0.89	182.32

Movement, Approach, & Intersection Results

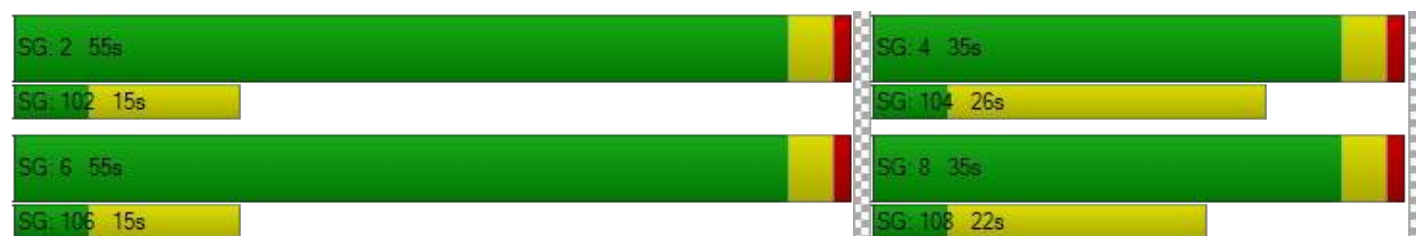
d_M, Delay for Movement [s/veh]	5.33	3.67	3.68	13.59	3.62	3.62	0.00	34.25	34.25	35.57	45.64	45.64
Movement LOS	A	A	A	B	A	A	A	C	C	D	D	D
d_A, Approach Delay [s/veh]	3.69			5.39			34.25			45.58		
Approach LOS	A			A			C			D		
d_I, Intersection Delay [s/veh]	7.45											
Intersection LOS	A											
Intersection V/C	0.528											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.719			2.861			1.959			2.395		
Crosswalk LOS	B			C			A			B		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1133			1133			689			689		
d_b, Bicycle Delay [s]	8.45			8.45			19.34			19.34		
I_b,int, Bicycle LOS Score for Intersection	2.450			2.611			1.568			1.843		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 7: Ayala Dr at Miro WyControl Type: Two-way stop
Analysis Method: HCM 7th Edition
Analysis Period: 15 minutesDelay (sec / veh): 79.7
Level Of Service: F
Volume to Capacity (v/c): 0.557**Intersection Setup**

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

Volumes

Name						
Base Volume Input [veh/h]	0	817	851	24	27	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00
Growth Factor	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	168	125	0	0	0
Site-Generated Trips [veh/h]	13	0	0	8	21	33
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]	13	1001	993	32	49	33
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	263	261	8	13	9
Total Analysis Volume [veh/h]	14	1054	1045	34	52	35
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.01	0.00	0.56	0.07
d_M, Delay for Movement [s/veh]	10.52	0.00	0.00	0.00	79.74	48.49
Movement LOS	B	A	A	A	F	E
95th-Percentile Queue Length [veh/ln]	0.02	0.01	0.00	0.00	3.34	3.34
95th-Percentile Queue Length [ft/ln]	0.59	0.29	0.00	0.00	83.49	83.49
d_A, Approach Delay [s/veh]	0.14		0.00		67.17	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	2.68					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Ayala Dr at Base Line Rd

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):	0.642

Intersection Setup												
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	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	0	1	0	0	1	0	0	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	0	0	0	0
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	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												
Base Volume Input [veh/h]	142	647	96	139	678	57	126	447	206	89	350	49
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	51	114	35	10	108	19	15	65	56	39	125	27
Site-Generated Trips [veh/h]	2	0	0	3	0	30	12	0	5	0	0	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]	198	774	133	155	800	107	156	521	271	130	482	78
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
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]	54	209	36	42	216	29	42	141	73	35	130	21
Total Analysis Volume [veh/h]	214	838	144	168	866	116	169	564	293	141	522	84
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]	90
Active Pattern	Pattern 1
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	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	9	32	0	9	32	0	12	37	0	12	37	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	23	0	0	23	0	0	26	0	0	28	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		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		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	L	C	C	L	C	C	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	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]	5	37	37	5	37	37	8	24	24	8	24	24
g / C, Green / Cycle	0.06	0.41	0.41	0.06	0.41	0.41	0.09	0.27	0.27	0.09	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.06	0.26	0.27	0.05	0.26	0.26	0.09	0.24	0.24	0.08	0.16	0.16
s, saturation flow rate [veh/h]	3514	1900	1804	3514	1900	1822	1810	1900	1684	1810	1900	1809
c, Capacity [veh/h]	195	769	730	195	769	738	161	519	460	161	519	494
d1, Uniform Delay [s]	42.50	21.69	21.71	42.15	21.66	21.67	41.00	31.25	31.26	40.51	28.42	28.43
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.20	0.20	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]	59.72	4.31	4.56	10.53	4.26	4.45	47.09	8.41	9.38	13.77	1.11	1.17
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	1.10	0.65	0.66	0.86	0.65	0.65	1.05	0.88	0.88	0.88	0.60	0.60
d, Delay for Lane Group [s/veh]	102.22	26.00	26.27	52.68	25.91	26.12	88.09	39.66	40.63	54.28	29.52	29.60
Lane Group LOS	F	C	C	D	C	C	F	D	D	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	3.76	9.11	8.73	2.11	9.05	8.74	5.62	10.35	9.30	3.66	5.83	5.58
50th-Percentile Queue Length [ft/ln]	94.04	227.82	218.34	52.85	226.37	218.47	140.40	258.85	232.58	91.43	145.81	139.48
95th-Percentile Queue Length [veh/ln]	6.77	14.06	13.58	3.81	13.99	13.59	9.67	15.63	14.31	6.58	9.79	9.45
95th-Percentile Queue Length [ft/ln]	169.27	351.59	339.51	95.13	349.74	339.68	241.67	390.78	357.64	164.57	244.82	236.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	102.22	26.11	26.27	52.68	26.00	26.12	88.09	39.85	40.63	54.28	29.55	29.60
Movement LOS	F	C	C	D	C	C	F	D	D	D	C	C
d_A, Approach Delay [s/veh]	39.75			29.91			48.02			34.23		
Approach LOS	D			C			D			C		
d_I, Intersection Delay [s/veh]	38.06											
Intersection LOS	D											
Intersection V/C	0.642											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersection	2.860	2.819	2.668	2.618
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]	622	622	733	733
d_b, Bicycle Delay [s]	21.36	21.36	18.05	18.05
l_b,int, Bicycle LOS Score for Intersection	2.546	2.508	2.406	2.176
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 9: Linden Ave at Miro WyControl Type:
Analysis Method:
Analysis Period:Signalized
HCM 7th Edition
15 minutesDelay (sec / veh): 10.2
Level Of Service: B
Volume to Capacity (v/c): 0.294**Intersection Setup**

Name												
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	0	0	0	0	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	0
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	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												
Base Volume Input [veh/h]	18	402	0	0	377	53	52	27	26	0	24	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 [%]	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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	44	0	37	28	0	0	0	0	0	0	16
Site-Generated Trips [veh/h]	0	0	14	1	0	0	0	0	0	39	0	2
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]	18	454	14	38	413	54	53	28	27	39	24	18
Peak Hour Factor	0.9500	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.7950	0.9500	0.7950	0.7950	0.7950
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]	5	143	4	12	130	17	17	9	7	12	8	6
Total Analysis Volume [veh/h]	19	571	18	48	519	68	67	35	28	49	30	23
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	5	10	0	0	10	0	0	10	0	0	10	0
Maximum Green [s]	30	30	0	0	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	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	1.0	0.0	0.0	1.0	0.0
Split [s]	9	46	0	0	37	0	0	44	0	0	44	0
Vehicle Extension [s]	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	7	0	0	10	0	0	17	0	0	14	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	0.0	2.0	0.0	0.0	2.0	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	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No			No			No			No	
Maximum Recall	No	No			No			No			No	
Pedestrian Recall	No	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	L	C	C	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	2.00	0.00	2.00	0.00	2.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	2	72	72	66	66	10	10	10
g / C, Green / Cycle	0.02	0.80	0.80	0.74	0.74	0.11	0.11	0.11
(v / s)_i Volume / Saturation Flow Rate	0.01	0.16	0.16	0.19	0.19	0.05	0.04	0.09
s, saturation flow rate [veh/h]	1810	1900	1880	1640	1666	1373	1762	1139
c, Capacity [veh/h]	38	1526	1509	1255	1229	97	190	182
d1, Uniform Delay [s]	43.57	2.07	2.07	3.73	3.83	38.93	37.12	39.91
k, delay calibration	0.11	0.50	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	1.00
d2, Incremental Delay [s]	9.62	0.28	0.29	0.49	0.51	8.45	1.01	2.67
d3, Initial Queue Delay [s]	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
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.50	0.19	0.19	0.25	0.26	0.69	0.33	0.56
d, Delay for Lane Group [s/veh]	53.20	2.35	2.36	4.21	4.34	47.38	38.13	42.58
Lane Group LOS	D	A	A	A	A	D	D	D
Critical Lane Group	Yes	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.52	0.84	0.83	1.58	1.62	1.64	1.32	2.33
50th-Percentile Queue Length [ft/ln]	12.92	21.00	20.85	39.44	40.53	41.03	33.02	58.29
95th-Percentile Queue Length [veh/ln]	0.93	1.51	1.50	2.84	2.92	2.95	2.38	4.20
95th-Percentile Queue Length [ft/ln]	23.26	37.80	37.52	70.99	72.95	73.85	59.43	104.92

