Appendix H:
SD Homes Redlands Apartments Traffic Impact Analysis

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SD HOMES REDLANDS APARTMENTS TRAFFIC IMPACT ANALYSIS

City of Redlands

Revised April 1, 2019

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

SD HOMES REDLANDS APARTMENTS
TRAFFIC IMPACT ANALYSIS

City of Redlands

March 4, 2019
Revised April 1, 2019

prepared by

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EXECUTIVE SUMMARY

The purpose of this Traffic Impact Analysis is to provide an assessment of traffic operations resulting from development of the proposed SD Homes Redlands Apartments project and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening year in Year 2020 and for a Year 2040 forecast reflective of the City of Redlands General Plan Buildout.

The City of Redlands is the lead agency responsible for preparation of the traffic impact analysis, in accordance with the California Environmental Quality Act authorizing legislation. This report analyzes traffic impacts for the anticipated opening date with full occupancy of the development when the project will be generating trips at its full potential in Opening Year (2020), and for the General Plan Buildout (Year 2040).

Although this is a technical report, effort has been made to write the report clearly and concisely. To assist the reader with terms unique to transportation engineering, a glossary is provided in Appendix A.

PROJECT DESCRIPTION

The 18.9 acre project site is located on both sides of Orange Avenue between Iowa Street and Alabama Street in the City of Redlands. The proposed project involves construction of a gated apartment complex with 328 multi-family (low-rise) attached residential dwelling units. Access is proposed at Orange Avenue and Alabama Street.

The proposed project is anticipated to be built in one continuous phase. For the purposes of this study, the proposed project is anticipated to be constructed and fully operational by Opening Year (2020).

EXISTING OPERATIONS

The study intersections currently operate within acceptable Levels of Service (C or better) during the peak hours for Existing conditions (see Table 1).

PROJECT TRIPS

The proposed project is forecast to generate a total of approximately 2,261 net new daily vehicle trips, including 138 net new trips during the AM peak hour and 167 net new trips during the PM peak hour (see Table 2).

FORECAST OPERATIONS

Existing Plus Project: The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for Existing Plus Project conditions (see Table 4); therefore, the proposed project is forecast to result in no significant traffic impacts for Existing Plus Project conditions.

Opening Year (2020) Without Project: The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for Opening Year (2020) Without Project conditions (see Table 4).

Opening Year (2020) With Project: The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for Opening Year (2020) With Project conditions (see Table 5); therefore, the proposed project is forecast to result in no significant traffic impacts for Opening Year (2020) With Project conditions.

General Plan Buildout (Year 2040) Without Project: The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) Without Project conditions, except for the following study intersection that is projected to operate at unacceptable Level of Service D without improvements (see Table 6):

- Alabama Street at Orange Avenue - #5 (PM peak hour)

The following improvements are recommended to maintain acceptable Levels of Service at the study intersections for General Plan Buildout (Year 2040) Without Project conditions:

- Alabama Street (NS) at Orange Avenue (EW) - #5
  - Restripe the eastbound approach to provide a dedicated left turn lane.
  - Restripe the westbound approach to provide a dedicated left turn lane.

The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) Without Project conditions, with improvements (see Table 6).

General Plan Buildout (Year 2040) With Project: The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) With Project conditions, except for the following study intersection that is projected to operate at unacceptable Level of Service F without improvements (see Table 6):

- Alabama Street at Orange Avenue - #5 (PM peak hour)

The previously identified improvements under General Plan Buildout (Year 2040) Without Project would also maintain acceptable Levels of Service at the study intersections for General Plan Buildout (Year 2040) With Project conditions. Therefore, no additional improvements are recommended.

SITE ACCESS/PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project to provide project site access:

Project West Driveway (NS) at Orange Avenue (EW)
- Construct the southbound approach to consist of one shared left/right turn with stop-control.
- Install appropriate "Exit Only" signage.

Project East Driveway (NS) at Orange Avenue (EW)
- Construct the northbound approach to consist of one shared left/through/right turn lane with stop-control.
- Construct the southbound approach to consist of one shared left/through/right turn lane with stop-control.

Alabama Street (NS) at Emergency Vehicle Access (EW)
- Construct emergency vehicle access driveway to the satisfaction of the City of Redlands Fire Department.
- Install appropriate emergency vehicle access only signage.

MITIGATION MEASURES

The proposed project shall contribute its fair share, through the adopted development impact fee program, to the following mitigation measure improvements for General Plan Buildout (Year 2040) Without and With Project:

- Alabama Street (NS) at Orange Avenue (EW) - #5
  - Restripe the eastbound approach to provide a dedicated left turn lane.
  - Restripe the westbound approach to provide a dedicated left turn lane.

Improvements at the project driveways are project design features which shall be constructed by the project. Site-adjacent roadway improvements shall be constructed in conjunction with the project.

The project fair share is based on the proportion of project peak hour traffic volume contributed to the improvement location relative to the total new peak hour traffic volume for General Plan Buildout (Year 2040) With Project conditions. The project proportional trip contributions have been calculated in Table 9 and the project fair share cost estimate is $3,867.

GENERAL RECOMMENDATIONS

Figure 39 summarizes the circulation recommendations for the proposed project.

On-site improvements and improvements adjacent to the site will be required in conjunction with the proposed development to ensure adequate circulation within the project itself (see Figure 38).

All roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project should be constructed in accordance with applicable engineering standards and to the satisfaction of the City of Redlands Municipal Utilities and Engineering Department.

Site-adjacent roadways should be constructed or repaired at their ultimate half-section width including roadway improvements, sidewalks, street lighting, bicycle lanes, transit stops and landscaping in conjunction with development, or as otherwise required by the City of Redlands Municipal Utilities and Engineering Department.

On-site traffic signing and striping plans should be submitted for City of Redlands approval in conjunction with detailed construction plans for the project. The applicant shall submit Iowa Street and Orange Avenue signing and striping plans to the City of Redlands for approval in conjunction with project frontage roadway construction plans. Conceptual striping figures for Opening Year and General Buildout are included in Appendix K.

Off-street parking should be provided to meet City of Redlands Municipal Code requirements.

The final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Redlands/California Department of Transportation sight distance standards.

As is the case for any roadway design, the City of Redlands should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

1. INTRODUCTION

This section describes the purpose of the Traffic Impact Analysis, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

The purpose of this Traffic Impact Analysis is to provide an assessment of traffic operations resulting from development of the proposed SD Homes Redlands Apartments project and to identify measures necessary to mitigate potentially significant traffic impacts. This report analyzes traffic impacts for the anticipated project opening in Year 2020 and for a Year 2040 forecast reflective of the City of Redlands General Plan Buildout.

Although this is a technical report, effort has been made to write the report clearly and concisely. A glossary is provided in Appendix A to assist the reader with terms related to transportation engineering.

PROJECT DESCRIPTION

The 18.9 acre project site is located on both sides of Orange Avenue between Iowa Street and Alabama Street in the City of Redlands. The proposed project involves construction of a gated apartment complex with 328 multi-family (low-rise) attached residential dwelling units. Access is proposed at Orange Avenue and Alabama Street.

PROJECT ACCESS

Three (3) gated access driveways are proposed. Primary ingress/egress access is proposed at Orange Avenue. A leasing and visitor parking area is provided outside of the primary access gate on the north side of Orange Avenue. A secondary egress only access is proposed at Orange Avenue near the western side of the project site and emergency vehicle access only is proposed at Alabama Street south of Orange Avenue.

PROJECT PHASING

The proposed project is anticipated to be built in one continuous phase. For the purposes of this study, the proposed project is anticipated to be constructed and fully operational by Opening Year (2020).

STUDY AREA

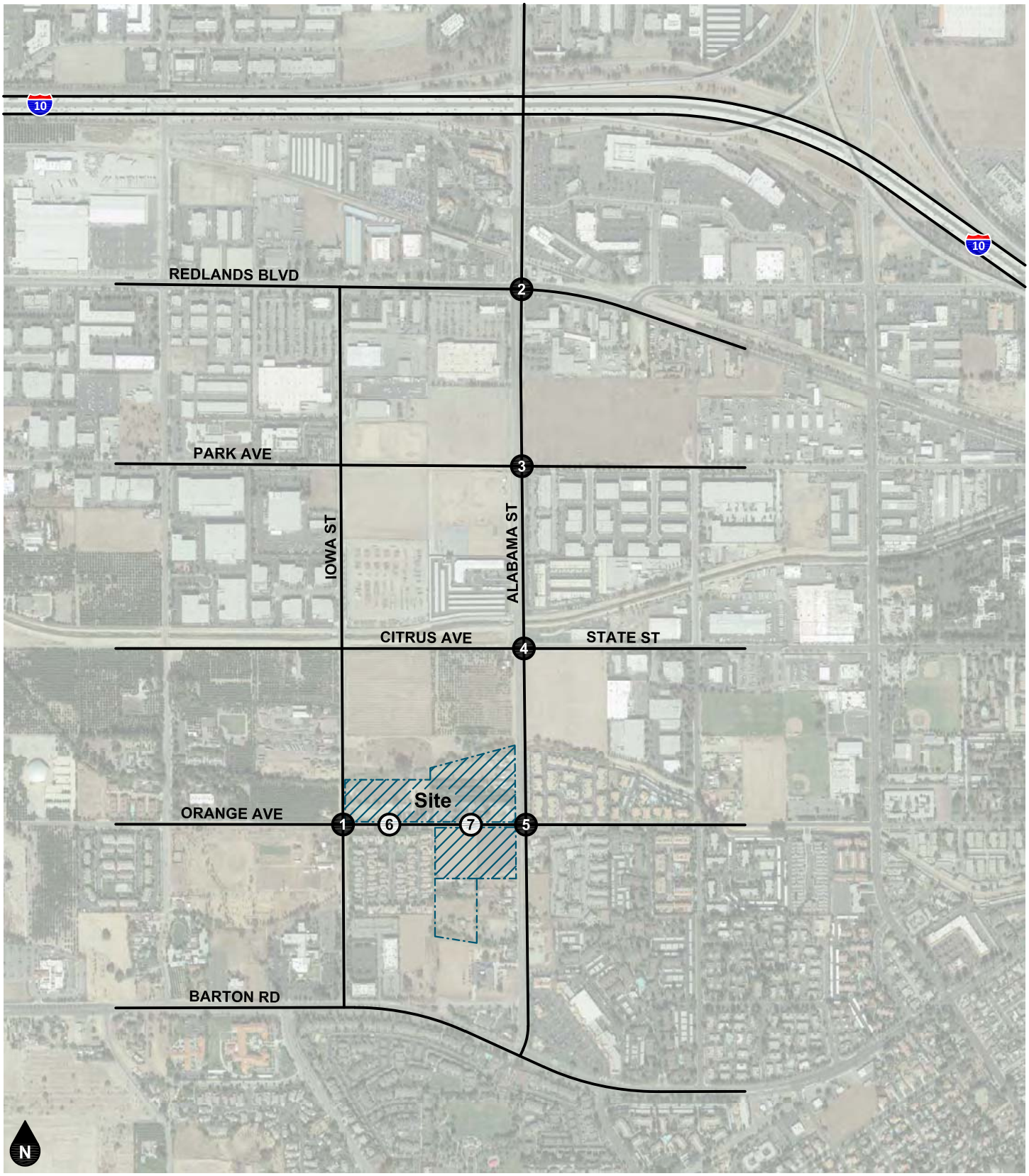
Based on the City-approved scoping agreement (see Appendix B), the study area consists of the following study intersections within the City of Redlands jurisdiction:

Study Intersections	Jurisdiction
1. Iowa Street (NS) at Orange Avenue (EW)	City of Redlands
2. Alabama Street (NS) at Redlands Boulevard (EW)	City of Redlands
3. Alabama Street (NS) at Park Avenue (EW)	City of Redlands
4. Alabama Street (NS) at Citrus Avenue (EW)	City of Redlands
5. Alabama Street (NS) at Orange Avenue (EW)	City of Redlands
6. Project West Access (NS) at Orange Avenue (EW)	City of Redlands
7. Project East Access (NS) at Orange Avenue (EW)	City of Redlands

ANALYSIS SCENARIOS

The following scenarios are analyzed during typical weekday AM and PM peak hour conditions:

- Existing
- Existing Plus Project
- Opening Year (2020) Without Project
- Opening Year (2020) With Project
- General Plan Buildout (Year 2040) Without Project
- General Plan Buildout (Year 2040) With Project



Legend

(#) Study Intersection

(#) Project Driveway

Figure 1
Project Location Map

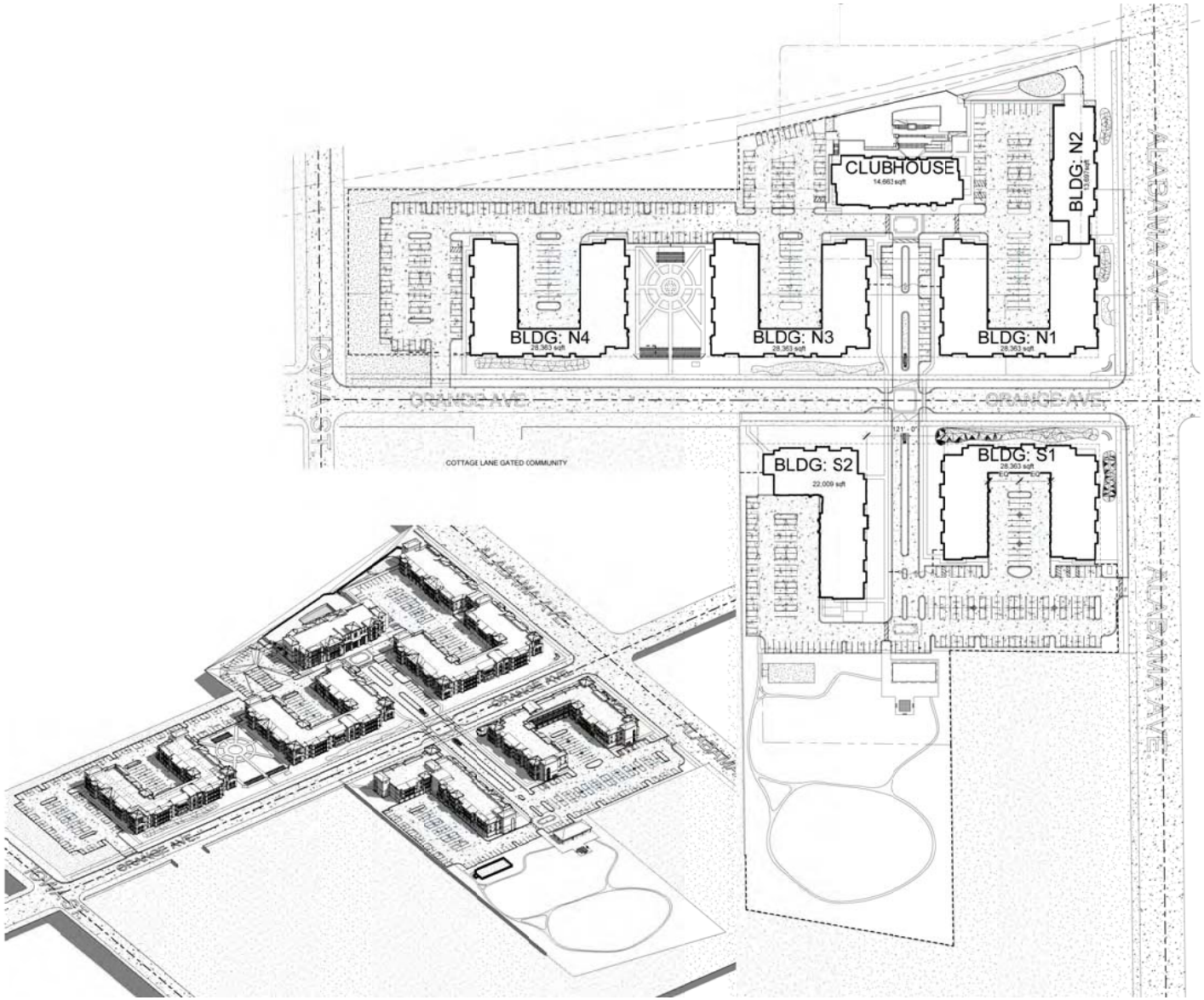


Figure 2
Site Plan

2. METHODOLOGY

This section discusses the analysis methodologies used to assess transportation facility performance as adopted by the respective jurisdictional agencies.

INTERSECTION DELAY METHODOLOGY

The technique used to assess the performance of intersections in the County of San Bernardino is known as the intersection delay methodology based on the procedures contained in the Highway Capacity Manual. The methodology compares the traffic volume using the intersection to the capacity of the intersection to calculate the delay associated with the traffic control at the intersection. The intersection delay is then correlated to a performance measure known as Level of Service based on the following thresholds:

Level of Service	Intersection Control Delay (Seconds / Vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10.0	≤ 10.0
B	> 10.0 to ≤ 20.0	> 10.0 to ≤ 15.0
C	> 20.0 to ≤ 35.0	> 15.0 to ≤ 25.0
D	> 35.0 to ≤ 55.0	> 25.0 to ≤ 35.0
E	> 55.0 to ≤ 80.0	> 35.0 to ≤ 50.0
F	> 80.0	> 50.0

Source: Transportation Research Board, Highway Capacity Manual (6th Edition).

Level of Service is used to qualitatively describe the performance of a roadway facility, ranging from Level of Service A (free-flow conditions) to Level of Service F (extreme congestion and system failure). At intersections with traffic signal or all way stop control, Level of Service is determined by the average control delay for the overall intersection. At intersections with cross street stop control (i.e., one- or two-way stop control), Level of Service is determined by the average control delay for the worst individual movement (or movements sharing a single lane).

Intersection delay analysis was performed using the Vistro (Version 6.00-00) software. The intersection Level of Service analysis has been performed in accordance with guidelines provided in Appendix B of the San Bernardino County Congestion Management Program, including minimum phase times, lost time, and saturation flow rates.

PERFORMANCE STANDARDS

City of Redlands: The definition of an intersection deficiency has also been obtained from the City of Redlands General Plan. The General Plan states that peak hour intersection operations of Level of Service C or better are generally acceptable. Therefore, any intersection operating at Level of Service D to F will be considered deficient.

In accordance to the City of Redlands Measure U Section 1A.60 PRINCIPLE SIX (a), all new development projects shall assure by appropriate mitigation measures that, at a minimum, traffic Levels of Service are maintained at a minimum of Level of Service C throughout the City, except where the current Level of Service is lower than Level of Service C, or as provided in Section 5.20 of the Redlands General Plan where a more intense Level of Service is specifically permitted**.** In any location where the Level of Service is below C at the time an application for a development project is submitted, mitigation measures shall be imposed on that development project to assure, at a minimum, that the Level of Service is maintained at Levels of Service that

are no worse than those existing at the time an application for development is filed, except as provided in Section 5.20b.

Measure U Section 5.0 Circulation Element sections 5.20a, 5.20b, 5.20c are listed as "Guiding Policies: Standards for Traffic Service:

5.20a Maintain Level of Service C or better as the standard at all intersections presently at Level of Service C or better.

5.20b Within the area identified in the General Plan (Figure 5.3), including that unincorporated County area identified as the "donut hole," maintain Level of Service C or better; however, accept a reduced Level of Service D on a case by case basis upon approval by a four-fifths (4/5ths) vote of the total authorized membership of the City Council.

5.20c Where the current Level of Service at a location within the City of Redlands is below the Level of Service C standard, no development project shall be approved that cannot be mitigated so that it does not reduce the existing Level of Service at that location except as provided in Section 5.20b.

Congestion Management Program: For freeway facilities, the Congestion Management Program controls the definition of deficiency for purposes of this study. The Congestion Management Program definition of deficiency is based on maintaining a Level of Service standard of Level of Service E or better, except where an existing Level of Service F condition is identified in the Congestion Management Program document (San Bernardino County Congestion Management Program Table 2-1). A Congestion Management Program deficiency is, therefore, defined as any freeway segment operating or projected to operate at Level of Service F, unless the segment is identified explicitly in the Congestion Management Program document.

The identification of a Congestion Management Program deficiency requires further analysis in satisfaction of Congestion Management Program requirements, including:

- Evaluation of the mitigation measures required to restore traffic operations to an acceptable level with respect to Congestion Management Program Level of Service standards.
- Calculation of the project share of new traffic on the impacted Congestion Management Program facility during peak hours of traffic.
- Estimation of the cost required to implement the improvements required to restore traffic operations to an acceptable Level of Service as described above.

This study incorporates each of these aspects for all locations where a Congestion Management Program deficiency is identified.

The I-10 Freeway is classified as a State Freeway on the Congestion Management Program network and Alabama Street is classified as a Principal Arterial on the Congestion Management Program network. The following study intersection is listed within the Congestion Management Program:

- Alabama Street at Redlands Boulevard - #2

SIGNIFICANCE IMPACT THRESHOLD

The City of Redlands General Plan and Circulation Element have been adopted in accordance with California Environmental Quality Act requirements, and any roadway improvements within the City of Redlands that are consistent with these documents are not considered a significant impact, so long as the project contributes mitigation or fair share funding for improvements.

For the City of Redlands, project related traffic impact is considered significant if the project reduces the Level of Service for opening year as follows:

- Pre-project Level of Service C or better: Project-related Level of Service D or worse for signalized intersections.
- Pre-project Level of Service C or better: Project-related Level of Service D or worse for unsignalized intersections which meet peak hour traffic signal warrant.
- Pre-project Level of Service D or worse: If the project reduces the Level of Service to a facility which previously operated at Level of Service D or worse, the project shall provide improvements at a minimum to the pre-project delay[1].

TRAFFIC VOLUMES AND TRANSPORTATION ANALYSIS MODEL

Existing Traffic Volume: Existing peak hour intersection turning movement volumes are based upon AM peak period and PM peak period intersection turning movement counts obtained during typical weekday conditions. The AM peak period was counted between 7:00 AM and 9:00 AM and the PM peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Intersection turning movement count worksheets are provided in Appendix C.

The Existing average daily traffic volumes have been obtained from the 2017 Traffic Volumes on California State Highways by the California Department of Transportation and factored from peak hour intersection turning movement volumes using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 11.5 = Leg Volume.

Opening Year (2020) Traffic Volume: The Opening Year (2020) traffic projections have been interpolated between the existing traffic volumes and Year 2040 (SBTAM) traffic volumes utilizing a portion of the growth increment. Project traffic volumes for all future projections were estimated using the manual approach.

General Plan Buildout (Year 2040) Traffic Volume: General Plan Buildout (Year 2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2012 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 28 year period between 2012 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year (2018) and year 2040. For this purpose, linear growth between the Year 2012 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Opening Year (2020) is 20 years of the 28 year time frame, a factor of 0.71 (i.e., 20/28) was used.

To derive AM and PM peak hour intersection turning movement volumes, the traffic volume growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with traffic volume forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis. Travel demand model plots are provided in Appendix D and post-processing worksheets are provided in Appendix E.

[1] Source: The City of Redlands staff defines an increase in delay makes the Level of Service worse as Level of Service is a measure by average delay.

3. EXISTING CONDITIONS

Transportation elements as they exist today are presented in this section.

EXISTING ROADWAY SYSTEM

Figure 3 identifies the lane geometry and intersection traffic controls for Existing conditions based on a field survey of the study area. Regional access to the project area is provided by the I-10 Freeway south of the project site. The key north-south roadways providing local circulation are Iowa Street and Alabama Street. The key east-west roadways providing local circulation are Redlands Boulevard, Park Avenue, Citrus Avenue, Orange Avenue, and Barton Road.

I-10 Freeway is a 10 lane divided freeway classified as a State Highway on the County of County of San Bernardino General Plan Circulation Element. Freeway access is approximately one-half drivable miles from the proposed project. It currently carries approximately 176,000 to 189,000 vehicles per day in the study area.

Iowa Street is a 2 lane undivided roadway north- south of Orange Avenue. Iowa Street is not classified in the City of Redlands General Plan Circulation Element. It currently carries approximately 2,300 to 2,600 vehicles per day in the study area.

Alabama Street is a 4 to 5 lane undivided north and south roadway in the study area. Alabama Street classified as a 4 to 6 lane divided Major Arterial (64 to 78 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route in the City of Redlands. On-street parking is generally prohibited. On-street bicycle lanes are currently not provided, but are a proposed bike route is in the City of Redlands General Plan. Sidewalk is provided north of Orange Avenue on the east side of the road between Orange Avenue and mid-block to Citrus Avenue. It currently carries approximately 14,900 to 22,300 vehicles per day in the study area.

Redlands Boulevard is a 4 lane divided east-west roadway. Redlands Boulevard is classified as a 4 to 6 lane divided Major Arterial (64 to 78 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route in the City of Redlands. On-street parking is generally not permitted. On-street bicycle lanes are currently not provided, but are a proposed bike route is in the City of Redlands General Plan. Sidewalk is provided on both sides of the road. It currently carries approximately 18,000 to 20,600 vehicles per day in the study area.

Park Avenue is a 2 lane undivided east-west roadway. Park Avenue is classified as Collector Street (36 to 40 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route in the City of Redlands. On-street bicycle lanes are currently not provided, but are a proposed bike route is in the City of Redlands General Plan. Sidewalk is provided on the south side of the road east of Alabama Street. It currently carries approximately 2,000 to 3,600 vehicles per day in the study area.

Citrus Avenue is 2 lane undivided east-west roadway. Citrus Avenue is classified as Collector Street (36 to 40 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route in the City of Redlands. On-street parking is generally not permitted. On-street bicycle lanes are currently not provided, but are a proposed bike route is in the City of Redlands General Plan. Sidewalk is provided on both sides of the road east of Alabama Street. It currently carries approximately 2,500 to 4,100 vehicles per day in the study area.

Orange Avenue is a 2 lane undivided roadway in the study area. Orange Avenue classified as a 2 lane Major Collector Street (36 to 40 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route in the City of Redlands. On-street parking is generally not permitted. On-street bicycle lanes are currently not provided, but are a proposed bike route is in the City of Redlands

General Plan. Sidewalk is provided on south side of the road between Iowa Street and mid-block to Alabama Street. It currently carries approximately 3,400 to 4,100 vehicles per day in the study area.

PEDESTRIAN FACILITIES

Existing pedestrian facilities in the project vicinity are shown on Figure 4. As shown on Figure 4, pedestrian sidewalks are currently not provided along the roadways adjacent to the project site.

TRANSIT FACILITIES

Figure 5 shows the existing transit routes available in the project vicinity. As shown on Figure 5, the study area is currently served by Omnitrans Route 8 along Redlands Boulevard.

GENERAL PLAN CONTEXT

Figure 6 shows the City of Redlands General Plan Circulation Element roadway classifications map. This figure shows the nature and extent of arterial and collector highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Redlands standard roadway cross-sections are illustrated on Figure 7.

BICYCLE ROUTES

There are currently no bicycle lanes provided in the project vicinity. On-street bicycle lanes are proposed in the City of Redlands General Plan for California Street, Alabama Street, and Orange Avenue. The City of Redlands General Plan Bike Routes are depicted on Figure 8.

TRUCK ROUTES

Figure 9 shows the designated truck routes as identified in the City of Redlands General Plan.

EXISTING ROADWAY VOLUMES

Figure 10 shows the Existing average daily traffic volumes. The Existing average daily traffic volumes have been obtained from the 2017 Traffic Volumes on California State Highways by the California Department of Transportation and factored from peak hour intersection turning movement volumes using the following formula for each intersection leg:

PM Peak Hour (Approach Volume + Exit Volume) x 11.5 = Leg Volume.

Existing peak hour intersection volumes are based upon AM peak period and PM peak period intersection turning movement counts obtained in November 2017 during typical weekday conditions. The AM peak period was counted between 7:00 AM and 9:00 AM and the PM peak period was counted between 4:00 PM and 6:00 PM. The actual peak hour within the peak period is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the weekday PM peak hour at one intersection may be 4:45 PM to 5:45 PM if those four consecutive 15 minute periods have the highest combined volume. Figure 11 and Figure 12 show the Existing AM and PM peak hour intersection turning movement volumes, respectively.

EXISTING INTERSECTION LEVEL OF SERVICE

The intersection Levels of Service for Existing conditions have been calculated and are shown in Table 1. Existing intersection Level of Service worksheets are provided in Appendix F. The study intersections currently operate within acceptable Levels of Service (C or better) during the peak hours for Existing conditions (see Table 1).

Table 1
Existing Intersection Level of Service

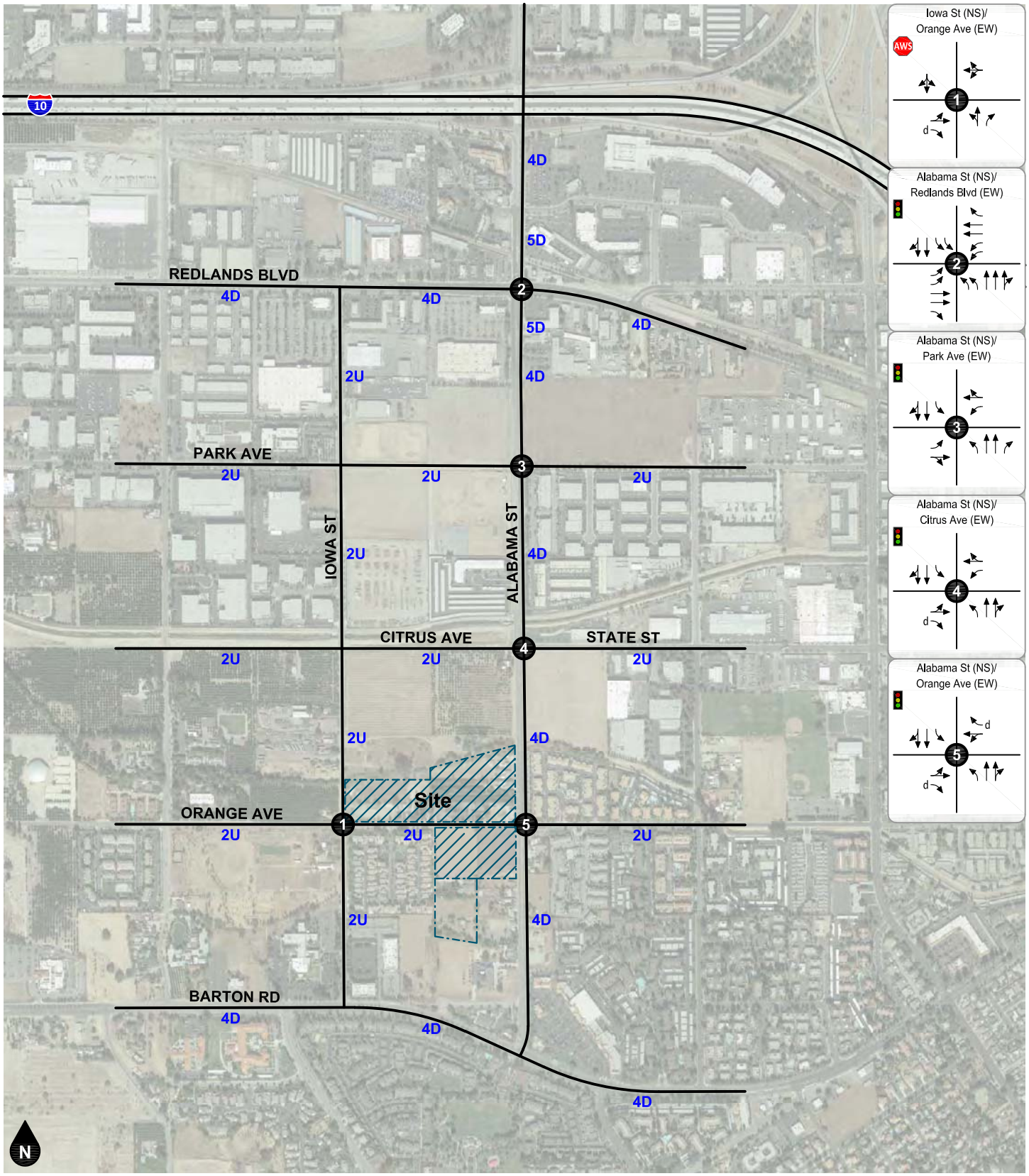
ID	Study Intersection	Traffic Control[1]	AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay	LOS
1.	Iowa St at Orange Ave	AWS	10.5	B	9.3	A
2.	Alabama St at Redlands Blvd	TS	28.9	C	23.6	C
3.	Alabama St at Park Ave	TS	19.7	B	18.6	B
4.	Alabama St at Citrus Ave	TS	12.3	B	20.0	B
5.	Alabama St at Orange Ave	TS	18.0	B	17.6	B

Notes:

(1) TS = Traffic Signal; AWS = All Way Stop

(2) Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

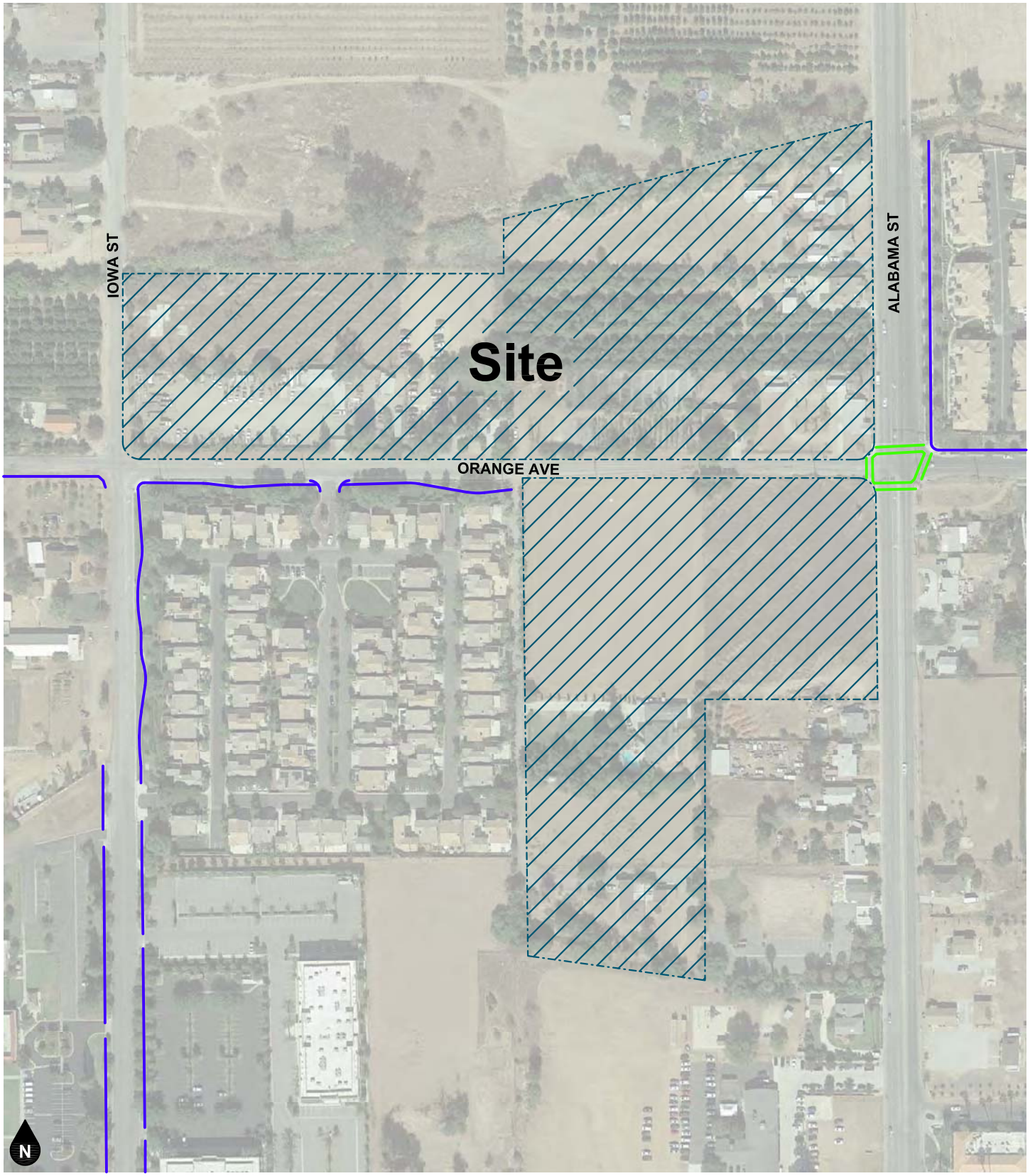
(3) LOS = Level of Service



Legend

- Traffic Signal
- AWS All Way Stop
- STOP Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- d De Facto Right Turn Lane