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.20	2.35	2.36	4.21	4.27	4.34	47.38	38.13	38.13	42.58	42.58	42.58
Movement LOS	D	A	A	A	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	3.94			4.28			42.89			42.58		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	10.19											
Intersection LOS	B											
Intersection V/C	0.294											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersectio	2.606			2.544			2.022			1.884		
Crosswalk LOS	B			B			B			A		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	933			733			889			889		
d_b, Bicycle Delay [s]	12.80			18.05			13.89			13.89		
I_b,int, Bicycle LOS Score for Intersection	2.061			2.083			1.774			1.728		
Bicycle LOS	B			B			A			A		

Sequence

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



Intersection Level Of Service Report
Intersection 10: Linden Ave at Base Line Rd

Control Type:	Signalized	Delay (sec / veh):	29.1
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.579

Intersection Setup

Name												
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	0	0	1	0	0	1	1	0	0	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	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			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	18	168	45	144	170	95	83	475	27	39	367	163
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	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200	1.0200
In-Process Volume [veh/h]	0	0	0	17	0	11	8	82	0	0	143	36
Site-Generated Trips [veh/h]	0	0	0	5	0	34	12	12	0	0	30	2
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]	18	171	46	169	173	142	105	579	28	40	547	204
Peak Hour Factor	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880	0.8880
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]	5	48	13	48	49	40	30	163	8	11	154	57
Total Analysis Volume [veh/h]	20	193	52	190	195	160	118	652	32	45	616	230
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]	90
Active Pattern	Pattern 1
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	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	5	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	30	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	40	0	0	40	0	13	40	0	10	37	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	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	20	0	0	20	0	0	15	0	0	20	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]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	No		No	No	
Pedestrian Recall		No			No		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	R	C	C	R	L	C	C	L	C	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	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
g_i, Effective Green Time [s]	47	47	47	47	47	7	28	28	3	24	24
g / C, Green / Cycle	0.52	0.52	0.52	0.52	0.52	0.08	0.31	0.31	0.04	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.12	0.03	0.28	0.11	0.10	0.07	0.18	0.18	0.02	0.23	0.23
s, saturation flow rate [veh/h]	1803	1615	677	1729	1615	1810	1900	1869	1810	1900	1726
c, Capacity [veh/h]	976	835	430	894	835	149	591	581	70	508	461
d1, Uniform Delay [s]	11.82	10.84	26.11	11.83	11.65	40.53	26.09	26.09	42.67	31.52	31.53
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.11	0.11	0.11	0.11	0.17	0.17
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
d2, Incremental Delay [s]	0.51	0.14	3.26	0.56	0.51	9.02	0.92	0.93	9.67	7.22	7.91
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
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
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

Lane Group Results

X, volume / capacity	0.22	0.06	0.44	0.22	0.19	0.79	0.58	0.58	0.65	0.87	0.87
d, Delay for Lane Group [s/veh]	12.33	10.98	29.37	12.39	12.16	49.55	27.01	27.03	52.34	38.74	39.44
Lane Group LOS	B	B	C	B	B	D	C	C	D	D	D
Critical Lane Group	No	No	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.34	0.53	3.69	2.16	1.75	2.91	6.19	6.10	1.16	9.94	9.13
50th-Percentile Queue Length [ft/ln]	58.50	13.15	92.25	53.89	43.69	72.65	154.75	152.38	29.09	248.61	228.25
95th-Percentile Queue Length [veh/ln]	4.21	0.95	6.64	3.88	3.15	5.23	10.27	10.14	2.09	15.12	14.09
95th-Percentile Queue Length [ft/ln]	105.30	23.67	166.05	96.99	78.64	130.77	256.76	253.60	52.36	377.91	352.13

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	12.33	12.33	10.98	29.37	12.39	12.16	49.55	27.02	27.03	52.34	38.94	39.44
Movement LOS	B	B	B	C	B	B	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	12.07			18.24			30.33			39.74		
Approach LOS	B			B			C			D		
d_I, Intersection Delay [s/veh]	29.12											
Intersection LOS	C											
Intersection V/C	0.579											

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]	36.45			36.45			36.45			36.45		
I_p,int, Pedestrian LOS Score for Intersection	2.263			2.513			2.641			2.920		
Crosswalk LOS	B			B			B			C		
s_b, Saturation Flow Rate of the bicycle lane	2000			2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	800			800			800			733		
d_b, Bicycle Delay [s]	16.20			16.20			16.20			18.05		
I_b,int, Bicycle LOS Score for Intersection	1.997			2.009			2.221			2.295		
Bicycle LOS	A			B			B			B		

Sequence

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



APPENDIX D-6

INTERSECTION ANALYSIS
WORKSHEETS –
OPENING YEAR 2024 CUMULATIVE PLUS
PROJECT – WITH IMPROVEMENTS

Option 1: 2nd NBL Lane

Number	1											
Intersection	Alder Ave at SR-210 WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	396	343	0	0	17	12	0	0	0	431	5	157
Total Analysis Volume [veh/h]	730	753	0	0	361	118	0	0	0	950	6	292

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	23	40	0	0	17	0	0	0	0	0	50	0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
l1, 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	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.21	0.40	0.14	0.14		0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.21	0.21	0.13	0.14		0.53	0.18
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	1900	1748		1810	1620
c, Capacity [veh/h]	742	1447	274	252		925	828
X, volume / capacity	0.98	0.52	0.87	0.95		1.03	0.36
d, Delay for Lane Group [s/veh]	47.41	21.80	67.32	82.96		58.36	13.44

Lane Group LOS	D	C	E	F		F	B
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	9.00	6.03	7.33	8.28		27.01	3.47
50th-Percentile Queue Length [ft/ln]	224.99	150.76	183.25	206.92		675.18	86.77
95th-Percentile Queue Length [veh/ln]	13.92	10.06	11.77	12.99		36.30	6.25
95th-Percentile Queue Length [ft/ln]	347.99	251.44	294.25	324.87		907.59	156.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	47.41	21.80	0.00	0.00	72.58	82.96	0.00	0.00	0.00	58.36	13.44	13.44
Movement LOS	D	C			E	F				F	B	B
Critical Movement	No	No			No	Yes				No	No	No
d_A, Approach Delay [s/veh]	34.40			75.14			0.00			47.64		
Approach LOS	C			E			A			D		
d_I, Intersection Delay [s/veh]	45.63											
Intersection LOS	D											
Intersection V/C	0.870											

Option 1: Add 2nd NBL Lane

Number	1											
Intersection	Alder Ave at SR-210 WB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	475	298	0	0	292	376	0	0	0	295	4	123
Total Analysis Volume [veh/h]	914	614	0	0	608	522	0	0	0	567	4	234

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal Group	1	6	0	0	2	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	10	0
Maximum Green [s]	30	30	0	0	30	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	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	1.0	0.0
Split [s]	26	59	0	0	33	0	0	0	0	0	31	0
Walk [s]	0	5	0	0	5	0	0	0	0	0	5	0
Pedestrian Clearance [s]	0	10	0	0	3	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
l1, 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	2.0	0.0
Minimum Recall	No	No			No						No	
Maximum Recall	No	No			No						No	
Pedestrian Recall	No	No			No						No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.24	0.61	0.32	0.32		0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.26	0.17	0.30	0.35		0.31	0.15
so, Base Saturation Flow per Lane [pc/h/lane]	1900	1900	1900	1900		1900	1900
Arrival type	3		3		3	3	
s, saturation flow rate [veh/h]	3514	3618	1900	1634		1810	1619
c, Capacity [veh/h]	859	2211	612	526		543	486
X, volume / capacity	1.06	0.28	0.92	1.07		1.04	0.49
d, Delay for Lane Group [s/veh]	69.00	8.51	51.08	90.86		78.50	26.62

Lane Group LOS	F	A	D	F		F	C
Critical Lane Group	Yes	No	No	Yes		Yes	No
50th-Percentile Queue Length [veh/ln]	13.27	2.62	14.99	19.75		18.42	4.18
50th-Percentile Queue Length [ft/ln]	331.86	65.61	374.74	493.65		460.55	104.54
95th-Percentile Queue Length [veh/ln]	19.93	4.72	21.34	28.29		26.17	7.53
95th-Percentile Queue Length [ft/ln]	498.16	118.10	533.48	707.15		654.32	188.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	69.00	8.51	0.00	0.00	53.89	90.86	0.00	0.00	0.00	78.50	26.62	26.62
Movement LOS	F	A			D	F				F	C	C
Critical Movement	No	No			No	Yes				No	No	No
d_A, Approach Delay [s/veh]	44.70			70.97			0.00			63.16		
Approach LOS	D			E			A			E		
d_I, Intersection Delay [s/veh]	57.56											
Intersection LOS	E											
Intersection V/C	0.919											

Option 1: Add a 2nd SBL Turn Lane and modify EB approach

Number	2											
Intersection	Alder Ave at SR-210 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	486	333	6	421	0	298	3	616	0	0	0
Total Analysis Volume [veh/h]	0	1022	622	106	1116	0	438	3	1110	0	0	0

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	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	41	0	9	50	0	0	40	0	0	0	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	3	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
l1, 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
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.41	0.41	0.05	0.51	0.40	0.40	
(v / s)_i Volume / Saturation Flow Rate	0.43	0.49	0.03	0.31	0.45	0.48	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	1900	1676	3514	3618	1720	1615	
c, Capacity [veh/h]	787	694	185	1849	688	646	
X, volume / capacity	1.04	1.18	0.57	0.60	1.13	1.20	
d, Delay for Lane Group [s/veh]	70.78	123.56	44.43	17.02	101.82	131.60	

Lane Group LOS	F	F	D	B	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	25.48	32.66	1.21	7.91	28.20	31.81	
50th-Percentile Queue Length [ft/ln]	637.10	816.45	30.22	197.82	704.99	795.36	
95th-Percentile Queue Length [veh/ln]	34.87	47.12	2.18	12.53	40.06	46.31	
95th-Percentile Queue Length [ft/ln]	871.71	1177.99	54.40	313.15	1001.62	1157.80	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	81.11	123.56	44.43	17.02	0.00	101.82	101.82	122.63	0.00	0.00	0.00
Movement LOS		F	F	D	B		F	F	F			
Critical Movement		No	Yes	No	No		No	No	No			
d_A, Approach Delay [s/veh]	97.17			19.40			116.71			0.00		
Approach LOS	F			B			F			A		
d_I, Intersection Delay [s/veh]	82.52											
Intersection LOS	F											
Intersection V/C	1.001											

Option 1: Add a 2nd SBL Turn Lane and modify EB approach

Number	2											
Intersection	Alder Ave at SR-210 EB Ramps											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	0	565	420	155	430	0	203	4	502	0	0	0
Total Analysis Volume [veh/h]	0	1140	812	259	858	0	309	4	763	0	0	0

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Permiss	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	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	50	0	10	60	0	0	30	0	0	0	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	0	0
Pedestrian Clearance [s]	0	3	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
l1, 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
Minimum Recall		No		No	No			No				
Maximum Recall		No		No	No			No				
Pedestrian Recall		No		No	No			No				
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.51	0.51	0.07	0.62	0.29	0.29	
(v / s)_i Volume / Saturation Flow Rate	0.51	0.59	0.07	0.24	0.31	0.33	
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	
Arrival type	3		3		3		3
s, saturation flow rate [veh/h]	1900	1657	3514	3618	1723	1615	
c, Capacity [veh/h]	971	847	234	2251	498	467	
X, volume / capacity	1.01	1.15	1.11	0.38	1.08	1.15	
d, Delay for Lane Group [s/veh]	52.11	104.10	103.03	8.91	91.99	121.15	

Lane Group LOS	F	F	F	A	F	F	
Critical Lane Group	No	Yes	Yes	No	No	Yes	
50th-Percentile Queue Length [veh/ln]	26.67	35.48	4.55	3.84	18.72	21.32	
50th-Percentile Queue Length [ft/ln]	666.76	887.11	113.80	96.08	468.09	533.12	
95th-Percentile Queue Length [veh/ln]	35.28	50.31	8.19	6.92	27.07	31.42	
95th-Percentile Queue Length [ft/ln]	882.12	1257.67	204.85	172.94	676.77	785.53	

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	0.00	59.59	104.10	103.03	8.91	0.00	91.99	91.99	112.55	0.00	0.00	0.00
Movement LOS		E	F	F	A		F	F	F			
Critical Movement		No	No	No	No		No	No	Yes			
d_A, Approach Delay [s/veh]	78.10			30.73			106.57			0.00		
Approach LOS	E			C			F			A		
d_I, Intersection Delay [s/veh]	72.73											
Intersection LOS	E											
Intersection V/C	0.996											

Option 1: Add 2nd SBL Turn Laner

Number	3											
Intersection	Alder Ave at Renaissance Pkwy											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	127	567	15	155	775	78	97	158	80	26	140	199
Total Analysis Volume [veh/h]	145	1069	17	541	1532	108	129	258	94	30	241	485

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	11	33	0	18	40	0	10	30	0	9	29	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	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
l1, 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
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.08	0.32	0.32	0.16	0.40	0.40	0.07	0.31	0.31	0.03	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.08	0.29	0.29	0.15	0.43	0.44	0.07	0.10	0.10	0.02	0.13	0.30
so, Base Saturation Flow per Lane [pc/h/lane]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1890	3514	1900	1857	1810	1900	1731	1810	1900	1615
c, Capacity [veh/h]	141	612	609	547	760	743	121	596	543	56	528	449
X, volume / capacity	1.03	0.89	0.89	0.99	1.08	1.10	1.07	0.31	0.31	0.54	0.46	1.08
d, Delay for Lane Group [s/veh]	84.74	46.45	46.57	53.56	83.04	92.26	99.97	23.74	23.84	50.69	27.50	93.29

Lane Group LOS	F	D	D	D	F	F	F	C	C	D	C	F
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.77	13.70	13.65	7.01	27.18	28.46	4.59	2.92	2.73	0.77	4.28	17.00
50th-Percentile Queue Length [ft/ln]	119.22	342.49	341.24	175.36	679.46	711.56	114.64	73.01	68.35	19.30	106.95	424.98
95th-Percentile Queue Length [veh/ln]	8.43	19.77	19.71	11.36	37.71	39.88	8.25	5.26	4.92	1.39	7.67	24.89
95th-Percentile Queue Length [ft/ln]	210.80	494.25	492.71	283.94	942.76	997.03	206.35	131.42	123.03	34.73	191.75	622.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	84.74	46.51	46.57	53.56	87.33	92.26	99.97	23.77	23.84	50.69	27.50	93.29
Movement LOS	F	D	D	D	F	F	F	C	C	D	C	F
Critical Movement	No	No	No	No	No	No	Yes	No	No	No	No	No
d_A, Approach Delay [s/veh]	51.01			79.20			44.22			70.63		
Approach LOS	D			E			D			E		
d_I, Intersection Delay [s/veh]	66.72											
Intersection LOS	E											
Intersection V/C	0.893											

Option 1: Add 2nd SBL Turn Lane

Number	3											
Intersection	Alder Ave at Renaissance Pkwy											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	51	659	34	183	603	138	95	269	67	20	172	221
Total Analysis Volume [veh/h]	57	1269	36	418	1025	163	117	354	72	21	251	544

Intersection Settings

Cycle Length [s]	90											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	15	33	0	14	32	0	10	34	0	9	33	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	17	0	0	17	0	0	17	0	0	17	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
l1, 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
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.04	0.32	0.32	0.11	0.39	0.39	0.07	0.37	0.37	0.02	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.34	0.35	0.12	0.32	0.32	0.06	0.11	0.12	0.01	0.13	0.34
so, Base Saturation Flow per Lane [pc/h/lane]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	1810	1900	1882	3514	1900	1811	1810	1900	1791	1810	1900	1615
c, Capacity [veh/h]	79	612	606	390	741	706	121	695	655	42	612	520
X, volume / capacity	0.73	1.07	1.07	1.07	0.81	0.83	0.97	0.31	0.32	0.50	0.41	1.05
d, Delay for Lane Group [s/veh]	54.42	87.09	87.80	82.92	34.02	35.62	73.25	20.71	20.76	52.35	24.26	80.67

Lane Group LOS	D	F	F	F	C	D	E	C	C	D	C	F
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	22.32	22.23	6.58	12.85	12.82	3.61	3.24	3.10	0.56	4.14	18.05
50th-Percentile Queue Length [ft/ln]	37.46	558.09	555.70	164.38	321.18	320.60	90.20	81.11	77.50	14.04	103.53	451.20
95th-Percentile Queue Length [veh/ln]	2.70	31.43	31.34	11.06	18.73	18.70	6.49	5.84	5.58	1.01	7.45	25.74
95th-Percentile Queue Length [ft/ln]	67.43	785.78	783.56	276.58	468.13	467.43	162.36	146.00	139.50	25.27	186.36	643.57

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.42	87.43	87.80	82.92	34.68	35.62	73.25	20.73	20.76	52.35	24.26	80.67
Movement LOS	D	F	F	F	C	D	E	C	C	D	C	F
Critical Movement	No	No	Yes	No	No	No	No	No	No	No	No	No
d_A, Approach Delay [s/veh]	86.06			47.33			32.05			62.59		
Approach LOS	F			D			C			E		
d_I, Intersection Delay [s/veh]	60.48											
Intersection LOS	E											
Intersection V/C	0.866											