Figure 3
Existing Through Travel Lanes and Intersection Controls



Legend
Sidewalk
Cross Walk

Figure 4
Existing Pedestrian Facilities

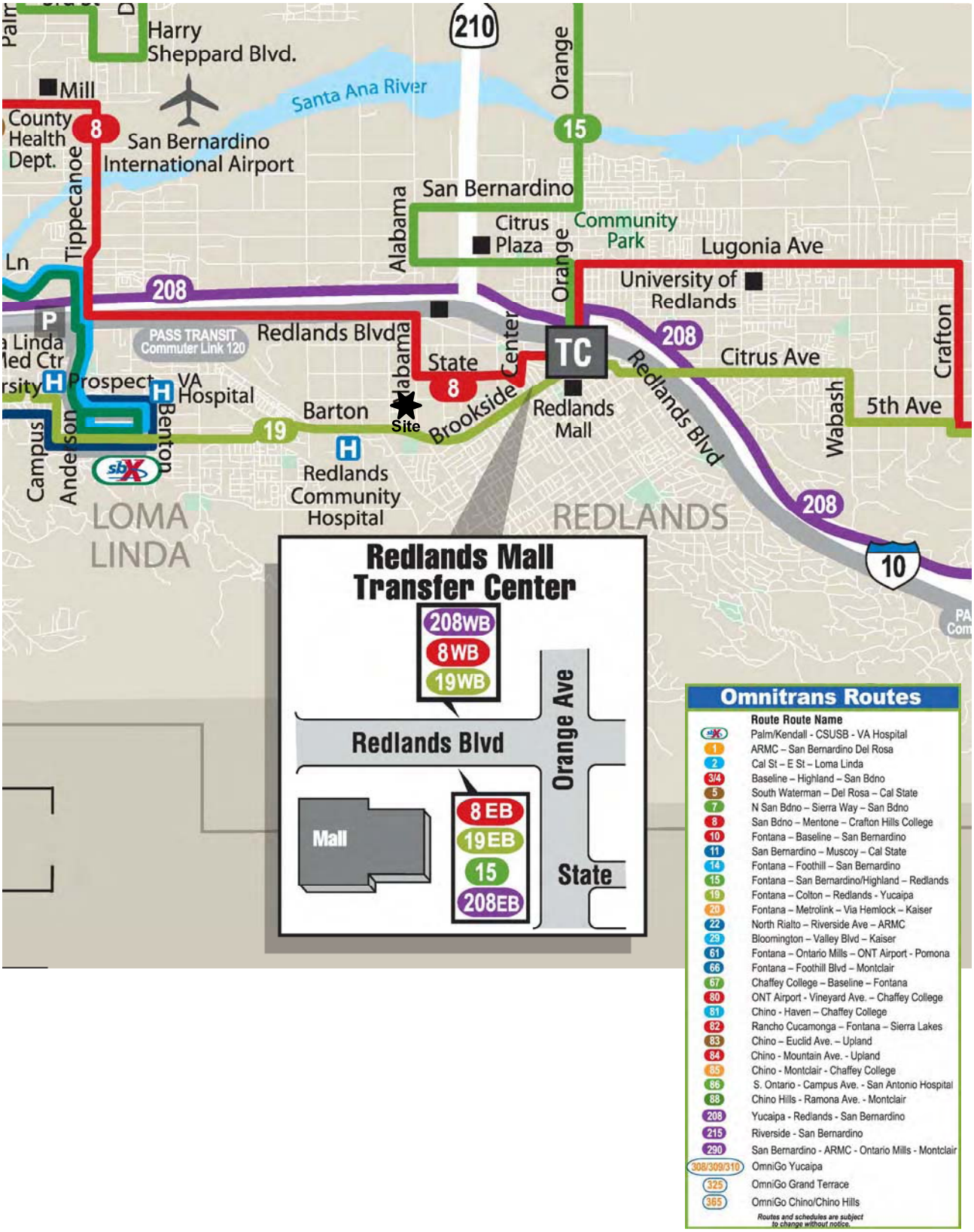


Figure 5
Existing Transit Routes

Source: Omnitrans

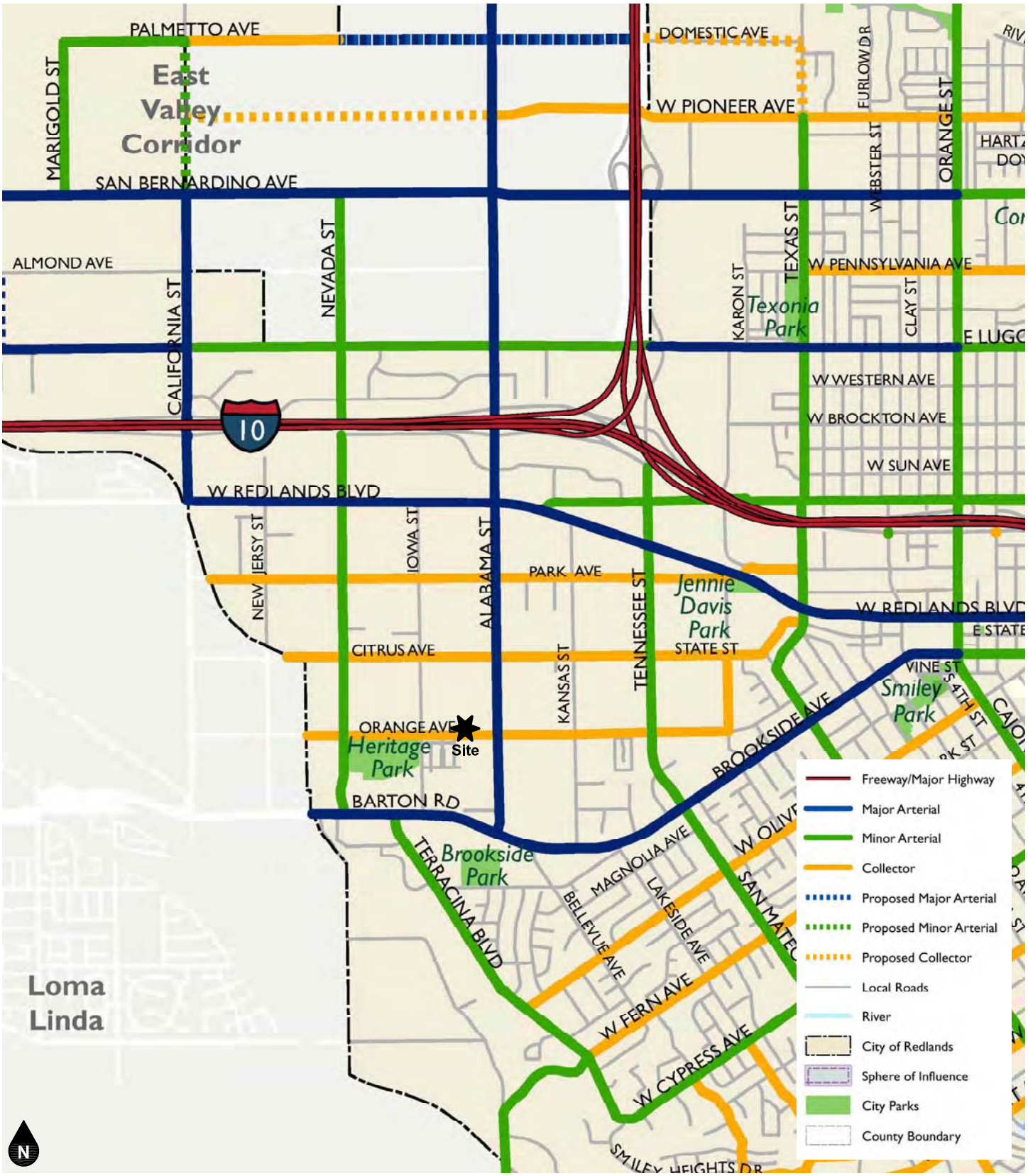


Figure 6
City of Redlands General Plan Circulation Element

Source: City of Redlands

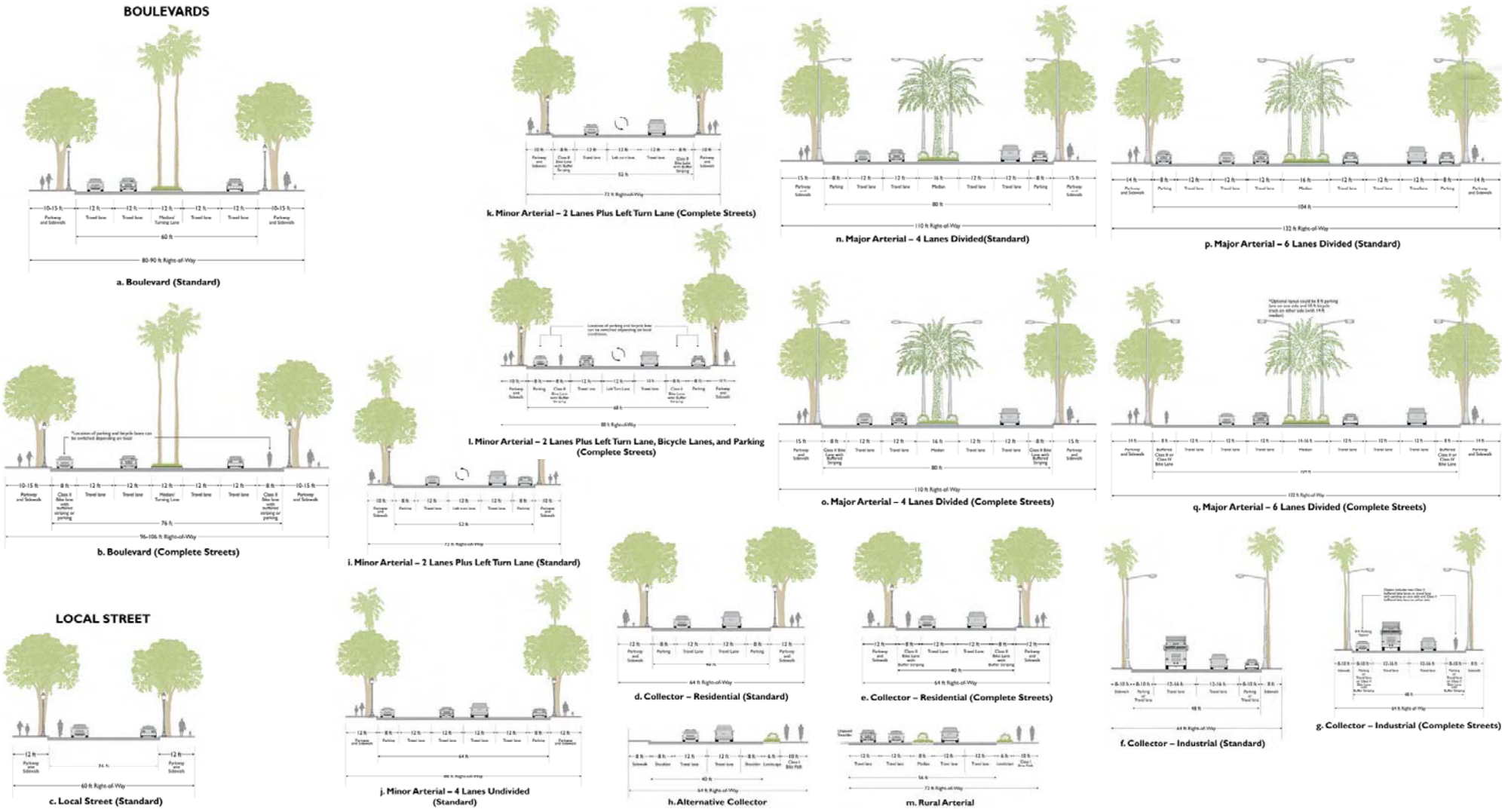


Figure 7
City of Redlands General Plan Roadway Cross-Sections

Source: City of Redlands

Figure 8
City of Redlands General Plan Bicycle Routes

Source: City of Redlands

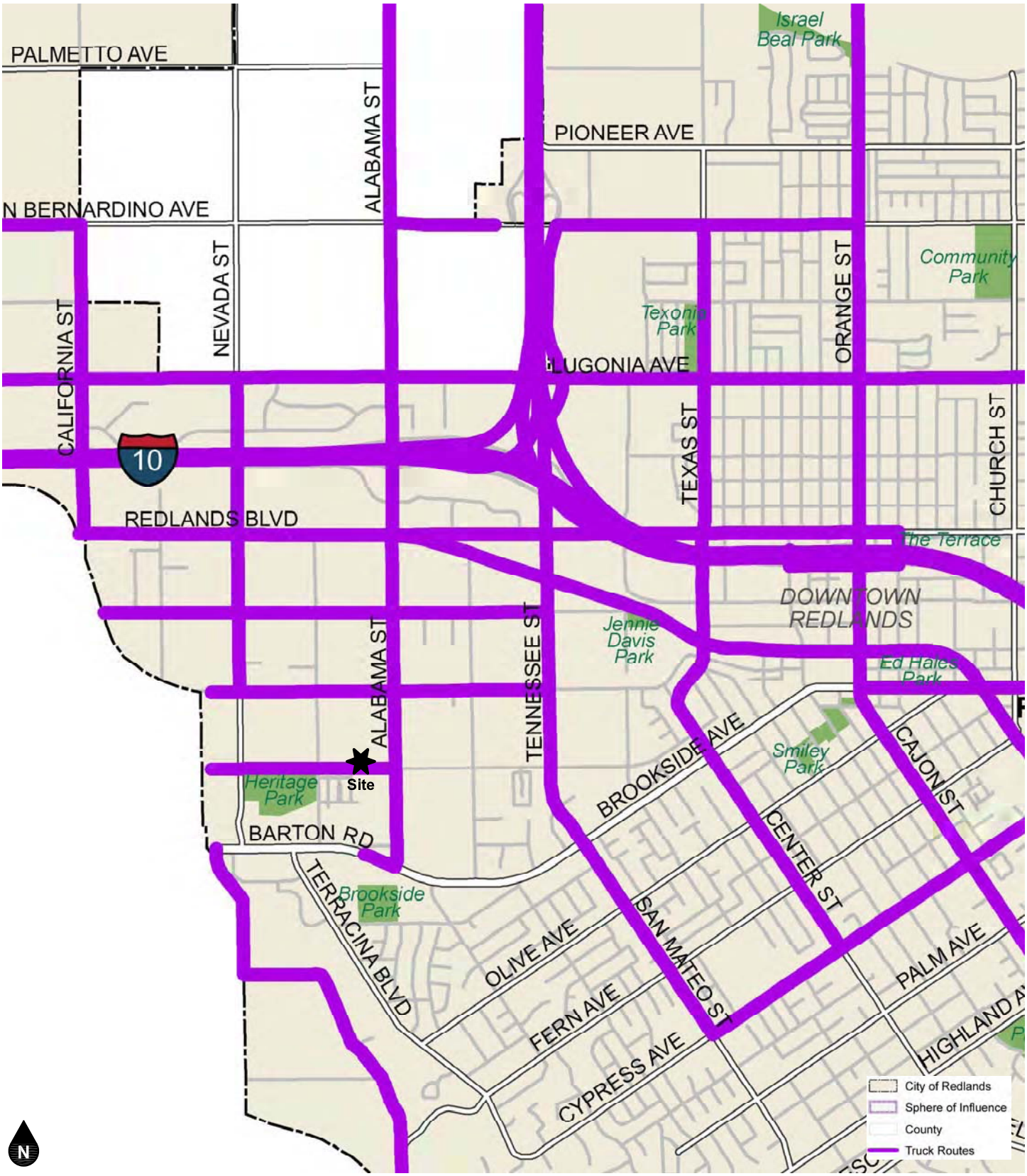
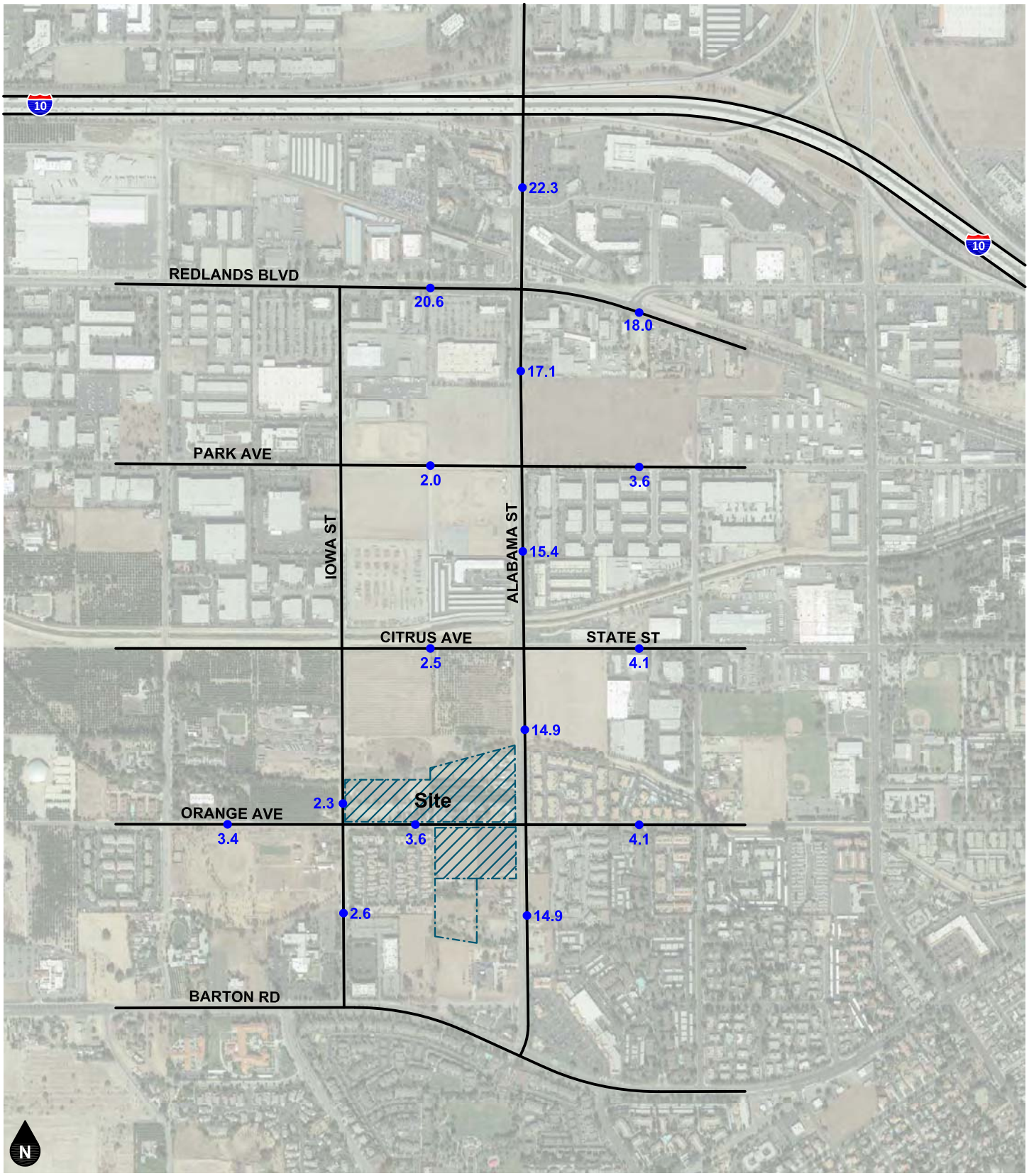


Figure 9
City of Redlands General Plan Truck Routes

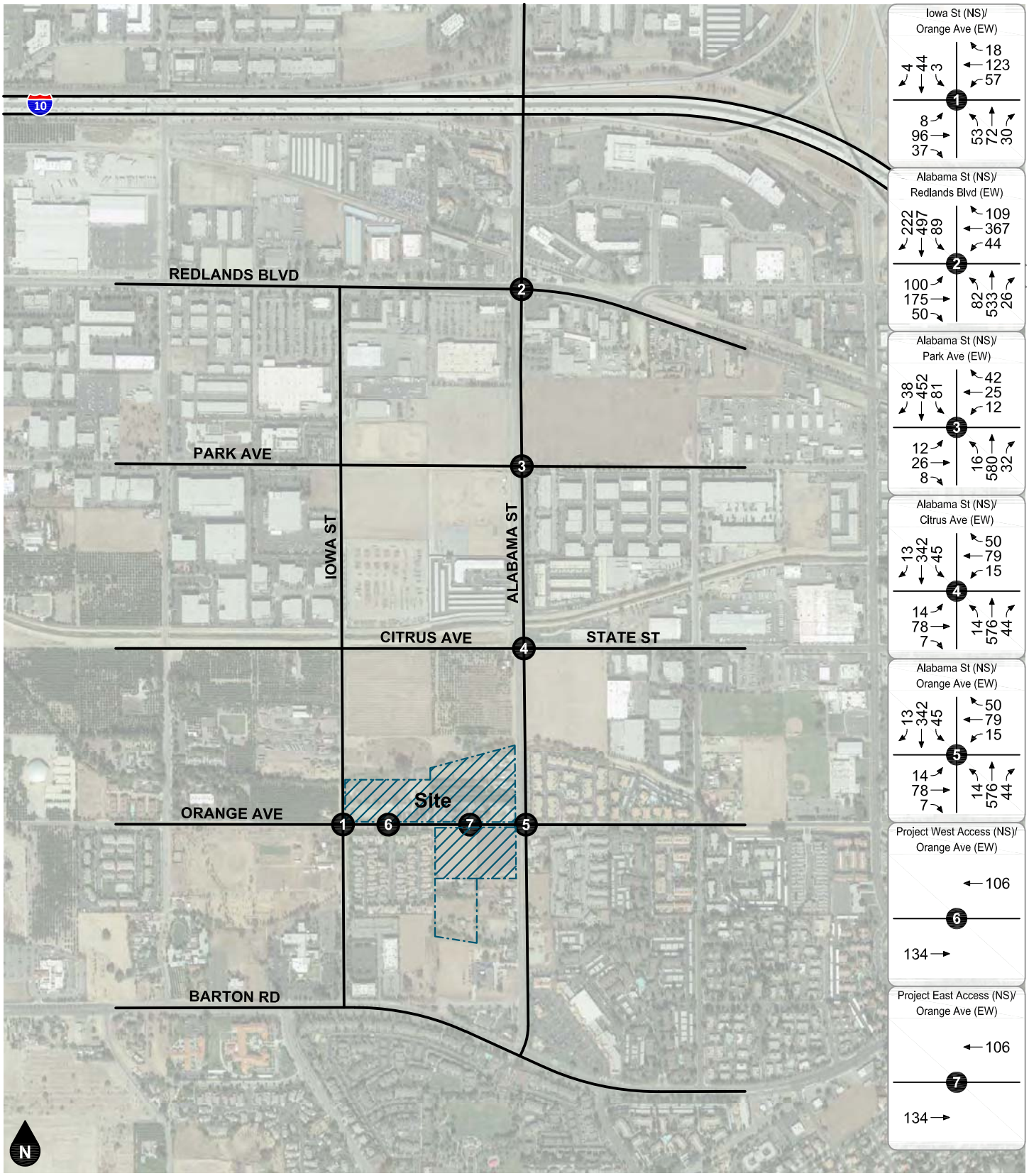
Source: City of Redlands



Legend

●2.6 Vehicles Per Day (1,000's)

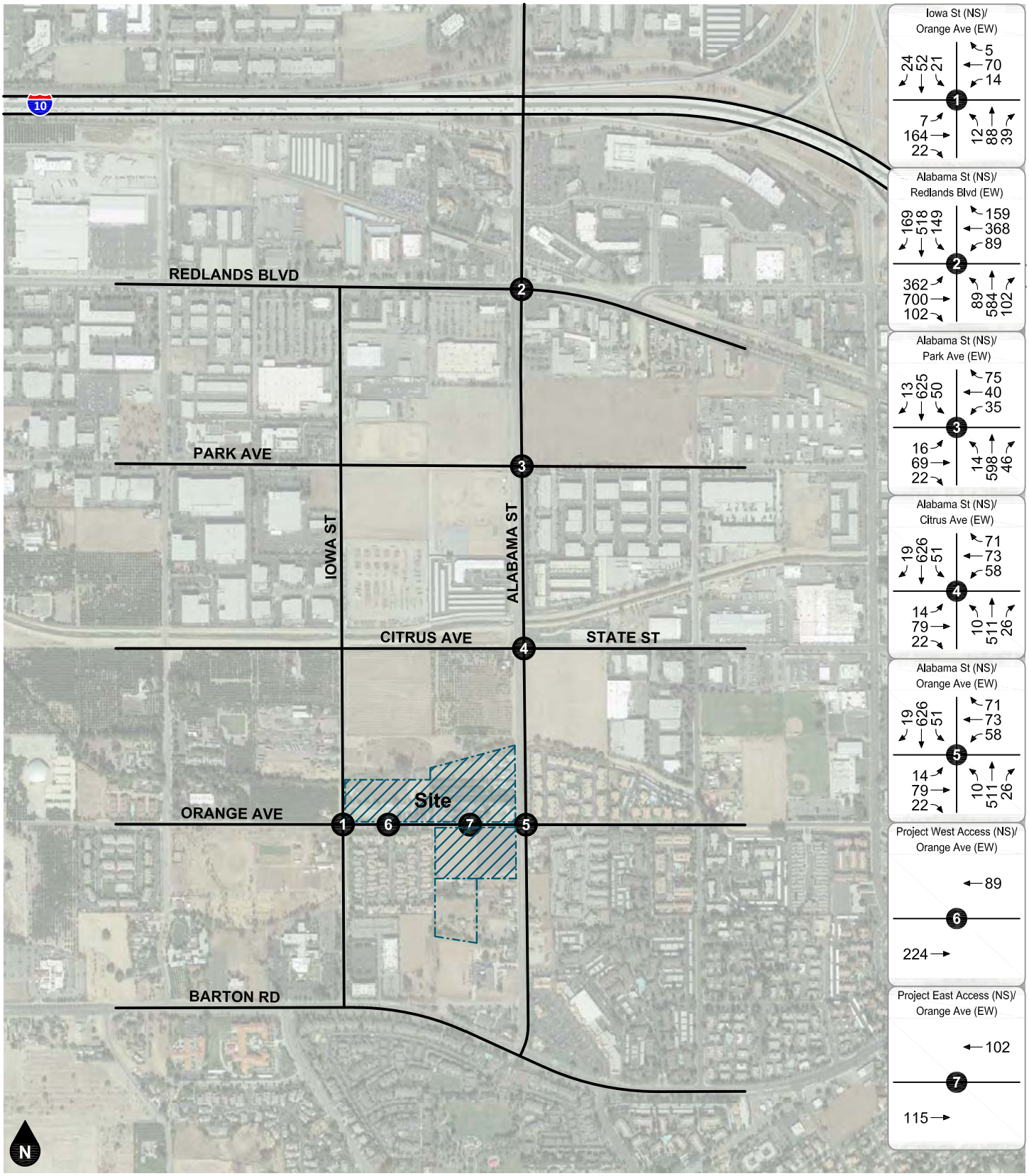
Figure 10
Existing Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 11
Existing AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 12
Existing PM Peak Hour Intersection Turning Movement Volumes

4. PROJECT TRIP FORECASTS

This section describes how project trip generation, trip distribution, and trip assignment forecasts were developed. The forecast project volumes are illustrated on figures contained in this section.

PROJECT TRIP GENERATION

Trip generation rates for daily trips, AM peak hour inbound and outbound trips, and PM peak hour inbound and outbound trips for the proposed land use were obtained from the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017. The number of trips forecast to be generated by the proposed land use are determined by multiplying the trip generation rates for a specific land use by the land use quantity.

The project site is currently occupied with the following land uses: single-family detached residential, plant nursery, and landscape contracting maintenance yard. At the time the traffic counts were obtained, those land uses which would contribute to the existing traffic counts were included in the existing site trip generation credit.

As shown in Table 2, existing project site uses are forecast to generate a total of approximately 140 daily vehicle trips, including 13 trips during the AM peak hour and 17 trips during the PM peak hour. The proposed use is forecast to generate approximately 2,401 daily vehicle trips, including 151 trips during the AM peak hour and 184 trips during the PM peak hour. Thus, the proposed project is forecast to generate a total of approximately 2,261 net new daily vehicle trips, including 138 net new trips during the AM peak hour and 167 net new trips during the PM peak hour (see Table 2).

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Figure 13 and Figure 14 show the forecast outbound and inbound directional distribution patterns for the project, respectively. The project trip distribution patterns are based on review of existing volume data, surrounding land uses, designated truck routes, and the local and regional roadway facilities in the project vicinity.

Based on the identified project trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 15. The AM and PM peak hour intersection turning movement volumes expected from the project are depicted on Figure 16 and Figure 17, respectively.

PROJECT DESIGN FEATURES

This analysis assumes all improvements necessary for site access will be constructed in conjunction with the proposed project as Project Design Features. These are described later in the report under the Site Access section.

Table 2
Project Trip Generation

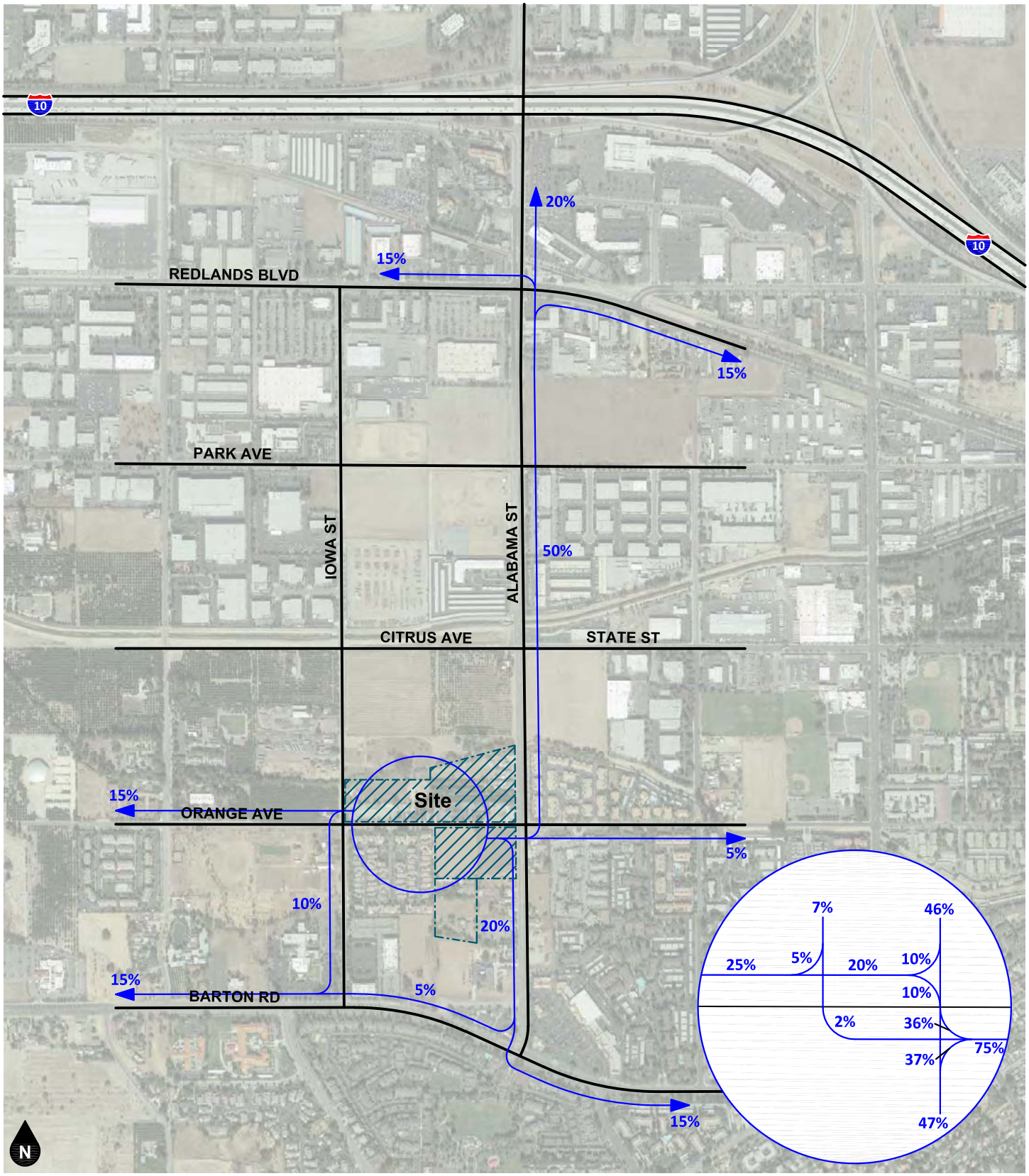
Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			Daily
Land Use	Source[1]	Unit[2]	% In	% Out	Rate	% In	% Out	Rate	Rate
Single-Family Detached Housing	ITE 210	DU	25%	75%	0.74	63%	37%	0.99	9.44
Specialty Trade Contractor	ITE 180	TSF	73%	27%	1.66	32%	68%	1.97	10.22
Nursery Wholesale[a]	ITE 818	AC	43%	57%	0.26	50%	50%	0.45	19.5
Multi-Family Housing	ITE 220	DU	23%	77%	0.46	63%	37%	0.56	7.32

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity[3]	Unit[2]	In	Out	Total	In	Out	Total	Daily
Existing Land Uses									
Single-Family Detached Housing	-8	DU	-1	-5	-6	-5	-3	-8	-76
Specialty Trade Contractor	-4	TSF	-5	-2	-7	-3	-5	-8	-41
Nursery Wholesale	-1.2	AC	0	0	0	0	-1	-1	-23
Subtotal - Existing			-6	-7	-13	-8	-9	-17	-140
Proposed Land Uses									
Multi-Family Housing	328	DU	35	116	151	116	68	184	2,401
TOTAL NET NEW TRIPS			**+29**	**+109**	**+138**	**+108**	**+59**	**+167**	**+2,261**

Notes:

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code.
[a] PM inbound-outbound distribution for nursery are not available; assumed to be 50%-50%.

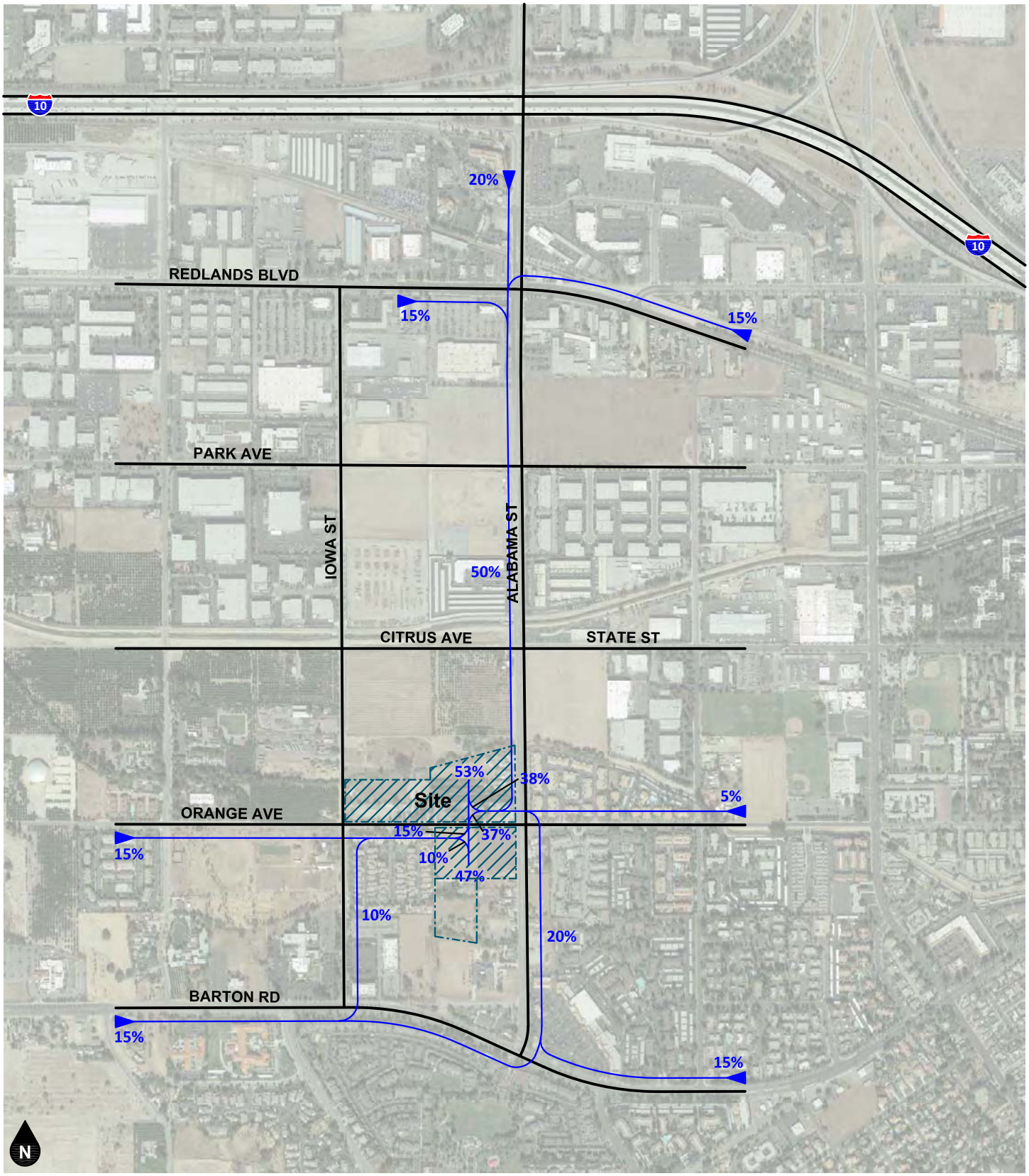
(2) DU = Dwelling Units; TSF = Thousand Square Feet; AC = Acres



Legend

10% Percent From Project

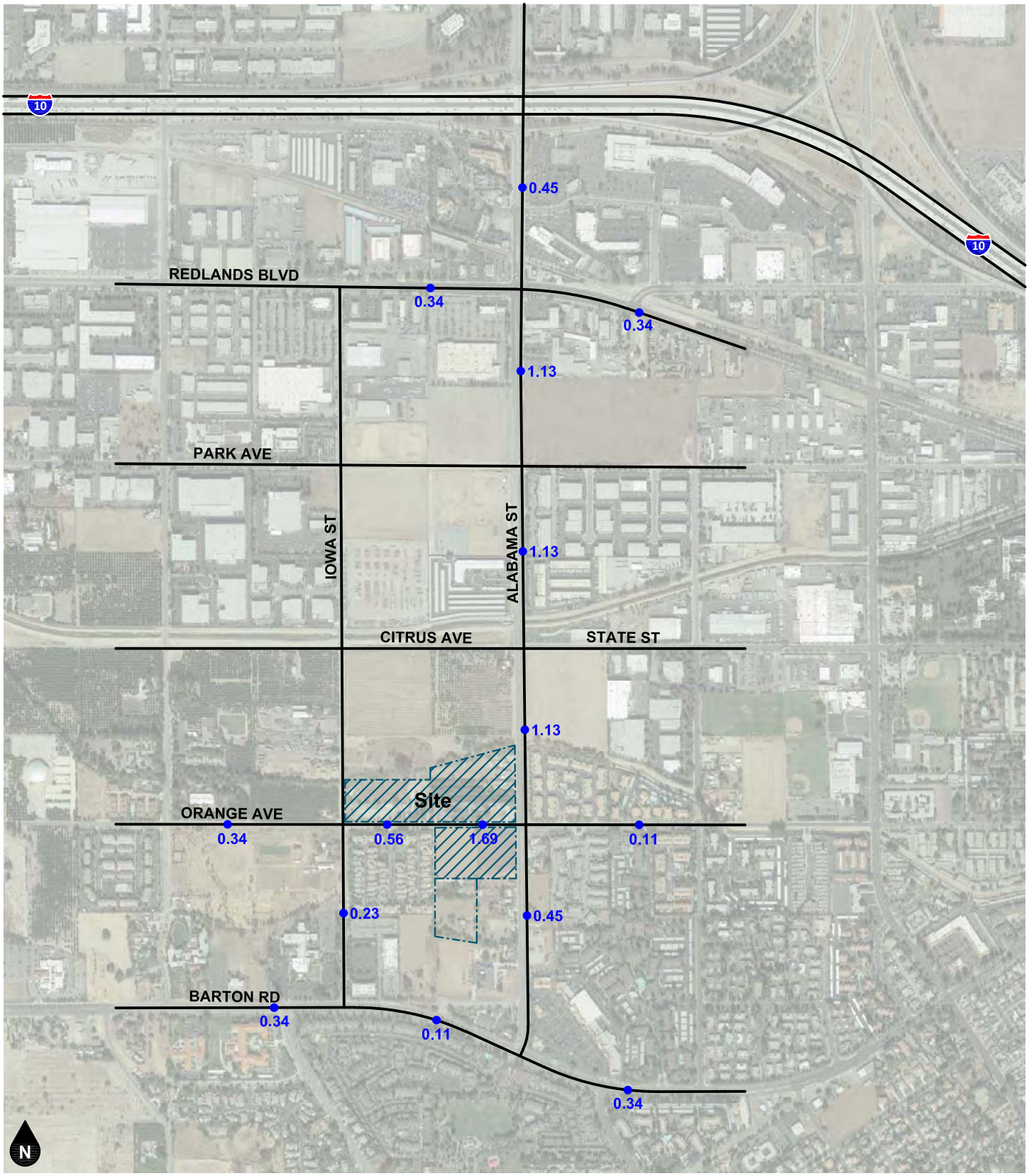
Figure 13
Project Trip Distribution - Outbound



Legend

10% Percent To Project

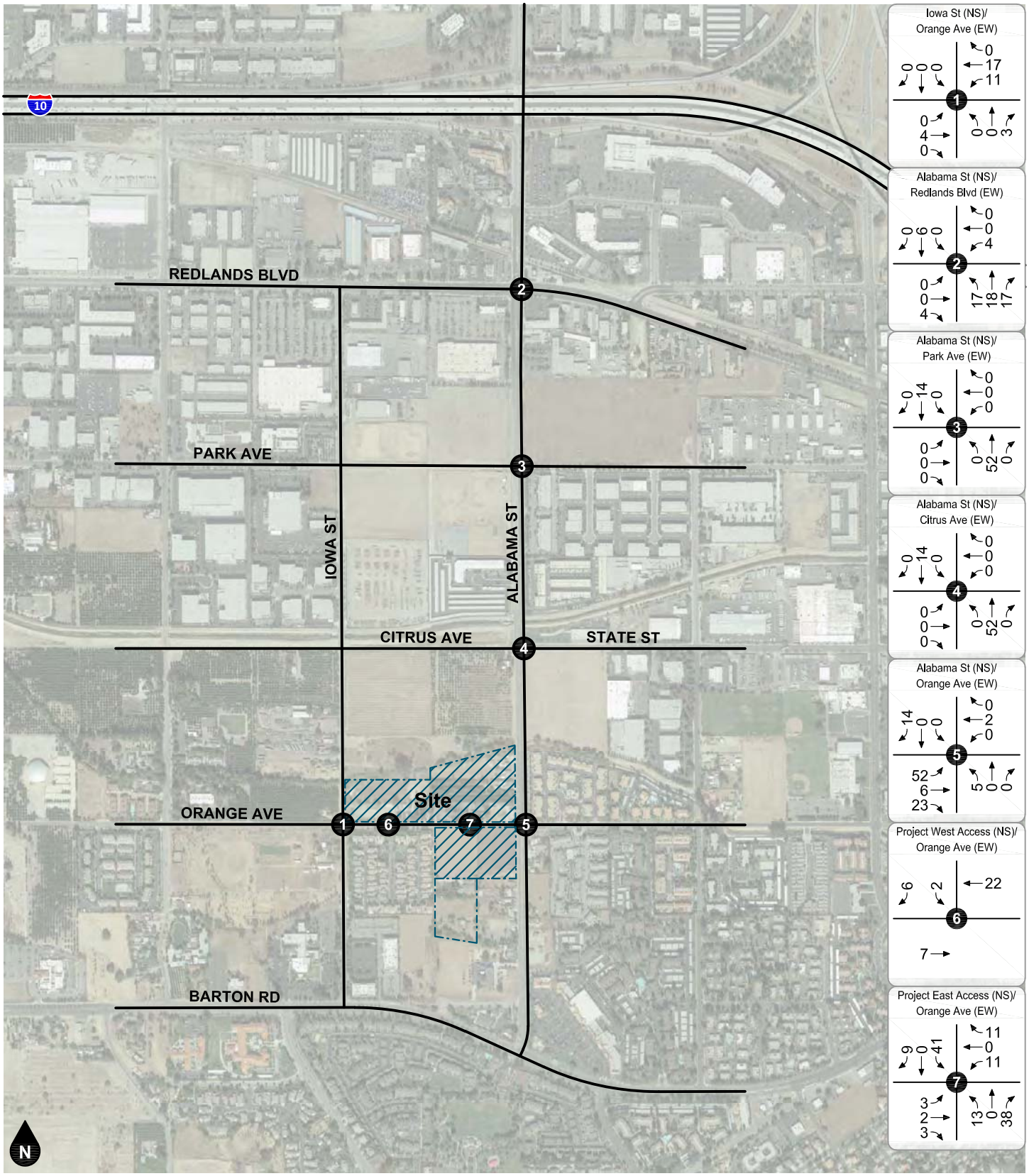
Figure 14
Project Trip Distribution - Inbound



Legend

● 0.34 Vehicles Per Day (1,000's)

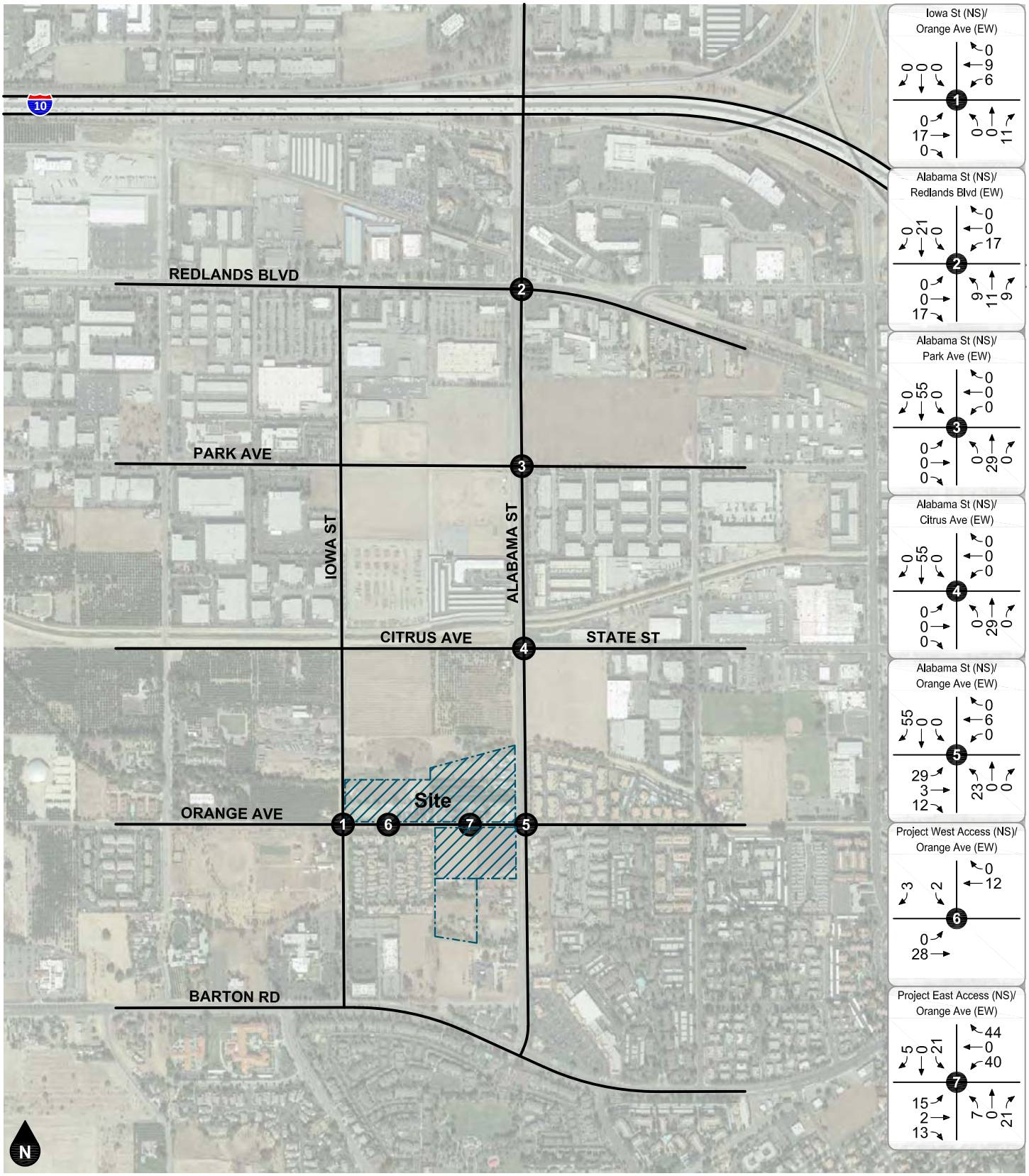
Figure 15
Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 16
Project AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 17
Project PM Peak Hour Intersection Turning Movement Volumes

5. FUTURE VOLUME FORECASTS

This section describes how future volume forecasts for each analysis scenario were developed. Forecast study area volumes are illustrated on figures contained in this section.

OTHER DEVELOPMENT

To account for trips generated by future development, trips generated by pending or approved other development projects in the County of San Bernardino and the Cities of Redlands and Loma Linda were added to the study area. Table 3 shows the trip generation summary for other development projects. Figure 24 shows the other development location map. The growth interpolation from Year 2040 projections as discussed below is assumed to account for any additional trips generated by other development projects located outside the project vicinity and not specifically listed in this report.

Figure 25 shows the forecast average daily traffic volumes for the other developments. Figure 26 and Figure 27 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments in opening year (2020).

For Year 2022 conditions, other development traffic contributions from the adjacent property are included in the other development volumes. Figure 25 shows the forecast average daily traffic volumes for the other development for both Without and With Recipical Access Project. Figure 28 and Figure 29 show the forecast AM and PM peak hour intersection turning movement volumes for trips generated by other developments With Recipical Access Project.

INTERPOLATED MODEL GROWTH (AMBIENT GROWTH)

In addition to other development trips, the Opening Year (2020) and Year 2022 projections have been interpolated by utilizing a portion of the total growth between existing and Year 2040 (SBTAM) traffic volumes.

GENERAL PLAN BUILDOUT (YEAR 2040) PROJECTIONS

General Plan buildout (Year 2040) forecasts have been determined using a growth increment approach with the San Bernardino Transportation Analysis Model (SBTAM) Year 2012 and Year 2040 travel demand model plots. This difference defines the incremental growth in forecast volumes over the 28 year period between 2012 and 2040. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between the current year (2019) and year 2040. For this purpose, linear growth between the Year 2012 base condition and the forecast Year 2040 condition was assumed. Since the increment between the current year and Year 2040 is 21 years of the 28 year time frame, a factor of 0.79 (i.e., 21/28) was used.

To derive AM and PM peak hour intersection turning movement volumes, the traffic volume growth forecasts were further refined using a spreadsheet program developed by the Federal Highway Administration and consistent with traffic volume forecasting procedures outlined in the National Cooperative Highway Research Program Report 255. The spreadsheet program uses a linear programming algorithm to calculate future turning movements based on the relationship of existing intersection turning movements and forecast model growth. The forecast turning movements developed by the spreadsheet program were reviewed for reasonableness and adjusted as necessary to ensure traffic growth. The end results of the post-processing procedures are future traffic volumes suitable for analysis. Travel demand model plots are provided in Appendix D and post-processing worksheets are provided in Appendix E.

General Plan Buildout (Year 2040) Without Project

General Plan Buildout (Year 2040) Without Project volume forecasts were derived from the SBTAM travel demand model and post-processing procedures previously described in this section. General Plan Buildout (Year 2040) Without Project average daily traffic volumes are shown on Figure 31. General Plan Buildout (Year 2040) Without Project AM and PM peak hour intersection turning movement volumes are shown on Figure 32 and Figure 33, respectively.

General Plan Buildout (Year 2040) With Project

General Plan Buildout (Year 2040) With Project volumes were developed by adding project generated trips to the General Plan Buildout (Year 2040) Without Project forecast volumes. General Plan Buildout (Year 2040) With Project average daily traffic volumes are shown on Figure 34. General Plan Buildout (Year 2040) With Project AM and PM peak hour intersection turning movement volumes are shown on Figure 35 and Figure 36, respectively.

CONSTRUCTION TRAFFIC VOLUMES

Compared to the project trip generation, construction of the proposed project is expected to generate significantly less trips. The traffic impacts of construction activity will be minor and temporary. To further lessen the impact of construction trips, the project will be required to comply with all standard conditions pertaining to construction including work hours, traffic control plan, haul route, access, oversized-vehicle transportation permit, site security, noise, vehicle emissions, and dust control. Whenever possible, construction related trips should be restricted to off-peak hours.

Table 3 (3 of 11)

Cumulative Other Development Trip Generation

City/ County	ID	Address/Name	Land Use	Source[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
							In	Out	Total	In	Out	Total	
County	1	The Redlands [3]	Multi-Family Residential	221	360	DU	32	76	108	83	57	140	1,955
City of Redlands	2	California Street High-Cube Distribution [4]	Warehouse-Cars	152	771.840	TSF	49	18	67	25	49	74	1,031
			Warehouse-Trucks				31	13	44	15	31	46	647
	3	Redlands Commerce Center [5]	Warehouse-Cars	152	1100.451	TSF	70	26	96	35	70	105	1,471
			Warehouse-Trucks				46	18	64	22	46	68	952
County of San Bernardino	4	Pioneer Industrial Center Expansion [6]	Warehouse-Cars	150	216.050	TSF	14	5	19	7	14	21	289
			Warehouse-Trucks				10	3	13	3	10	13	189
	5	Redlands Distribution Center Building 10 [7]	Warehouse-Cars	152	542.980	TSF	33	15	47	16	36	52	726
			Warehouse-Trucks				21	9	30	11	23	34	470
	6	Redlands Distribution Center Building 13 [8]	Warehouse-Cars	152	289.327	TSF	18	7	25	9	18	27	387
			Warehouse-Trucks				13	3	16	5	13	18	252
	7	Perricone Industrial Center [9]	Warehouse-Cars	150	165.980	TSF	10	4	15	5	11	16	222
			Warehouse-Trucks				6	3	9	3	7	10	144
	8	Rossmore Enterprises [10]	Warehouse-Cars	152	593.916	TSF	34	13	47	17	34	51	713
			Warehouse-Trucks				26	10	36	15	26	41	577
	9	Redlands Distribution Center Building 17 [11]	Warehouse-Cars	152	777.620	TSF	47	21	68	23	51	74	1,040
			Warehouse-Trucks				30	13	43	16	33	49	673
	10	Chiming Industrial Project [12]	Warehouse-Cars	152	614.328	TSF	39	15	54	20	39	59	821
			Warehouse-Trucks				25	10	35	13	25	38	531
	11	Alabama Venture 1 [13]	Warehouse-Cars	152	313.470	TSF	20	7	27	10	20	30	419
			Warehouse-Trucks				13	3	16	8	13	21	270
City of Redlands	12	NE of Pioneer/ Texas	Single Family Residential	210	82	DU	16	45	61	51	30	81	774
	13	NEC Texas/Pioneer	Single Family Residential	210	12	DU	2	7	9	7	5	12	113
	14	Orange/Lugonia	Single Family Residential	210	39	DU	7	22	29	24	15	39	368
			Multi-Family Residential	220	189	DU	21	66	87	66	40	106	1,383
	15	SWC Lugonia/Texas	Multi-Family Residential	220	80	DU	9	28	37	28	17	45	586
	16	921 New York Street	Car Dealership	840	2.890	TSF	4	1	5	3	4	7	80
County of San Bernardino	17	Mountain Grove at Citrus Plaza [14]	Apartments	220	281	DU	28	115	143	112	62	174	1,888
			Hotel	310	168	RM	57	37	94	52	47	99	1,373
			Commercial Retail	820	338.060	TSF	105	63	168	391	426	817	8,639
	18	Redlands Crossing [15]	Mixed Commercial Retail	820	284.500	TSF	543	433	976	698	703	1,401	19,481
	19	The Crossings [16]	Apartments	220	340	DU	34	139	173	136	75	211	2,261
			Specialty Retail	826	6.377	TSF	5	3	8	8	10	18	283
City of Redlands	20	Industrial Park [17]	Hotel	310	77	RM	24	17	41	24	23	47	629
	21	1700 Orange Tree Lane [18]	Hotel	310	124	RM	39	27	66	39	35	74	1,013
	22	Lugonia Marriott	Hotel	310	88	RM	25	16	41	27	26	53	736
	23	SEC Park / Iowa[19]	Warehouse-Cars	150	153.994	TSF	10	3	13	4	11	15	138
			Warehouse-Trucks				16	5	21	6	17	23	213
	24	Alabama @ Park [20]	Light Industrial-Cars	110	170.443	TSF	109	15	124	16	115	131	936
			Light Industrial-Trucks				72	7	79	11	72	83	628
	25	Iowa @ Park [21]	Light Industrial-Cars	110	78.565	TSF	50	7	57	8	52	60	431
			Light Industrial-Trucks				36	0	36	7	34	41	181
	26	614, 624, 634 Nevada	Light Industrial-Cars	110	16.676	TSF	11	1	12	2	11	13	91
			Light Industrial-Trucks				8	0	8	1	8	9	38
	27	1890 Orange Avenue	Student Services Building	520	1.952	TSF	6	4	10	1	1	2	30
	28	Eureka/Stuart	Shopping Center	820	88.075	TSF	121	75	196	237	258	495	5,515
			Pass-by Credit				0	0	0	-81	-87	-168	0
	29	330 3rd St	Restaurant/Retail Food Hall	932	14.000	TSF	19	10	29	109	89	198	4,412
			Pass-by Credit				0	0	0	-48	-39	-87	0
	30	317 Brookside	Multi-Family Residential	220	8	DU	1	3	4	3	1	4	59
	31	219 Cajon Street	Dentist Office	720	0.363	TSF	1	0	1	0	1	1	13
	32	212 & 213 Brookside	Redevelopment Area	-	2	Demo	-	-	-	-	-	-	-
	33	380-400 Kansas St	Parking Lot	-	5.500	TSF	-	-	-	-	-	-	-
	34	130 Tennessee	School	520	1.200	TSF	3	3	6	1	0	1	19

Table 3 (4 of 11)

Cumulative Other Development Trip Generation

City/ County	ID	Address/Name	Land Use	Source[1]	Quantity	Units[2]	AM Peak Hour			PM Peak Hour			Daily
							In	Out	Total	In	Out	Total	
City of Redlands	35	Sunnyside/Linda Vista	Single Family Residential	210	11	DU	2	6	8	7	4	11	104
	36	350 Terracina Blvd	Hospital	610	8.530	TSF	5	3	8	3	5	8	113
	37	1619 Laurel Ave	Parking Lot	-			-	-	-	-	-	-	-
	38	NWC Alabama-Park Warehouse	Warehouse-Cars	150	154.000	TSF	10	3	13	4	11	15	138
			Warehouse-Trucks				16	5	21	6	17	23	213
City of Loma Linda	39	TTM 18963 Citrus Lane[23]	Single Family Residential	210	35	DU	7	20	27	22	13	35	333
	40	Citrus Glen [24]	Single Family Residential	210	95	DU	18	53	71	60	35	95	904
	41	Lewis Commercial Development [25]	Commercial Center	820	132.000	81	213	302	327	629	6,881	480	4,005
			Average Pass-by ITE(820)	-	0.000	0	0	-103	-111	-214	0	2	26
			Subtotal		132.000	81	213	199	216	415	6,881	482	4,031
	42	Citrus Trails Master Plan [26]	Residential	210/220	586	DU	75	204	279	223	141	364	4,008
			Commercial Center	820	309.060	TSF	190	116	306	601	651	1,252	12,949
			City Park	410	21.8	AC	0	0	0	1	1	2	14
			Internal Capture[10]	-	15.2/14.7	%	-	-	-	(125)	(121)	(246)	(2,493)
			Average Pass-by ITE(820)	-	34% PM	%	-	-	-	(204)	(222)	(426)	-
			Subtotal				265	320	585	496	450	946	14,478
	43	Phase Three Concept SPA-D Specific Plan [25]	Residential	210/220	481	DU	57	181	238	185	110	295	3,648
			Commercial Center	820	155.730	TSF	142	87	229	362	392	754	8,125
			Community Overlay	575/590	25.000	TSF	13	7	20	33	38	71	702
			City Park	410	26.5	AC	0	0	0	1	2	3	20
			Internal Capture[10]	-	15.3/13.8	%	0	0	0	(84)	(76)	(160)	(1,801)
			Average Pass-by ITE(820)	-	34% PM	%	0	0	0	(123)	(133)	(256)	0
			Subtotal				212	275	487	374	333	707	10,694
	44	Mission Middle School [27]	Middle School	522	1330	STU	412	359	771	106	120	226	2,833
TOTAL							3,129	2,687	5,620	3,797	10,557	7,540	99,931

Notes:

(1) Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code, unless otherwise noted.

(2) DU = Dwelling Units; TSF = Thousand Square Feet; PCE = Passenger Car Equivalent; RM = Hotel Rooms; AC = Acres; EMP = Employees.

(3) Source: The Redlands Traffic Impact Analysis (Revised), Kunzman Associates, Inc. (July 15, 2017).

(4) Source: California Street High-Cube Distribution Warehouse Traffic Impact Analysis, Urban Crossroads, Inc. (August 9, 2013).

(5) Source: Redlands Commerce Center Buildings 1 and 2 Traffic Impact Analysis (Revised), Kunzman Associates, Inc. (September 5, 2014).

(6) Source: Pioneer Industrial Center Expansion Traffic Impact Analysis, Kunzman Associates, Inc. (August 11, 2014).

(7) Source: Redlands Distribution Center Building 10, Albert A. Webb Associates. (January 7, 2015).

(8) Source: Redlands Distribution Center Building 13 Traffic Impact Analysis, Kunzman Associates, Inc. (June 12, 2013).

(9) Source: Perricone Industrial Center Traffic Impact Analysis (Revised), Albert A. Webb Associates. (January 7, 2015).

(10) Source: Rossmore Enterprises Project Traffic Impact Analysis, Kunzman Associates, Inc. (July 11, 2013).

(11) Source: Prologis Redlands Distribution Center Trip Generation Comparison, Kunzman Associates, Inc. (December 13, 2016).

(12) Source: Chiming Inc. Industrial Project Traffic Impact Analysis (Revised), Kunzman Associates, Inc. (September 10, 2014).

(13) Source: Alabama Venture Project1 Traffic Impact Analysis (Revised), Kunzman Associates, Inc. (September 10, 2014).

(14) Source: Mountain Grove at Citrus Plaza Project Traffic Impact Analysis Peer Review, Kunzman Associates, Inc. (December 12, 2007).

(15) Source: Redlands Crossing Traffic Impact Analysis, Urban Crossroads, Inc. (November 2, 2011).

(16) Source: Crossings at Redlands Traffic Impact Analysis, Kunzman Associates, Inc. (October 23, 2014).

(17) Source: Traffic Impact Analysis Homes2 Suites By Hilton Redlands , Transpogroup (February 14, 2017).

(18) Source: 1700 Orange Tree Lane Hotel Traffic Impact Study, RK Engineering, Inc. (July 6, 2017).

(19) Source: Iowa and Park Warehouse Project Traffic Impact Analysis REVISED, Kunzman Associates (February 22, 2018).

(20) Source: Traffic Study Alabama @ Park Light Industrial, LSA, Inc. (August 14, 2013).

(21) Source: Traffic Study Iowa @ Park Light Industrial, LSA, Inc. (August 14, 2013).

(22) Source: Traffic Study Scoping Agreement submitted March 8, 2018.

(23) Source: Tentative Tract Map No. 18963 Traffic Impact Analysis, Kunzman Associates, Inc. (August 6, 2014).

(24) Source: Orchard Heights Traffic Impact Analysis, Kunzman Associates, Inc. (September, 2015).

(25) Source: Phase Three Concept SPA-D Specific Plan Traffic Impact Analysis, Kunzman Associates, Inc. (March 9, 2018).

(26) Source: Citrus Trails Master Plan Traffic Impact Analysis, Kunzman Associates, Inc. (September 21, 2016).

(27) Source: Redlands USD Middle School 5 Traffic Impact Analysis, Kunzman Associates, Inc. (July 13, 2013).

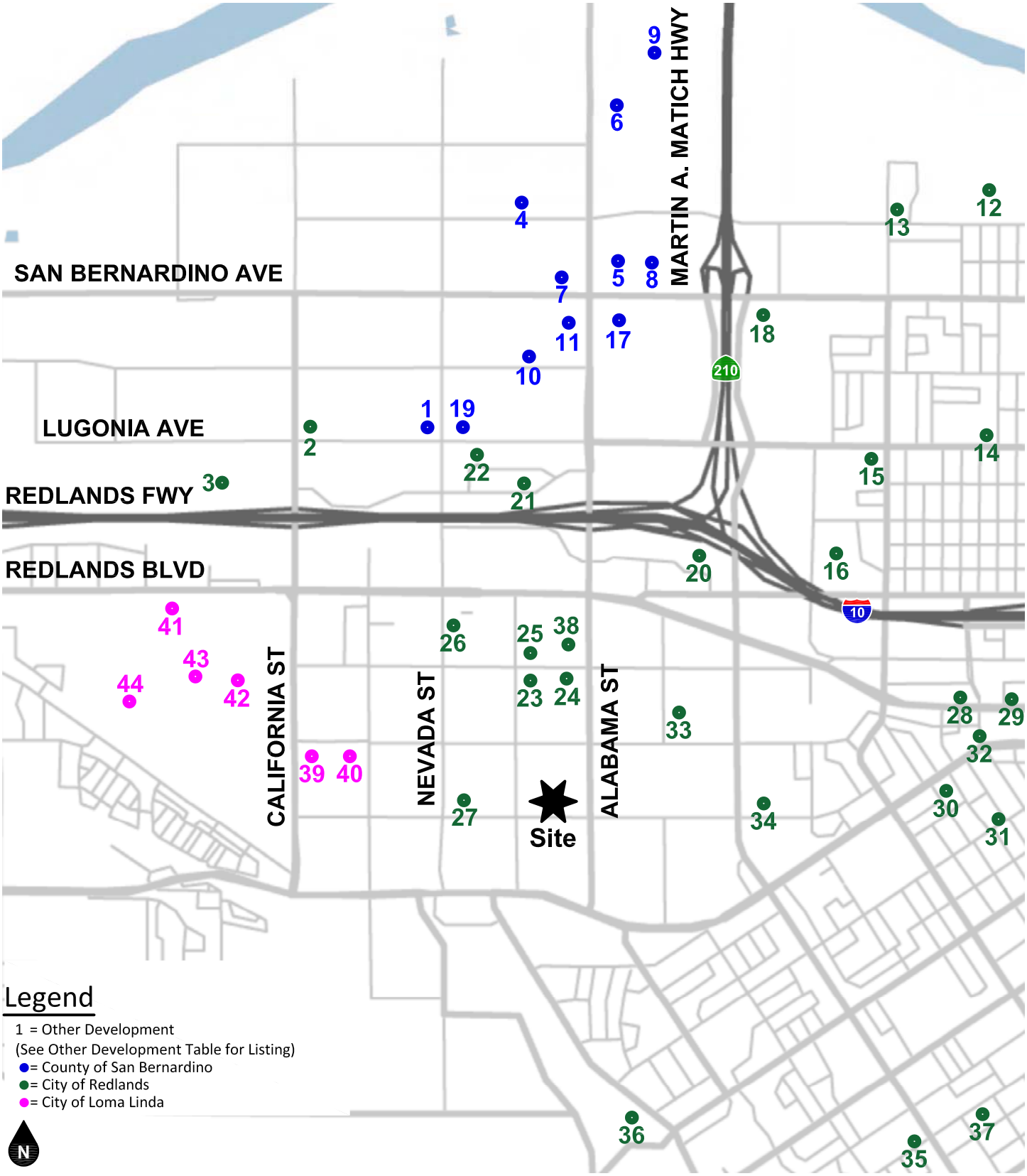
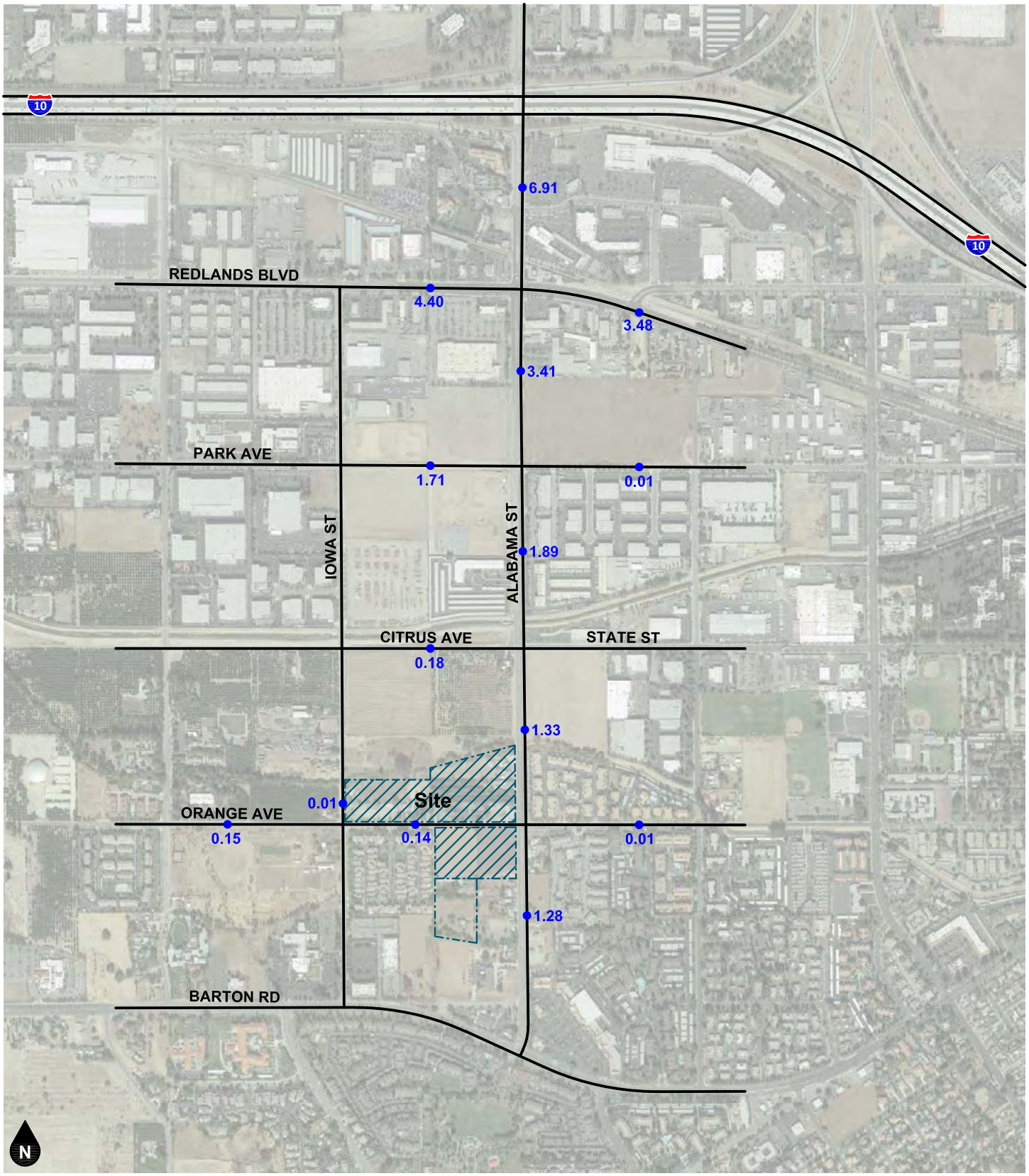


Figure 18
Other Development Traffic Analysis Zone Map



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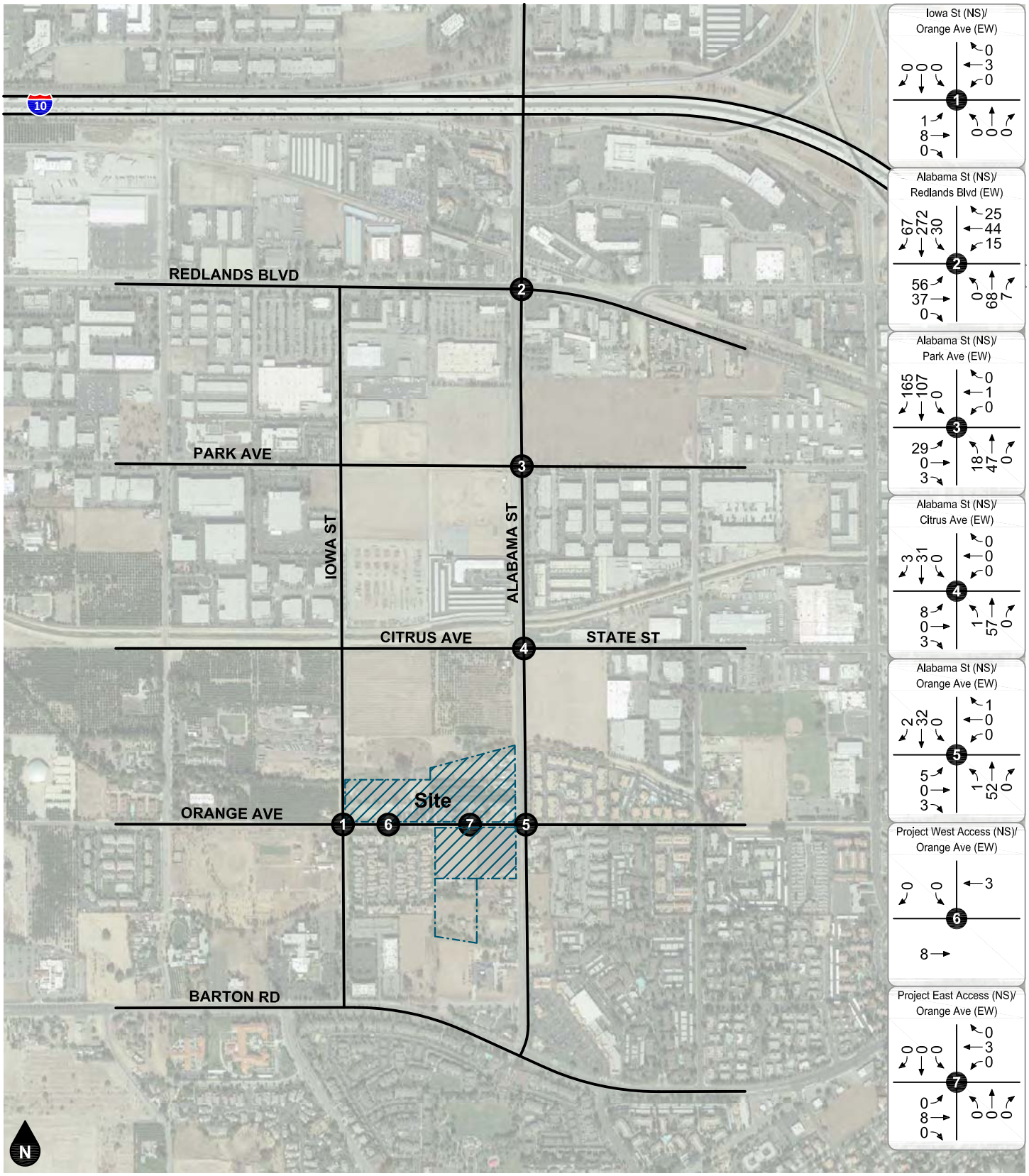
●2.6 Vehicles Per Day (1,000's)

Figure 19
Other Development Average Daily Traffic Volumes



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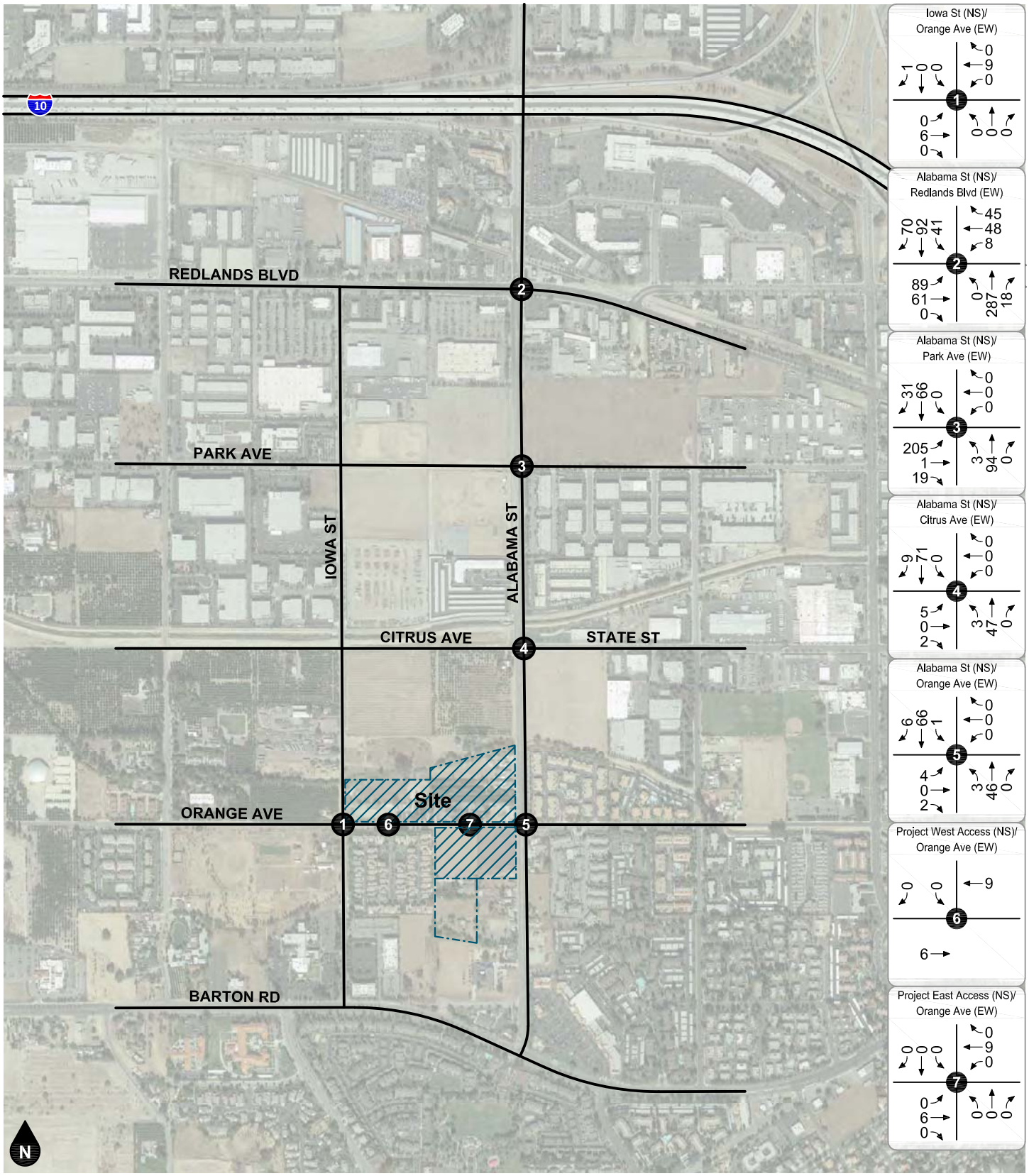
(#) Study Intersection

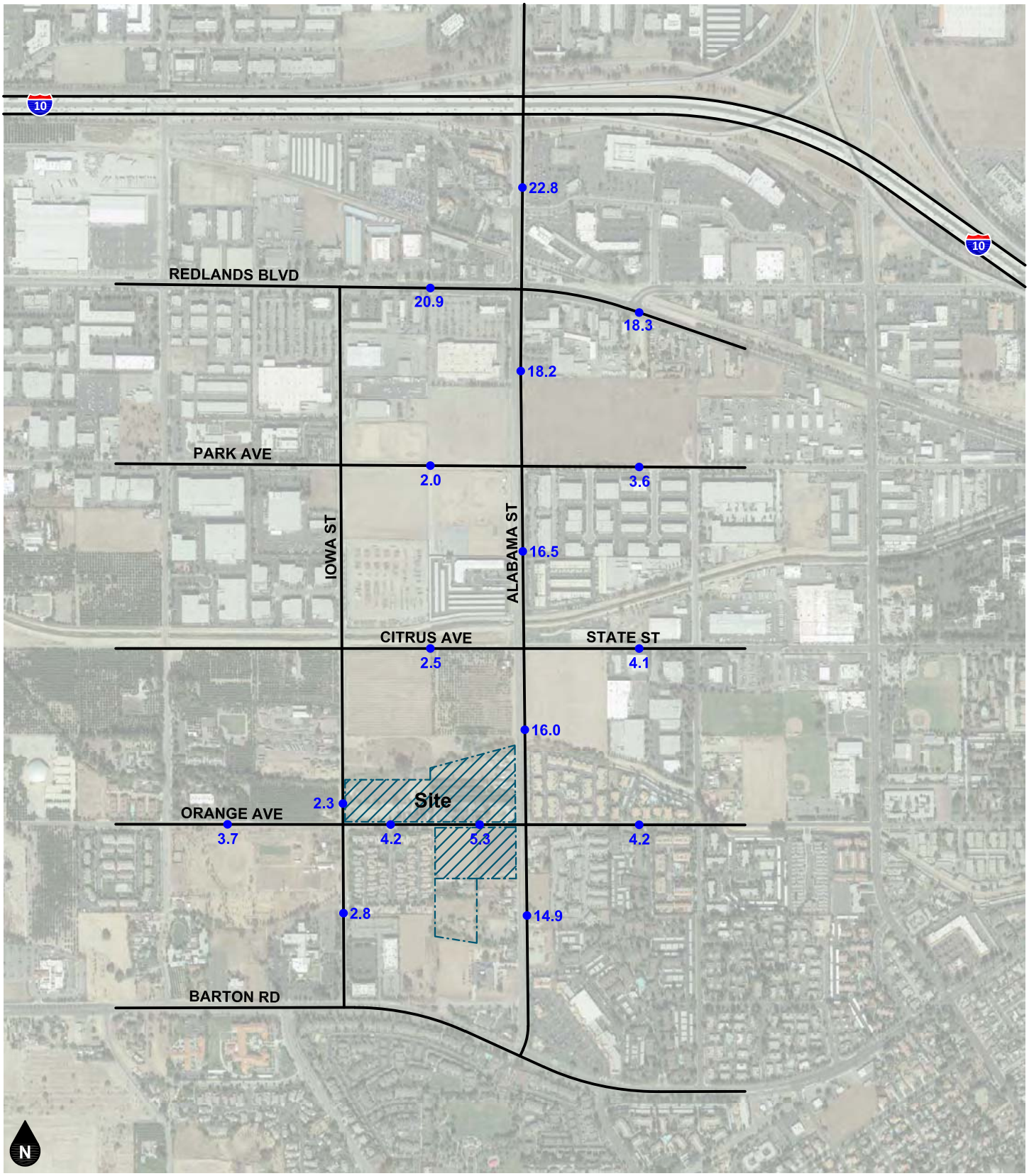
Figure 20
Other Development
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

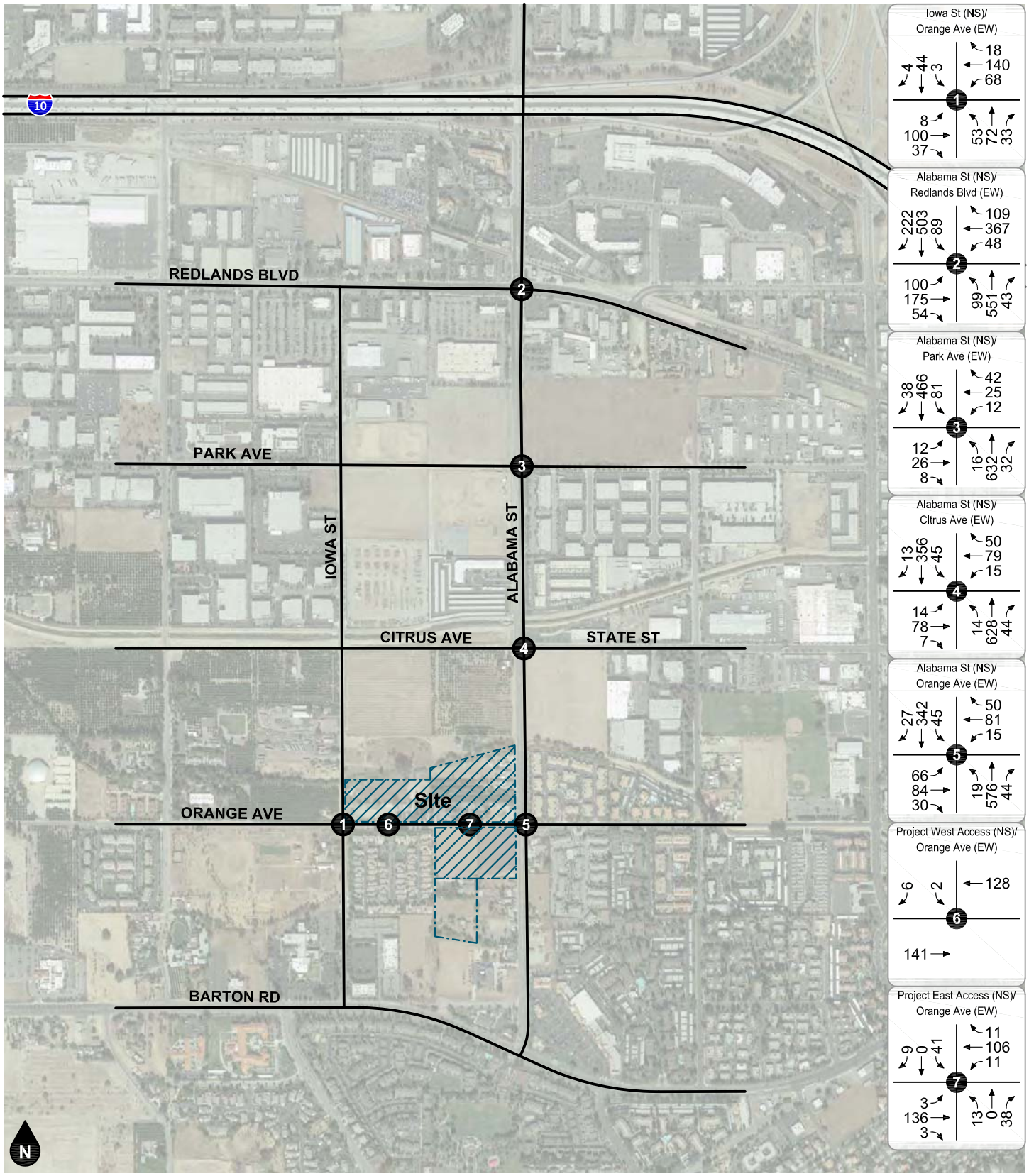
Figure 21
Other Development
PM Peak Hour Intersection Turning Movement Volumes