Option 1: Install Traffic Signal

Number	7					
Intersection	Ayala Dr at Miro Wy					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	0	729	646	15	15	0
Total Analysis Volume [veh/h]	35	896	847	38	21	11

Intersection Settings

Cycle Length [s]	90					
Active Pattern	Pattern 1					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	10	10	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	77	77	0	13	0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.88	0.88	0.88	0.88	0.03
(v / s)_i Volume / Saturation Flow Rate	0.27	0.27	0.23	0.24	0.02
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3		3		3
s, saturation flow rate [veh/h]	1722	1729	1900	1872	1738
c, Capacity [veh/h]	1556	1519	1669	1644	57
X, volume / capacity	0.30	0.31	0.27	0.27	0.56
d, Delay for Lane Group [s/veh]	1.37	1.44	1.26	1.27	51.30

Lane Group LOS	A	A	A	A	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.29	0.30	0.26	0.26	0.83
50th-Percentile Queue Length [ft/ln]	7.32	7.59	6.38	6.48	20.70
95th-Percentile Queue Length [veh/ln]	0.53	0.55	0.46	0.47	1.49
95th-Percentile Queue Length [ft/ln]	13.18	13.67	11.48	11.67	37.27

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	1.37	1.41	1.27	1.27	51.30	51.30
Movement LOS	A	A	A	A	D	D
Critical Movement	No	No	No	No	Yes	No
d_A, Approach Delay [s/veh]	1.41		1.27		51.30	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	2.20					
Intersection LOS	A					
Intersection V/C	0.288					

Option 1: Install Traffic Signal

Number	7					
Intersection	Ayala Dr at Miro Wy					
Control Type	Signalized					
Analysis Method	HCM 7th Edition					
Name						
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Base Volume Input [veh/h]	0	817	851	24	27	0
Total Analysis Volume [veh/h]	14	1054	1045	34	52	35

Intersection Settings

Cycle Length [s]	90					
Active Pattern	Pattern 1					
Coordination Type	Time of Day Pattern Coordinated					
Actuation Type	Semi-actuated					
Lost time [s]	0.00					
Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	0	6	2	0	3	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-
Minimum Green [s]	0	10	10	0	5	0
Maximum Green [s]	0	30	30	0	30	0
Amber [s]	0.0	3.0	3.0	0.0	3.0	0.0
All red [s]	0.0	1.0	1.0	0.0	1.0	0.0
Split [s]	0	73	73	0	17	0
Walk [s]	0	5	5	0	5	0
Pedestrian Clearance [s]	0	10	7	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
l1, Start-Up Lost Time [s]	0.0	2.0	2.0	0.0	2.0	0.0
Minimum Recall		No	No		No	
Maximum Recall		No	No		No	
Pedestrian Recall		No	No		No	
Pedestrian Signal Group	0					
Pedestrian Walk [s]	0					
Pedestrian Clearance [s]	0					

Lane Group Calculations

g / C, Green / Cycle	0.85	0.85	0.85	0.85	0.07
(v / s)_i Volume / Saturation Flow Rate	0.30	0.30	0.28	0.29	0.05
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900
Arrival type	3		3		3
s, saturation flow rate [veh/h]	1855	1729	1900	1879	1726
c, Capacity [veh/h]	1608	1461	1605	1587	115
X, volume / capacity	0.34	0.35	0.34	0.34	0.76
d, Delay for Lane Group [s/veh]	2.12	2.22	2.08	2.10	51.11

Lane Group LOS	A	A	A	A	D
Critical Lane Group	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.02	0.98	0.99	0.99	2.19
50th-Percentile Queue Length [ft/ln]	25.50	24.62	24.63	24.82	54.72
95th-Percentile Queue Length [veh/ln]	1.84	1.77	1.77	1.79	3.94
95th-Percentile Queue Length [ft/ln]	45.90	44.32	44.34	44.67	98.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	2.12	2.16	2.09	2.10	51.11	51.11
Movement LOS	A	A	A	A	D	D
Critical Movement	No	No	No	No	Yes	No
d_A, Approach Delay [s/veh]	2.16		2.09		51.11	
Approach LOS	A		A		D	
d_I, Intersection Delay [s/veh]	4.04					
Intersection LOS	A					
Intersection V/C	0.349					

Option 1: Signal Retiming

Number	8											
Intersection	Ayala Dr at Base Line Rd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	197	584	68	53	546	54	110	264	154	60	322	39
Total Analysis Volume [veh/h]	270	748	101	79	718	83	178	420	209	89	415	55

Intersection Settings

Cycle Length [s]	100											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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	37	0	9	32	0	17	44	0	10	37	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	26	0	0	28	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
l1, 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
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.10	0.53	0.53	0.04	0.47	0.47	0.12	0.21	0.21	0.06	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.23	0.23	0.02	0.21	0.21	0.10	0.17	0.18	0.05	0.13	0.13
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	3514	1900	1822	3514	1900	1832	1810	1900	1690	1810	1900	1823
c, Capacity [veh/h]	336	998	957	156	900	868	210	400	356	109	293	281
X, volume / capacity	0.80	0.43	0.43	0.51	0.45	0.45	0.85	0.83	0.83	0.82	0.82	0.82
d, Delay for Lane Group [s/veh]	48.78	15.99	16.05	49.21	19.26	19.33	52.32	42.31	42.96	60.37	46.43	46.90

Lane Group LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.46	6.15	5.92	1.01	6.49	6.27	4.80	8.19	7.37	2.59	6.09	5.92
50th-Percentile Queue Length [ft/ln]	86.54	153.87	148.12	25.26	162.26	156.87	120.09	204.63	184.20	64.84	152.19	148.03
95th-Percentile Queue Length [veh/ln]	6.23	10.22	9.92	1.82	10.67	10.38	8.40	12.88	11.82	4.67	10.13	9.91
95th-Percentile Queue Length [ft/ln]	155.76	255.59	247.91	45.47	266.71	259.57	209.96	321.94	295.49	116.71	253.35	247.79

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.78	16.01	16.05	49.21	19.29	19.33	52.32	42.45	42.96	60.37	46.63	46.90
Movement LOS	D	B	B	D	B	B	D	D	D	E	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	23.92			21.98			44.76			48.85		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.55											
Intersection LOS	C											
Intersection V/C	0.517											

Option 1: Signal Retiming

Number	8											
Intersection	Ayala Dr at Base Line Rd											
Control Type	Signalized											
Analysis Method	HCM 7th Edition											
Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Base Volume Input [veh/h]	142	647	96	139	678	57	126	447	206	89	350	49
Total Analysis Volume [veh/h]	214	838	144	168	866	116	169	564	293	141	522	84

Intersection Settings

Cycle Length [s]	100											
Active Pattern	Pattern 1											
Coordination Type	Time of Day Pattern Coordinated											
Actuation Type	Semi-actuated											
Lost time [s]	0.00											
Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	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]	11	36	0	10	35	0	17	41	0	13	37	0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	23	0	0	23	0	0	26	0	0	28	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
l1, 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
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Pedestrian Signal Group	0											
Pedestrian Walk [s]	0											
Pedestrian Clearance [s]	0											

Lane Group Calculations

g / C, Green / Cycle	0.07	0.42	0.42	0.06	0.41	0.41	0.11	0.27	0.27	0.09	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.06	0.26	0.27	0.05	0.26	0.26	0.09	0.24	0.24	0.08	0.16	0.16
so, Base Saturation Flow per Lane [pc/h/ln]	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Arrival type	3			3			3			3		
s, saturation flow rate [veh/h]	3514	1900	1804	3514	1900	1822	1810	1900	1684	1810	1900	1809
c, Capacity [veh/h]	246	797	757	211	778	746	203	514	456	163	472	450
X, volume / capacity	0.87	0.63	0.63	0.80	0.64	0.64	0.83	0.88	0.88	0.87	0.66	0.66
d, Delay for Lane Group [s/veh]	55.20	26.71	26.95	53.13	27.77	27.96	52.15	43.88	44.90	57.63	35.28	35.39

Lane Group LOS	E	C	C	D	C	C	D	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]	2.93	9.88	9.46	2.25	10.06	9.71	4.55	11.66	10.47	4.00	6.87	6.58
50th-Percentile Queue Length [ft/ln]	73.18	247.00	236.50	56.16	251.53	242.63	113.75	291.61	261.75	100.00	171.82	164.40
95th-Percentile Queue Length [veh/ln]	5.27	15.03	14.50	4.04	15.26	14.81	8.05	17.27	15.78	7.20	11.17	10.78
95th-Percentile Queue Length [ft/ln]	131.73	375.87	362.61	101.08	381.58	370.36	201.21	431.64	394.41	180.00	279.31	269.53