Legend

●2.6 Vehicles Per Day (1,000's)

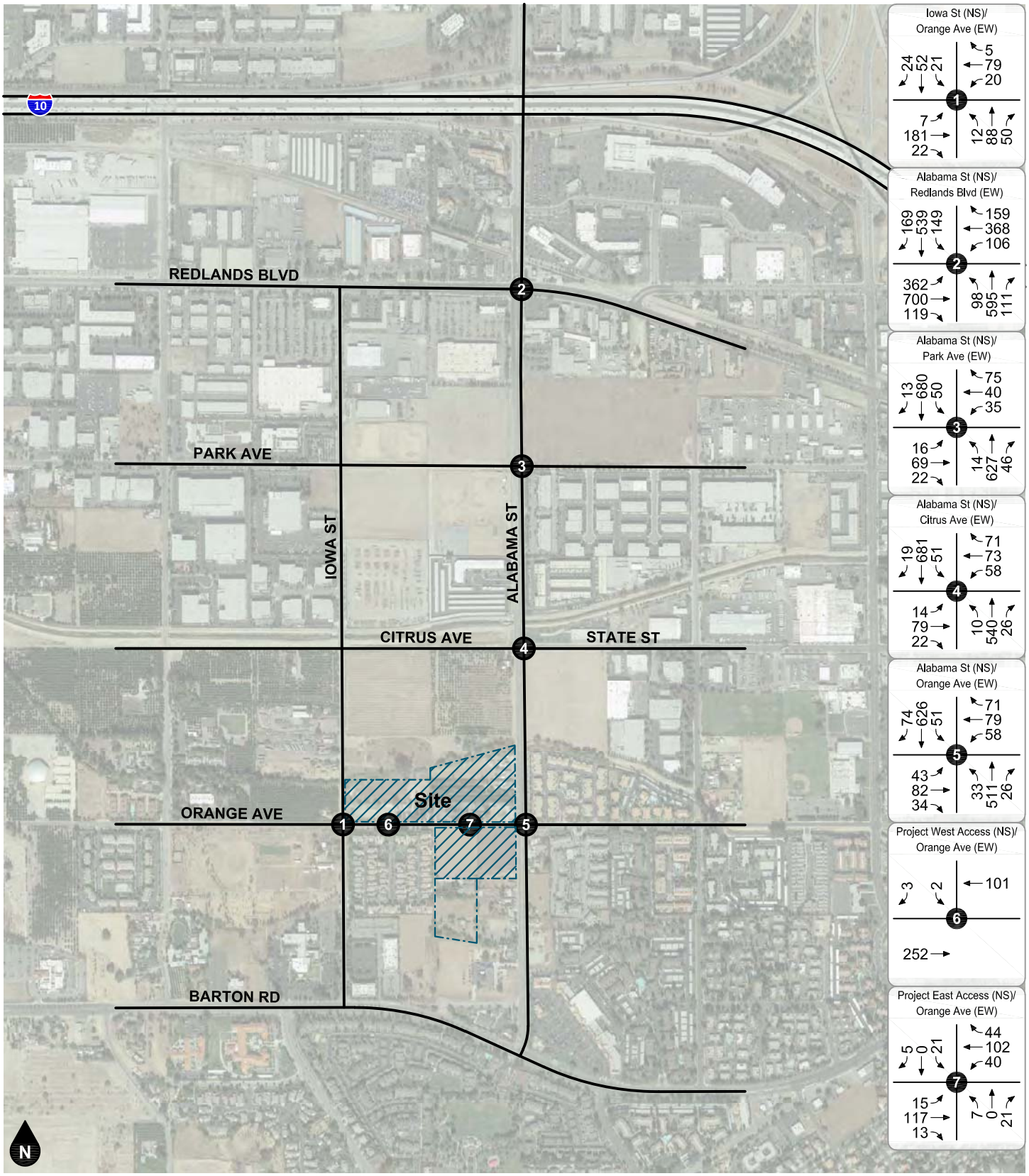
Figure 22
Existing Plus Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

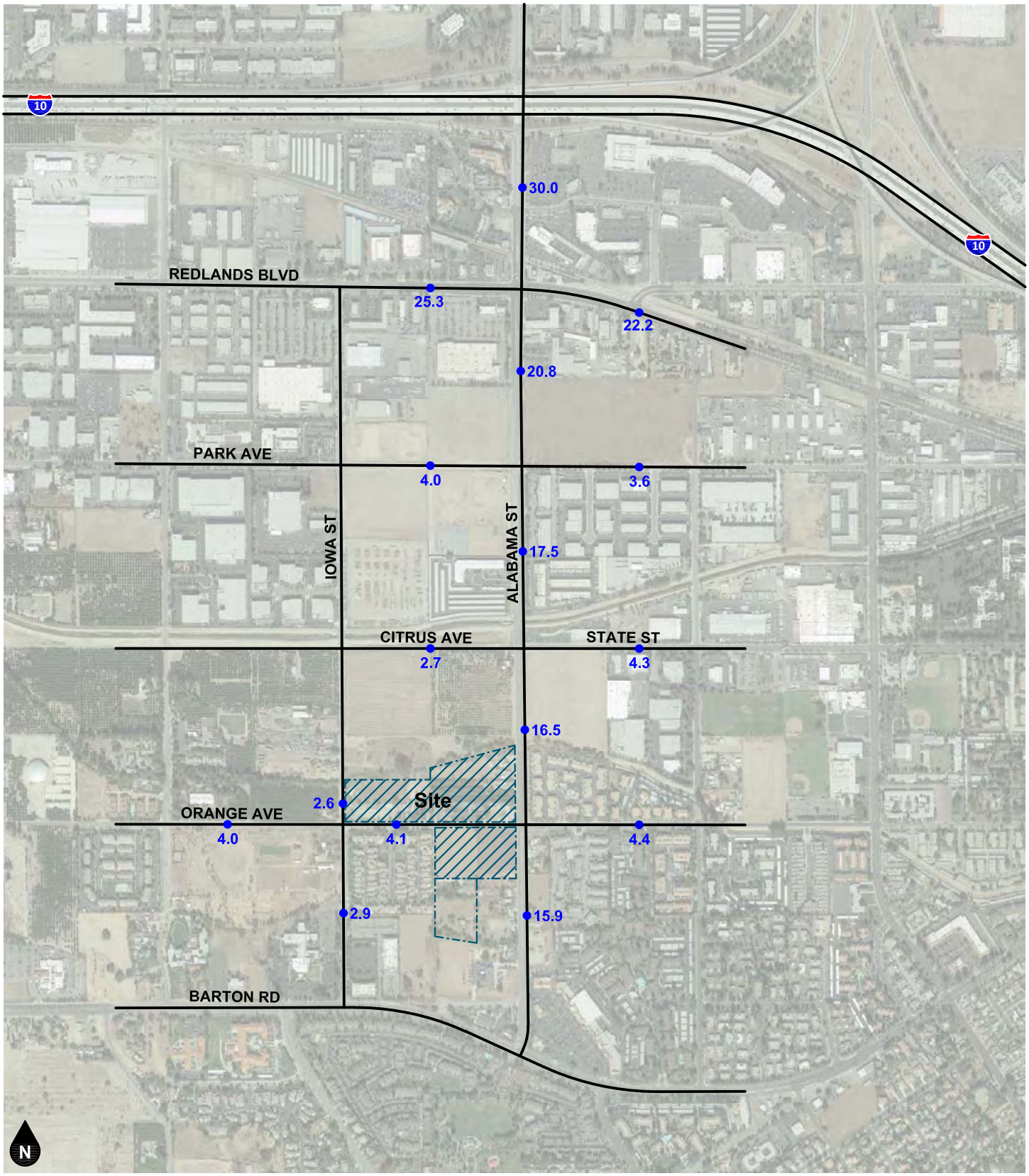
Figure 23
Existing Plus Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

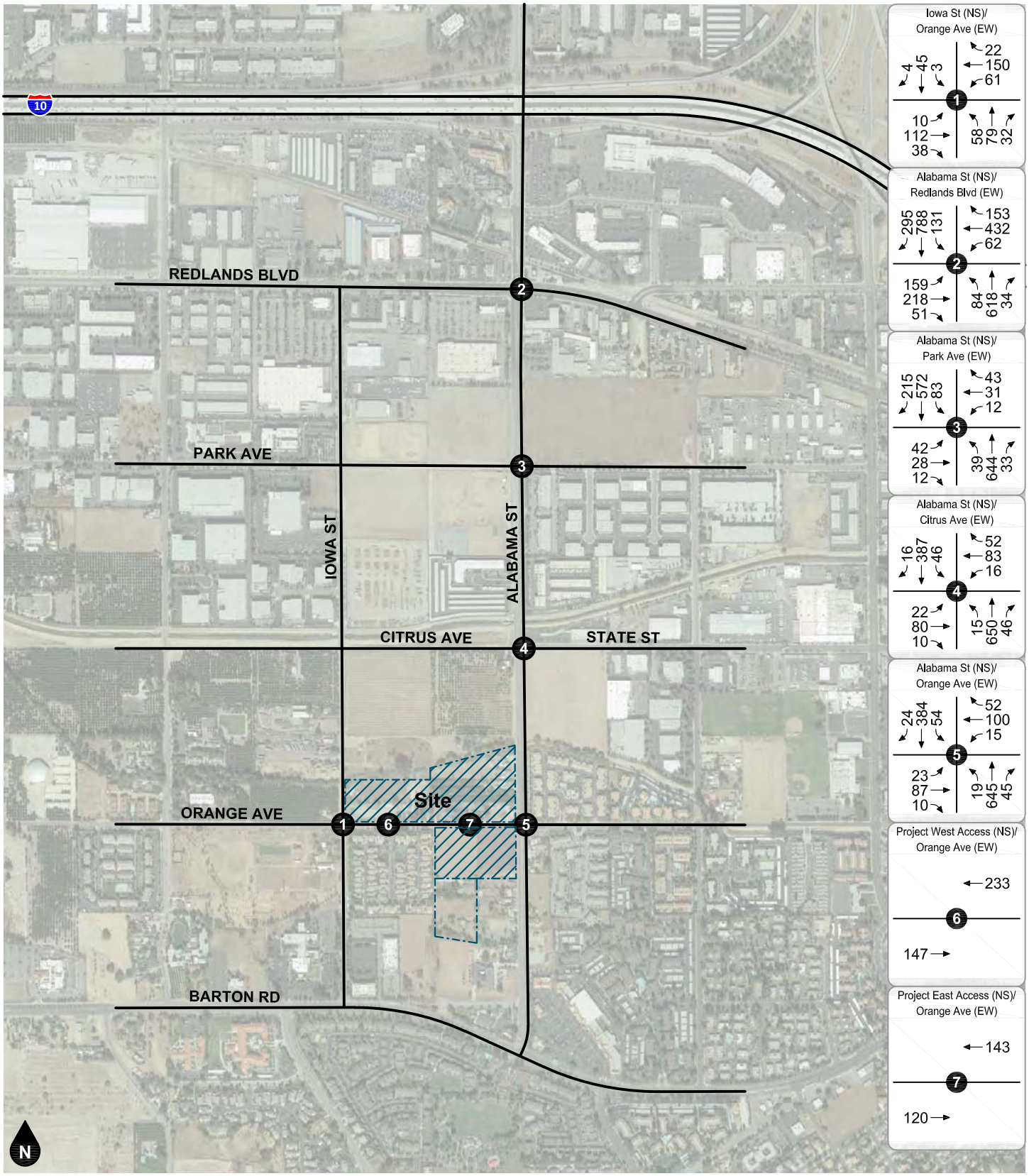
Figure 24
Existing Plus Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●2.6 Vehicles Per Day (1,000's)

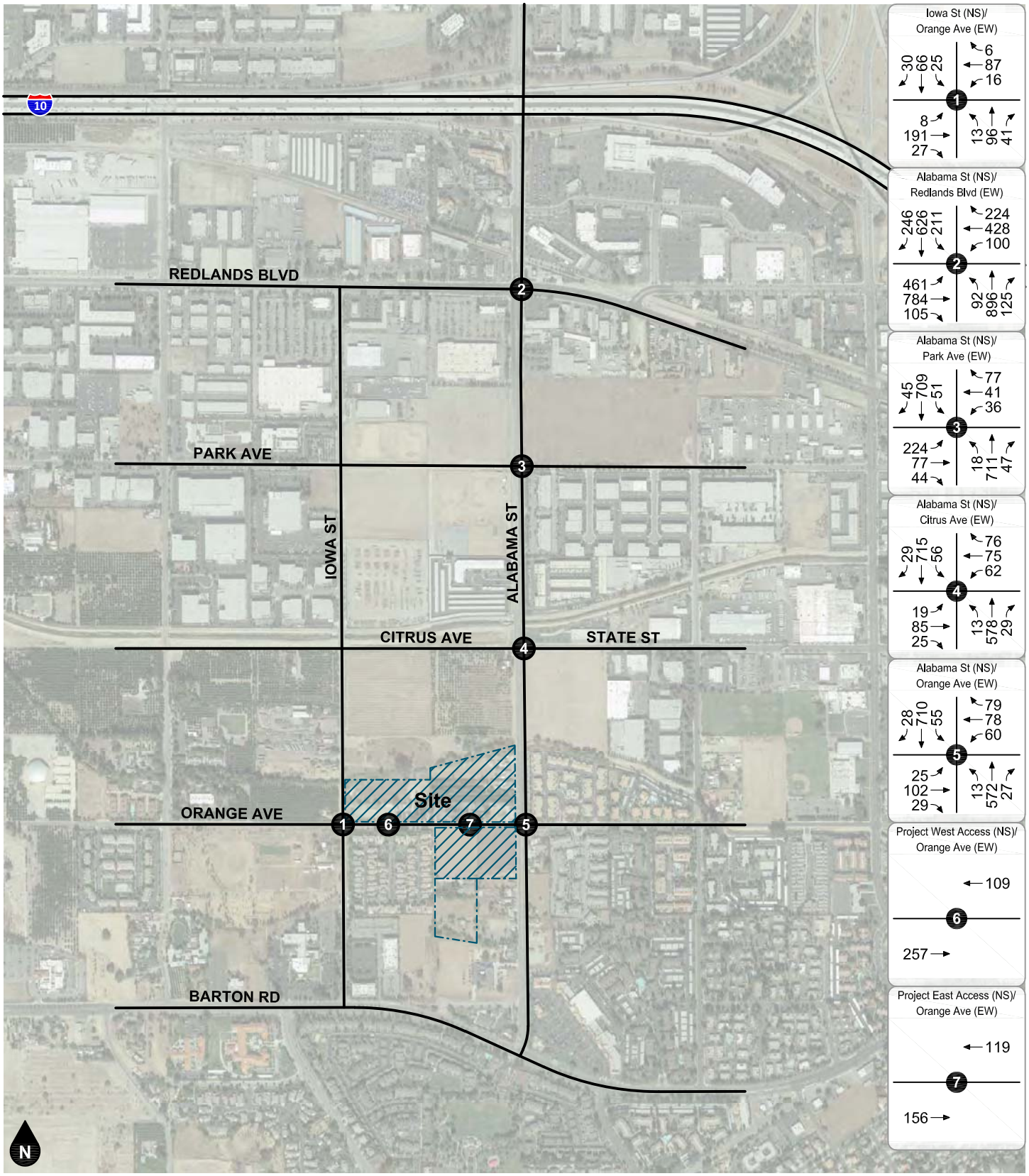
Figure 25
Opening Year (2020) Without Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

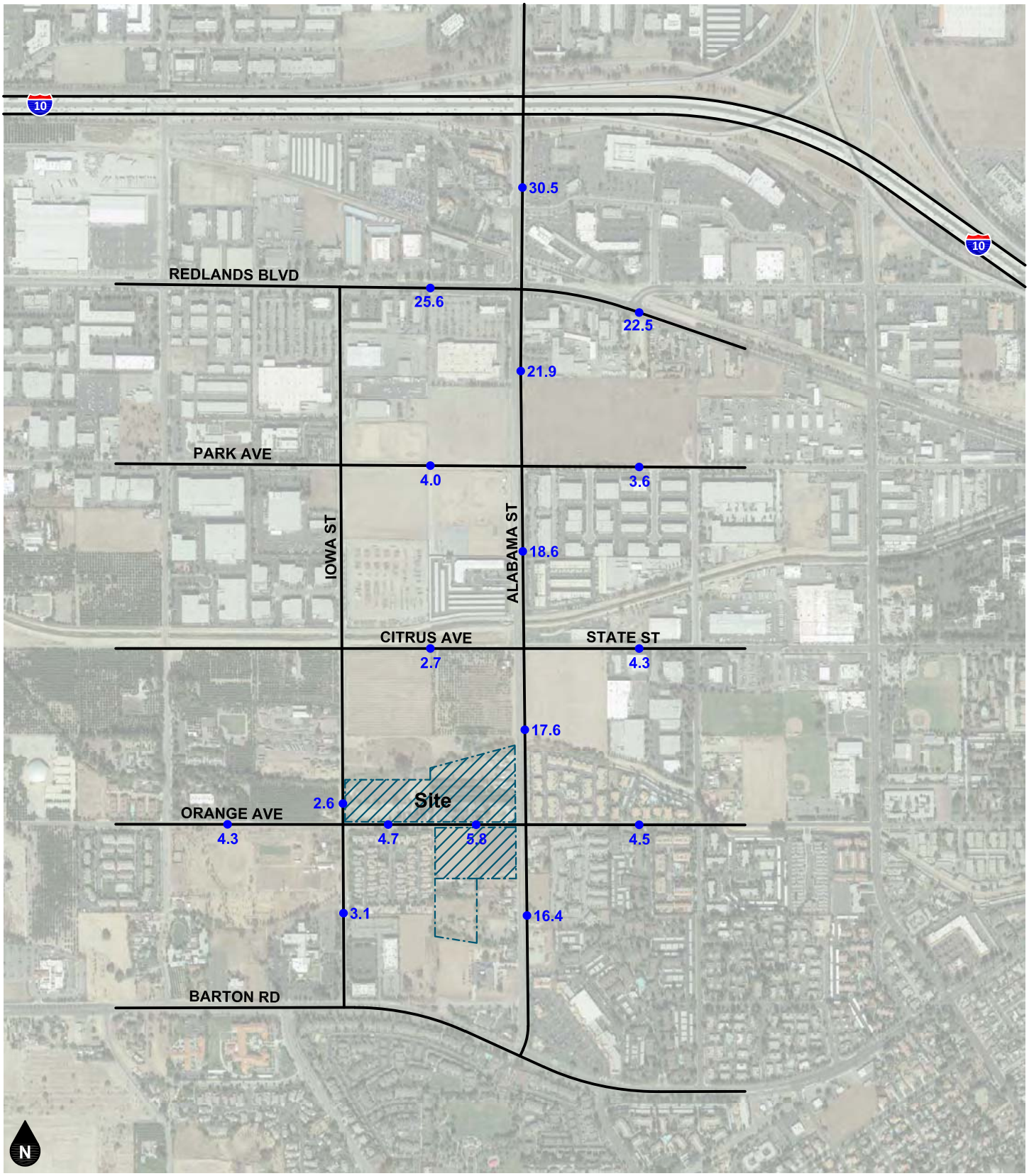
Figure 26
Opening Year (2020) Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

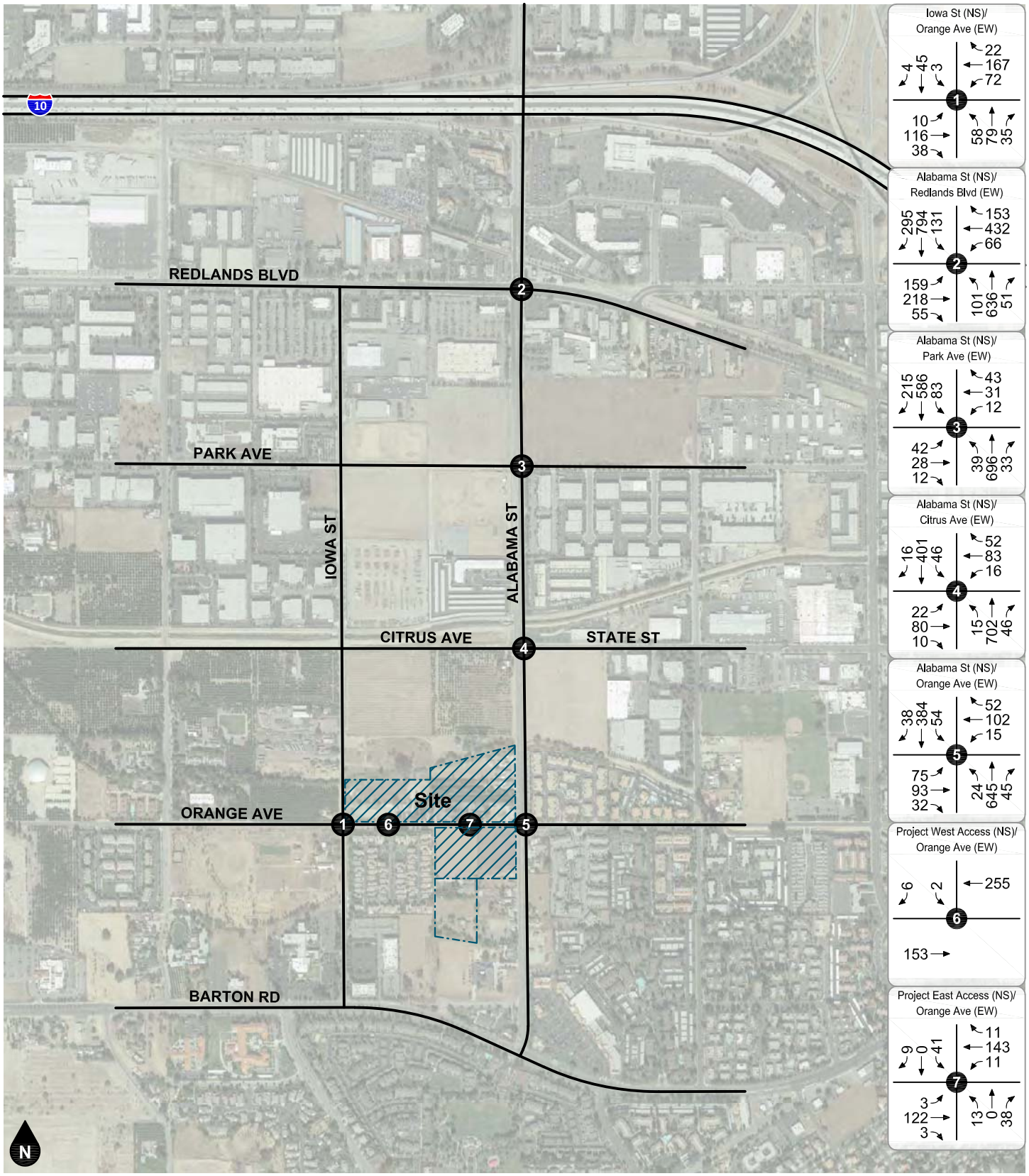
Figure 27
Opening Year (2020) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●2.6 Vehicles Per Day (1,000's)

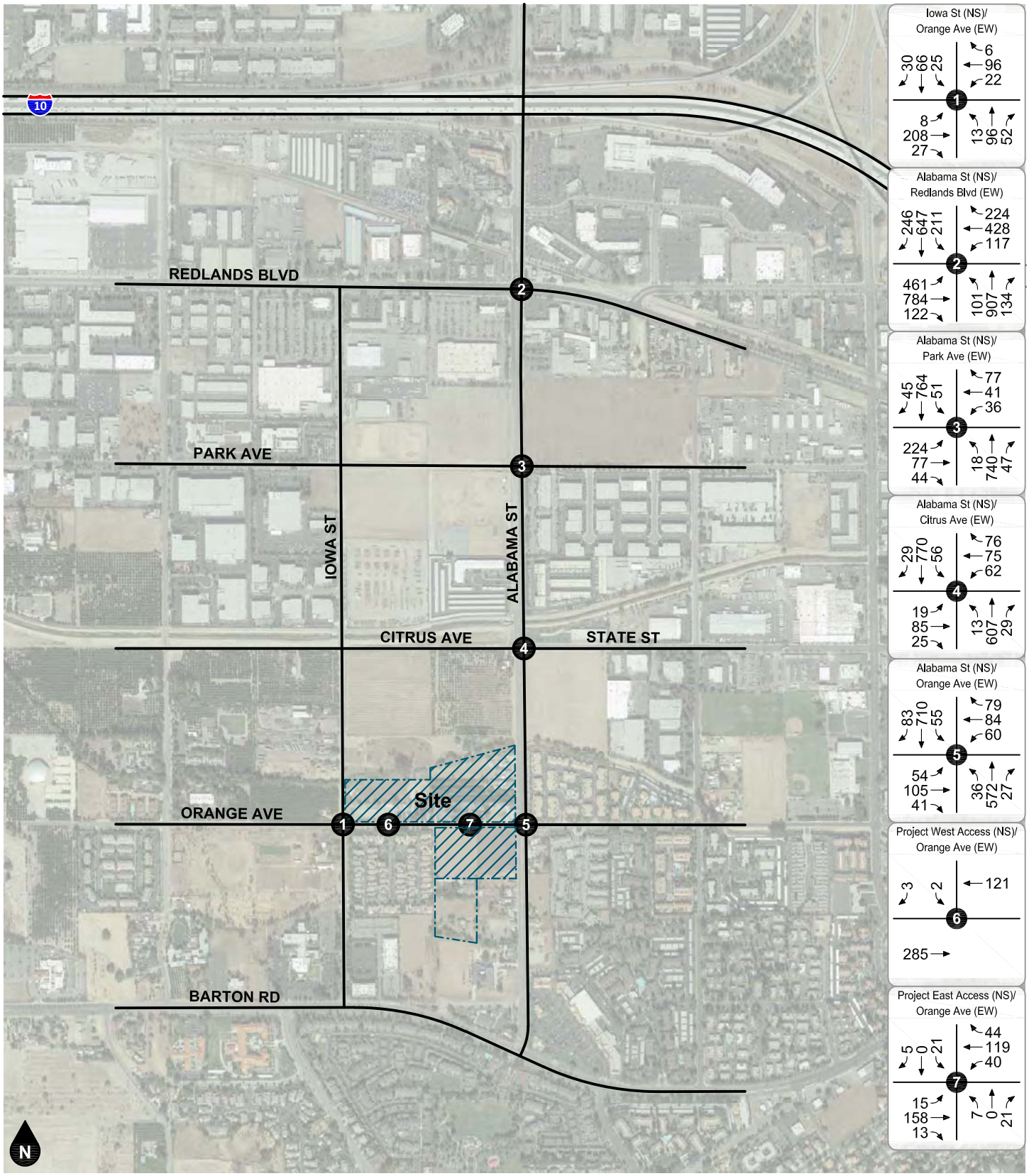
Figure 28
Opening Year (2020) With Project Average Daily Traffic Volumes



Legend

(#) Study Intersection

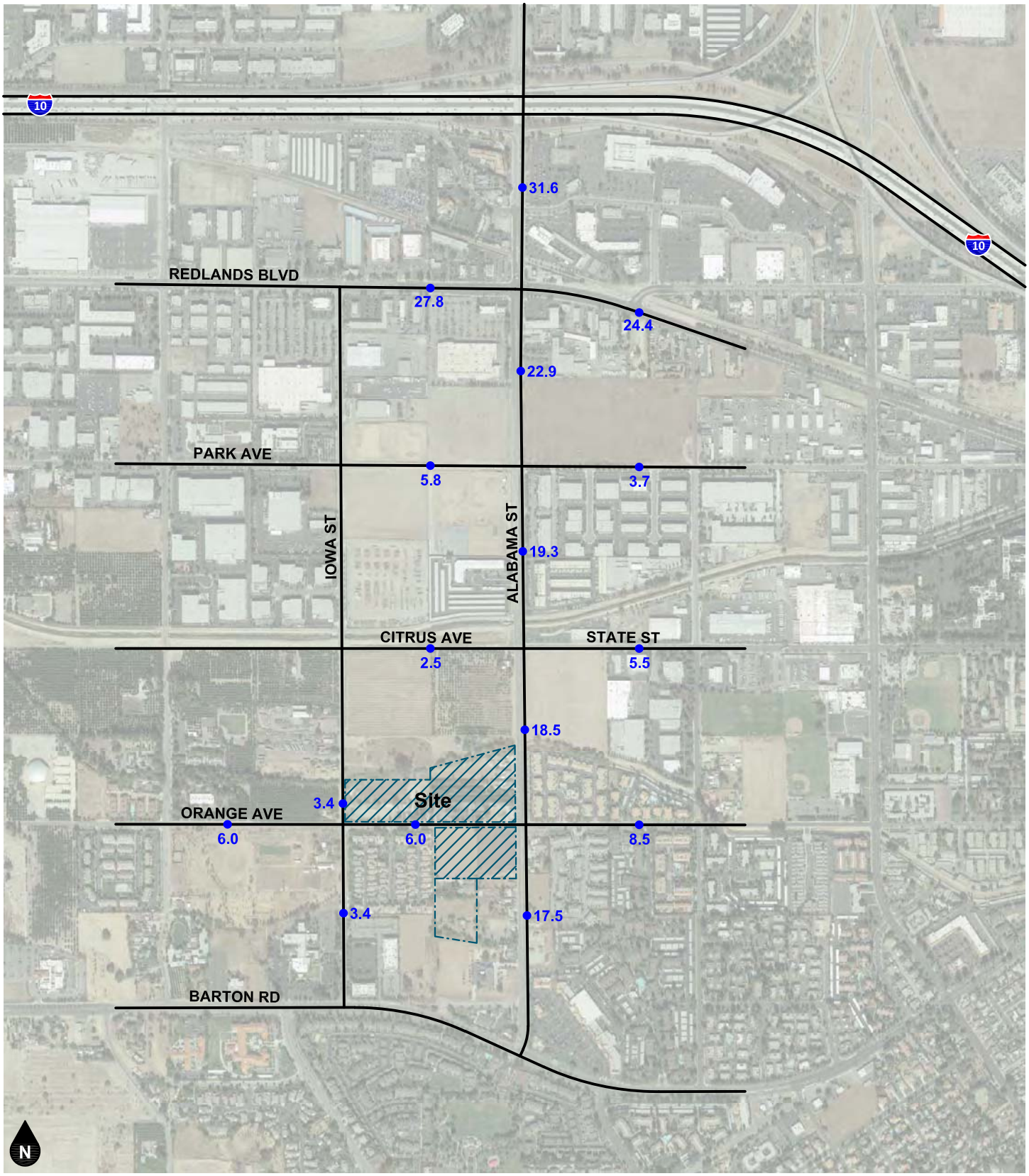
Figure 29
Opening Year (2020) With Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

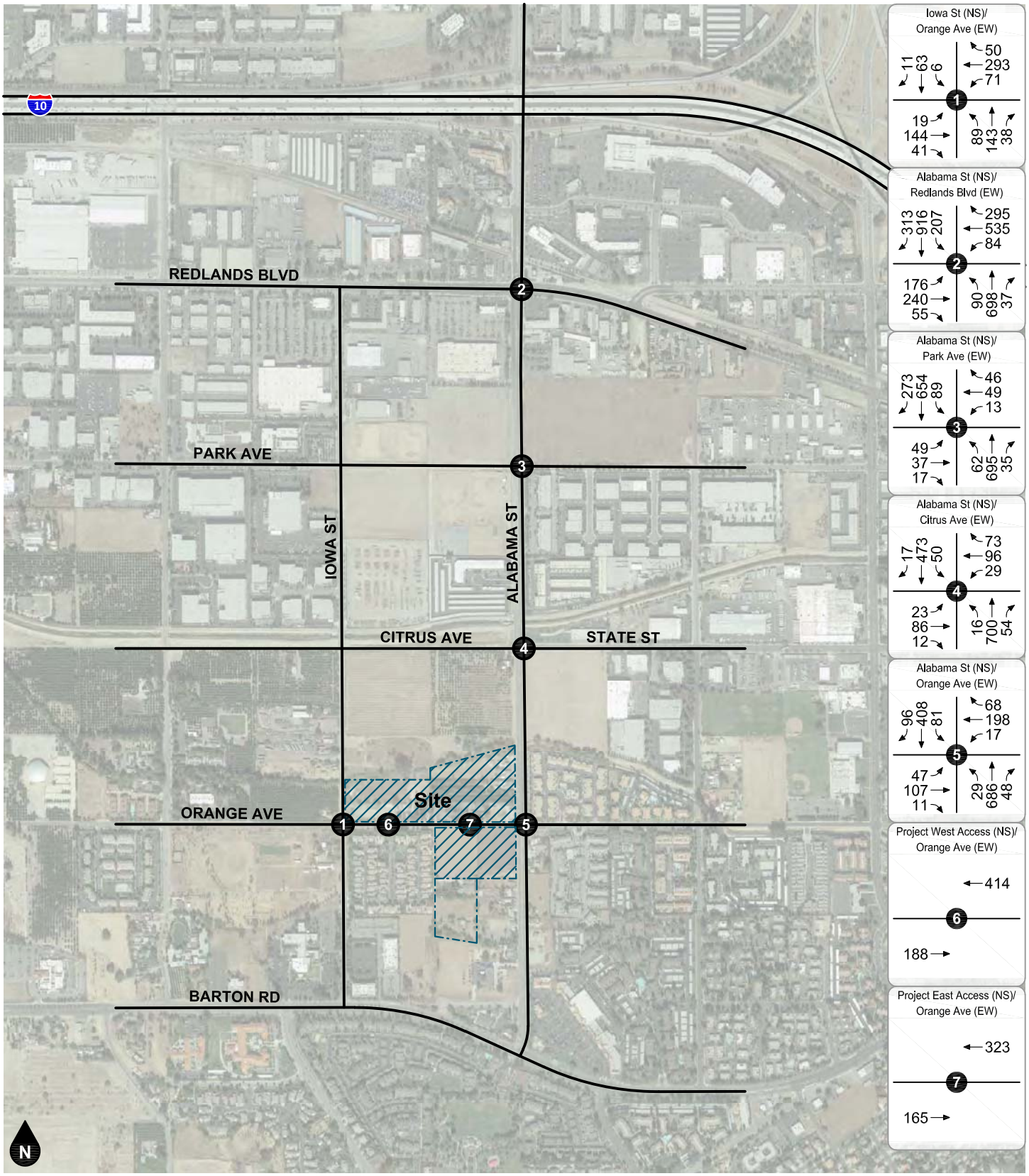
Figure 30
Opening Year (2020) With Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●2.6 Vehicles Per Day (1,000's)

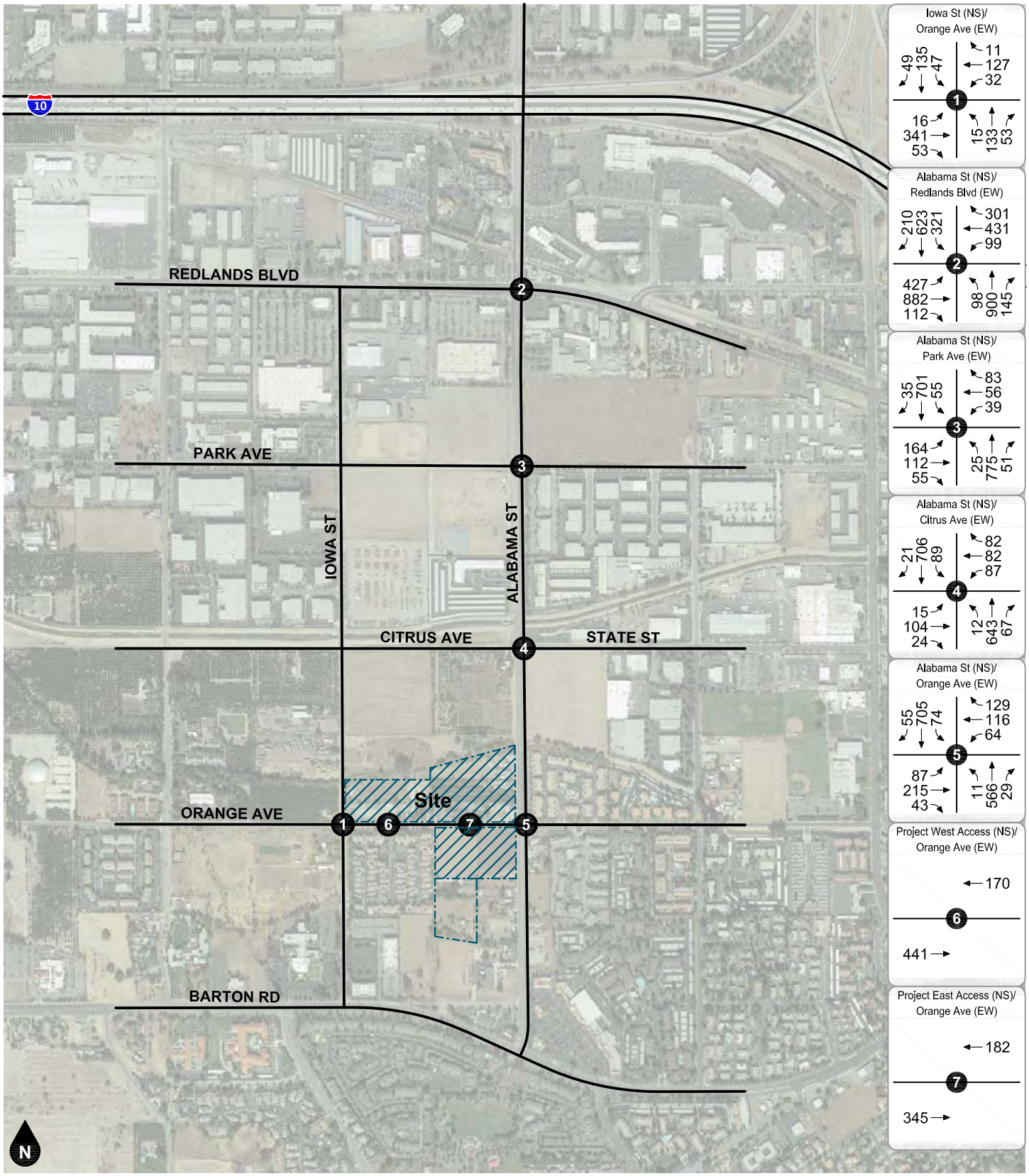
Figure 31
General Plan Buildout (Year 2040) Without Project
Average Daily Traffic Volumes



Legend

(#) Study Intersection

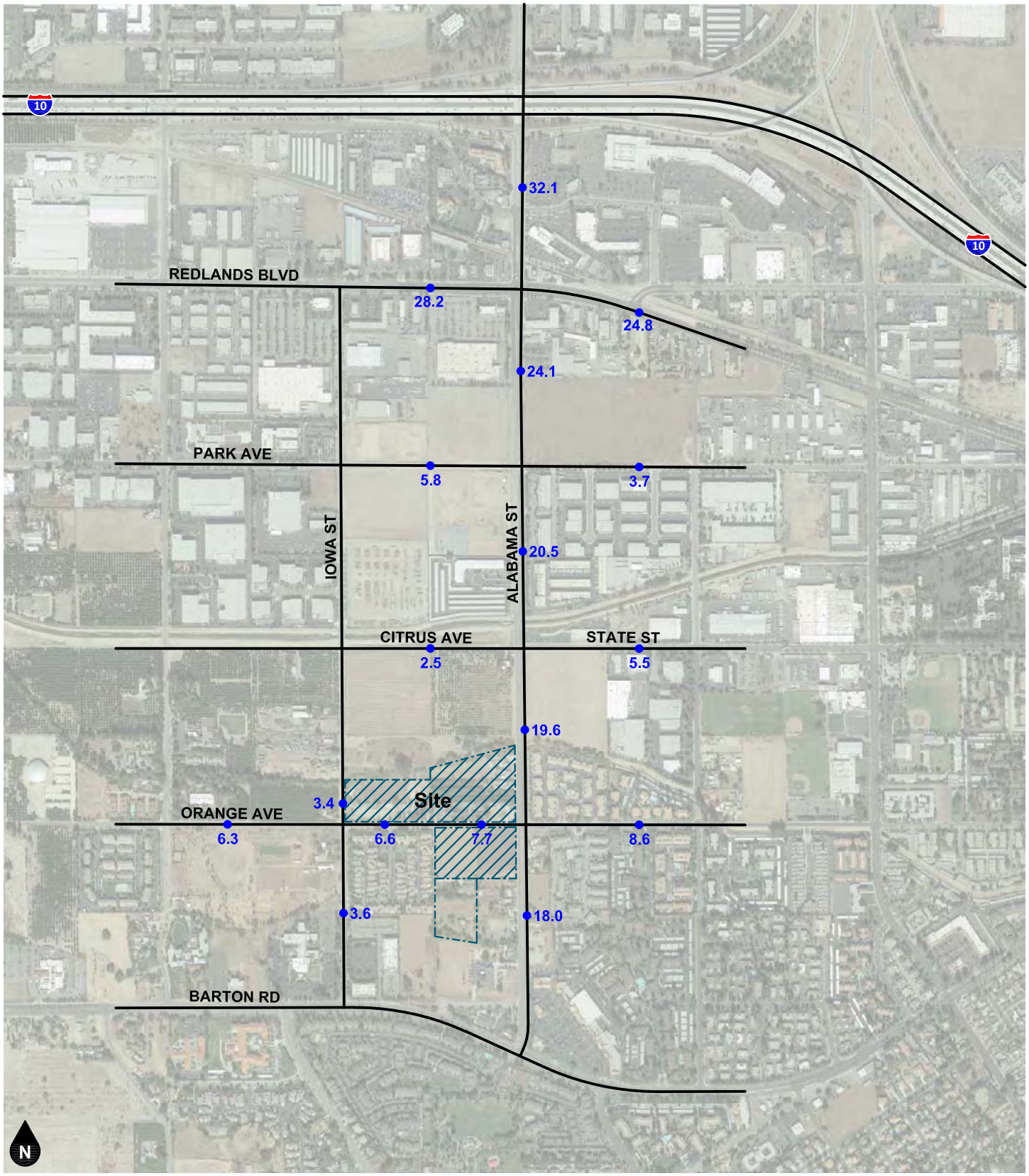
Figure 32
General Plan Buildout (Year 2040) Without Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