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.20	26.81	26.95	53.13	27.85	27.96	52.15	44.08	44.90	57.63	35.33	35.39
Movement LOS	E	C	C	D	C	C	D	D	D	E	D	D
Critical Movement	No	No	No	No	No	No	No	No	No	Yes	No	No
d_A, Approach Delay [s/veh]	31.90			31.56			45.64			39.54		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	36.61											
Intersection LOS	D											
Intersection V/C	0.642											

APPENDIX E

CUMULATIVE PROJECTS INFORMATION

CUMULATIVE PROJECTS - DISTRIBUTION
TOTAL OF ALL CUMULATIVE PROJECTS

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	196	144	0	0	144	5	0	0	0	291	0	5
2	Alder Avenue at SR-210 Eastbound Ramps	0	335	196	5	431	0	5	0	291	0	0	0
3	Alder Avenue at Renaissance Parkway	0	314	0	313	410	0	0	56	0	0	56	217
4	Alder Avenue at Baseline Road	13	20	0	9	18	60	29	19	5	0	19	10
5	Ayala Drive at Renaissance Parkway	0	86	10	19	102	0	0	0	0	8	0	16
6	Ayala Drive at Fitzgerald Avenue	0	91	0	0	106	0	0	0	0	0	0	0
7	Ayala Drive at Miro Way	0	91	0	0	106	0	0	0	0	0	0	0
8	Ayala Drive at Baseline Road	37	86	19	0	88	5	18	6	25	19	18	0
9	Linden Avenue at Miro Way	0	5	0	12	18	0	0	0	0	0	0	37
10	Linden Avenue at Baseline Road	0	0	0	18	0	0	0	19	0	0	19	5

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	266	119	0	0	119	5	0	0	0	186	0	5
2	Alder Avenue at SR-210 Eastbound Ramps	0	379	266	5	299	0	5	0	186	0	0	0
3	Alder Avenue at Renaissance Parkway	0	361	0	199	287	0	0	45	0	0	45	282
4	Alder Avenue at Baseline Road	5	18	0	8	17	30	61	33	13	0	33	9
5	Ayala Drive at Renaissance Parkway	0	117	12	23	101	0	0	0	0	8	0	16
6	Ayala Drive at Fitzgerald Avenue	0	123	0	0	105	0	0	0	0	0	0	0
7	Ayala Drive at Miro Way	0	123	0	0	105	0	0	0	0	0	0	0
8	Ayala Drive at Baseline Road	41	104	33	0	98	19	7	18	51	33	8	0
9	Linden Avenue at Miro Way	0	19	0	37	7	0	0	0	0	0	0	16
10	Linden Avenue at Baseline Road	0	0	0	7	0	0	0	33	0	0	33	19

CUMULATIVE PROJECTS - HAND ENTERED FROM TRAFFIC STUDIES

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	14	148	0	0	147	84	0	0	0	48	0	84
2	Alder Avenue at SR-210 Eastbound Ramps	0	78	14	84	111	0	84	0	48	0	0	0
3	Alder Avenue at Renaissance Parkway	1	56	0	18	123	18	18	14	3	0	18	18
4	Alder Avenue at Baseline Road	0	0	0	99	0	0	0	13	0	0	16	29
5	Ayala Drive at Renaissance Parkway	14	63	9	0	50	0	0	7	7	9	4	0
6	Ayala Drive at Fitzgerald Avenue	0	16	0	19	40	0	0	0	0	0	0	3
7	Ayala Drive at Miro Way	0	16	0	19	40	0	0	0	0	0	0	3
8	Ayala Drive at Baseline Road	5	5	5	18	15	7	4	111	8	2	35	8
9	Linden Avenue at Miro Way	0	12	0	0	22	0	0	0	0	0	0	0
10	Linden Avenue at Baseline Road	0	0	0	15	0	7	4	108	0	0	38	8

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	51	136	0	0	136	86	0	0	0	18	0	83
2	Alder Avenue at SR-210 Eastbound Ramps	0	104	50	84	70	0	83	0	19	0	0	0
3	Alder Avenue at Renaissance Parkway	3	124	0	15	59	15	15	20	1	0	19	15
4	Alder Avenue at Baseline Road	0	0	0	38	0	0	0	19	0	0	17	104
5	Ayala Drive at Renaissance Parkway	11	66	12	0	65	0	0	6	14	10	8	0
6	Ayala Drive at Fitzgerald Avenue	0	45	0	7	20	0	0	0	0	0	0	9
7	Ayala Drive at Miro Way	0	45	0	7	20	0	0	0	0	0	0	9
8	Ayala Drive at Baseline Road	10	10	2	10	10	0	8	47	5	6	117	27
9	Linden Avenue at Miro Way	0	25	0	0	21	0	0	0	0	0	0	0
10	Linden Avenue at Baseline Road	0	0	0	10	0	11	8	49	0	0	110	17

TOTAL CUMULATIVE PROJECTS TRAFFIC

		AM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	210	292	0	0	291	89	0	0	0	339	0	89
2	Alder Avenue at SR-210 Eastbound Ramps	0	413	210	89	542	0	89	0	339	0	0	0
3	Alder Avenue at Renaissance Parkway	1	370	0	331	533	18	18	70	3	0	74	235
4	Alder Avenue at Baseline Road	13	20	0	108	18	60	29	32	5	0	35	39
5	Ayala Drive at Renaissance Parkway	14	149	19	19	152	0	0	7	7	17	4	16
6	Ayala Drive at Fitzgerald Avenue	0	107	0	19	146	0	0	0	0	0	0	3
7	Ayala Drive at Miro Way	0	107	0	19	146	0	0	0	0	0	0	3
8	Ayala Drive at Baseline Road	42	91	24	18	103	12	22	117	33	21	53	8
9	Linden Avenue at Miro Way	0	17	0	12	40	0	0	0	0	0	0	37
10	Linden Avenue at Baseline Road	0	0	0	33	0	7	4	127	0	0	57	13

		PM Peak Hour											
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	Alder Avenue at SR-210 Westbound Ramps	317	255	0	0	255	91	0	0	0	204	0	88
2	Alder Avenue at SR-210 Eastbound Ramps	0	483	316	89	369	0	88	0	205	0	0	0
3	Alder Avenue at Renaissance Parkway	3	485	0	214	346	15	15	65	1	0	64	297
4	Alder Avenue at Baseline Road	5	18	0	46	17	30	61	52	13	0	50	113
5	Ayala Drive at Renaissance Parkway	11	183	24	23	166	0	0	6	14	18	8	16
6	Ayala Drive at Fitzgerald Avenue	0	168	0	7	125	0	0	0	0	0	0	9
7	Ayala Drive at Miro Way	0	168	0	7	125	0	0	0	0	0	0	9
8	Ayala Drive at Baseline Road	51	114	35	10	108	19	15	65	56	39	125	27
9	Linden Avenue at Miro Way	0	44	0	37	28	0	0	0	0	0	0	16
10	Linden Avenue at Baseline Road	0	0	0	17	0	11	8	82	0	0	143	36

Yellow cells calculate

Alder Avenue at SR-210 Westbound Ramps

Entire Intersection

Mirror distribution?

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	5	0	0	139	0	0	0	0	291	0	5
AM Out		196	139	0	0	5	5	0	0	0	0	0	0
AM Tot		196	144	0	0	144	5	0	0	0	291	0	5
PM In		0	5	0	0	114	0	0	0	0	186	0	5
PM Out		266	114	0	0	5	5	0	0	0	0	0	0
PM Tot		266	119	0	0	119	5	0	0	0	186	0	5

Cumulative Project 1

[illegible][illegible]

Cumulative Project 2

[illegible][illegible]

Cumulative Projects 3, 10, 11, 12, 13

[illegible][illegible]

Cumulative Project 4

[illegible][illegible]

Int. #:	1	Alder Avenue at SR-210 Westbound Ramps

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

[illegible][illegible]

Zone #	8	Cumulative Project 14

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		20%										20%
N	0%	0%	0%	0%	20%	20%	0%	0%	0%	0%	0%	0%
AM Out					20%	20%						
PM In	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%
PM Out	0%	0%	0%	0%	20%	20%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	25	0	5	0	0	0	0	0	0	0	0	0	5
AM Out	24	0	0	0	0	5	5	0	0	0	0	0	0
PM In	26	0	5	0	0	0	0	0	0	0	0	0	5
PM Out	25	0	0	0	0	5	5	0	0	0	0	0	0

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	1	Alder Avenue at SR-210 Westbound Ramps

Zone #	10	Cumulative Projects 20, 21

[illegible]

Zone #	11	Cumulative Project 22

[illegible]

Zone #	12	Cumulative Project 25

[illegible]

Zone #	13	Cumulative Project 18

[illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible][illegible][illegible][illegible][illegible]

Int. #:	2	Alder Avenue at SR-210 Eastbound Ramps

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

[illegible][illegible]

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	2	Alder Avenue at SR-210 Eastbound Ramps

Zone #	10	Cumulative Projects 20, 21

[illegible][illegible]

Zone #	11	Cumulative Project 22

[illegible][illegible]

Zone #	12	Cumulative Project 25

[illegible][illegible]

Zone #	13	Cumulative Project 18

[illegible][illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible]

Int. #:	3	Alder Avenue at Renaissance Parkway

Y

114

Zone #	1	Cumulative Project 1

[illegible]

Zone #	2	Cumulative Project 2

[illegible]

Zone #	3	Cumulative Projects 3, 10, 11, 12, 13

[illegible]

Zone #	4	Cumulative Project 4

[illegible]

TOTAL CUMULATIVE PROJECTS TRAFFIC	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	313	410	0	0	56	0	0	0	0
AM Out		0	314	0	0	0	0	0	0	0	0	56	217
AM Tot		0	314	0	313	410	0	0	56	0	0	56	217
PM In		0	0	0	199	287	0	0	45	0	0	0	0
PM Out		0	361	0	0	0	0	0	0	0	0	45	282
PM Tot		0	361	0	199	287	0	0	45	0	0	45	282

[illegible][illegible][illegible][illegible]

Int. #:	3	Alder Avenue at Renaissance Parkway

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible]

Zone #	6	Cumulative Project 6

[illegible]

Zone #	7	Cumulative Projects 8, 9, 15

[illegible]

Zone #	8	Cumulative Project 14

[illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible][illegible][illegible][illegible][illegible]

Int. #:	3	Alder Avenue at Renaissance Parkway

Zone #	10	Cumulative Projects 20, 21

[illegible][illegible]

Zone #	11	Cumulative Project 22

[illegible][illegible]

Zone #	12	Cumulative Project 25

[illegible][illegible]

Zone #	13	Cumulative Project 18

[illegible][illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible]

Yellow cells calculate

Alder Avenue at Baseline Road

Y

Cumulative Project 1

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%					5%					5%
Y	0%	0%	0%	5%	10%	5%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	5%	0%	0%	0%	0%	5%
PM Out	0%	0%	0%	5%	10%	5%	0%	0%	0%	0%	0%	0%

Cumulative Project 2

[illegible]

Cumulative Projects 3, 10, 11, 12, 13

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	5%					20%						
Y	0%	0%	0%	0%	0%	0%	20%	0%	5%	0%	0%	0%
AM Out												
PM In	5%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	20%	0%	5%	0%	0%	0%

Cumulative Project 4

[illegible]

TOTAL CUMULATIVE PROJECTS TRAFFIC	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		13	20	0	0	0	51	10	19	0	0	0	10
AM Out		0	0	0	9	18	9	19	0	5	0	19	0
AM Tot		13	20	0	9	18	60	29	19	5	0	19	10
PM In		5	18	0	0	0	22	9	33	0	0	0	9
PM Out		0	0	0	8	17	8	52	0	13	0	33	0
PM Tot		5	18	0	8	17	30	61	33	13	0	33	9

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	205	0	20	0	0	0	0	10	0	0	0	0	10
AM Out	184	0	0	0	9	18	9	0	0	0	0	0	0
PM In	185	0	18	0	0	0	0	9	0	0	0	0	9
PM Out	170	0	0	0	8	17	8	0	0	0	0	0	0

Int. #:	4	Alder Avenue at Baseline Road

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

[illegible][illegible]

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	4	Alder Avenue at Baseline Road

Zone #	10	Cumulative Projects 20, 21

[illegible][illegible]

Zone #	11	Cumulative Project 22

[illegible][illegible]

Zone #	12	Cumulative Project 25

[illegible][illegible]

Zone #	13	Cumulative Project 18

[illegible][illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible]

Yellow cells calculate

Ayala Drive at Renaissance Parkway

Y

11

Cumulative Project 1

[illegible]

Cumulative Project 2

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

Cumulative Projects 3, 10, 11, 12, 13

[illegible]

Cumulative Project 4

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In			20%	40%								
Y	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	40%
AM Out												
PM In	0%	0%	20%	40%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	40%

TOTAL CUMULATIVE PROJECTS TRAFFIC	
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	62	10	19	37	0	0	0	0	0	0	0
AM Out		0	24	0	0	65	0	0	0	0	8	0	16
AM Tot		0	86	10	19	102	0	0	0	0	8	0	16
PM In		0	65	12	23	40	0	0	0	0	0	0	0
PM Out		0	52	0	0	61	0	0	0	0	8	0	16
PM Tot		0	117	12	23	101	0	0	0	0	8	0	16

[illegible]

Int. #:	5	Ayala Drive at Renaissance Parkway

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		20%										
Y	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	280	0	56	0	0	0	0	0	0	0	0	0	0
AM Out	225	0	0	0	0	45	0	0	0	0	0	0	0
PM In	217	0	43	0	0	0	0	0	0	0	0	0	0
PM Out	244	0	0	0	0	49	0	0	0	0	0	0	0

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	5	Ayala Drive at Renaissance Parkway

Zone #	10	Cumulative Projects 20, 21

[illegible]

Zone #	11	Cumulative Project 22

[illegible]

Zone #	12	Cumulative Project 25

[illegible]

Zone #	13	Cumulative Project 18

[illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible][illegible][illegible][illegible][illegible]

Enter only in blue cells Yellow cells calculate

Int. #: 6 Ayala Drive at Fitzgerald Avenue

Y

Zone # 1 Cumulative Project 1

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

Zone # 2 Cumulative Project 2

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

Zone # 3 Cumulative Projects 3, 10, 11, 12, 13

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

Zone # 4 Cumulative Project 4

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	67	0	0	37	0	0	0	0	0	0	0
AM Out		0	24	0	0	69	0	0	0	0	0	0	0
AM Tot		0	91	0	0	106	0	0	0	0	0	0	0
PM In		0	71	0	0	40	0	0	0	0	0	0	0
PM Out		0	52	0	0	65	0	0	0	0	0	0	0
PM Tot		0	123	0	0	105	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	205	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	184	0	0	0	0	0	0	0	0	0	0	0	0
PM In	185	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	170	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	120	0	6	0	0	0	0	0	0	0	0	0	0
AM Out	407	0	0	0	0	20	0	0	0	0	0	0	0
PM In	438	0	22	0	0	0	0	0	0	0	0	0	0
PM Out	246	0	0	0	0	12	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	254	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	93	0	0	0	0	0	0	0	0	0	0	0	0
PM In	109	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	258	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	48	0	5	0	0	0	0	0	0	0	0	0	0
AM Out	40	0	0	0	0	4	0	0	0	0	0	0	0
PM In	58	0	6	0	0	0	0	0	0	0	0	0	0
PM Out	39	0	0	0	0	4	0	0	0	0	0	0	0

Int. #:	6	Ayala Drive at Fitzgerald Avenue

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		20%										
Y	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	280	0	56	0	0	0	0	0	0	0	0	0	0
AM Out	225	0	0	0	0	45	0	0	0	0	0	0	0
PM In	217	0	43	0	0	0	0	0	0	0	0	0	0
PM Out	244	0	0	0	0	49	0	0	0	0	0	0	0

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Enter only in blue cells Yellow cells calculate

Int. #: 7 Ayala Drive at Miro Way

Y

Zone # 1 Cumulative Project 1

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

Zone # 2 Cumulative Project 2

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

Zone # 3 Cumulative Projects 3, 10, 11, 12, 13

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

Zone # 4 Cumulative Project 4

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	67	0	0	37	0	0	0	0	0	0	0
AM Out		0	24	0	0	69	0	0	0	0	0	0	0
AM Tot		0	91	0	0	106	0	0	0	0	0	0	0
PM In		0	71	0	0	40	0	0	0	0	0	0	0
PM Out		0	52	0	0	65	0	0	0	0	0	0	0
PM Tot		0	123	0	0	105	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	205	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	184	0	0	0	0	0	0	0	0	0	0	0	0
PM In	185	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	170	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	120	0	6	0	0	0	0	0	0	0	0	0	0
AM Out	407	0	0	0	0	20	0	0	0	0	0	0	0
PM In	438	0	22	0	0	0	0	0	0	0	0	0	0
PM Out	246	0	0	0	0	12	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	254	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	93	0	0	0	0	0	0	0	0	0	0	0	0
PM In	109	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	258	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	48	0	5	0	0	0	0	0	0	0	0	0	0
AM Out	40	0	0	0	0	4	0	0	0	0	0	0	0
PM In	58	0	6	0	0	0	0	0	0	0	0	0	0
PM Out	39	0	0	0	0	4	0	0	0	0	0	0	0

Int. #:	7	Ayala Drive at Miro Way

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible][illegible]

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		20%										
Y	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	280	0	56	0	0	0	0	0	0	0	0	0	0
AM Out	225	0	0	0	0	45	0	0	0	0	0	0	0
PM In	217	0	43	0	0	0	0	0	0	0	0	0	0
PM Out	244	0	0	0	0	49	0	0	0	0	0	0	0

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	7	Ayala Drive at Miro Way

Zone #	10	Cumulative Projects 20, 21

[illegible]