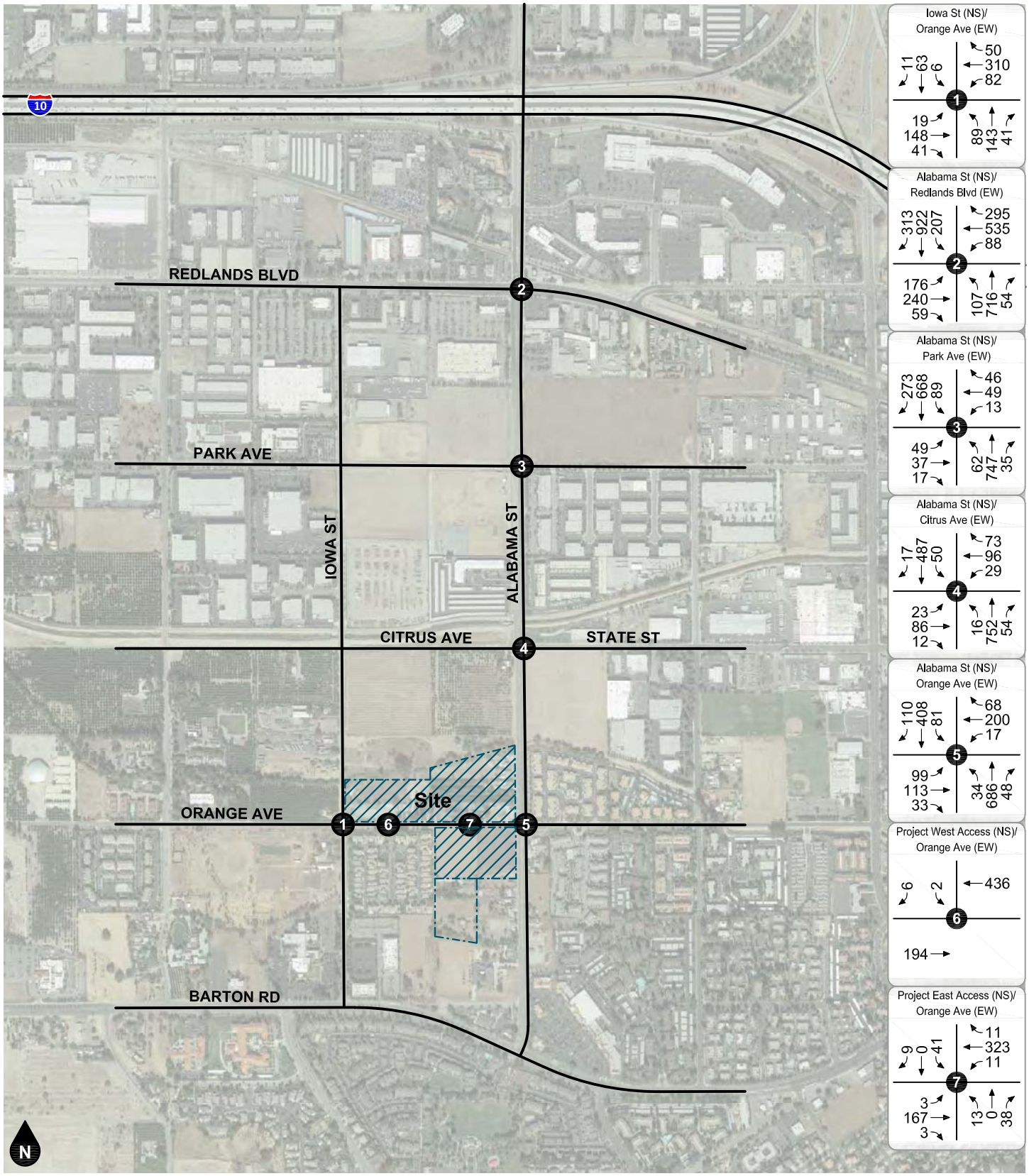
Figure 33
General Plan Buildout (Year 2040) Without Project
PM Peak Hour Intersection Turning Movement Volumes



Legend

●2.6 Vehicles Per Day (1,000's)

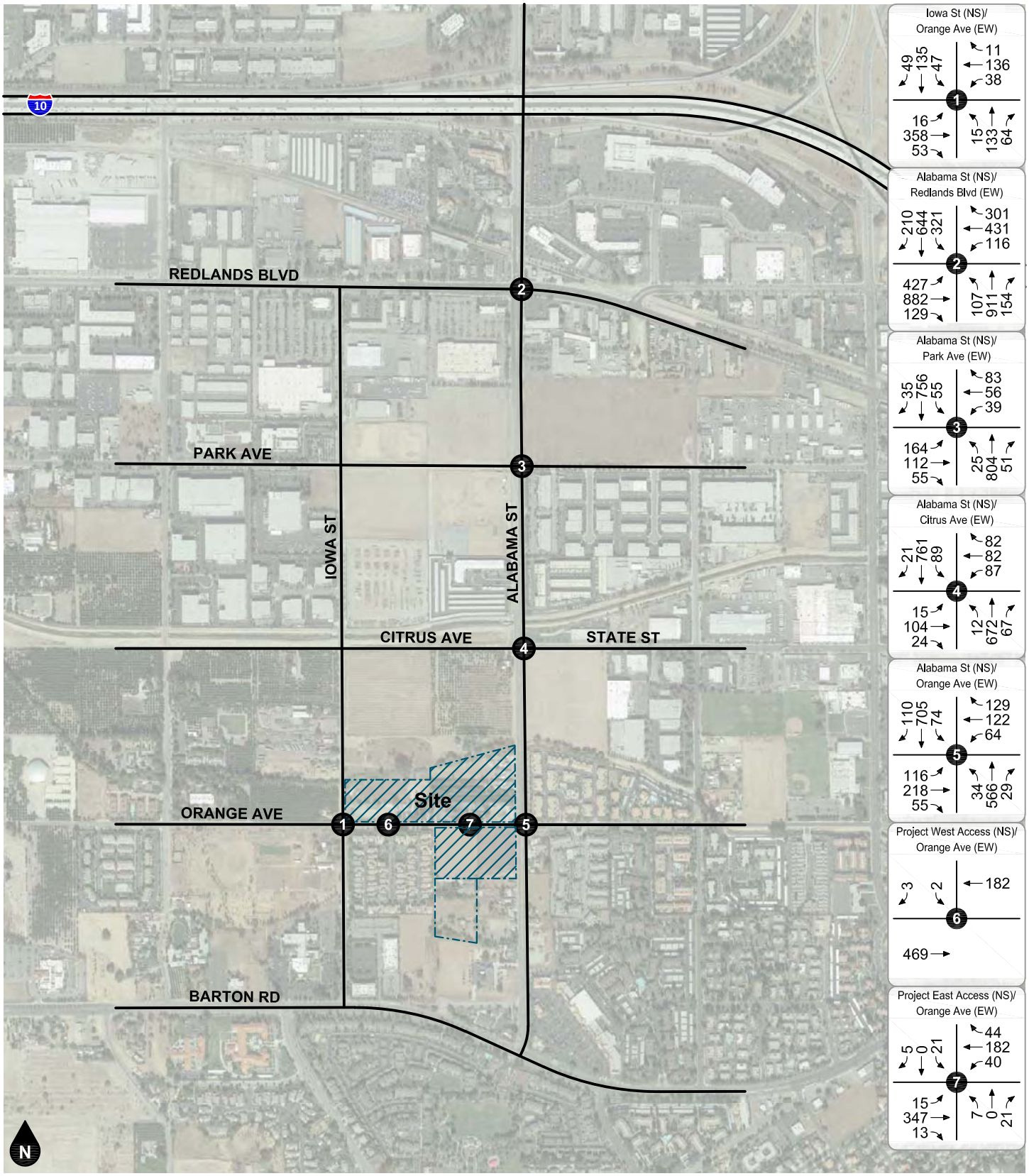
Figure 34
General Plan Buildout (Year 2040) With Project
Average Daily Traffic Volumes



Legend

(#) Study Intersection

Figure 35
General Plan Buildout (Year 2040) With Project
AM Peak Hour Intersection Turning Movement Volumes



Legend

(#) Study Intersection

Figure 36
General Plan Buildout (Year 2040) With Project
PM Peak Hour Intersection Turning Movement Volumes

6. FUTURE OPERATIONAL ANALYSIS

Detailed intersection Level of Service calculation worksheets for each of the following analysis scenarios are provided in Appendix F.

EXISTING PLUS PROJECT

The intersection Levels of Service for Existing Plus Project conditions are shown in Table 4. The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for Existing Plus Project conditions (see Table 4); therefore, the proposed project is forecast to result in no significant traffic impacts for Existing Plus Project conditions.

OPENING YEAR (2020) WITHOUT PROJECT

The delay and Levels of Service for Opening Year (2020) Without Project conditions are shown in Table 5. The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for Opening Year (2020) Without Project conditions (see Table 5).

OPENING YEAR (2020) WITH PROJECT

The intersection Levels of Service for Opening Year (2020) With Project conditions are shown in Table 5. The study intersections are forecast to operate within acceptable Levels of Service (C or better) during the peak hours for Opening Year (2020) With Project conditions (see Table 5); therefore, the proposed project is forecast to result in no significant traffic impacts for Opening Year (2020) With Project conditions.

GENERAL PLAN BUILDOUT (YEAR 2040) WITHOUT PROJECT

The intersection Levels of Service for General Plan Buildout (Year 2040) Without Project conditions, without and with improvements are shown in Table 6. The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) Without Project conditions, except for the following study intersection that is projected to operate at unacceptable Level of Service D without improvements (see Table 6):

- Alabama Street at Orange Avenue - #5 (PM peak hour)

The following improvements are recommended to maintain acceptable Levels of Service at the study intersections for General Plan Buildout (Year 2040) Without Project conditions:

- Alabama Street (NS) at Orange Avenue (EW) - #5
  - Restripe the eastbound approach to provide a dedicated left turn lane.
  - Restripe the westbound approach to provide a dedicated left turn lane.

The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) Without Project conditions, with improvements (see Table 6).

GENERAL PLAN BUILDOUT (YEAR 2040) WITH PROJECT

The intersection Levels of Service for General Plan Buildout (Year 2040) With Project conditions, without and with improvements, are shown in Table 6. The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) With Project conditions, except for the following study intersection that is projected to operate at unacceptable Level of Service F without improvements (see Table 6):

- Alabama Street at Orange Avenue - #5 (PM peak hour)

The previously identified improvements under General Plan Buildout (Year 2040) Without Project would also maintain acceptable Levels of Service at the study intersections for General Plan Buildout (Year 2040) With Project conditions. Therefore, no additional improvements are recommended.

The study intersections are projected to operate within acceptable Levels of Service (C or better) during the peak hours for General Plan Buildout (Year 2040) With Project traffic conditions, with improvements (see Table 6).

Table 4
Existing Plus Project Intersection Level of Service

ID	Study Intersection	Traffic Control[1]	Existing				Existing Plus Project			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay	LOS	Delay	LOS	Delay	LOS
1.	Iowa St at Orange Ave	AWS	10.5	B	9.3	A	11.1	B	9.5	A
2.	Alabama St at Redlands Blvd	TS	28.9	C	23.6	C	29.3	C	24.0	C
3.	Alabama St at Park Ave	TS	19.7	B	18.6	B	19.9	B	18.8	B
4.	Alabama St at Citrus Ave	TS	12.3	B	20.0	B	14.8	B	20.1	C
5.	Alabama St at Orange Ave	TS	18.0	B	17.6	B	18.5	B	19.4	B
6.	Project West Driveway at Orange Ave	CSS	-		-		10.0	A	10.8	B
7.	Project East Driveway at Orange Ave	CSS	-		-		11.4	B	12.2	B

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(2) Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

Table 5
Opening Year (2020) Intersection Level of Service

ID	Study Intersection	Traffic Control[1]	Opening Year Without Project				Opening Year With Project			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay	LOS	Delay	LOS	Delay	LOS
1.	Iowa St at Orange Ave	AWS	11.4	B	9.9	A	12.1	B	10.2	B
2.	Alabama St at Redlands Blvd	TS	29.3	C	28.3	C	29.4	C	28.7	C
3.	Alabama St at Park Ave	TS	22.2	C	20.4	C	22.5	C	20.6	C
4.	Alabama St at Citrus Ave	TS	15.1	B	20.9	C	15.8	B	21.0	C
5.	Alabama St at Orange Ave	TS	19.0	B	18.7	B	19.7	B	21.2	C
6.	Project West Driveway at Orange Ave	CSS	-		-		11.0	B	11.3	B
7.	Project East Driveway at Orange Ave	CSS	-		-		11.7	B	12.9	B

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(2) Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

Table 6
General Buildout (Year 2040) Intersection Level of Service

ID	Study Intersection	Traffic Control[1]	General Buildout Without Project				General Buildout With Project			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			Delay[2]	LOS[3]	Delay	LOS	Delay	LOS	Delay	LOS
1.	Iowa St at Orange Ave	AWS	17.7	C	16.0	C	20.0	C	17.3	C
2.	Alabama St at Redlands Blvd	TS	32.3	C	32.1	C	32.8	C	32.7	C
3.	Alabama St at Park Ave	TS	22.4	C	20.3	C	22.6	C	20.5	C
4.	Alabama St at Citrus Ave	TS	20.4	C	22.0	C	20.5	C	22.0	C
5.	Alabama St at Orange Ave	TS	19.8	B	53.7	D	20.7	C	82.4	F
	With Improvements	TS	15.1	B	15.8	B	16.2	B	16.8	B
6.	Project West Driveway at Orange Ave	CSS	-		-		13.5	B	13.7	B
7.	Project East Driveway at Orange Ave	CSS	-		-		14.6	B	16.7	C

Notes:

(1) TS = Traffic Signal; CSS = Cross Street Stop; AWS = All Way Stop

(2) Delay is reported for all study intersections. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, Level of Service is based on average delay of the worst individual lane (or movements sharing a lane).

(3) LOS = Level of Service

7. SITE ACCESS

Three (3) gated access driveways are proposed. Primary ingress/egress access is proposed at Orange Avenue. A leasing and visitor parking area is provided outside of the primary access gate on the north side of Orange Avenue. A secondary egress only access is proposed at Orange Avenue near the western side of the project site and emergency vehicle access only is proposed at Alabama Street south of Orange Avenue.

PROJECT DESIGN FEATURES

This analysis assumes the following improvements will be constructed by the project to provide project site access:

Project West Driveway (NS) at Orange Avenue (EW)
- Construct the southbound approach to consist of one shared left/right turn with stop-control.
- Install appropriate "Exit Only" signage.

Project East Driveway (NS) at Orange Avenue (EW)
- Construct the northbound approach to consist of one shared left/through/right turn lane with stop-control.
- Construct the southbound approach to consist of one shared left/through/right turn lane with stop-control.

Alabama Street (NS) at Emergency Vehicle Access (EW)
- Construct emergency vehicle access driveway to the satisfaction of the City of Redlands Fire Department.
- Install appropriate emergency vehicle access only signage.

SITE ACCESS QUEUEING

Table 7 summarizes the results of a queue analysis for left-turn, right-turn, or shared through-turn movements at the project driveways and site-adjacent signalized study intersection of Alabama Street/Orange Avenue based on the forecast 95th-percentile queue lengths[2] shown in the delay calculation worksheets (see Appendix F). Additionally, the recommended storage length is provided for turn lanes that are forecast to exceed the existing storage.

To prevent queueing issues during the AM and PM peak hours, it is recommended that a 100-foot westbound left-turn lane and a 50-foot eastbound left-turn lane be provided at the Alabama Street and Orange Avenue study intersection (#5). Based on the queuing analysis, adequate storage length is forecast to be provided for the analyzed left-turn lanes with implementation of the recommended storage lengths.

SIGHT DISTANCE EVALUATION

Sight distance at the project accesses shall comply with standard California Department of Transportation requirements. Sight distance is the continuous length of roadway visible to the driver traveling at a given speed. Two types of sight distance are considered for this driveway: (1) stopping sight distance and (2) corner sight distance, as described in Appendix H.

The stopping sight distance for a driver approaching on the major roadway to see a vehicle exiting from the minor roadway at the prevailing speed is determined in accordance with Table 201.1 in the Highway Design Manual. The stopping sight distance is measured from the driver's eye, which is located 3.5 feet above the pavement and right of the centerline of the travel lane to an object that is 6 inches above the pavement.

[2] For a more conservative analysis, the forecast 95th-percentile queue lengths shown in the delay calculation worksheets have been increased by a 5% safety factor and rounded up to nearest 5 foot increment.

The minimum corner sight distance requirement is determined in accordance with Table 405.1A in the Highway Design Manual. Corner sight distance accounts for the distance needed for the driver to exit the minor roadway from a stopped position and cross or enter the major roadway without requiring approaching vehicles to substantially slow down.

Orange Avenue has a prima facie speed limit of twenty five (25) mile per hour. Based on an estimated prevailing speed of 30 mile per hour, vehicles on Orange Avenue require 200 feet for stopping sight distance when approaching the project access. Vehicles exiting the project site require 330 feet of clear line of sight for a 7.5 second corner sight distance.

Given the relatively straight horizontal and vertical alignment of Alabama Street and Orange Avenue, there does not appear to be any physical roadway geometrics which would cause substantial obstructions to the required sight distances. It is recommended that the landscape plan for the site should utilize the sight distance principals to avoid placing obstructions (such as dense trees or monument signs) within the limited use area on either side of the proposed project access driveways. The area between the line of sight and the centerline of the nearest approaching lane is defined as the limited use area. The limited use area should be kept clear of obstructions, including landscaping over 18 inches to allow better visibility. It is recommended that trees within 50 feet of the driveway be outside of the limited-use area or as far back as reasonably possible. Ultimately, the final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Redlands/California Department of Transportation sight distance standards.

TRAFFIC SIGNAL WARRANT ANALYSIS

Installation of a traffic signal warrant is not forecast to be warranted at any of the unsignalized study intersections based upon the California Manual on Uniform Traffic Control Devices (2014) peak hour volume warrant (Warrant 3).

GATED ACCESS

The proposed project east access on Orange Avenue will be gated and provide full access for residents and visitors. The proposed west access on Orange Avenue will be gated and provide restricted outbound only access for residents. The third driveway is restricted to emergency vehicles access only access at Alabama Street.

Gated Access Considerations

For gated entries, the following guidelines should be incorporated into the project design:

- Applicant shall submit plans for City and/or Fire Authority for review and approval.
- Gates shall be equipped with an approved Fire Authority release.
- The gate facility shall be delineated by standard traffic control devices (signs and pavement markings) as determined by the City and/or Fire Authority.
- Access roadway approaches to the gates must have a clear width for two-way operation or one-way operation of each gate. A clear width must also be maintained between any islands to be constructed (for card reader, keypad, etc.).
- The entrance gate control facility shall provide sufficient storage length (multiple lanes) to prevent vehicle queuing from the card reader, keypad, etc. to the intersecting roadway.
- At the entrance gates, an adequate turnaround area shall be provided to accommodate the turning radius of an automobile, pick-up, or delivery truck, eliminating required backing maneuvers onto adjacent roadways.

- A separate pedestrian access facility should be provided in addition to the vehicular access facility (optional).
- The vehicle entry control facility shall be designed and installed to provide access in a timely fashion to prevent extended vehicle queuing.

Gated Queueing Analysis

The key to the successful operation of a gated access is providing the appropriate vehicle stacking length and vehicle turn around location prior to the gate. Vehicle stacking which allows vehicles a safe place to wait for the gate without blocking vehicles in the public right-of-way. Secondly, a well-designed turnaround area is necessary to accommodate any vehicles that are not granted access and prevent the need to drive in reverse into oncoming traffic. Typically, a minimum of one hundred (100) feet of vehicle stacking and a minimum radius of thirty (30) feet turnaround area are required. It is recommended that these minimums be used in the design of all gated access points. The vehicle stacking area is measured from the gate to the edge of sidewalk or flowline of the adjacent street.

The following calculations are based upon the Institute of Transportation Engineers, Transportation and Land Development, 1988. The theory of queuing concerns the use of mathematical algorithms to describe the processes that result in the formation of queues, so that a detailed analysis of the effect of queues can be undertaken. A queue is formed when arrivals wait at a service area, such as a gate or call box for entry into the community. Generally, residents and employees have immediate access and therefore do not queue outside the gates. Separate visitor and resident lanes reduces the storage length required for visitor queues.

The length of necessary stacking space is a function of the number of inbound vehicles, the number of gated accesses to site, the number of service lanes per access, the utilization factor of the service lane, the service rate capacity of the gate, and the confidence interval used for the analysis. The utilization factor is calculated by dividing peak hour volumes by the control point processing rate. The capacity of a swing arm gate is controlled by the rate at which the gate can open and close in a given cycle. An hourly capacity of 180 vehicles has been assumed for the swing arm gate; however, the actual operation of the gate is controlled by vehicle sensors (traffic loop detectors) to prevent the gate from accidentally hitting the vehicles. For this reason, more than one vehicle to may enter or leave when a second vehicle follows immediately behind the first vehicle. This typically occurs at peak times when a vehicle queue may form.

A critical component for the successful operation of a gated entry is that the gate opens quickly for entry or exit vehicles. For exiting vehicles, this can be accomplished by traffic loop detectors, which are located within 1 or 2 feet of the gate, on both sides of the gate, to prevent the gate from closing on a vehicle in the gate's path. The vehicle entry should be well lit and easy to reach call box for visitors as well as electronic detection for residential vehicles to bypass the call box will reduce the time of delay. It is recommended that all residents be provided with a remote control device to operate the gates.

Other auxiliary factors to include in the design are the appropriate turnaround radius, pedestrian walkways as well as traffic control signing and striping. A minimum turnaround radius of 30 feet should be incorporated into the plans for the turnaround design for the gated areas for visitors who do not gain entry, so that they do not need to backup to exit the driveway. Pedestrian walkways should be provided along each side of the proposed gated entry locations. Advance signing of the gates and traffic control and pavement markings should be provided. Stop sign traffic controls at the exit gate is recommended, and exiting traffic presence loops should be located at the stop bar location.

These queue lengths have been calculated based on the trip generation/distribution for the currently proposed development. These queue lengths do assume the presence of a by-pass lane as two lanes are shown on the site plan. The vehicle stacking area is measured from the gate to the edge of sidewalk or flowline of the adjacent street.

The following conservative assumptions were made in determining data input for the queuing analysis:

- The larger of the PM or AM peak hour inbound trips were used for the calculations.
- The number of inbound trips at each of the gates was used to generate the queue length for that particular gate as there more than one gate.
- The entry includes two lanes. The right side lane should be for residents to by-pass stopping vehicles. The left side lane allows for visitors to stop and access the call box in the center median. Visitors who do not gain access should proceed to the provided non-entry turnaround.
- The processing rate at the control point is assumed to be 180 vehicles per hour (i.e., one visitor vehicle every 20 seconds can be processed and continue through the gate).
- The analysis is based on a standard confidence interval (such that 95 percent (95%) of the time, the queue will be equal to or less than the calculated maximum vehicle queue).

The forecast queue of vehicles is increased by one vehicle to account for the service position vehicle and multiplied by standard vehicle length to determine the total required storage capacity. The queue analysis which is shown in Appendix I has a 95 percent (95%) confidence interval of the maximum number of vehicles which will queue is less than the vehicle storage length provided.

The forecast queue of vehicles is increased by one vehicle to account for the service position vehicle and multiplied by standard vehicle length to determine the total required storage capacity. The amount of storage space needed at the gated queue locations is summarized in Table 8. The queue analysis worksheets are in Appendix I.

The available queue space shown on the proposed plan for the primary access is approximately 165 (north of Orange Avenue) and 235 feet (south of Orange Avenue). These queue lengths have been calculated based on the trip generation/distribution for the currently proposed development. These queue lengths assume the presence of one inbound lane. The vehicle stacking area is measured from the gate to the edge of sidewalk or travel way of the adjacent street. The entry locations meet the minimum requirements for gate stacking.

Table 7
Summary of Queueing Analysis

ID Intersection	Approach	Lane	Storage Length (Feet)[1]	Peak Hour 95th-Percentile Queue Length (Feet)												Adequate Storage Provided
				Existing		Existing Plus Project		Opening Year (2020)				General Buildout (Year 2040)				
								Without Project		With Project		Without Project		With Project		
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
5. Alabama St at Orange Ave	Northbound	Left	175	<25	<25	<25	35	<25	<25	30	40	30	<25	35	<25	YES
	Southbound	Left	155	50	55	50	55	60	60	60	60	80	55	80	55	YES
	Eastbound	Combined left-thru	295	60	60	125	80	75	80	150	160	90	675	200	1010	NO-1010
	Westbound	Combined left-thru	210	60	90	65	120	80	120	80	145	130	225	135	230	NO-230
5. Alabama St at Orange Ave With Improvements	Northbound	Left	175	-	-	-	-	-	-	-	-	<25	<25	<25	<25	YES
	Southbound	Left	155	-	-	-	-	-	-	-	-	60	55	60	55	YES
	Eastbound [3]	**Left**	**100**	-	-	-	-	-	-	-	-	35	60	75	85	YES
	Eastbound	Combined thru-right	295	-	-	-	-	-	-	-	-	65	145	80	165	YES
	Westbound	**Left**	**50**	-	-	-	-	-	-	-	-	<25	45	<25	45	YES
	Westbound	Combined thru-right	210	-	-	-	-	-	-	-	-	170	140	160	150	YES
6. Project West Driveway at Orange Ave	Southbound[4]	Combined left-right	75	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
	Eastbound	Thru	145	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
	Westbound	Thru	800	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
7. Project East Driveway at Orange Ave	Northbound[4]	Combined left-thru-right	235	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
	Southbound[4]	Combined left-thru-right	165	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
	Eastbound	Combined left-thru-right	615	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES
	Westbound	Combined left-thru-right	295	-	-	<25	<25	-	-	<25	<25	-	-	<25	<25	YES

Notes:

(1) Distance to the adjacent driveway (existing or proposed future development).

(2) Improvements = **Bold**

(3) The eastbound left turn lane should be provided in conjunction with intersection improvements.

(4) Queueing analysis does not include gate delay. For gate queueing analysis see Table 8 Gate Stacking / Minimum Queue Requirements.

Table 8
Gate Stacking / Minimum Queue Requirements

Peak Hour	Peak Inbound Flow Rate Per Hour	Service Rate Capacity Per Hour Per Lane	Utilization Factor[1]	Minimum Calculated Queue Length in Feet	Minimum Recommended Queue Length in Feet[2]	Queue Length on Proposed Plan
Orange Ave/Alabama St (North)						
AM Peak Hour	14	180	0.08	25	50	165
PM Peak Hour	59	180	0.33	50	50	165
Orange Ave/Alabama St (South)						
AM Peak Hour	14	180	0.08	25	50	235
PM Peak Hour	53	180	0.29	50	50	235

Notes:

(1) Source: Institute of Transportation Engineers, Transportation and Land Development, 1988 Applications of Queueing Analysis page 231.

(2) If the calculated length is less than 2 vehicle lengths, 2 vehicles is used as the minimum queue length.

8. OTHER TRAFFIC CONSIDERATIONS

This section describes traffic issues pertinent to Orange Avenue.

PEDESTRIAN MID-BLOCK CROSSWALK

The project proposes traffic calming curb extensions on either side of the project east access on Orange Avenue to provide for pedestrian access between the north and south components of the project and traffic calming speed reduction on Orange Avenue.

PEDESTRIAN CROSSWALK GUIDELINES

Providing a midblock crosswalk at the Project East Access at Orange Avenue intersection, necessitates assessing pedestrian crossing safety. Key issues for crosswalk assessment pedestrian volumes, roadway width, and critical speed of the roadway.

A comprehensive study published by the Federal Highway Administration (FHWA)[3] analyzed five years of pedestrian crashes at 1,000 marked and 1,000 unmarked crosswalks. Given the General Buildout (Year 2040) With Project average daily traffic volume of 7,700 on Orange Avenue and assuming the 85th-percentile speed of the roadway is five miles per hour over the prima facie speed limit of twenty five (25) miles per hour, the location is a candidate for marked crosswalks. As noted Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations (see Appendix J), it is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone. Based on the FHWA recommendations, other treatments such as traffic calming, pedestrian signals (where warranted), or other substantial crossing improvements should be considered at the study intersection to improve crossing safety should a marked crosswalk be installed.

California MUTCD, Section 3B.18 provides the following guidance regarding the use of crosswalk markings:

- 08 Crosswalk lines should not be used indiscriminately. An engineering study should be performed before a marked crosswalk is installed at a location away from a traffic control signal or an approach controlled by a STOP or YIELD sign. The engineering study should consider the number of lanes, the presence of a median, the distance from adjacent signalized intersections, the pedestrian volumes and delays, the average daily traffic (ADT), the posted or statutory speed limit or 85th-percentile speed, the geometry of the location, the possible consolidation of multiple crossing points, the availability of street lighting, and other appropriate factors.
- 09 New marked crosswalks across uncontrolled roadways should include other measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness of the crossing, and/or provide active warning of pedestrian presence, where the speed limit exceeds 40 mph and either: A. The roadway has four or more lanes of travel without a raised median or pedestrian refuge island and an ADT of 12,000 vehicles per day or greater; or B. The roadway has four or more lanes of travel with a raised median or pedestrian refuge island and an ADT of 15,000 vehicles per day or greater.
- 09a If a marked crosswalk exists across an uncontrolled roadway where the speed limit exceeds 40 mph and the roadway has four or more lanes of travel and an ADT of 12,000 vehicles per day or greater, advanced yield lines with associated Yield Here to Pedestrians (R1-5, R1-5a) signs should be placed 20 to 50 feet in advance of the crosswalk, adequate visibility should be provided by parking prohibitions, pedestrian crossing (W11-2) warning signs with diagonal downward pointing arrow (W16-7p) plaques should be installed at the crosswalk, and a high-visibility crosswalk marking pattern should be used (See Figure 3B-17(CA)).

[3] Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations, U.S. Department of Transportation Federal Highway Administration (FHWA), September 2005.

Based on the California MUTCD guidance, additional measures designed to reduce traffic speeds, shorten crossing distances, enhance driver awareness, and/or provide active warning of pedestrian presence may be considered optional since Orange Avenue has fewer than four travel lanes, the average daily traffic volume projected is less than 12,000 vehicles per day and the speed is less than 40 miles per hour. Depending on the actual number of pedestrian crossing volumes, the following pedestrian crossing enhancements may be considered.

PEDESTRIAN MID-BLOCK CROSSING ENHANCEMENT

Without a pedestrian count estimate it is definitive to the extent pedestrian crossing enhancements should be recommended. However, in addition to the curb extensions, standard pedestrian crossing pavement markings and warning signage are recommended. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

Curb Extensions (Currently Proposed)

Reducing the width of the lanes may result in slower speeds in some situations, which can benefit pedestrians who are attempting to cross the street. Curb extensions reduce the crossing distance for pedestrians and exposure to traffic.

The use of colored pavement as shown in this example or high visibility crosswalk markings shown below may be considered.

Source: Federal Highway Administration (FHWA)

High-Visibility Crosswalk Markings

To increase visibility of the proposed crosswalk, diagonal or longitudinal lines are recommended. If the City of Redlands has an established design standard for high-visibility crosswalk markings, the City's standard should be implemented for consistency. This recommendation is in accordance with California MUTCD guidance that high-visibility markings should be used at locations where substantial numbers of pedestrians cross without any other traffic control device.

Source: Texas Transportation Institute

Warning Signs and Roadway Lighting

According to the MUTCD, pedestrian crossing signs should only be used at locations that are unusually hazardous, where crossing activity is unexpected, or at locations where pedestrian crossing activity is not readily apparent. Given the midblock placement of the crosswalk the pedestrian warning sign is warranted.

Adequate nighttime lighting should be provided at marked crosswalks and areas with nighttime pedestrian activity. Nighttime lighting will increase the visibility of pedestrians to drivers who may be unfamiliar with the midblock crossing.

Source: Federal Highway Administration (FHWA)

MONTESSORI IN REDLANDS

The existing Montessori in Redlands is currently located at 1890 Orange Avenue in the City of Redlands. Access to the Montessori School is currently provided by an inbound only driveway on Orange Avenue and an outbound only driveway on Nevada Street. In addition, a gated emergency only driveway is also located on Orange Avenue. The existing internal circulation pattern is counter-clockwise through the Montessori parking lot.

Based upon discussions with the Montessori staff, the school currently has a total of approximately 354 students in 13 classrooms attending the school from Monday – Friday as follows:

Preschool: 18 months old to 3 years old = 42 students in 3 classrooms
Primary: 3 years old to 6 years old = 156 students in 5 classrooms
Elementary: 1st grade to 6th grade = 156 students in 5 classrooms

The primary/elementary start time is 8:00 AM and the preschool start time is 9:00 AM. Parents can pick-up their students any time in the afternoon until the school closes at 6:00 PM. It should be noted that the majority of students are picked up between 3:30 PM to 5:00 PM.

On-site childcare is offered for before- and after-school for enrolled students at all levels. Toddler/primary childcare is available from 7:15 AM – 9:00 AM. Childcare is available until 5:30 PM – 6:00 PM for families enrolled in the all-day (9:00 AM – 5:00 PM) program. Elementary childcare hours are 8:30 AM – 3:30 PM.

Ganddini Group, Inc. staff observed the existing circulation patterns during the peak period from 7:30 AM to 9:00 AM on a typical weekday. Several parents were observed to park curbside along Orange Avenue and walk their students into the internal parking area. Vehicles appeared to be able to enter the parking lot on Orange Avenue with relatively minimal conflict. Furthermore, only a minority of project trips (approximately 15 percent) are forecast to travel along Orange Avenue past the Montessori in Redlands. Therefore, the proposed project is not expected to adversely impact site access for the Montessori in Redlands school.

9. STATE HIGHWAY ANALYSIS

This section discusses the prescribed methodology assess whether freeway mainline or ramp analyses are required.

CALIFORNIA DEPARTMENT OF TRANSPORTATION REGIONAL FREEWAY

The closest freeway to the proposed site is the I-10 Freeway that is currently six (6) lanes in each direction and located approximately 1.1 (drivable) miles north of the project site.

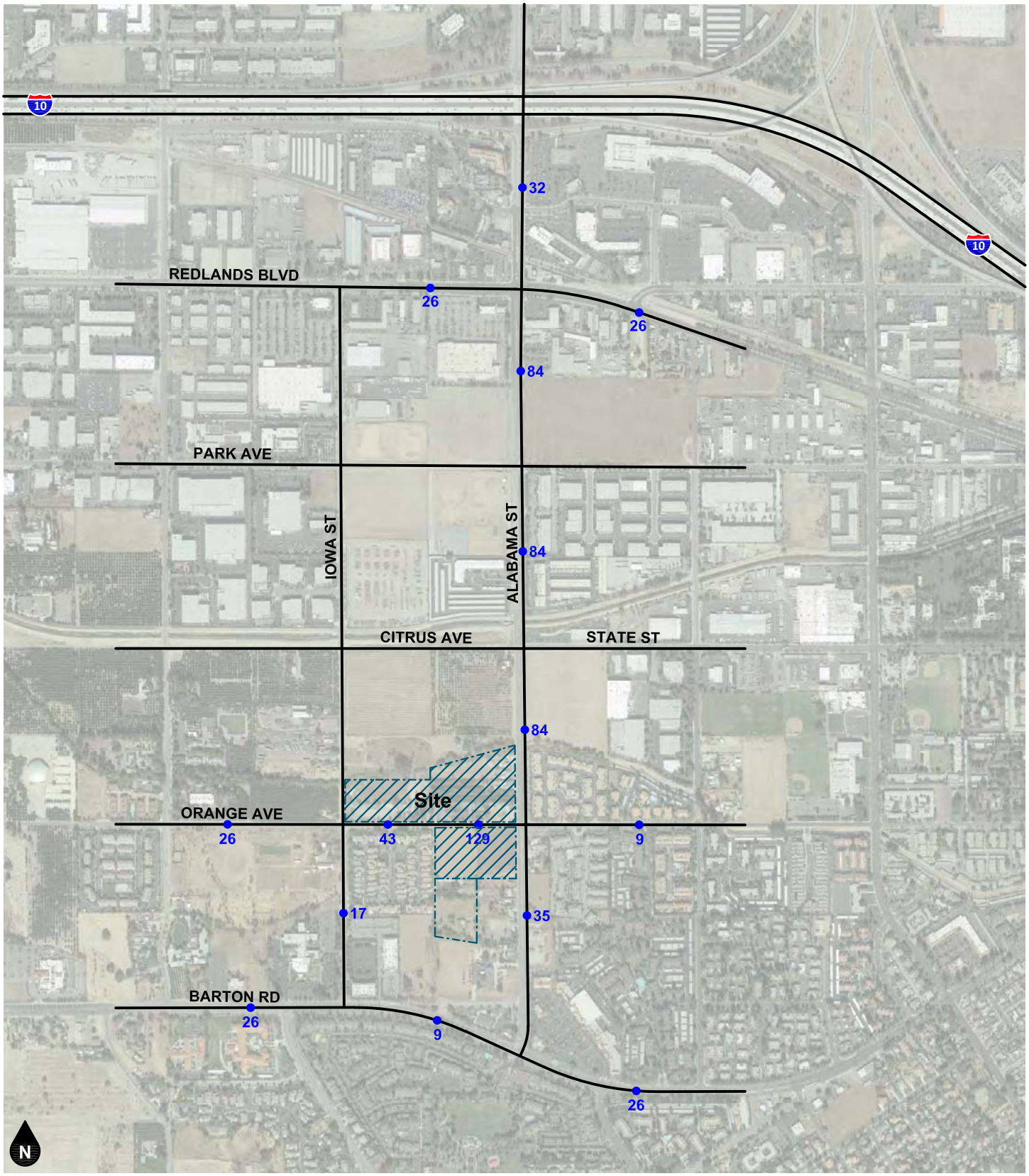
Based on the mainline average daily traffic volumes (176,000 to 189,000 vehicles per day) and the capacity of a 12 lane State Highway as specified in the San Bernardino County Congestion Management Program, the freeway mainline currently operates at Levels of Service B to D.

TRIP CONTRIBUTION

The project trip distributions depict the project trip contribution during the peak hours to the roadway segment closest to the freeway as shown on Figure 37.

The project does not contribute greater than the freeway threshold volume of 100 two-way peak hour trips or (1% of mainline capacity) to the I-10 Freeway. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on freeway ramp terminals. The project does not contribute trips greater than one percent (1%) of ramp capacity to freeway ramps.

The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the peak hours on facilities serving intersections outside of the City of Redlands. This means that the City of Redlands is not required to notify the adjacent jurisdictions and provide a copy of the traffic impact analysis, once the document is accepted by the City of Redlands. The purpose of this notification is to allow the adjacent jurisdictions to identify opportunities to make improvements to intersections concurrent with adjacent development, at considerably less cost and disruption than would occur if it were done after-the-fact.



Legend

●26 Evening Peak Hour Volumes

Figure 37
Project Trip Contribution Test Volumes

10. MITIGATION MEASURES

As mitigation for any potential off-site traffic impacts, the proposed project shall contribute through an adopted traffic impact fee program in addition to any fair share contributions shown within the traffic impact analysis which is not covered within this fee program. Fees typically applied are established County fees, for regional transportation improvements, local and/or community development impact fee agreements.

OFF-SITE IMPROVEMENTS

The proposed project shall contribute its fair share, through the adopted development impact fee program, to the following mitigation measure improvements for General Plan Buildout (Year 2040) Without and With Project:

- Alabama Street (NS) at Orange Avenue (EW) - #5
  - Restripe the eastbound approach to provide a dedicated left turn lane.
  - Restripe the westbound approach to provide a dedicated left turn lane.

Improvements at the project driveways are project design features which shall be constructed by the project. Site-adjacent roadway improvements shall be constructed in conjunction with the project.

FAIR SHARE ANALYSIS

The project fair share is based on the proportion of project peak hour traffic volume contributed to the improvement location relative to the total new peak hour traffic volume for General Plan Buildout (Year 2040) With Project conditions. The cost estimates for the identified improvements have been obtained from the County of San Bernardino Congestion Management Program (2003 Update).

The necessary improvements to bring the study area intersection operations back to an acceptable Level of Service have been identified for General Plan Buildout (Year 2040) traffic conditions. The project proportional trip contributions have been calculated in Table 9 and the project fair share cost estimate is $3,867.