Zone #	11	Cumulative Project 22

[illegible]

Zone #	12	Cumulative Project 25

[illegible]

Zone #	13	Cumulative Project 18

[illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible][illegible][illegible][illegible][illegible]

Enter only in blue cells Yellow cells calculate

Int. #: 8 Ayala Drive at Baseline Road

Y

Zone # 1 Cumulative Project 1

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

Zone # 2 Cumulative Project 2

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

Zone # 3 Cumulative Projects 3, 10, 11, 12, 13

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

Zone # 4 Cumulative Project 4

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		10%										
Y	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	10%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	10%	0%	0%	0%	0%	0%	0%	0%

TOTAL CUMULATIVE PROJECTS TRAFFIC													
Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		18	67	0	0	19	0	18	0	19	19	18	0
AM Out		19	19	19	0	69	5	0	6	6	0	0	0
AM Tot		37	86	19	0	88	5	18	6	25	19	18	0
PM In		8	71	0	0	33	0	7	0	33	33	8	0
PM Out		33	33	33	0	65	19	0	18	18	0	0	0
PM Tot		41	104	33	0	98	19	7	18	51	33	8	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	205	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	184	0	0	0	0	0	0	0	0	0	0	0	0
PM In	185	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	170	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	120	0	6	0	0	0	0	0	0	0	0	0	0
AM Out	407	0	0	0	0	20	0	0	0	0	0	0	0
PM In	438	0	22	0	0	0	0	0	0	0	0	0	0
PM Out	246	0	0	0	0	12	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	254	0	0	0	0	0	0	0	0	0	0	0	0
AM Out	93	0	0	0	0	0	0	0	0	0	0	0	0
PM In	109	0	0	0	0	0	0	0	0	0	0	0	0
PM Out	258	0	0	0	0	0	0	0	0	0	0	0	0

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	48	0	5	0	0	0	0	0	0	0	0	0	0
AM Out	40	0	0	0	0	4	0	0	0	0	0	0	0
PM In	58	0	6	0	0	0	0	0	0	0	0	0	0
PM Out	39	0	0	0	0	4	0	0	0	0	0	0	0

Int. #:	8	Ayala Drive at Baseline Road

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

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

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	365	18	0	0	0	0	0	0	0	0	0	18	0
AM Out	124	0	0	0	0	0	0	0	6	6	0	0	0
PM In	157	8	0	0	0	0	0	0	0	0	0	8	0
PM Out	365	0	0	0	0	0	0	0	18	18	0	0	0

Zone #	6	Cumulative Project 6

[illegible][illegible]

Zone #	7	Cumulative Projects 8, 9, 15

Pk Hr	NBL	NBT	NBR	SDL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		20%										
Y	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	280	0	56	0	0	0	0	0	0	0	0	0	0
AM Out	225	0	0	0	0	45	0	0	0	0	0	0	0
PM In	217	0	43	0	0	0	0	0	0	0	0	0	0
PM Out	244	0	0	0	0	49	0	0	0	0	0	0	0

Zone #	8	Cumulative Project 14

[illegible][illegible]

Zone #	9	Cumulative Project 19

[illegible][illegible]

Int. #:	8	Ayala Drive at Baseline Road

Zone #	10	Cumulative Projects 20, 21

[illegible][illegible]

Zone #	11	Cumulative Project 22

Pk Hr	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In							20%					
Y	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%
AM Out												
PM In	0%	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%
PM Out	0%	0%	0%	0%	0%	20%	0%	0%	0%	0%	0%	0%

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	88	0	0	0	0	0	0	18	0	0	0	0	0
AM Out	26	0	0	0	0	0	5	0	0	0	0	0	0
PM In	34	0	0	0	0	0	0	7	0	0	0	0	0
PM Out	93	0	0	0	0	0	19	0	0	0	0	0	0

Zone #	12	Cumulative Project 25

[illegible][illegible]

Zone #	13	Cumulative Project 18

[illegible][illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible]

Yellow cells calculate

Linden Avenue at Miro Way

Y

Cumulative Project 1

[illegible]

Cumulative Project 2

[illegible]

Cumulative Projects 3, 10, 11, 12, 13

[illegible]

Cumulative Project 4

[illegible]

TOTAL CUMULATIVE PROJECTS TRAFFIC

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	0	18	0	0	0	0	0	0	37
AM Out		0	5	0	12	0	0	0	0	0	0	0	0
AM Tot		0	5	0	12	18	0	0	0	0	0	0	37
PM In		0	0	0	0	7	0	0	0	0	0	0	16
PM Out		0	19	0	37	0	0	0	0	0	0	0	0
PM Tot		0	19	0	37	7	0	0	0	0	0	0	16

[illegible]

Int. #:	9	Linden Avenue at Miro Way

Zone #	5	Cumulative Projects 5, 7, 17, 23, 24

[illegible]

Zone #	6	Cumulative Project 6

[illegible]

Zone #	7	Cumulative Projects 8, 9, 15

[illegible]

Zone #	8	Cumulative Project 14

[illegible]

Zone #	9	Cumulative Project 19

[illegible]

Pk Hr	T Gen	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In	365	0	0	0	0	0	0	0	0	0	0	0	37
AM Out	124	0	0	0	12	0	0	0	0	0	0	0	0
PM In	157	0	0	0	0	0	0	0	0	0	0	0	16
PM Out	365	0	0	0	37	0	0	0	0	0	0	0	0

[illegible][illegible][illegible][illegible]

Int. #:	9	Linden Avenue at Miro Way

Zone #	10	Cumulative Projects 20, 21

[illegible]

Zone #	11	Cumulative Project 22

[illegible]

Zone #	12	Cumulative Project 25

[illegible]

Zone #	13	Cumulative Project 18

[illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible][illegible][illegible][illegible][illegible]

Yellow cells calculate

Linden Avenue at Baseline Road

Y

Pk Hr		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM In		0	0	0	18	0	0	0	19	0	0	0	0
AM Out		0	0	0	0	0	0	0	0	0	0	19	5
AM Tot		0	0	0	18	0	0	0	19	0	0	19	5
PM In		0	0	0	7	0	0	0	33	0	0	0	0
PM Out		0	0	0	0	0	0	0	0	0	0	33	19
PM Tot		0	0	0	7	0	0	0	33	0	0	33	19

Cumulative Project 1

[illegible][illegible]

Cumulative Project 2

[illegible][illegible]

Cumulative Projects 3, 10, 11, 12, 13

[illegible][illegible]

Cumulative Project 4

[illegible][illegible]

Int. #:	10	Linden Avenue at Baseline Road

Zone #	10	Cumulative Projects 20, 21

[illegible][illegible]

Zone #	11	Cumulative Project 22

[illegible][illegible]

Zone #	12	Cumulative Project 25

[illegible][illegible]

Zone #	13	Cumulative Project 18

[illegible][illegible]

Zone #	14	Cumulative Project 16

[illegible][illegible]

APPENDIX F

SIGNAL WARRANT ANALYSIS WORKSHEETS

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET:

Ayala Drive

NB

SB

 # OF APPROACH LANES:

2

MINOR STREET:

Miro Way

EB

WB

 # OF APPROACH LANES:

1

CITY, STATE:

Rialto, CA

COMMENTS:

Signal Warrant Study, Opening Year 2024 Cumulative Plus Project Conditions

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

N

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

Y

			WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET
THRESHOLD VALUES					420	105		630	53		336	84		504	42	
06:00 AM	TO	07:00 AM	0	0												
07:00 AM	TO	08:00 AM	0	0												
08:00 AM	TO	09:00 AM	1,725	30	Y			Y			Y			Y		
09:00 AM	TO	10:00 AM	0	0												
10:00 AM	TO	11:00 AM	0	0												
11:00 AM	TO	12:00 PM	0	0												
12:00 PM	TO	01:00 PM	0	0												
01:00 PM	TO	02:00 PM	0	0												
02:00 PM	TO	03:00 PM	0	0												
03:00 PM	TO	04:00 PM	0	0												
04:00 PM	TO	05:00 PM	0	0												
05:00 PM	TO	06:00 PM	2,039	82	Y			Y	Y	Y	Y			Y	Y	Y
06:00 PM	TO	07:00 PM	0	0												
07:00 PM	TO	08:00 PM	0	0												
08:00 PM	TO	09:00 PM	0	0												
09:00 PM	TO	10:00 PM	0	0												
			3,764	112	2	0	0	2	1	1	2	0	0	2	1	1
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

TRAFFIC SIGNAL VOLUME WARRANT ANALYSIS (2000 MUTCD)

MAJOR STREET:

Ayala Drive

NB

SB

 # OF APPROACH LANES:

2

MINOR STREET:

Miro Way

EB

WB

 # OF APPROACH LANES:

1

CITY, STATE:

Rialto, CA

COMMENTS:

Signal Warrant Study, Opening Year 2024 Existing Plus Growth Plus Project Conditions