The project fair share shown above represents a rough order of magnitude; it is intended only for the discussion purposes of this traffic impact analysis and does not imply any legal responsibility or formula for contributions or mitigation.

CONSTRUCTION TRAFFIC CONTROL MEASURES

A construction work site traffic control plan shall be submitted to the City for review and approval prior to the start of any construction work. The plans shall show the location of any roadway, sidewalk, bike route, bus stop or driveway closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. Temporary traffic controls used around the construction area should adhere to the standards set forth in the California Manual of Uniform Traffic Control Devices (2014) and construction activities should adhere to applicable local ordinances.

Site development would require the use of haul trucks during site clearing and excavation and the use of a variety of other construction vehicles throughout the construction work at the site. Transportation of heavy construction equipment and or materials, which requires the use of oversized vehicles, will require the appropriate transportation permit.

Table 9
Project Intersection Trip Contribution

ID	Study Intersection	Estimated Construction Cost[1]	Peak Hour	Peak Hour Volume					Project % at Intersection[2]	Project Fair Share Cost
				Existing	General Buildout (Year 2040) With Project	Project Trips	New Trips	Project % of New Trips		
1.	Iowa St at Orange Ave	NA[3]	AM	545	1,003	35	458	7.6%	8.0%	-
			PM	518	1,055	43	537	8.0%		
2.	Alabama St at Redlands Blvd	NA[3]	AM	2,294	3,712	66	1,418	4.7%	6.8%	-
			PM	3,391	4,633	84	1,242	6.8%		
3.	Alabama St at Park Ave	NA[3]	AM	1,324	2,085	66	761	8.7%	13.3%	-
			PM	1,603	2,235	84	632	13.3%		
4.	Alabama St at Citrus Ave	NA[3]	AM	1,277	1,695	66	418	15.8%	18.4%	-
			PM	1,560	2,016	84	456	18.4%		
5.	Alabama St at Orange Ave	$20,000.00	AM	1,277	1,897	102	620	16.5%	19.3%	$3,867
			PM	1,560	2,222	128	662	19.3%		
6.	Project West Driveway at Orange Ave	NA[4]	AM	149	638	37	489	7.6%	9.8%	-
			PM	197	656	45	459	9.8%		
7.	Project East Driveway at Orange Ave	NA[4]	AM	240	619	131	379	34.6%	47.6%	-
			PM	342	695	168	353	47.6%		

Notes:

(1) Cost estimate based on values from the San Bernardino County Transportation Authority Preliminary Construction Cost Estimates For Congestion Management Program (2003). Costs estimates are sensitive to the quantity and location of work specified for a given installation. These values represent the relative magnitude of the cost and should be verified through the bidding process.

11. CONCLUSIONS

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements. The improvements were determined through the operations analysis of Section 6 and mitigation measures of section 10. Table 10 summarizes the operational analysis for analysis scenarios.

PROJECT DESIGN FEATURES

Project West Driveway (NS) at Orange Avenue (EW)
- Construct the southbound approach to consist of one shared left/right turn with stop-control.
- Install appropriate "Exit Only" signage.

Project East Driveway (NS) at Orange Avenue (EW)
- Construct the northbound approach to consist of one shared left/through/right turn lane with stop-control.
- Construct the southbound approach to consist of one shared left/through/right turn lane with stop-control.

Alabama Street (NS) at Emergency Vehicle Access (EW)
- Construct emergency vehicle access driveway to the satisfaction of the City of Redlands Fire Department.
- Install appropriate emergency vehicle access only signage.

MITIGATION MEASURES

The proposed project shall contribute its fair share, through the adopted development impact fee program, to the following mitigation measure improvements for General Plan Buildout (Year 2040) Without and With Project:

- Alabama Street (NS) at Orange Avenue (EW) - #5
  - Restripe the eastbound approach to provide a dedicated left turn lane.
  - Restripe the westbound approach to provide a dedicated left turn lane.

Improvements at the project driveways are project design features which shall be constructed by the project. Site-adjacent roadway improvements shall be constructed in conjunction with the project.

The project fair share is based on the proportion of project peak hour traffic volume contributed to the improvement location relative to the total new peak hour traffic volume for General Plan Buildout (Year 2040) With Project conditions. The project proportional trip contributions have been calculated in Table 9 and the project fair share cost estimate is $3,867.

Figure 38 graphically illustrates the identified improvements.

GENERAL RECOMMENDATIONS

Figure 39 summarizes the circulation recommendations for the proposed project.

All roadway design, traffic signing and striping, and traffic control improvements relating to the proposed project should be constructed in accordance with applicable engineering standards and to the satisfaction of the City of Redlands Municipal Utilities and Engineering Department.

Site-adjacent roadways should be constructed or repaired at their ultimate half-section width including roadway improvements, sidewalks, street lighting, bicycle lanes, transit stops and landscaping in conjunction

with development, or as otherwise required by the City of Redlands Municipal Utilities and Engineering Department.

On-site traffic signing and striping plans should be submitted for City of Redlands approval in conjunction with detailed construction plans for the project. The applicant shall submit Iowa Street and Orange Avenue signing and striping plans to the City of Redlands for approval in conjunction with project frontage roadway construction plans. Conceptual striping figures for Opening Year and General Buildout are included in Appendix K.

Off-street parking should be provided to meet City of Redlands Municipal Code requirements.

The final grading, landscaping, and street improvement plans should demonstrate that sight distance standards are met in accordance with applicable City of Redlands/California Department of Transportation sight distance standards.

As is the case for any roadway design, the City of Redlands should periodically review traffic operations in the vicinity of the project once the project is constructed to assure that the traffic operations are satisfactory.

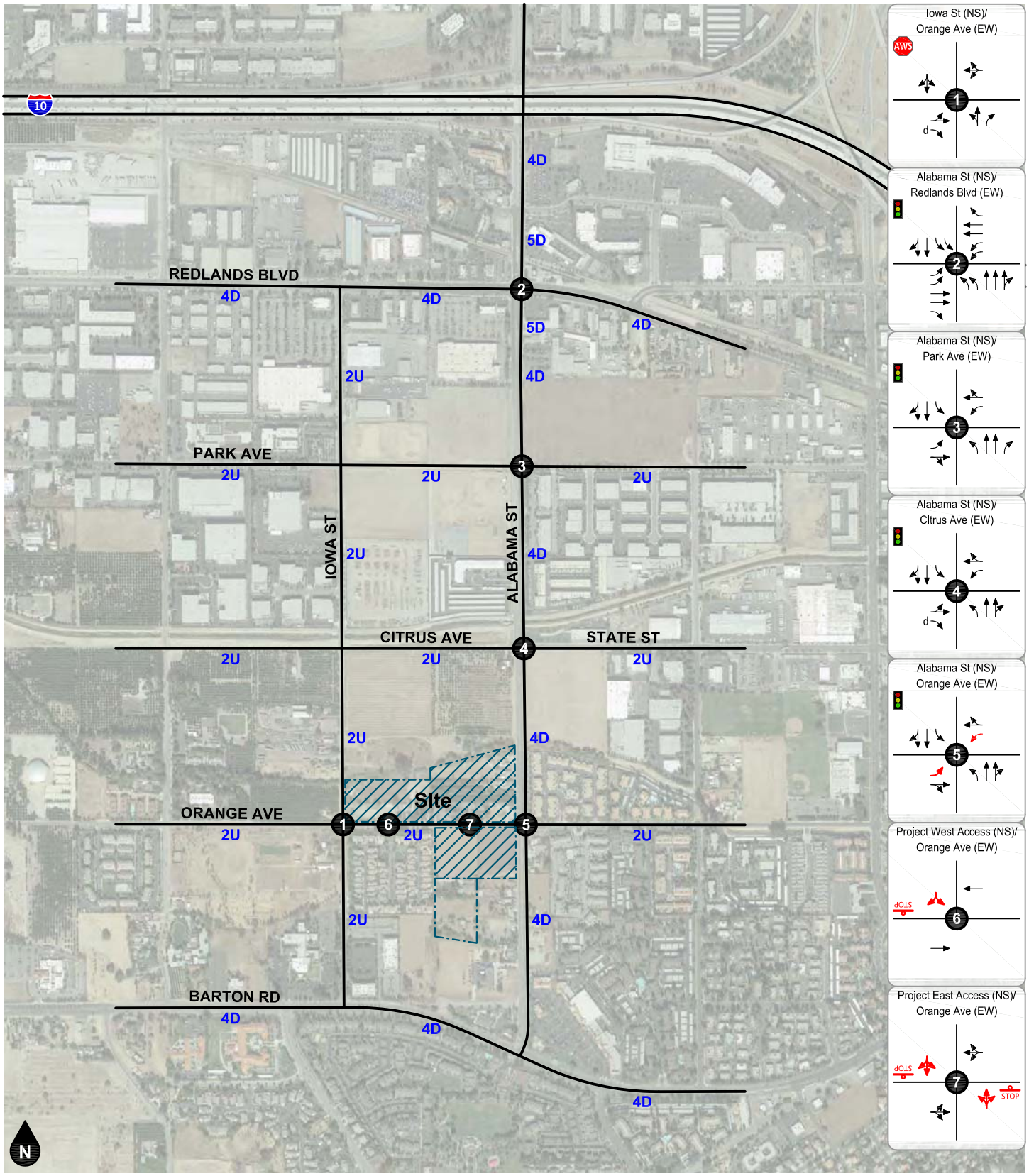
Table 10
Summary of Intersection Levels of Service

		Existing				Existing Plus Project				Opening Year Without Project				Opening Year With Project				General Buildout Without Project				General Buildout With Project			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
ID	Study Intersection	Delay[1]	LOS[2]	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1.	Iowa St at Orange Ave	10.5	B	9.3	A	11.1	B	9.5	A	11.4	B	9.9	A	12.1	B	10.2	B	17.7	C	16.0	C	20.0	C	17.3	C
2.	Alabama St at Redlands Blvd	28.9	C	23.6	C	29.3	C	24.0	C	29.3	C	28.3	C	29.4	C	28.7	C	32.3	C	32.1	C	32.8	C	32.7	C
3.	Alabama St at Park Ave	19.7	B	18.6	B	19.9	B	18.8	B	22.2	C	20.4	C	22.5	C	20.6	C	22.4	C	20.3	C	22.6	C	20.5	C
4.	Alabama St at Citrus Ave	12.3	B	20.0	B	14.8	B	20.1	C	15.1	B	20.9	C	15.8	B	21.0	C	20.4	C	22.0	C	20.5	C	22.0	C
5.	Alabama St at Orange Ave	18.0	B	17.6	B	18.5	B	19.4	B	19.0	B	18.7	B	19.7	B	21.2	C	19.8	B	53.7	D	20.7	C	82.4	F
	With Improvements	-		-		-		-		-		-		-		-		15.1	B	15.8	B	16.2	B	16.8	B
6.	Project West Driveway at Orange Ave	-		-		10.0	A	10.8	B	-		-		11.0	B	11.3	B	-		-		13.5	B	13.7	B
7.	Project East Driveway at Orange Ave	-		-		11.4	B	12.2	B	-		-		11.7	B	12.9	B	-		-		14.6	B	16.7	C

Notes:

(1) Delay is shown in seconds per vehicle. For intersections with traffic signal or all way stop control, overall average intersection delay and LOS are shown. For intersections with cross street stop control, LOS is based on average delay of the worst individual lane (or movements sharing a lane).

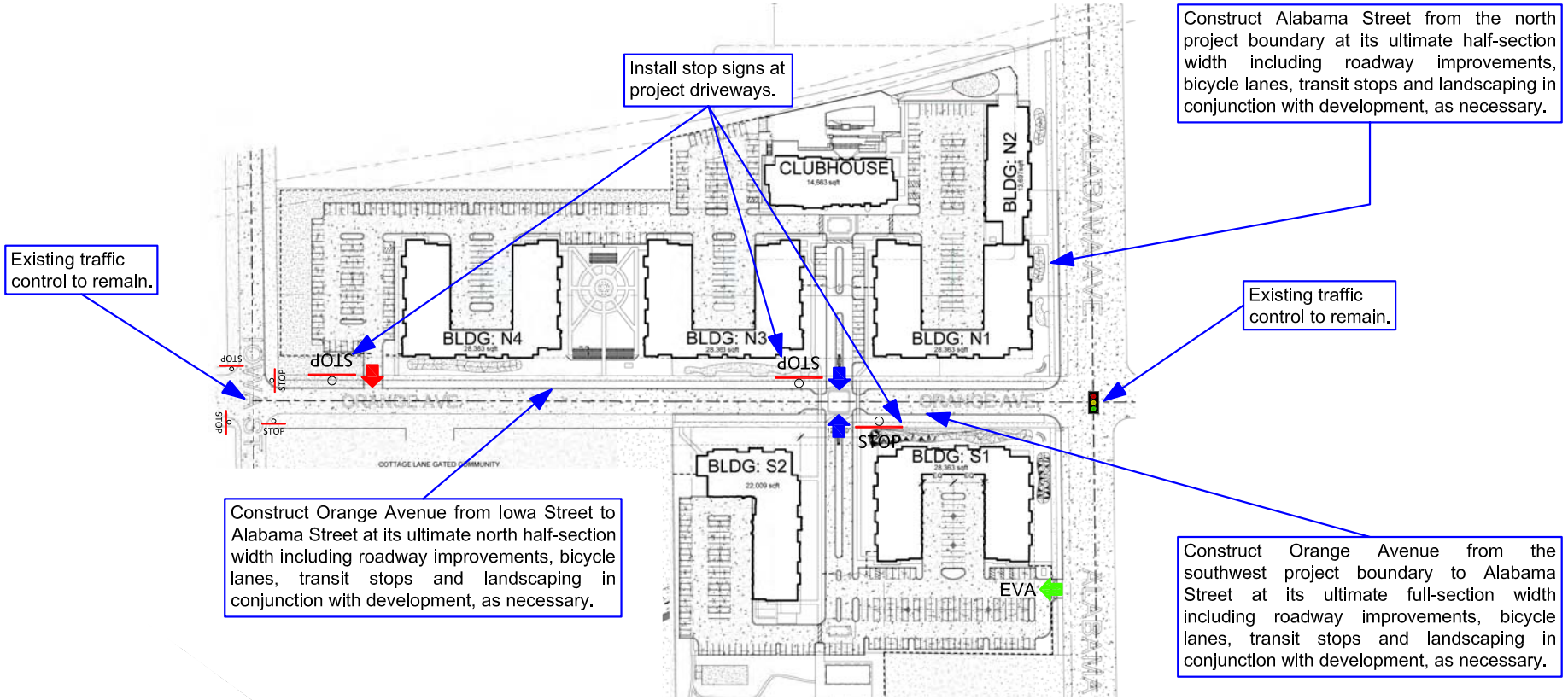
(2) LOS = Level of Service



Legend

- Traffic Signal
- AWS All Way Stop
- STOP Stop Sign
- #D #-Lane Divided Roadway
- #U #-Lane Undivided Roadway
- Existing Lane
- d De Facto Right Turn Lane
- Improvements

Figure 38
Proposed Through Travel Lanes and Intersection Controls



Sight distance at each project access should be reviewed with respect to California Department of Transportation/City of Redlands standards in conjunction with the preparation of final grading, landscaping, and street improvement plans.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the project. On-site traffic control plans shall comply with the California Manual of Uniform Traffic Control Devices (2014).

The Project site shall provide sufficient parking spaces to meet City of Redlands parking code requirements in order to service on-site parking demand.

Project West Driveway(NS) at Orange Avenue (EW)
Construct the southbound approach to consist of one shared left/right turn with stop-control.
Install appropriate "Exit Only" signage.

Project East Driveway (NS) at Orange Avenue (EW)
Construct the northbound approach to consist of one shared left/through/right turn lane with stop-control.
Construct the southbound approach to consist of one shared left/through/right turn lane with stop-control.

Alabama Street (NS) at Emergency Vehicle Access (EW)
Construct emergency vehicle access driveway to satisfaction of the City of Redlands Fire Department.
Install appropriate emergency vehicle access only signage.

Legend
- Traffic Signal
- STOP Stop Sign
- Full Access Driveway
- Restricted Exit Only Driveway
- EVA Emergency Vehicle Access Only

Figure 39
Circulation Recommendations

APPENDICES

APPENDIX A

GLOSSARY

GLOSSARY OF TERMS

ACRONYMS

AC	Acres
ADT	Average Daily Traffic
Caltrans	California Department of Transportation
DU	Dwelling Unit
ICU	Intersection Capacity Utilization
LOS	Level of Service
TSF	Thousand Square Feet
V/C	Volume/Capacity
VMT	Vehicle Miles Traveled

TERMS

AVERAGE DAILY TRAFFIC: The average 24-hour volume for a stated period divided by the number of days in that period. For example, Annual Average Daily Traffic is the total volume during a year divided by 365 days.

BANDWIDTH: The number of seconds of green time available for through traffic in a signal progression.

BOTTLENECK: A point of constriction along a roadway that limits the amount of traffic that can proceed downstream from its location.

CAPACITY: The maximum number of vehicles that can be reasonably expected to pass over a given section of a lane or a roadway in a given time period.

CHANNELIZATION: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movements of both vehicles and pedestrians.

CLEARANCE INTERVAL: Nearly same as yellow time. If there is an all red interval after the end of a yellow, then that is also added into the clearance interval.

CONTROL DELAY: The component of delay, typically expressed in seconds per vehicle, resulting from the type of traffic control at an intersection. Control delay is measured by comparison with the uncontrolled condition; it includes delay incurred by slowing down, stopping/waiting, and speeding up.

CORDON: An imaginary line around an area across which vehicles, persons, or other items are counted (in and out).

CORNER SIGHT DISTANCE: The minimum sight distance required by the driver of a vehicle to cross or enter the lanes of the major roadway without requiring approaching traffic travelling at a given speed to radically alter their speed or trajectory. Corner sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 36 inches above the pavement in the center of the nearest approach lane.

CYCLE LENGTH: The time period in seconds required for a traffic signal to complete one full cycle of indications.

CUL-DE-SAC: A local street open at one end only and with special provisions for turning around.

DAILY CAPACITY: A theoretical value representing the daily traffic volume that will typically result in a peak hour volume equal to the capacity of the roadway.

DELAY: The time consumed while traffic is impeded in its movement by some element over which it has no control, usually expressed in seconds per vehicle.

DEMAND RESPONSIVE SIGNAL: Same as traffic-actuated signal.

DENSITY: The number of vehicles occupying in a unit length of the through traffic lanes of a roadway at any given instant. Usually expressed in vehicles per mile.

DETECTOR: A device that responds to a physical stimulus and transmits a resulting impulse to the signal controller.

DESIGN SPEED: A speed selected for purposes of design. Features of a highway, such as curvature, superelevation, and sight distance (upon which the safe operation of vehicles is dependent) are correlated to design speed.

DIRECTIONAL SPLIT: The percent of traffic in the peak direction at any point in time.

DIVERSION: The rerouting of peak hour traffic to avoid congestion.

FORCED FLOW: Opposite of free flow.

FREE FLOW: Volumes are well below capacity. Vehicles can maneuver freely and travel is unimpeded by other traffic.

GAP: Time or distance between successive vehicles in a traffic stream, rear bumper to front bumper.

HEADWAY: Time or distance spacing between successive vehicles in a traffic stream, front bumper to front bumper.

INTERCONNECTED SIGNAL SYSTEM: A number of intersections that are connected to achieve signal progression.

LEVEL OF SERVICE: A qualitative measure of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience, and operating costs.

LOOP DETECTOR: A vehicle detector consisting of a loop of wire embedded in the roadway, energized by alternating current and producing an output circuit closure when passed over by a vehicle.

MINIMUM ACCEPTABLE GAP: Smallest time headway between successive vehicles in a traffic stream into which another vehicle is willing and able to cross or merge.

MULTI-MODAL: More than one mode; such as automobile, bus transit, rail rapid transit, and bicycle transportation modes.

OFFSET: The time interval in seconds between the beginning of green at one intersection and the beginning of green at an adjacent intersection.

PLATOON: A closely grouped component of traffic that is composed of several vehicles moving, or standing ready to move, with clear spaces ahead and behind.

PASSENGER CAR EQUIVALENT (PCE): A metric used to assess the impact of larger vehicles, such as trucks, recreational vehicles, and buses, by converting the traffic volume of larger vehicles to an equivalent number of passenger cars.

PEAK HOUR: The 60 consecutive minutes with the highest number of vehicles.

PRETIMED SIGNAL: A type of traffic signal that directs traffic to stop and go on a predetermined time schedule without regard to traffic conditions. Also, fixed time signal.

PROGRESSION: A term used to describe the progressive movement of traffic through several signalized intersections.

QUEUE: The number of vehicles waiting at a service area such as a traffic signal, stop sign, or access gate.

QUEUE LENGTH: The length of vehicle queue, typically expressed in feet, waiting at a service area such as a traffic signal, stop sign, or access gate.

SCREEN-LINE: An imaginary line or physical feature across which all trips are counted, normally to verify the validity of mathematical traffic models.

SHARED/RECIPROCAL PARKING AGREEMENT: A written binding document executed between property owners to provide a designated number of off-street parking stalls within a designated area to be available for specified businesses or land uses.

SIGHT DISTANCE: The continuous length of roadway visible to a driver or roadway user.

SIGNAL CYCLE: The time period in seconds required for one complete sequence of signal indications.

SIGNAL PHASE: The part of the signal cycle allocated to one or more traffic movements.

STACKING DISTANCE: The length of area available behind a service area, such as a traffic signal or gate, for vehicle queueing to occur.

STARTING DELAY: The delay experienced in initiating the movement of queued traffic from a stop to an average running speed through an intersection.

STOPPING SIGHT DISTANCE: The minimum distance required by the driver of a vehicle on the major roadway travelling at a given speed to bring the vehicle to a stop after an object on the road becomes visible. Stopping sight distance is measured from the driver's eye at 42 inches above the pavement to an object height of 6 inches above the pavement.

TRAFFIC-ACTUATED SIGNAL: A type of traffic signal that directs traffic to stop and go in accordance with the demands of traffic, as registered by the actuation of detectors.

TRIP: The movement of a person or vehicle from one location (origin) to another (destination). For example, from home to store to home is two trips, not one.

TRIP-END: One end of a trip at either the origin or destination (i.e., each trip has two trip-ends). A trip-end occurs when a person, object, or message is transferred to or from a vehicle.

TRIP GENERATION RATE: The quantity of trips produced and/or attracted by a specific land use stated in terms of units such as per dwelling, per acre, and per 1,000 square feet of floor space.

TRUCK: A vehicle having dual tires on one or more axles, or having more than two axles.

TURNING RADIUS: The circular arc formed by the smallest turning path radius of the front outside tire of a vehicle, such as that performed by a U-turn maneuver. This is based on the length and width of the wheel base as well as the steering mechanism of the vehicle.

UNBALANCED FLOW: Heavier traffic flow in one direction than the other. On a daily basis, most facilities have balanced flow. During the peak hours, flow is seldom balanced in an urban area.

VEHICLE MILES OF TRAVEL: A measure of the amount of usage of a section of highway, obtained by multiplying the average daily traffic by length of facility in miles.

APPENDIX B

SCOPING AGREEMENT

Perrie Ilercil

From: Don Young <dyoung@cityofredlands.org>
Sent: Tuesday, February 26, 2019 3:31 PM
To: Perrie Ilercil
Cc: Loralee Farris; Sean Reilly
Subject: RE: SD Homes Redlands Apartment project Site plan revision.

The revised scoping agreement is satisfactory.

Please remember all submittals should be through your case planner while the project is in the entitlement phase.

Donald Young
Manager - One Stop Permit Center
City of Redlands
909-798-7585 x6
dyoung@cityofredlands.org

From: Perrie Ilercil [mailto:perrie@ganddini.com]
Sent: Tuesday, February 26, 2019 12:12 PM
To: Don Young
Subject: SD Homes Redlands Apartment project Site plan revision.
Importance: High

Hi Don,
Please provide approval or email acceptance of the previous scoping agreement with minor changes.

This project previously had a scoping agreement approved, per email response March 14, 2018, at 382 units and opening year 2019.

The project has been reduced to 330 units, and opening year has been changed to 2020.

If you have any questions or comments, please email me or call 949-257-3126.

Thank you

PS Trip credits are for land uses which were existing at the time of the traffic counts.

Sincerely,

Perrie Ilercil, **PE (AZ)**
Senior Engineer

ATTACHMENT A

SCOPING AGREEMENT FOR TRAFFIC IMPACT STUDY

This letter acknowledges the City of Redlands Engineering Department requirements for the traffic impact analysis of the following project.

Case No. .
Related Cases.
SP No.
EIR No.
GPA No.
CZ No.
Project Name: SD Homes/Redlands Apartments
Project Address: NWC and SWC of the Alabama Street and Orange Avenue intersection
Project Description: 330 multi-family (low-rise) dwelling units and a site which currently has 6 homes, a nursery and a landscape maintenance yard.

	Consultant	Developer
Name:	Ganddini Group, Inc.	LUXVIEW Properties
Address:	506 Parkcenter Drive, Suite 201 Santa Ana, CA 92868	2358 University Ave. STE. 33 San Diego, CA 92104
Telephone:	949-257-3126 / 714-795-3100 ext 103	619-291-2229
Contact:	Perrie Ilercil, perrie@ganddini.com	Molly DeLattre, Project Manager

A. Trip Generation Source: ITE Trip Generation Edition. (See attached Table 1)

	Existing			Proposed		
Land Use	Residential / Agricultural			Multi-Family Residential		
Zoning	EV/AP			Multi-Family Residential		
Trip Generation	IN	OUT	TOTAL	IN	OUT	TOTAL
AM Trips(in PCE)	**6**	**5**	**11**	**35**	**117**	**152**
PM Trips(in PCE)	**7**	**8**	**15**	**116**	**69**	**185**
Daily Trips(in PCE)	**61**	**61**	**120**	**1208**	**1208**	**2416**

Internal Trip Allowance Yes [No] (% Trip Discount) (see Attached)
Pass-By Trip Allowance Yes [No] (% Trip Discount) (see Attached)

B. Trip Geographic Distribution: (See attached exhibit for detailed assignment)

Cars: N **20** % S **0** % E **35** % W **45** %
Trucks: N **NA** % S **NA** % E **NA** % W **NA** %

C. Background Traffic

Project Build-out Year 2020 Annual Ambient Growth Rate: SBTAM
Phase Year(s): NA
Other Related Projects to be analyzed: per City Planning Division – Major Projects List (Updated February 1, 2018) please provide any projects not listed for this area
Model/Forecast methodology: SBTAM Model .

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

1.	Iowa Street (NS) at Orange Avenue (EW)	8.	
2.	Alabama Street (NS) at Redlands Boulevard (EW)	9.	
3.	Alabama Street (NS) at Park Avenue (EW)	10.	
4.	Alabama Street (NS) at Citrus Avenue (EW)	11.	
5.	Alabama Street (NS) at Orange Avenue (EW)	12.	
6.	Iowa Street (NS) at Project Driveway (EW)	13.	
7.	Project Driveway (NS) at Orange Avenue (EW)	14.	

E. Other Jurisdictional Impacts

Is this project within a City's Sphere of Influence or one-mile radius of City boundaries? **Yes** No
If so, name of City Jurisdiction: City of Loma Linda

F. Freeway Analysis

The potential traffic impact on the following Freeway(s) must be considered. This consultation shall also include a determination of Caltrans requirements for the study of traffic impacts to its facilities and the mitigation of any such impacts. This analysis must follow the most current Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002). If Caltrans finds that the project has a significant impact on the freeway, Caltrans shall be requested to include the basis for this finding in their response.

Is the project within a 5 mile radius of the freeway system and will contribute more than 50 peak hour trips:
Closest freeway route: I-10 **Yes** No

G. Site Plan (See attached reduced copy)

H. Specific issues to be addressed in the Study (in addition to the standard analysis, to be filled out by Transportation Department)

Include analysis and commentary regarding pedestrian usage of the midblock crossing west of Iowa Street and any recommended safety improvements.

Recommended by:

Name: Perrie Ilercil, P.E. (AZ)
Consultant's Representative

February 25, 2019
October 25, 2017
March 8, 2018
Date

Approved Scoping Agreement:

City of Redlands, Engineering Department

Date

JN18-0085

Table 1
Project Trip Generation

Trip Generation Rates									
Land Use	Source[1]	Unit[2]	AM Peak Hour			PM Peak Hour			Daily
			% In	% Out	Total	% In	% Out	Total	
Single-Family Detached Housing	210	DU	25%	75%	0.74	63%	37%	0.99	9.44
Specialty Trade Contractor	180	TSF	73%	27%	1.66	32%	68%	1.97	10.22
Nursery Wholesale[a]	818	AC	43%	57%	0.26	50%	50%	0.45	19.5
Multi-Family Housing	220	DU	23%	77%	0.46	63%	37%	0.56	7.32

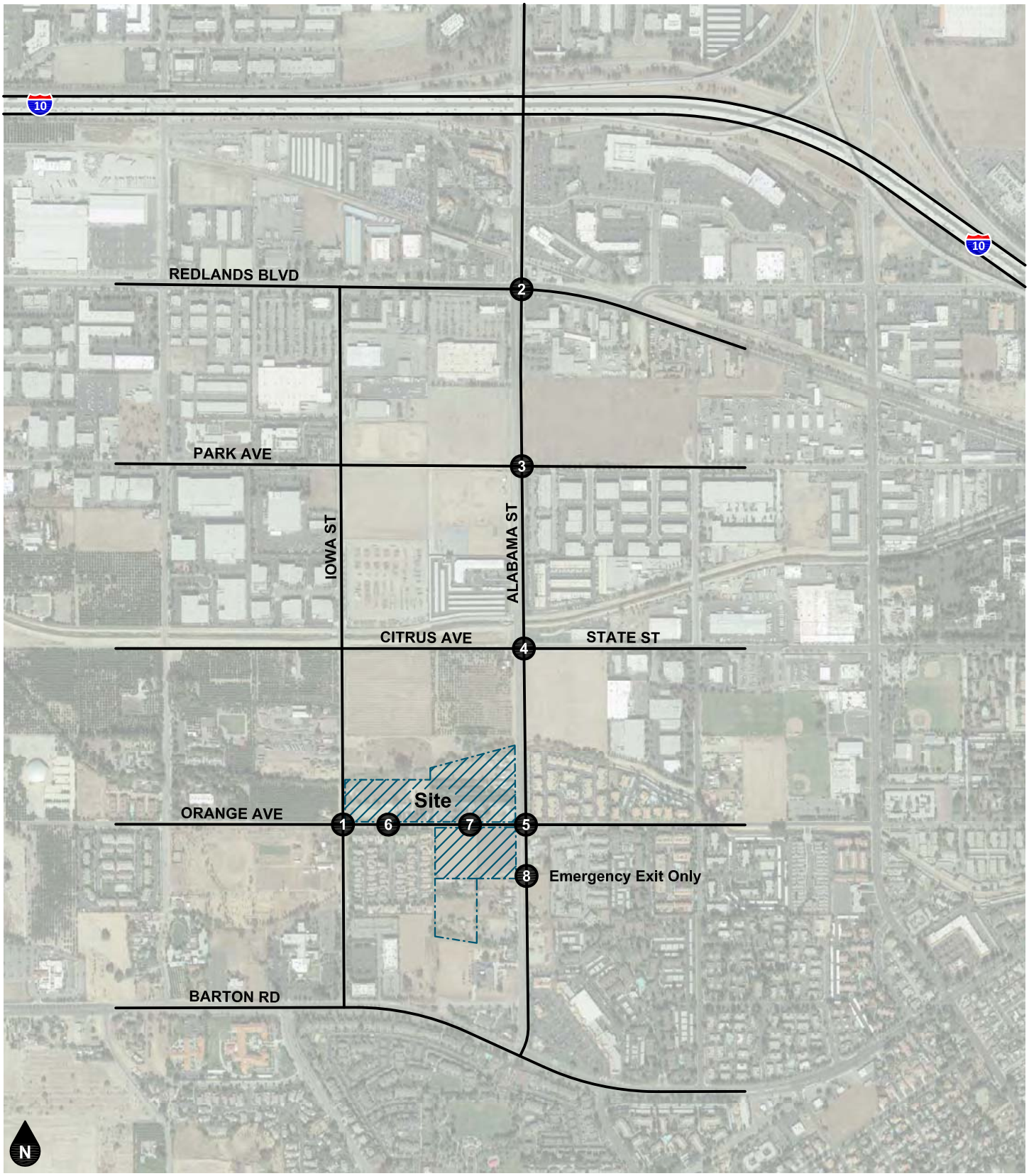
Trips Generated									
Land Use	Quantity[3]	Unit[2]	AM Peak Hour			PM Peak Hour			Daily
			% In	% Out	Total	% In	% Out	Total	
Single-Family Detached Housing	-6	DU	-1	-3	-4	-4	-2	-6	-57
Specialty Trade Contractor	-4	TSF	-5	-2	-7	-3	-5	-8	-41
Nursery Wholesale	-1.2	AC	0	0	0	0	-1	-1	-23
Existing Land Uses			-6	-5	-11	-7	-8	-15	-121
Multi-Family Housing	330	DU	35	117	152	116	69	185	2,416
TOTAL NET NEW TRIPS			**29**	**112**	**141**	**109**	**61**	**170**	**2,295**

Notes:

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, 2017; ### = Land Use Code.
[a] PM inbound-outbound distribution for ITE818 are not available, they are assumed to be 50%-50%.

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

(3) Source: Drawing AS-101 Site Plan for Project: SD Homes - Redlands Apartments, dated February 12, 2019.



Legend

(#) Study Intersection

Figure 1
Project Location Map

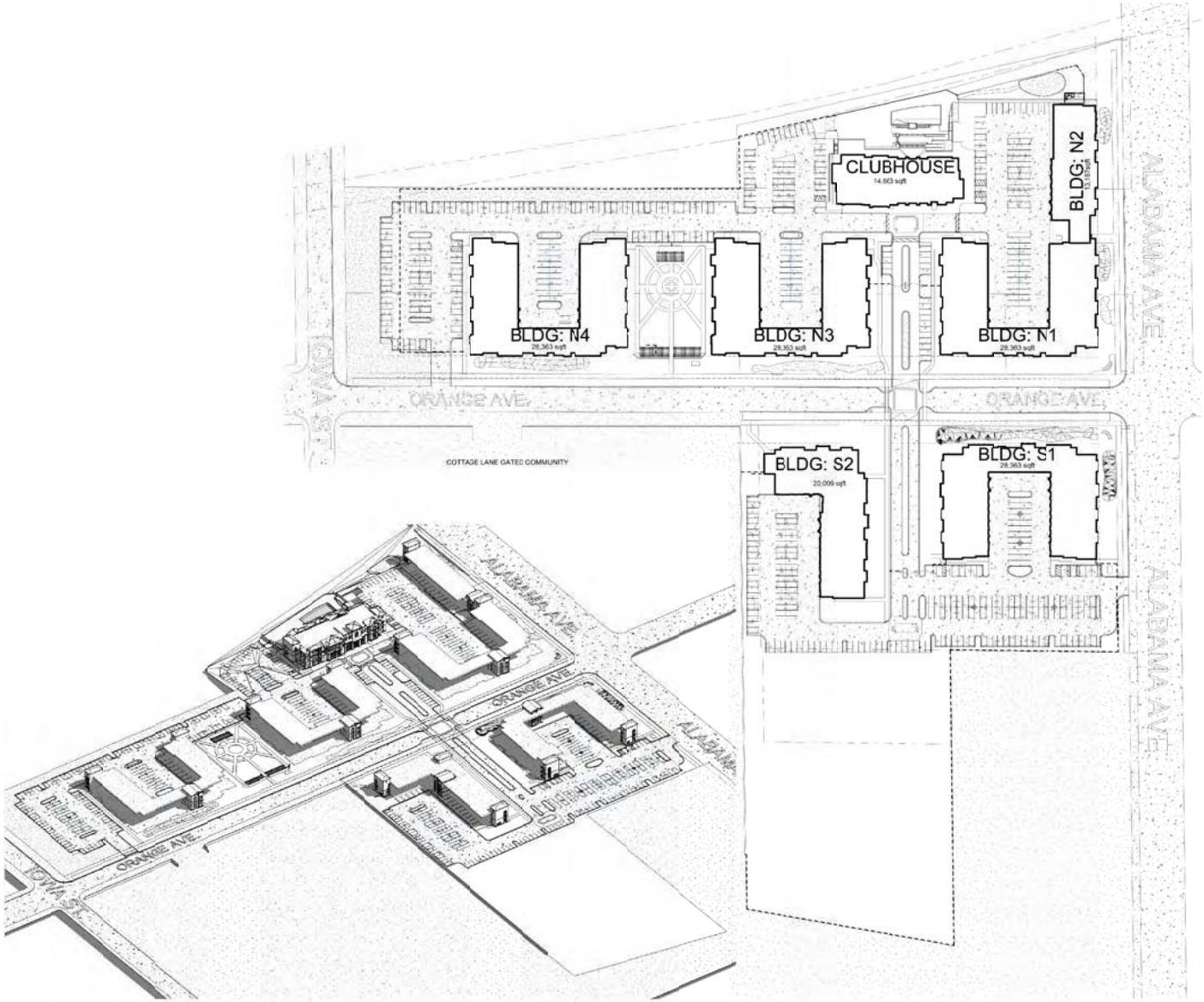
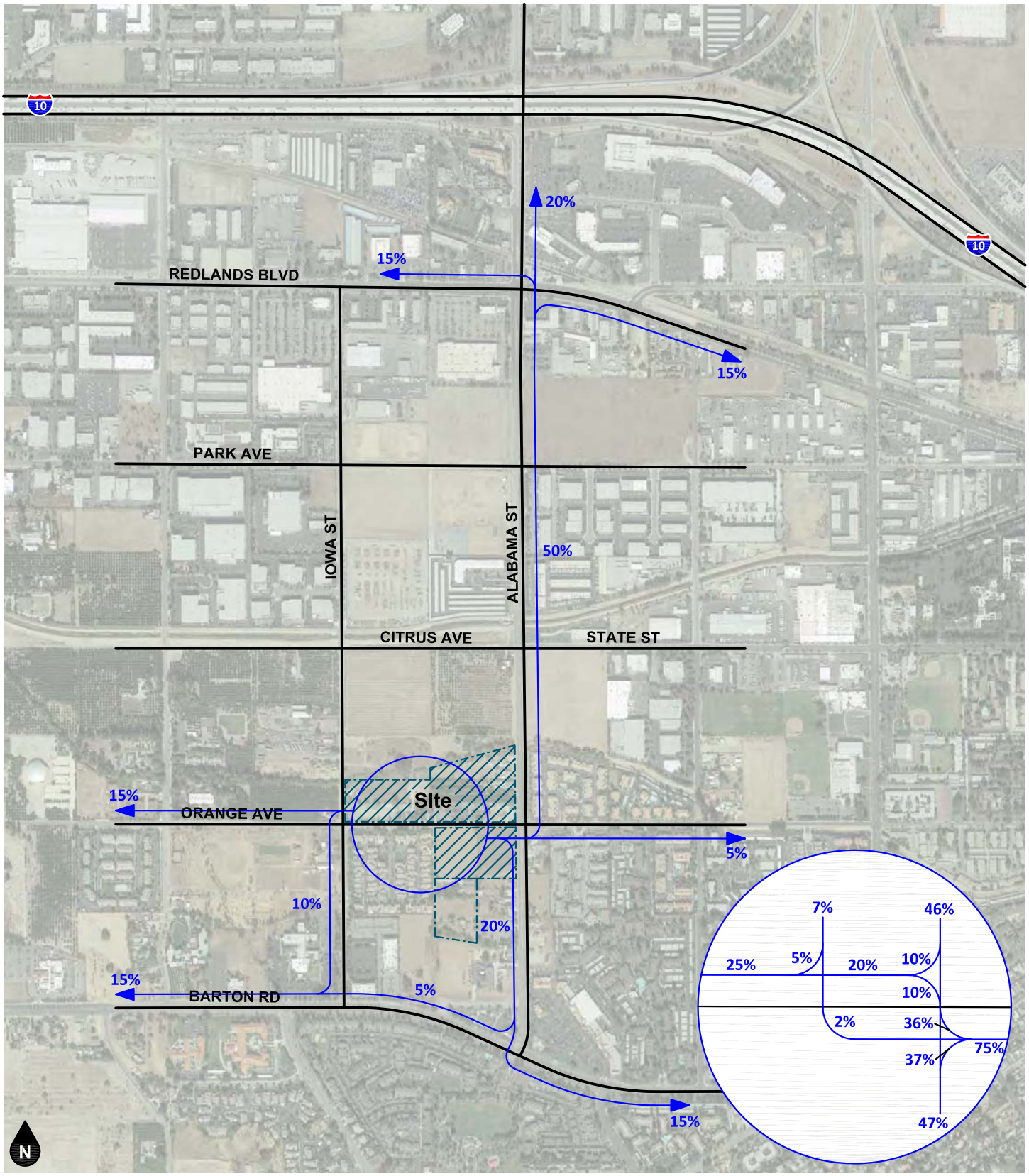


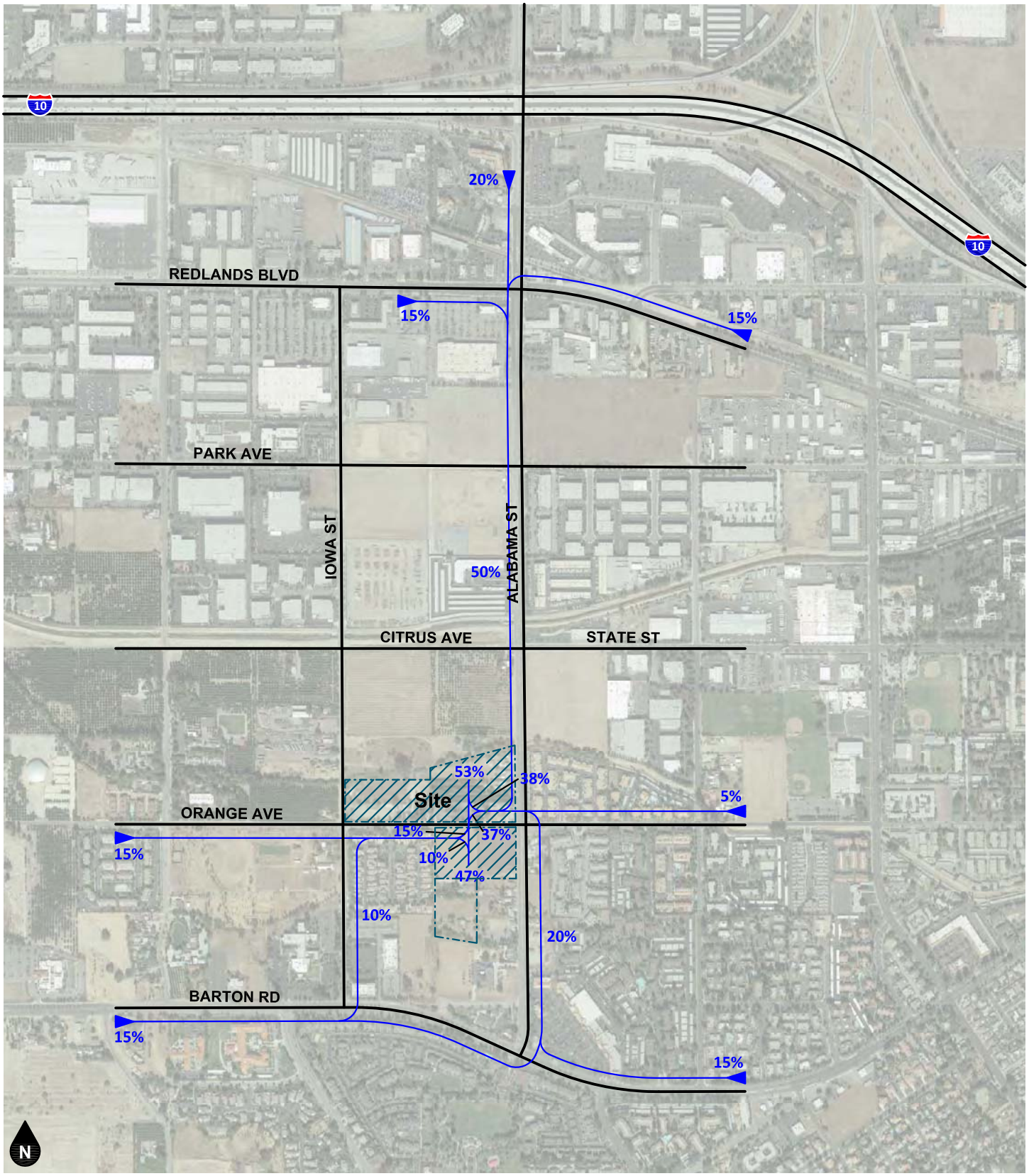
Figure 2
Site Plan



Legend

10% Percent From Project

Figure 3
Project Trip Distribution - Outbound



Legend

10% Percent To Project

Figure 4
Project Trip Distribution - Inbound

APPENDIX C

VOLUME COUNT WORKSHEETS

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

City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

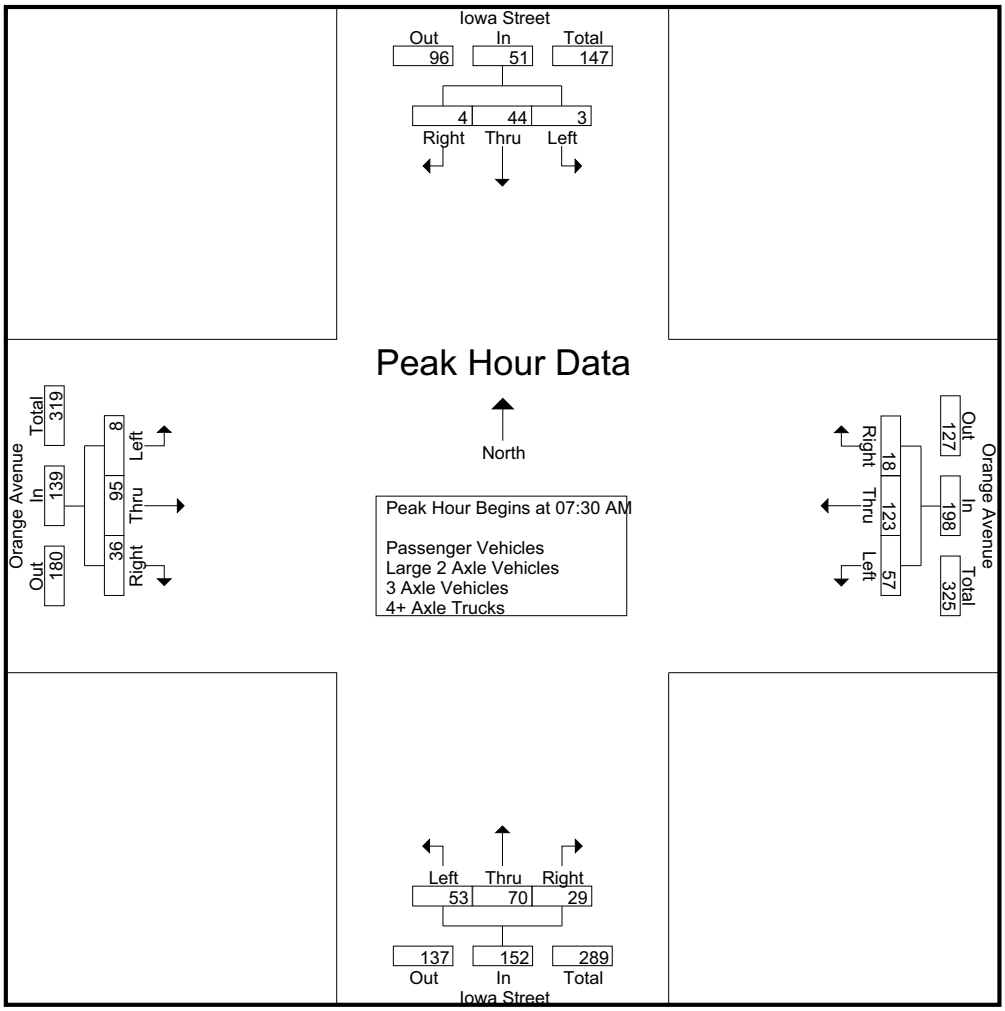
	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	3	1	5	6	18	4	28	10	6	0	16	1	7	5	13	62
07:15 AM	0	7	2	9	8	22	3	33	6	5	4	15	2	19	4	25	82
07:30 AM	0	9	2	11	15	36	3	54	12	11	3	26	1	19	6	26	117
07:45 AM	2	15	0	17	18	39	8	65	14	22	8	44	3	27	13	43	169
Total	3	34	5	42	47	115	18	180	42	44	15	101	7	72	28	107	430
08:00 AM	0	8	2	10	16	26	1	43	18	20	15	53	2	27	15	44	150
08:15 AM	1	12	0	13	8	22	6	36	9	17	3	29	2	22	2	26	104
08:30 AM	0	13	1	14	6	22	4	32	9	10	3	22	1	22	8	31	99
08:45 AM	2	5	2	9	6	23	1	30	7	13	1	21	1	11	2	14	74
Total	3	38	5	46	36	93	12	141	43	60	22	125	6	82	27	115	427
Grand Total	6	72	10	88	83	208	30	321	85	104	37	226	13	154	55	222	857
Apprch %	6.8	81.8	11.4		25.9	64.8	9.3		37.6	46	16.4		5.9	69.4	24.8		
Total %	0.7	8.4	1.2	10.3	9.7	24.3	3.5	37.5	9.9	12.1	4.3	26.4	1.5	18	6.4	25.9	
Passenger Vehicles	6	72	10	88	82	208	30	320	85	102	36	223	13	152	54	219	850
% Passenger Vehicles	100	100	100	100	98.8	100	100	99.7	100	98.1	97.3	98.7	100	98.7	98.2	98.6	99.2
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	1	2.7	0.9	0	0.6	0	0.5	0.4
3 Axle Vehicles	0	0	0	0	1	0	0	1	0	1	0	1	0	0	1	1	3
% 3 Axle Vehicles	0	0	0	0	1.2	0	0	0.3	0	1	0	0.4	0	0	1.8	0.5	0.4
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0.5	0.1

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	9	**2**	11	15	36	3	54	12	11	3	26	1	19	6	26	117
07:45 AM	**2**	**15**	0	**17**	**18**	**39**	**8**	**65**	14	**22**	8	44	**3**	**27**	13	43	**169**
08:00 AM	0	8	2	10	16	26	1	43	**18**	20	**15**	**53**	2	27	**15**	**44**	150
08:15 AM	1	12	0	13	8	22	6	36	9	17	3	29	2	22	2	26	104
Total Volume	3	44	4	51	57	123	18	198	53	70	29	152	8	95	36	139	540
% App. Total	5.9	86.3	7.8		28.8	62.1	9.1		34.9	46.1	19.1		5.8	68.3	25.9		
PHF	.375	.733	.500	.750	.792	.788	.563	.762	.736	.795	.483	.717	.667	.880	.600	.790	.799

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

City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 2



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

	07:45 AM				07:30 AM				07:30 AM				07:45 AM			
+0 mins.	**2**	**15**	0	**17**	15	36	3	54	12	11	3	26	**3**	**27**	13	43
+15 mins.	0	8	**2**	10	**18**	**39**	**8**	**65**	14	**22**	8	44	2	27	**15**	**44**
+30 mins.	1	12	0	13	16	26	1	43	**18**	20	**15**	**53**	2	22	2	26
+45 mins.	0	13	1	14	8	22	6	36	9	17	3	29	1	22	8	31
Total Volume	3	48	3	54	57	123	18	198	53	70	29	152	8	98	38	144
% App. Total	5.6	88.9	5.6		28.8	62.1	9.1		34.9	46.1	19.1		5.6	68.1	26.4	
PHF	.375	.800	.375	.794	.792	.788	.563	.762	.736	.795	.483	.717	.667	.907	.633	.818

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File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	3	1	5	5	18	4	27	10	6	0	16	1	7	5	13	61
07:15 AM	0	7	2	9	8	22	3	33	6	5	4	15	2	19	4	25	82
07:30 AM	0	9	2	11	15	36	3	54	12	11	2	25	1	19	6	26	116
07:45 AM	2	15	0	17	18	39	8	65	14	22	8	44	3	26	12	41	167
Total	3	34	5	42	46	115	18	179	42	44	14	100	7	71	27	105	426
08:00 AM	0	8	2	10	16	26	1	43	18	19	15	52	2	27	15	44	149
08:15 AM	1	12	0	13	8	22	6	36	9	16	3	28	2	22	2	26	103
08:30 AM	0	13	1	14	6	22	4	32	9	10	3	22	1	21	8	30	98
08:45 AM	2	5	2	9	6	23	1	30	7	13	1	21	1	11	2	14	74
Total	3	38	5	46	36	93	12	141	43	58	22	123	6	81	27	114	424
Grand Total	6	72	10	88	82	208	30	320	85	102	36	223	13	152	54	219	850
Apprch %	6.8	81.8	11.4		25.6	65	9.4		38.1	45.7	16.1		5.9	69.4	24.7		
Total %	0.7	8.5	1.2	10.4	9.6	24.5	3.5	37.6	10	12	4.2	26.2	1.5	17.9	6.4	25.8	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	9	**2**	11	15	36	3	54	12	11	2	25	1	19	6	26	116
07:45 AM	**2**	**15**	0	**17**	**18**	**39**	**8**	**65**	14	**22**	8	44	**3**	26	12	41	**167**
08:00 AM	0	8	2	10	16	26	1	43	**18**	19	**15**	**52**	2	**27**	**15**	**44**	149
08:15 AM	1	12	0	13	8	22	6	36	9	16	3	28	2	22	2	26	103
Total Volume	3	44	4	51	57	123	18	198	53	68	28	149	8	94	35	137	535
% App. Total	5.9	86.3	7.8		28.8	62.1	9.1		35.6	45.6	18.8		5.8	68.6	25.5		
PHF	.375	.733	.500	.750	.792	.788	.563	.762	.736	.773	.467	.716	.667	.870	.583	.778	.801

Counts Unlimited
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City of Redlands
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Weather: Clear

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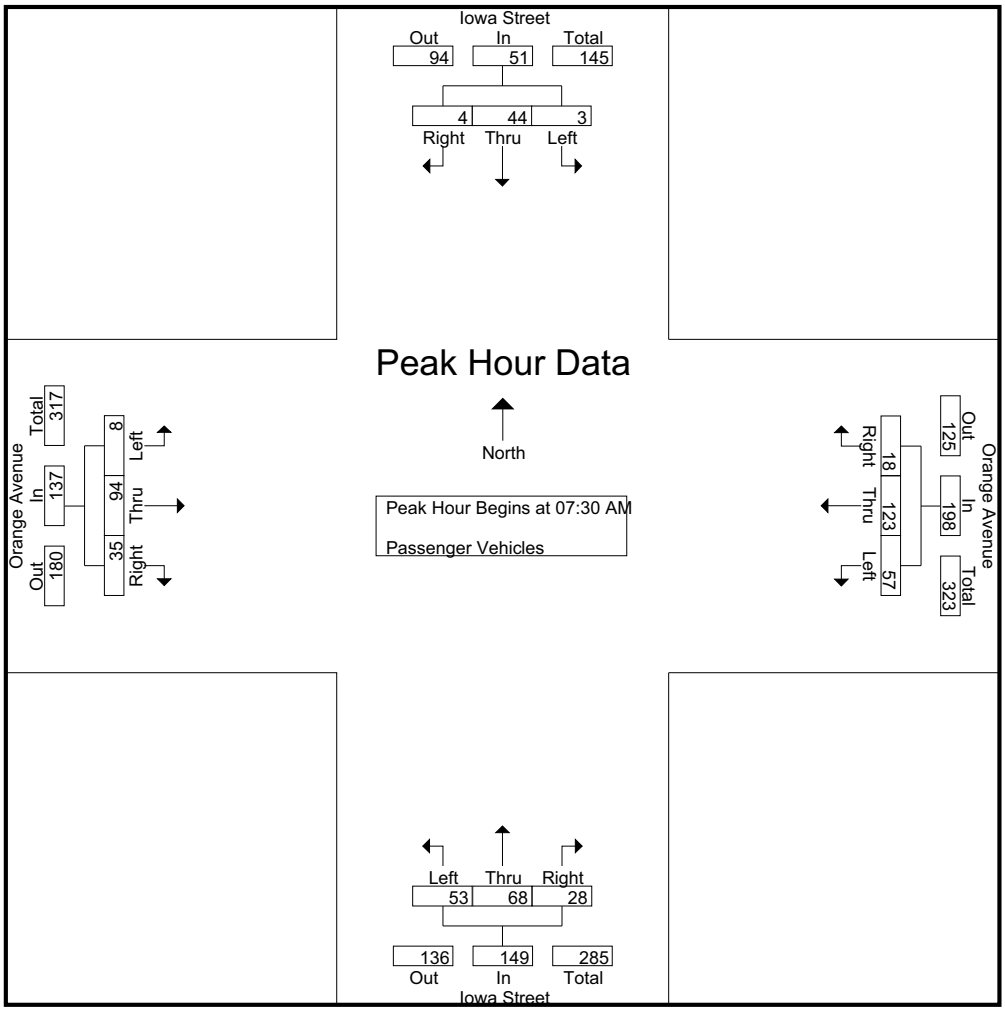

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	9	**2**	11	15	36	3	54	12	11	2	25	1	19	6	26
+15 mins.	**2**	**15**	0	**17**	**18**	**39**	**8**	**65**	14	**22**	8	44	**3**	26	12	41
+30 mins.	0	8	2	10	16	26	1	43	**18**	19	**15**	**52**	2	**27**	**15**	**44**
+45 mins.	1	12	0	13	8	22	6	36	9	16	3	28	2	22	2	26
Total Volume	3	44	4	51	57	123	18	198	53	68	28	149	8	94	35	137
% App. Total	5.9	86.3	7.8		28.8	62.1	9.1		35.6	45.6	18.8		5.8	68.6	25.5	
PHF	.375	.733	.500	.750	.792	.788	.563	.762	.736	.773	.467	.716	.667	.870	.583	.778

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E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Total	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
Apprch %	0	0	0		0	0	0		0	50	50		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	33.3	33.3	66.7	0	33.3	0	33.3	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0	**1**
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1	3
% App. Total	0	0	0		0	0	0		0	50	50		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.000	.250	.000	.250	.750

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City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
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File Name : 04_RED IO OR AM
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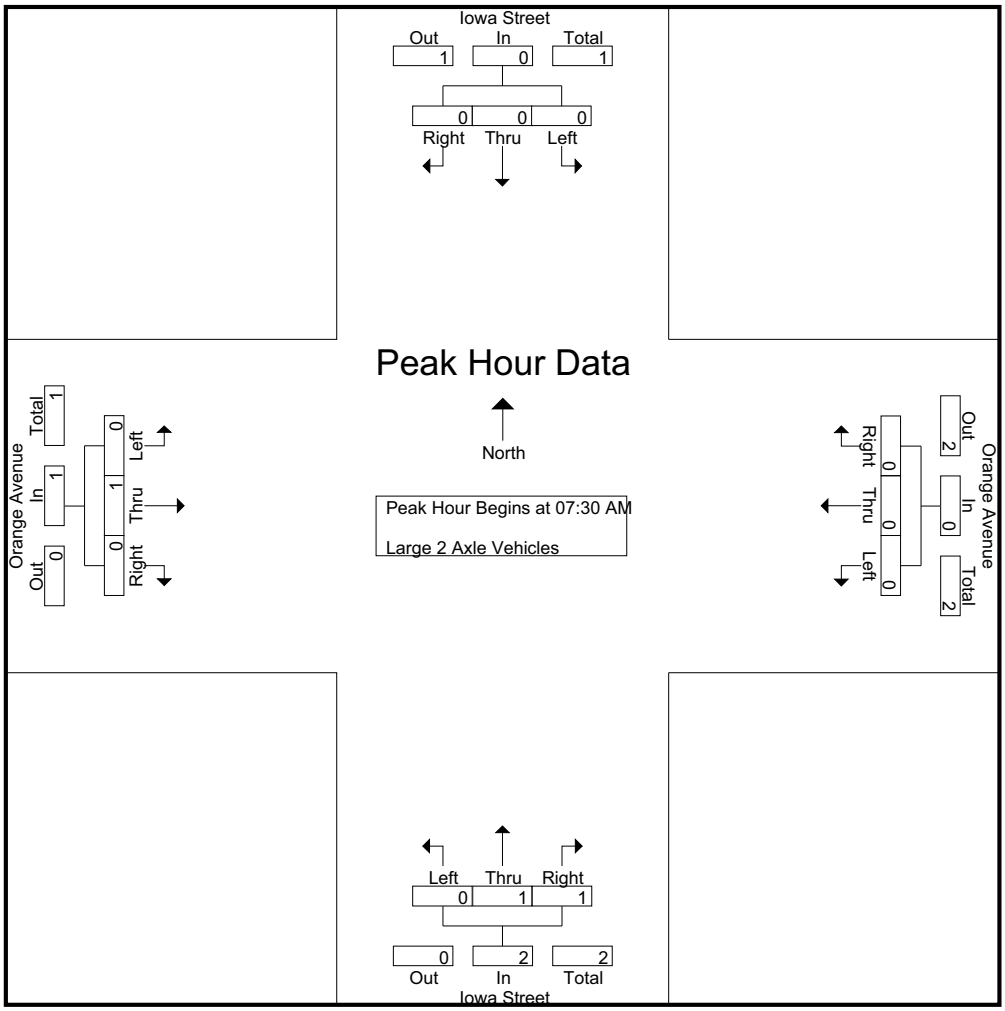

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**1**	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	1	2	0	1	0	1
% App. Total	0	0	0		0	0	0		0	50	50		0	100	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.500	.000	.250	.000	.250

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

City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	2
08:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	1	0	0	1	0	1	0	1	0	0	1	1	3
Apprch %	0	0	0		100	0	0		0	100	0		0	0	100		
Total %	0	0	0	0	33.3	0	0	33.3	0	33.3	0	33.3	0	0	33.3	33.3	

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

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City of Redlands
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E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
Start Date : 11/1/2017
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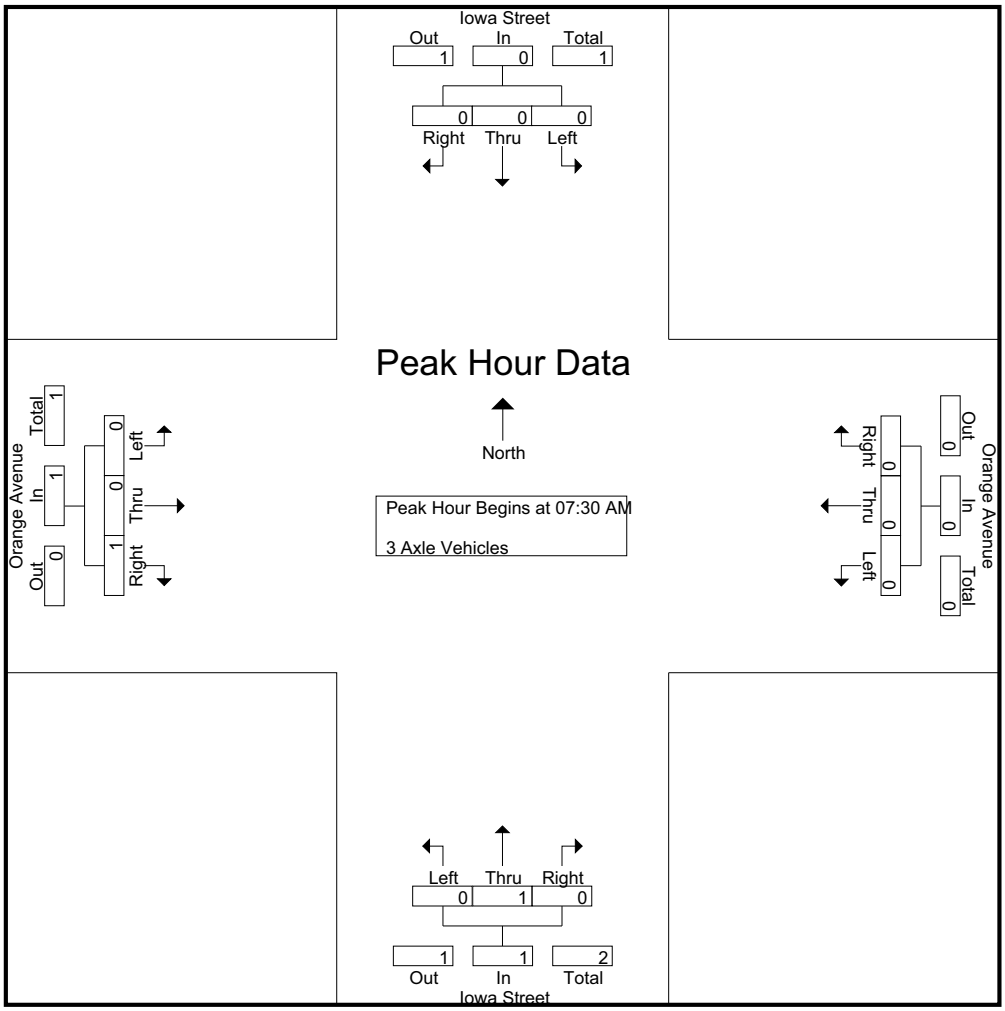

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	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
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Apprch %	0	0	0		0	0	0		0	0	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	100	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Weather: Clear

File Name : 04_RED IO OR AM
Site Code : 07517744
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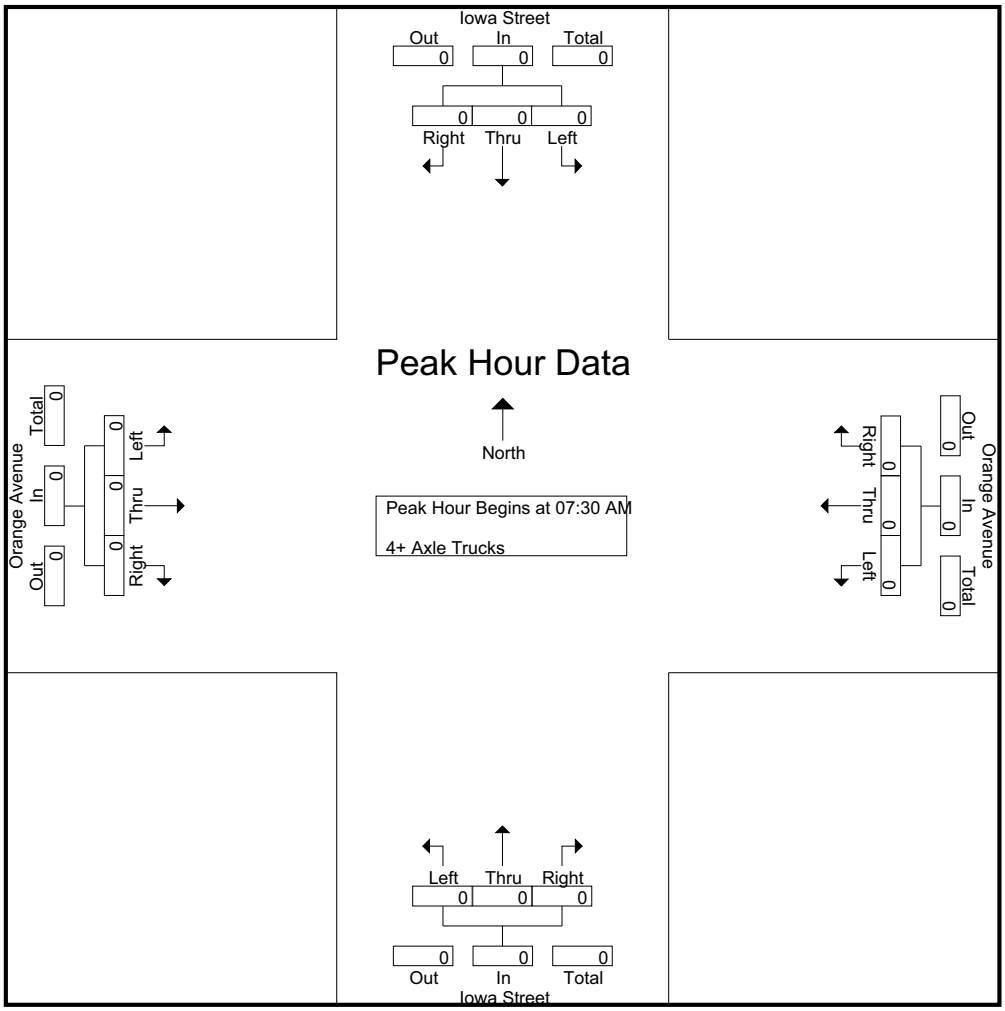

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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File Name : 04_RED IO OR PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	15	4	22	4	29	2	35	4	16	15	35	2	34	8	44	136
04:15 PM	3	6	1	10	3	20	4	27	5	8	10	23	1	21	6	28	88
04:30 PM	5	13	5	23	3	20	1	24	1	25	8	34	4	40	7	51	132
04:45 PM	7	13	7	27	9	15	1	25	4	19	6	29	2	35	7	44	125
Total	18	47	17	82	19	84	8	111	14	68	39	121	9	130	28	167	481
05:00 PM	4	13	7	24	1	14	2	17	2	25	12	39	1	48	6	55	135
05:15 PM	5	11	5	21	1	21	1	23	5	16	13	34	0	40	2	42	120
05:30 PM	6	10	1	17	0	20	1	21	1	9	5	15	2	33	3	38	91
05:45 PM	2	7	0	9	4	14	1	19	0	6	6	12	2	27	4	33	73
Total	17	41	13	71	6	69	5	80	8	56	36	100	5	148	15	168	419
Grand Total	35	88	30	153	25	153	13	191	22	124	75	221	14	278	43	335	900
Apprch %	22.9	57.5	19.6		13.1	80.1	6.8		10	56.1	33.9		4.2	83	12.8		
Total %	3.9	9.8	3.3	17	2.8	17	1.4	21.2	2.4	13.8	8.3	24.6	1.6	30.9	4.8	37.2	
Passenger Vehicles	35	86	30	151	25	153	13	191	22	121	75	218	14	277	43	334	894
% Passenger Vehicles	100	97.7	100	98.7	100	100	100	100	100	97.6	100	98.6	100	99.6	100	99.7	99.3
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	1.6	0	0.9	0	0.4	0	0.3	0.3
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% 3 Axle Vehicles	0	2.3	0	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.8	0	0.5	0	0	0	0	0.1

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	**13**	5	23	3	20	1	24	1	**25**	8	34	**4**	40	**7**	51	132
04:45 PM	**7**	13	**7**	**27**	**9**	15	1	**25**	4	19	6	29	2	35	7	44	125
05:00 PM	4	13	7	24	1	14	**2**	17	2	25	12	**39**	1	**48**	6	**55**	**135**
05:15 PM	5	11	5	21	1	**21**	1	23	**5**	16	**13**	34	0	40	2	42	120
Total Volume	21	50	24	95	14	70	5	89	12	85	39	136	7	163	22	192	512
% App. Total	22.1	52.6	25.3		15.7	78.7	5.6		8.8	62.5	28.7		3.6	84.9	11.5		
PHF	.750	.962	.857	.880	.389	.833	.625	.890	.600	.850	.750	.872	.438	.849	.786	.873	.948

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Site Code : 07517744
Start Date : 11/1/2017
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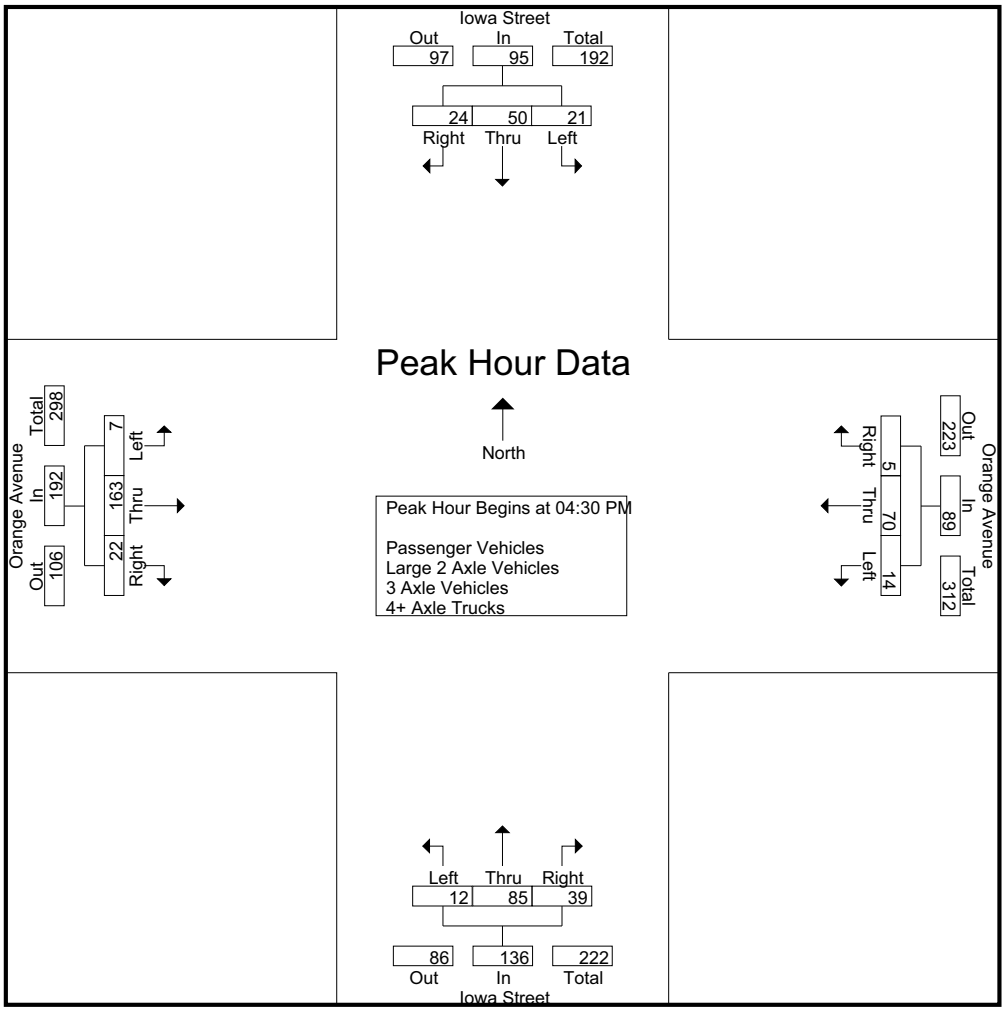

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:00 PM				04:30 PM				04:30 PM			
+0 mins.	5	**13**	5	23	4	**29**	2	**35**	1	**25**	8	34	**4**	40	**7**	51
+15 mins.	**7**	13	**7**	**27**	3	20	**4**	27	4	19	6	29	2	35	7	44
+30 mins.	4	13	7	24	3	20	1	24	2	25	12	**39**	1	**48**	6	**55**
+45 mins.	5	11	5	21	**9**	15	1	25	**5**	16	**13**	34	0	40	2	42
Total Volume	21	50	24	95	19	84	8	111	12	85	39	136	7	163	22	192
% App. Total	22.1	52.6	25.3		17.1	75.7	7.2		8.8	62.5	28.7		3.6	84.9	11.5	
PHF	.750	.962	.857	.880	.528	.724	.500	.793	.600	.850	.750	.872	.438	.849	.786	.873

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Site Code : 07517744
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Groups Printed- Passenger Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	3	15	4	22	4	29	2	35	4	16	15	35	2	34	8	44	136
04:15 PM	3	6	1	10	3	20	4	27	5	8	10	23	1	21	6	28	88
04:30 PM	5	13	5	23	3	20	1	24	1	24	8	33	4	40	7	51	131
04:45 PM	7	11	7	25	9	15	1	25	4	19	6	29	2	35	7	44	123
Total	18	45	17	80	19	84	8	111	14	67	39	120	9	130	28	167	478
05:00 PM	4	13	7	24	1	14	2	17	2	24	12	38	1	47	6	54	133
05:15 PM	5	11	5	21	1	21	1	23	5	15	13	33	0	40	2	42	119
05:30 PM	6	10	1	17	0	20	1	21	1	9	5	15	2	33	3	38	91
05:45 PM	2	7	0	9	4	14	1	19	0	6	6	12	2	27	4	33	73
Total	17	41	13	71	6	69	5	80	8	54	36	98	5	147	15	167	416
Grand Total	35	86	30	151	25	153	13	191	22	121	75	218	14	277	43	334	894
Apprch %	23.2	57	19.9		13.1	80.1	6.8		10.1	55.5	34.4		4.2	82.9	12.9		
Total %	3.9	9.6	3.4	16.9	2.8	17.1	1.5	21.4	2.5	13.5	8.4	24.4	1.6	31	4.8	37.4	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	**13**	5	23	3	20	1	24	1	**24**	8	33	**4**	40	**7**	51	131
04:45 PM	**7**	11	**7**	**25**	**9**	15	1	**25**	4	19	6	29	2	35	7	44	123
05:00 PM	4	13	7	24	1	14	**2**	17	2	24	12	**38**	1	**47**	6	**54**	**133**
05:15 PM	5	11	5	21	1	**21**	1	23	**5**	15	**13**	33	0	40	2	42	119
Total Volume	21	48	24	93	14	70	5	89	12	82	39	133	7	162	22	191	506
% App. Total	22.6	51.6	25.8		15.7	78.7	5.6		9	61.7	29.3		3.7	84.8	11.5		
PHF	.750	.923	.857	.930	.389	.833	.625	.890	.600	.854	.750	.875	.438	.862	.786	.884	.951

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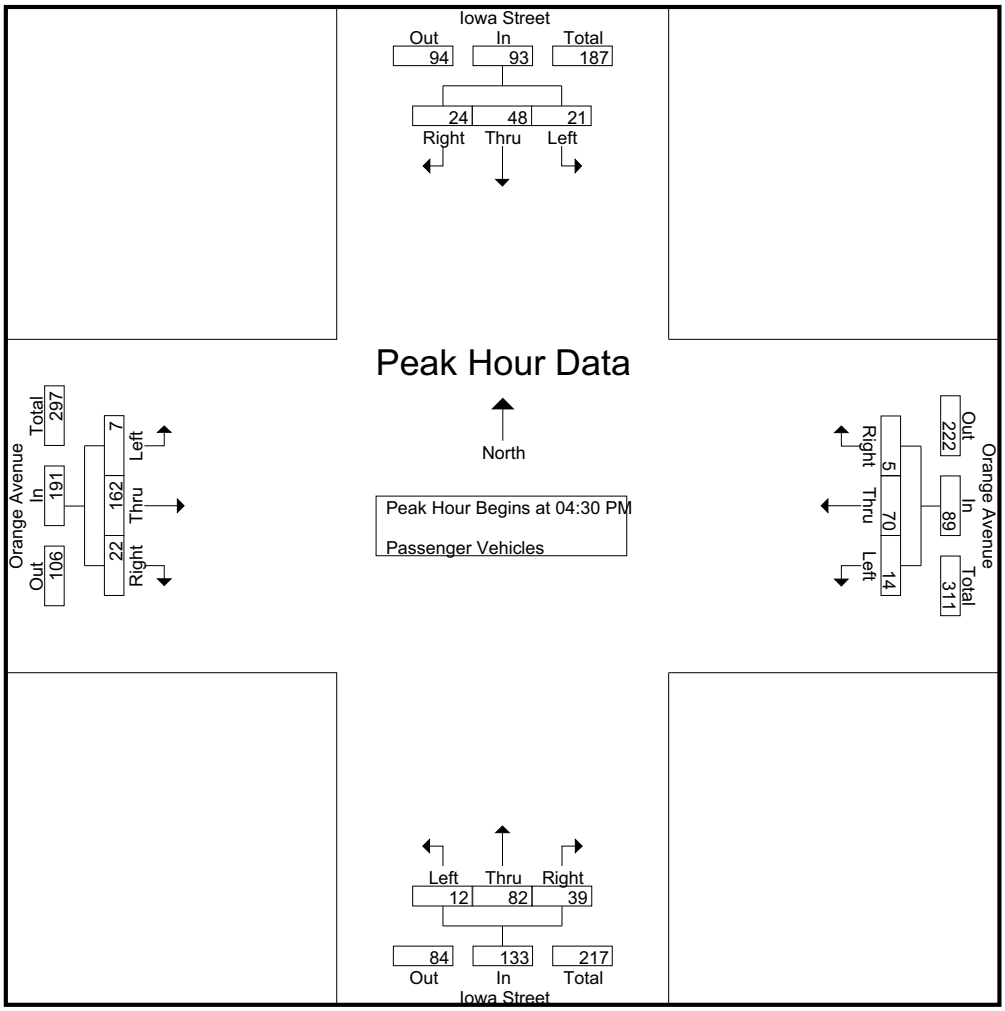

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	5	**13**	5	23	3	20	1	24	1	**24**	8	33	**4**	40	**7**	51
+15 mins.	**7**	11	**7**	**25**	**9**	15	1	**25**	4	19	6	29	2	35	7	44
+30 mins.	4	13	7	24	1	14	**2**	17	2	24	12	**38**	1	**47**	6	**54**
+45 mins.	5	11	5	21	1	**21**	1	23	**5**	15	**13**	33	0	40	2	42
Total Volume	21	48	24	93	14	70	5	89	12	82	39	133	7	162	22	191
% App. Total	22.6	51.6	25.8		15.7	78.7	5.6		9	61.7	29.3		3.7	84.8	11.5	
PHF	.750	.923	.857	.930	.389	.833	.625	.890	.600	.854	.750	.875	.438	.862	.786	.884

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Site Code : 07517744
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Groups Printed- Large 2 Axle Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
Apprch %	0	0	0		0	0	0		0	100	0		0	100	0		
Total %	0	0	0	0	0	0	0	0	0	66.7	0	66.7	0	33.3	0	33.3	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	0	2	0	2	0	1	0	1	3
% App. Total	0	0	0		0	0	0		0	100	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.750

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E/W: Orange Avenue
Weather: Clear