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

N

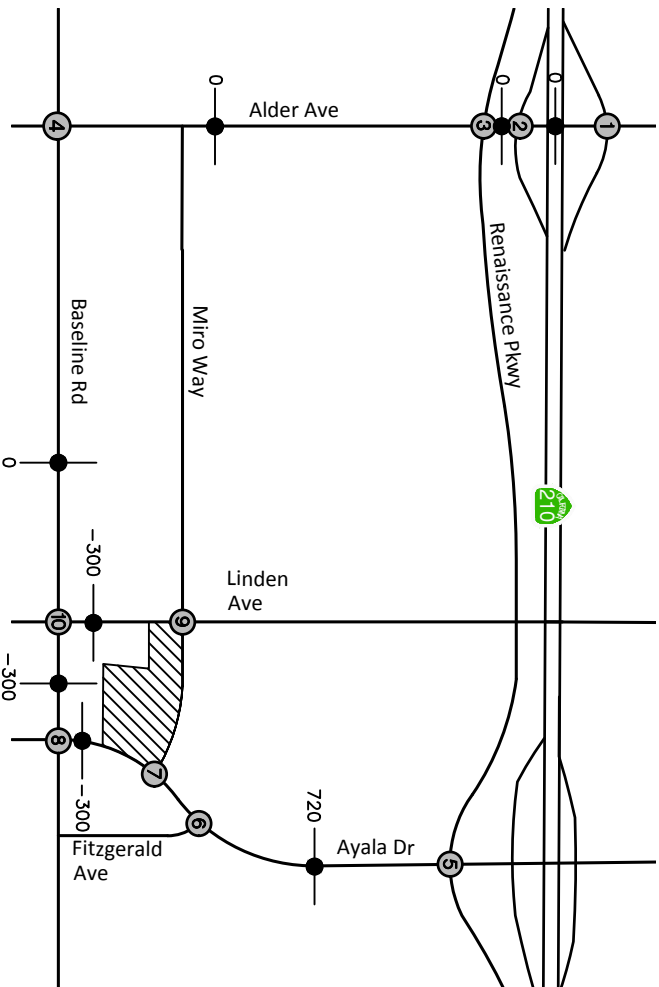
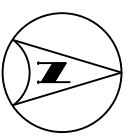
85TH PERCENTILE SPEED GREATER THAN 40 MPH ON MAJOR STREET (Y OR N):

Y

			WARRANT 1 - Condition A, Part 1			WARRANT 1 - Condition B, Part 1			WARRANT 1 - Condition A, Part 2			WARRANT 1 - Condition B, Part 2			WARRANT 2 Four-Hour	WARRANT 3 Peak Hour
			MAJOR ST TWO-WAY TRAFFIC	MINOR ST TRAFFIC HEAVY LEG	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET	MAIN LINE	SIDE STREET	BOTH MET
THRESHOLD VALUES					420	105		630	53		336	84		504	42	
06:00 AM	TO	07:00 AM	0	0												
07:00 AM	TO	08:00 AM	0	0												
08:00 AM	TO	09:00 AM	1,472	30	Y			Y			Y			Y		
09:00 AM	TO	10:00 AM	0	0												
10:00 AM	TO	11:00 AM	0	0												
11:00 AM	TO	12:00 PM	0	0												
12:00 PM	TO	01:00 PM	0	0												
01:00 PM	TO	02:00 PM	0	0												
02:00 PM	TO	03:00 PM	0	0												
03:00 PM	TO	04:00 PM	0	0												
04:00 PM	TO	05:00 PM	0	0												
05:00 PM	TO	06:00 PM	1,746	82	Y			Y	Y	Y	Y			Y	Y	Y
06:00 PM	TO	07:00 PM	0	0												
07:00 PM	TO	08:00 PM	0	0												
08:00 PM	TO	09:00 PM	0	0												
09:00 PM	TO	10:00 PM	0	0												
			3,218	112	2	0	0	2	1	1	2	0	0	2	1	1
			8 HOURS NEEDED			8 HOURS NEEDED			8 HOURS NEEDED for both Condition A & B						4 HRS NEEDED	1 HR NEEDED
			NOT SATISFIED			NOT SATISFIED			NOT SATISFIED						NOT SATISFIED	SATISFIED

APPENDIX G

REROUTED EXISTING VOLUMES FOR PLUS PROJECT SCENARIOS

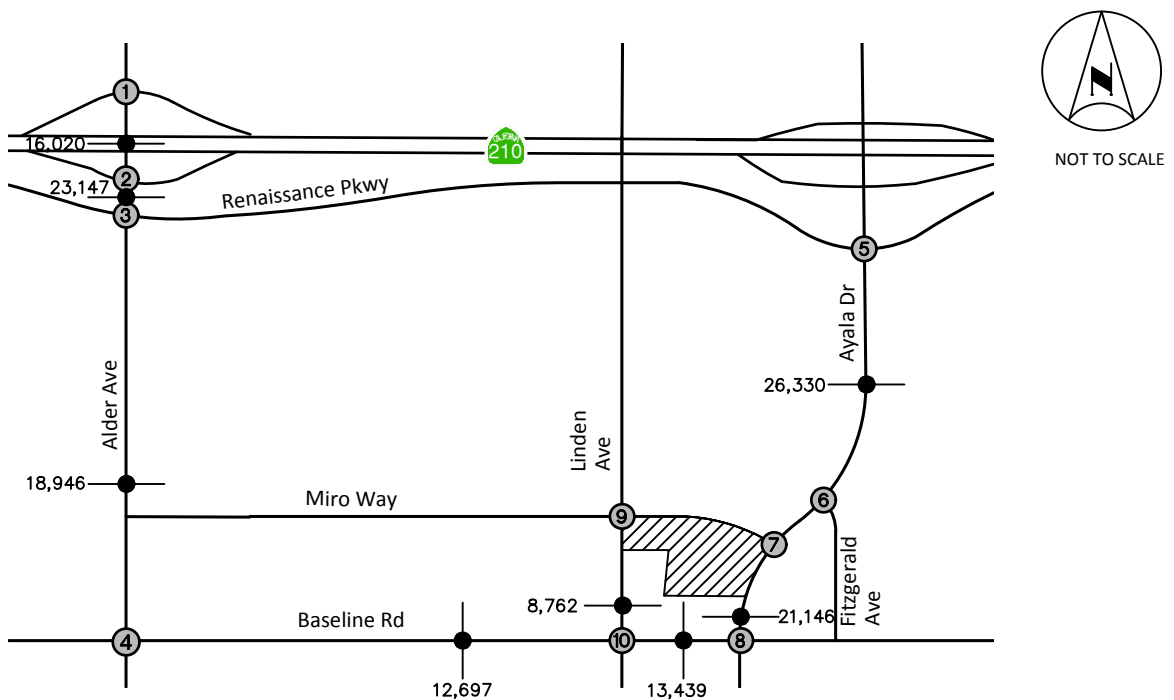


1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd

LEGEND:

-  = Project Site
-  = Study Intersection
- XX/YY = AM/PM Peak Hour Existing Turning Movement Volumes after Rerouting
-  = Roadway Segment + Change in Existing ADT Volumes after Rerouting

APPENDIX G-1 CHANGE IN EXISTING TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS



1. Alder Ave at SR-210 WB Ramps	2. Alder Ave at SR-210 EB Ramps	3. Alder Ave at Renaissance Pkwy	4. Alder Ave at Baseline Rd
12/376 17/292 157/123 5/4 431/295 396/475 343/298	421/430 6/155 298/203 3/4 616/502 486/565 333/420	78/138 775/603 155/183 199/221 140/172 26/20 97/95 158/269 80/67 127/51 567/659 15/34	138/123 345/363 63/118 128/87 472/346 41/57 96/79 373/434 74/63 157/43 301/323 100/44
5. Ayala Dr at Renaissance Pkwy	6. Ayala Dr at Fitzgerald Ave	7. Ayala Dr at Miro Way	8. Ayala Dr at Baseline Rd
328/541 711/823 198/342 350/357 122/184 29/61 225/361 106/378 80/113 47/106 726/792 38/75	8/1 654/869 122/209 136/151 1/3 3/1 1/0 4/5 14/8 727/828 3/8	15/24 646/851 15/27 729/817	54/57 546/678 53/139 39/49 322/350 60/89 110/126 264/447 154/206 197/142 584/647 65/96
9. Linden Ave at Miro Way	10. Linden Ave at Baseline Rd		
39/53 233/377 15/24 30/52 15/27 15/26 6/18 285/402	47/95 93/170 69/144 124/163 436/367 20/39 26/83 402/475 31/27 41/18 134/168 61/45		

LEGEND:

- = Project Site
- = Study Intersection
- XX/YY = AM/PM Peak Hour
Existing Turning
Movement Volumes
after Rerouting
- = Roadway Segment
+ Existing ADT
Volumes after
Rerouting

APPENDIX G-2 REROUTED EXISTING TRAFFIC VOLUMES FOR PLUS PROJECT SCENARIOS