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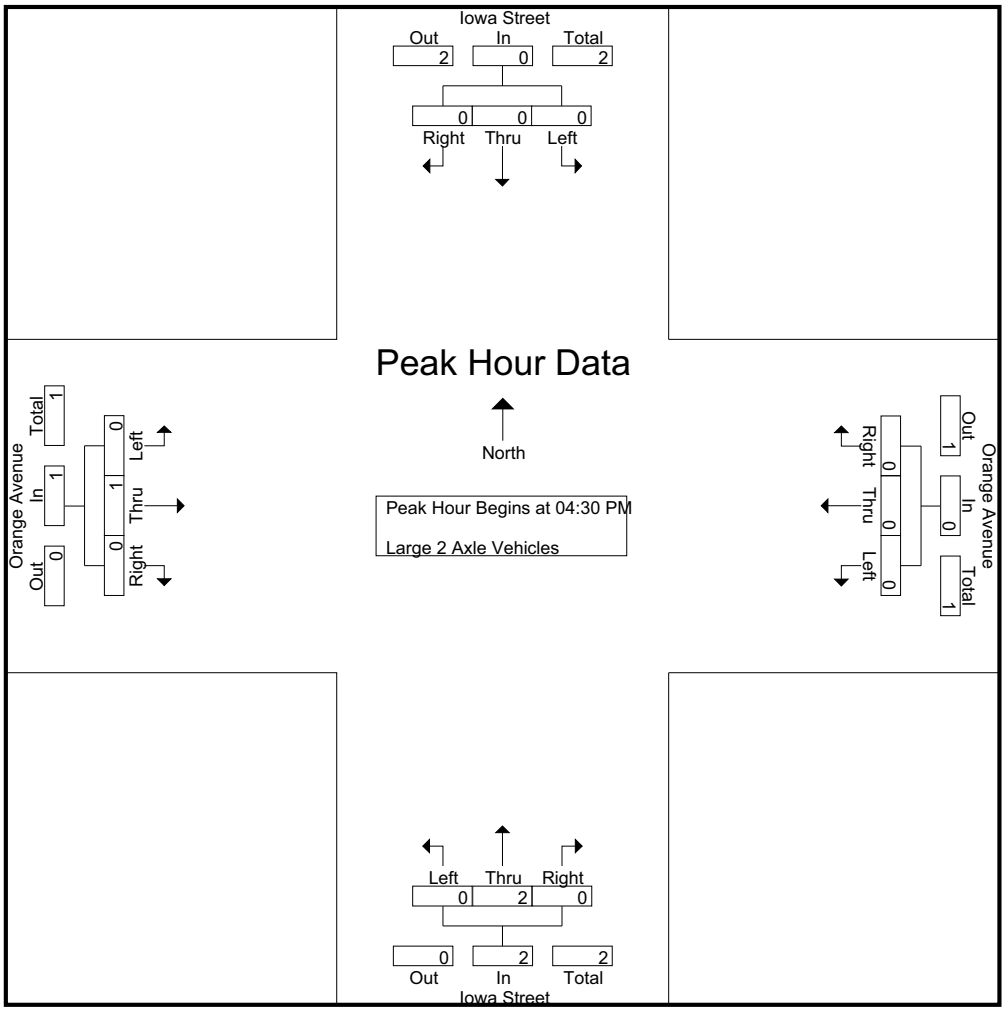

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 3 Axle Vehicles

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Apprch %	0	100	0		0	0	0		0	0	0		0	0	0		
Total %	0	100	0	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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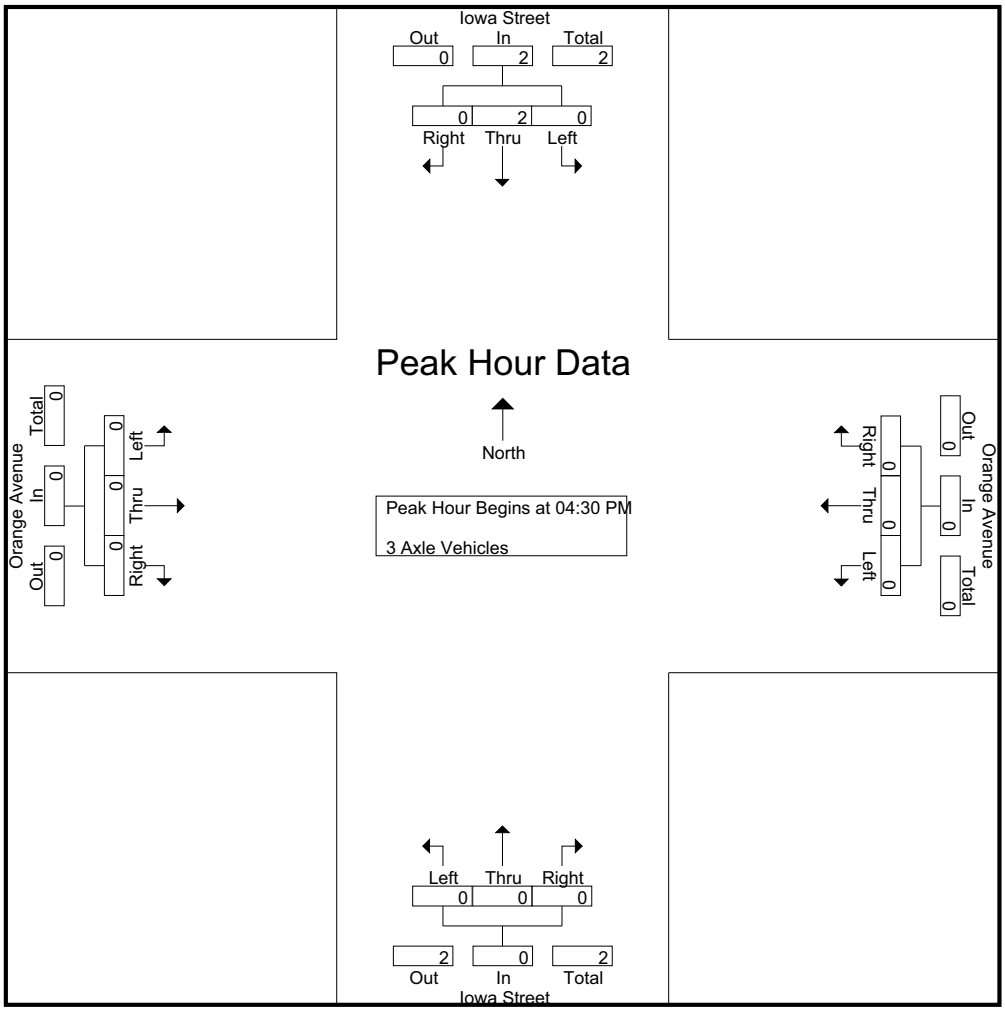

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Iowa Street Southbound				Orange Avenue Westbound				Iowa Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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File Name : 04_RED IO OR PM
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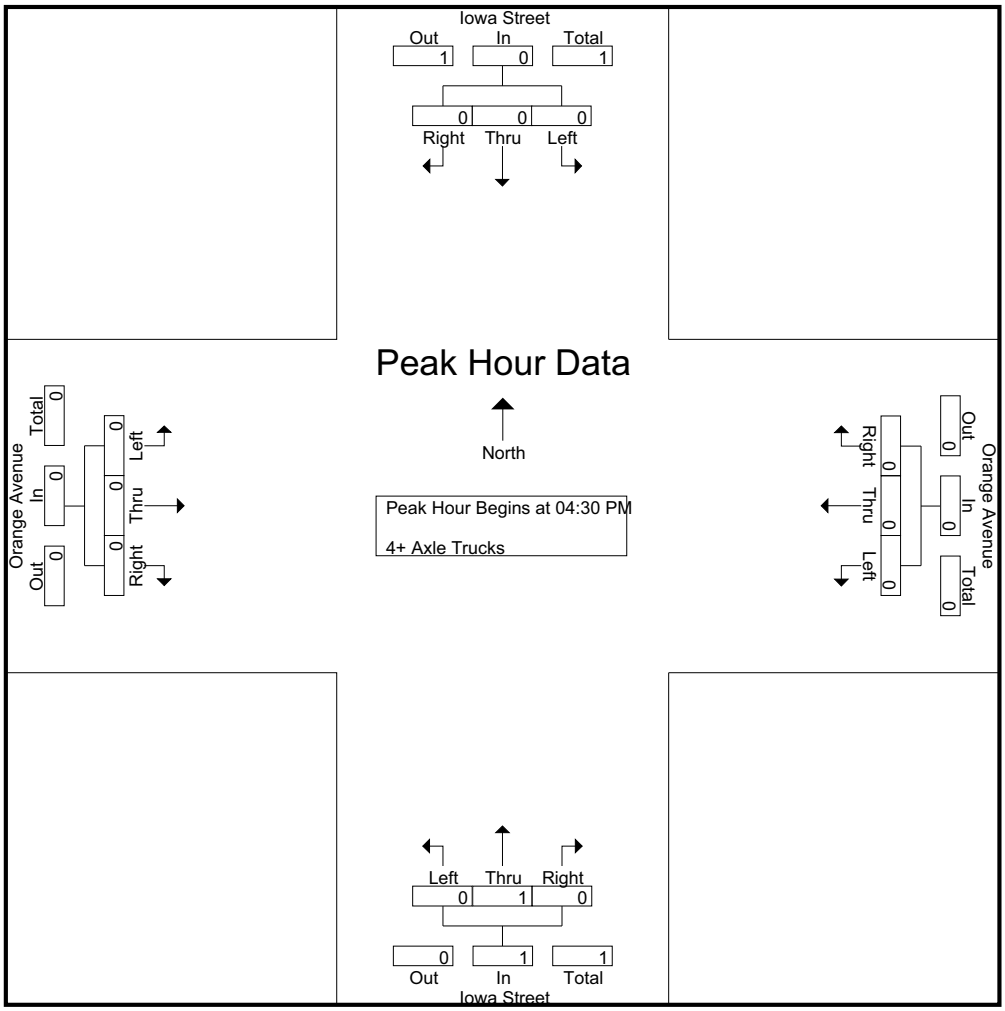

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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File Name : 01_RED IO RE AM
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	10	55	65	5	5	10	30	3	33	108
07:15 AM	7	127	134	6	6	12	53	4	57	203
07:30 AM	13	152	165	6	6	12	43	6	49	226
07:45 AM	23	148	171	18	14	32	64	1	65	268
Total	53	482	535	35	31	66	190	14	204	805
08:00 AM	8	106	114	8	8	16	60	8	68	198
08:15 AM	13	127	140	8	17	25	88	7	95	260
08:30 AM	14	113	127	3	16	19	79	5	84	230
08:45 AM	16	104	120	10	12	22	98	8	106	248
Total	51	450	501	29	53	82	325	28	353	936
Grand Total	104	932	1036	64	84	148	515	42	557	1741
Apprch %	10	90		43.2	56.8		92.5	7.5		
Total %	6	53.5	59.5	3.7	4.8	8.5	29.6	2.4	32	
Passenger Vehicles	102	919	1021	57	78	135	495	38	533	1689
% Passenger Vehicles	98.1	98.6	98.6	89.1	92.9	91.2	96.1	90.5	95.7	97
Large 2 Axle Vehicles	1	9	10	3	4	7	14	2	16	33
% Large 2 Axle Vehicles	1	1	1	4.7	4.8	4.7	2.7	4.8	2.9	1.9
3 Axle Vehicles	0	0	0	3	2	5	4	2	6	11
% 3 Axle Vehicles	0	0	0	4.7	2.4	3.4	0.8	4.8	1.1	0.6
4+ Axle Trucks	1	4	5	1	0	1	2	0	2	8
% 4+ Axle Trucks	1	0.4	0.5	1.6	0	0.7	0.4	0	0.4	0.5

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**23**	**148**	**171**	**18**	14	**32**	64	1	65	**268**
08:00 AM	8	106	114	8	8	16	60	**8**	68	198
08:15 AM	13	127	140	8	**17**	25	**88**	7	**95**	260
08:30 AM	14	113	127	3	16	19	79	5	84	230
Total Volume	58	494	552	37	55	92	291	21	312	956
% App. Total	10.5	89.5		40.2	59.8		93.3	6.7		
PHF	.630	.834	.807	.514	.809	.719	.827	.656	.821	.892

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City of Redlands
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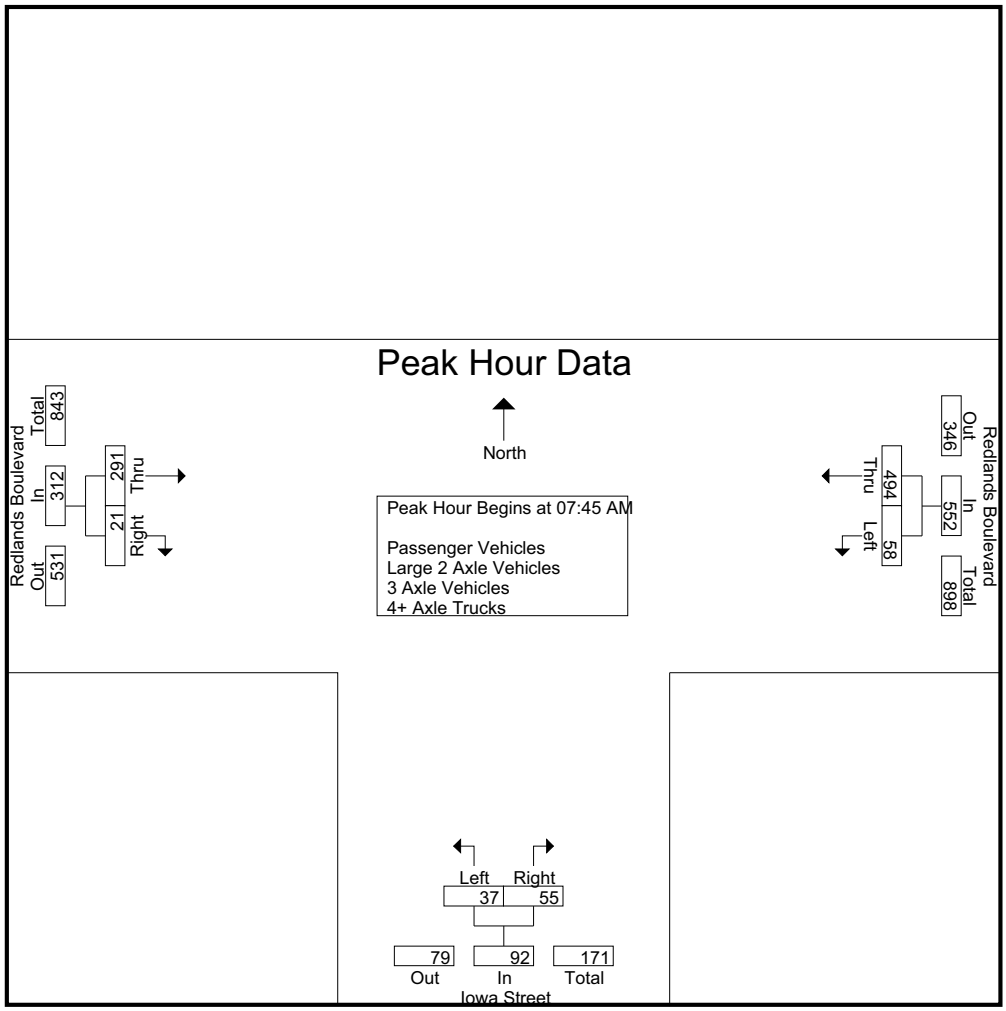

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM			07:45 AM			08:00 AM		
+0 mins.	13	**152**	165	**18**	14	**32**	60	**8**	68
+15 mins.	**23**	148	**171**	8	8	16	88	7	95
+30 mins.	8	106	114	8	**17**	25	79	5	84
+45 mins.	13	127	140	3	16	19	**98**	8	**106**
Total Volume	57	533	590	37	55	92	325	28	353
% App. Total	9.7	90.3		40.2	59.8		92.1	7.9	
PHF	.620	.877	.863	.514	.809	.719	.829	.875	.833

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Groups Printed- Passenger Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	10	55	65	4	5	9	30	3	33	107
07:15 AM	7	127	134	4	5	9	46	4	50	193
07:30 AM	13	150	163	5	5	10	43	4	47	220
07:45 AM	23	146	169	18	13	31	61	1	62	262
Total	53	478	531	31	28	59	180	12	192	782
08:00 AM	8	104	112	8	8	16	60	8	68	196
08:15 AM	12	126	138	6	16	22	85	6	91	251
08:30 AM	14	109	123	3	14	17	77	5	82	222
08:45 AM	15	102	117	9	12	21	93	7	100	238
Total	49	441	490	26	50	76	315	26	341	907
Grand Total	102	919	1021	57	78	135	495	38	533	1689
Apprch %	10	90		42.2	57.8		92.9	7.1		
Total %	6	54.4	60.4	3.4	4.6	8	29.3	2.2	31.6	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	**23**	**146**	**169**	**18**	13	**31**	61	1	62	**262**
08:00 AM	8	104	112	8	8	16	60	**8**	68	196
08:15 AM	12	126	138	6	**16**	22	**85**	6	**91**	251
08:30 AM	14	109	123	3	14	17	77	5	82	222
Total Volume	57	485	542	35	51	86	283	20	303	931
% App. Total	10.5	89.5		40.7	59.3		93.4	6.6		
PHF	.620	.830	.802	.486	.797	.694	.832	.625	.832	.888

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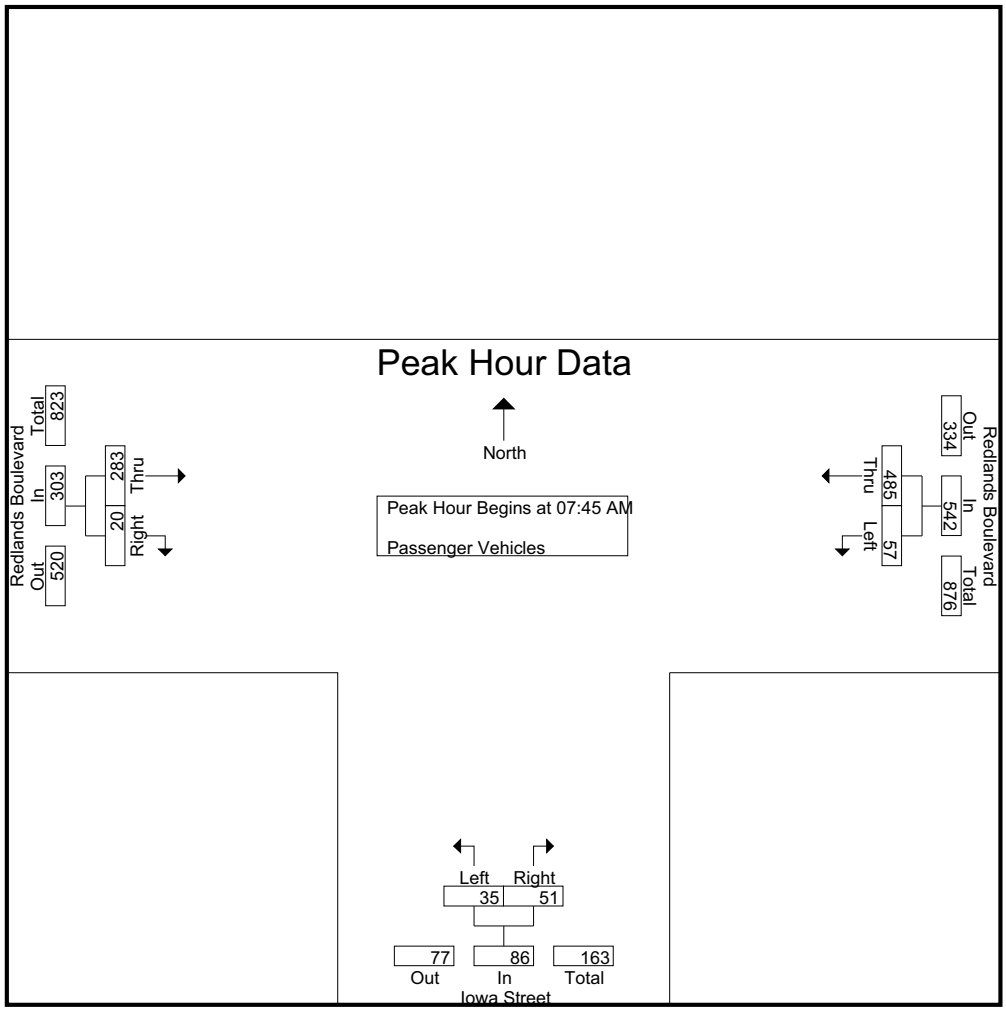

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+0 mins.	**23**	**146**	**169**	**18**	13	**31**	61	1	62
+15 mins.	8	104	112	8	8	16	60	**8**	68
+30 mins.	12	126	138	6	**16**	22	**85**	6	**91**
+45 mins.	14	109	123	3	14	17	77	5	82
Total Volume	57	485	542	35	51	86	283	20	303
% App. Total	10.5	89.5		40.7	59.3		93.4	6.6	
PHF	.620	.830	.802	.486	.797	.694	.832	.625	.832

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Weather: Clear

File Name : 01_RED IO RE AM
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Groups Printed- Large 2 Axle Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	1	0	1	0	0	0	1
07:15 AM	0	0	0	1	1	2	5	0	5	7
07:30 AM	0	1	1	0	0	0	0	1	1	2
07:45 AM	0	2	2	0	1	1	2	0	2	5
Total	0	3	3	2	2	4	7	1	8	15
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	1	1	2	1	1	2	3	1	4	8
08:30 AM	0	1	1	0	1	1	1	0	1	3
08:45 AM	0	2	2	0	0	0	3	0	3	5
Total	1	6	7	1	2	3	7	1	8	18
Grand Total	1	9	10	3	4	7	14	2	16	33
Apprch %	10	90		42.9	57.1		87.5	12.5		
Total %	3	27.3	30.3	9.1	12.1	21.2	42.4	6.1	48.5	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	**2**	**2**	0	**1**	1	2	0	2	5
08:00 AM	0	2	2	0	0	0	0	0	0	2
08:15 AM	**1**	1	2	**1**	1	**2**	**3**	**1**	**4**	**8**
08:30 AM	0	1	1	0	1	1	1	0	1	3
Total Volume	1	6	7	1	3	4	6	1	7	18
% App. Total	14.3	85.7		25	75		85.7	14.3		
PHF	.250	.750	.875	.250	.750	.500	.500	.250	.438	.563

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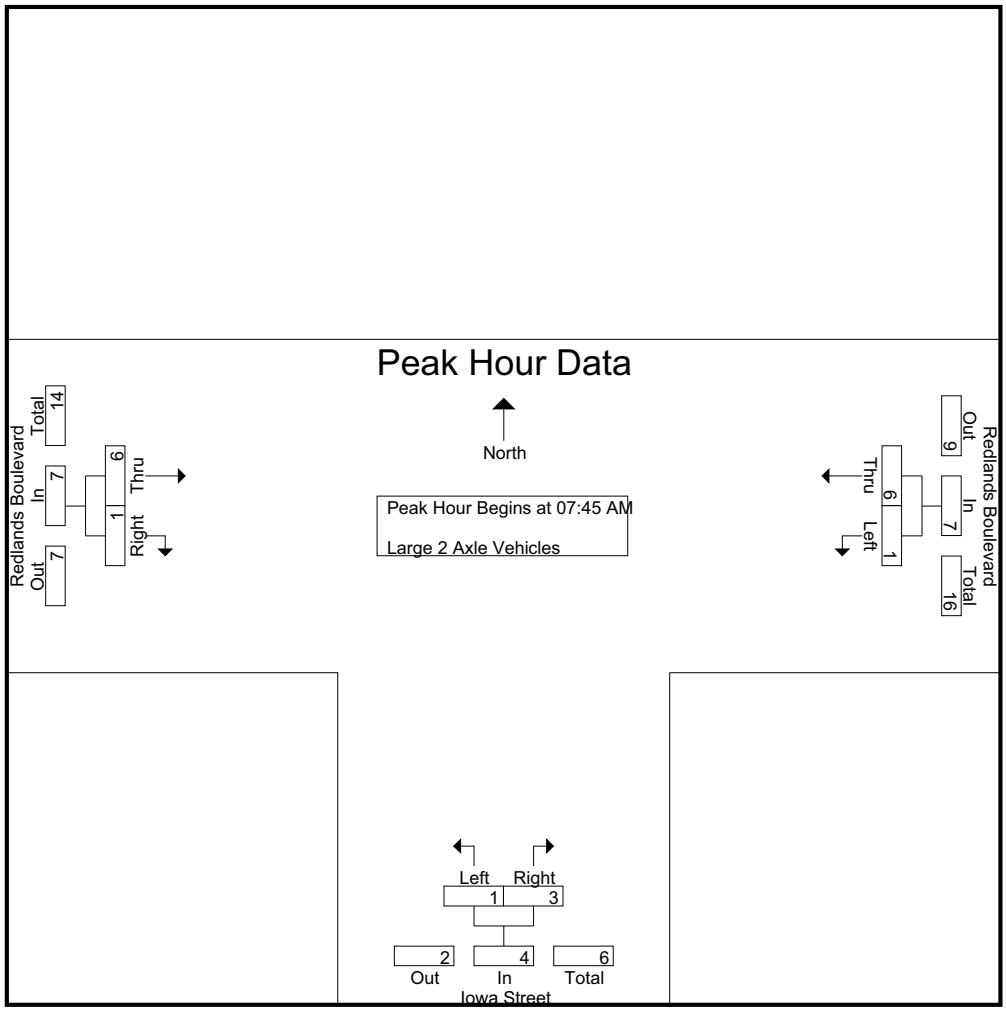

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+0 mins.	0	**2**	**2**	0	**1**	1	2	0	2
+15 mins.	0	2	2	0	0	0	0	0	0
+30 mins.	**1**	1	2	**1**	1	**2**	**3**	**1**	**4**
+45 mins.	0	1	1	0	1	1	1	0	1
Total Volume	1	6	7	1	3	4	6	1	7
% App. Total	14.3	85.7		25	75		85.7	14.3	
PHF	.250	.750	.875	.250	.750	.500	.500	.250	.438

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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE AM
Site Code : 07517744
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Groups Printed- 3 Axle Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	1	0	1	2	0	2	3
07:30 AM	0	0	0	0	1	1	0	1	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	1	1	2	2	1	3	5
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	1	0	1	0	0	0	1
08:30 AM	0	0	0	0	1	1	0	0	0	1
08:45 AM	0	0	0	1	0	1	2	1	3	4
Total	0	0	0	2	1	3	2	1	3	6
Grand Total	0	0	0	3	2	5	4	2	6	11
Apprch %	0	0		60	40		66.7	33.3		
Total %	0	0	0	27.3	18.2	45.5	36.4	18.2	54.5	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	**1**	0	**1**	0	0	0	**1**
08:30 AM	0	0	0	0	**1**	1	0	0	0	1
Total Volume	0	0	0	1	1	2	0	0	0	2
% App. Total	0	0		50	50		0	0		
PHF	.000	.000	.000	.250	.250	.500	.000	.000	.000	.500

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City of Redlands
N/S: Iowa Street
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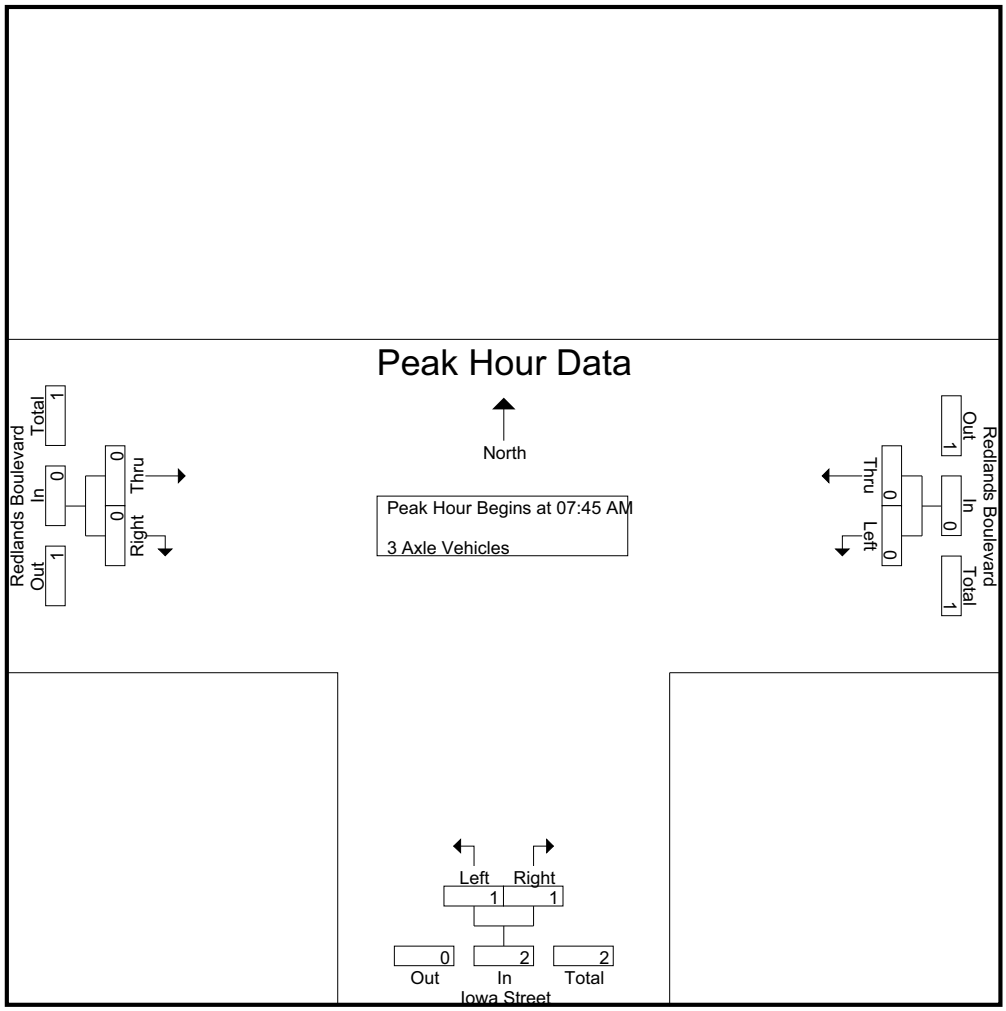

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	**1**	0	**1**	0	0	0
+45 mins.	0	0	0	0	**1**	1	0	0	0
Total Volume	0	0	0	1	1	2	0	0	0
% App. Total	0	0		50	50		0	0	
PHF	.000	.000	.000	.250	.250	.500	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	1	1	1	0	1	0	0	0	2
07:45 AM	0	0	0	0	0	0	1	0	1	1
Total	0	1	1	1	0	1	1	0	1	3
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	3	3	0	0	0	1	0	1	4
08:45 AM	1	0	1	0	0	0	0	0	0	1
Total	1	3	4	0	0	0	1	0	1	5
Grand Total	1	4	5	1	0	1	2	0	2	8
Apprch %	20	80		100	0		100	0		
Total %	12.5	50	62.5	12.5	0	12.5	25	0	25	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:45 AM										
07:45 AM	0	0	0	0	0	0	**1**	0	**1**	1
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	**3**	**3**	0	0	0	1	0	1	**4**
Total Volume	0	3	3	0	0	0	2	0	2	5
% App. Total	0	100		0	0		100	0		
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500	.313

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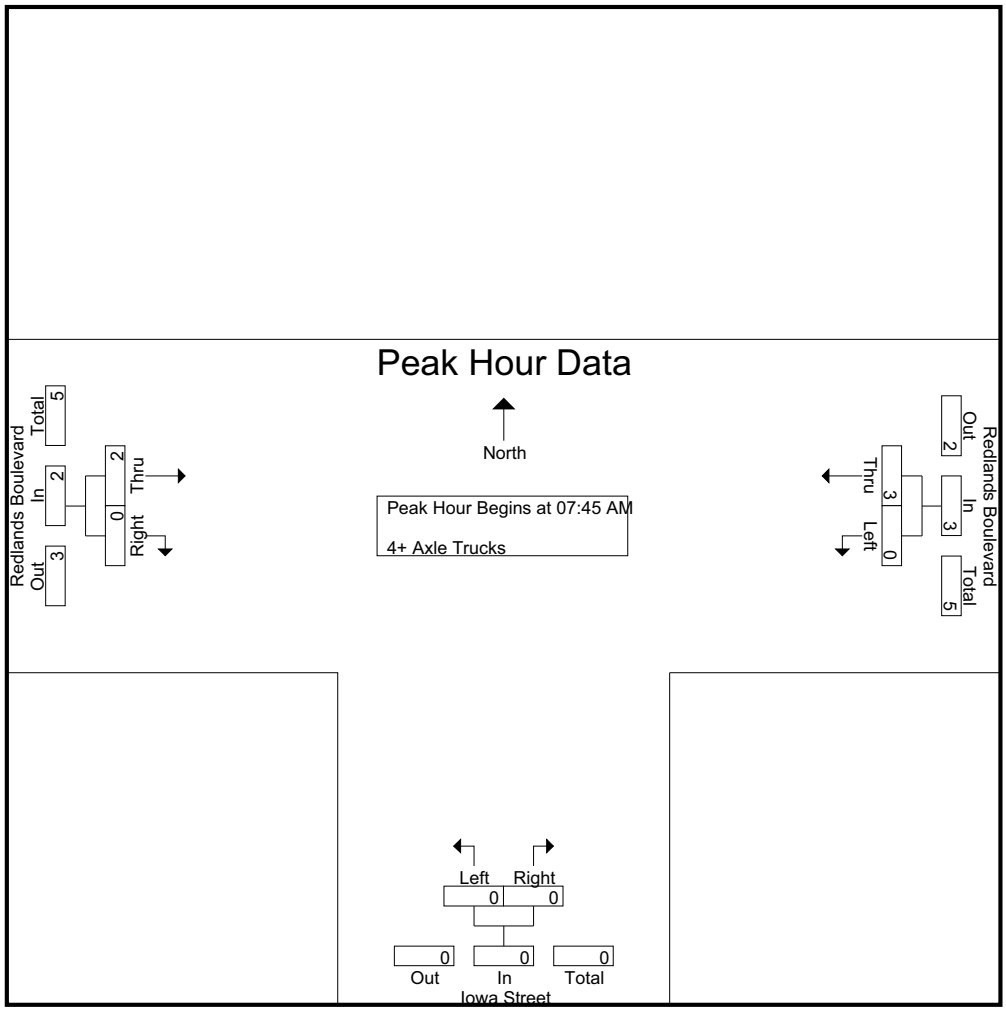

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+0 mins.	0	0	0	0	0	0	**1**	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	**3**	**3**	0	0	0	1	0	1
Total Volume	0	3	3	0	0	0	2	0	2
% App. Total	0	100		0	0		100	0	
PHF	.000	.250	.250	.000	.000	.000	.500	.000	.500

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

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	7	128	135	19	37	56	188	10	198	389
04:15 PM	10	151	161	11	21	32	204	6	210	403
04:30 PM	11	136	147	18	26	44	215	11	226	417
04:45 PM	6	145	151	14	22	36	274	5	279	466
Total	34	560	594	62	106	168	881	32	913	1675
05:00 PM	9	159	168	24	21	45	264	2	266	479
05:15 PM	10	142	152	11	20	31	230	6	236	419
05:30 PM	7	141	148	8	21	29	248	5	253	430
05:45 PM	11	148	159	4	12	16	216	4	220	395
Total	37	590	627	47	74	121	958	17	975	1723
Grand Total	71	1150	1221	109	180	289	1839	49	1888	3398
Apprch %	5.8	94.2		37.7	62.3		97.4	2.6		
Total %	2.1	33.8	35.9	3.2	5.3	8.5	54.1	1.4	55.6	
Passenger Vehicles	70	1137	1207	109	178	287	1824	45	1869	3363
% Passenger Vehicles	98.6	98.9	98.9	100	98.9	99.3	99.2	91.8	99	99
Large 2 Axle Vehicles	1	7	8	0	0	0	11	1	12	20
% Large 2 Axle Vehicles	1.4	0.6	0.7	0	0	0	0.6	2	0.6	0.6
3 Axle Vehicles	0	1	1	0	2	2	1	3	4	7
% 3 Axle Vehicles	0	0.1	0.1	0	1.1	0.7	0.1	6.1	0.2	0.2
4+ Axle Trucks	0	5	5	0	0	0	3	0	3	8
% 4+ Axle Trucks	0	0.4	0.4	0	0	0	0.2	0	0.2	0.2

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	6	145	151	14	**22**	36	**274**	5	**279**	466
05:00 PM	9	**159**	**168**	**24**	21	**45**	264	2	266	**479**
05:15 PM	**10**	142	152	11	20	31	230	**6**	236	419
05:30 PM	7	141	148	8	21	29	248	5	253	430
Total Volume	32	587	619	57	84	141	1016	18	1034	1794
% App. Total	5.2	94.8		40.4	59.6		98.3	1.7		
PHF	.800	.923	.921	.594	.955	.783	.927	.750	.927	.936

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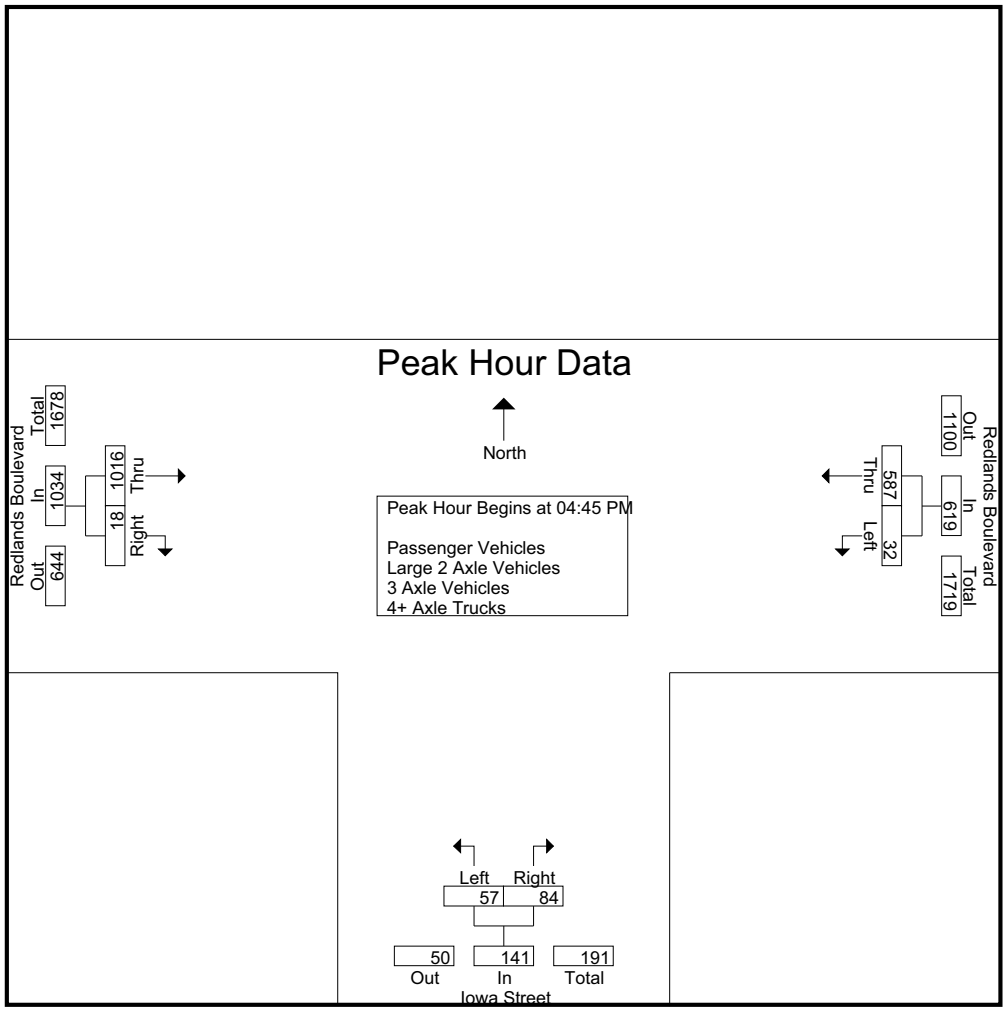

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:15 PM			04:00 PM			04:45 PM		
+0 mins.	10	151	161	**19**	**37**	**56**	**274**	5	**279**
+15 mins.	**11**	136	147	11	21	32	264	2	266
+30 mins.	6	145	151	18	26	44	230	**6**	236
+45 mins.	9	**159**	**168**	14	22	36	248	5	253
Total Volume	36	591	627	62	106	168	1016	18	1034
% App. Total	5.7	94.3		36.9	63.1		98.3	1.7	
PHF	.818	.929	.933	.816	.716	.750	.927	.750	.927

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Weather: Clear

File Name : 01_RED IO RE PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	7	127	134	19	37	56	186	10	196	386
04:15 PM	9	149	158	11	21	32	199	4	203	393
04:30 PM	11	135	146	18	26	44	214	10	224	414
04:45 PM	6	144	150	14	22	36	272	5	277	463
Total	33	555	588	62	106	168	871	29	900	1656
05:00 PM	9	157	166	24	21	45	263	2	265	476
05:15 PM	10	140	150	11	20	31	229	6	235	416
05:30 PM	7	137	144	8	19	27	247	5	252	423
05:45 PM	11	148	159	4	12	16	214	3	217	392
Total	37	582	619	47	72	119	953	16	969	1707
Grand Total	70	1137	1207	109	178	287	1824	45	1869	3363
Apprch %	5.8	94.2		38	62		97.6	2.4		
Total %	2.1	33.8	35.9	3.2	5.3	8.5	54.2	1.3	55.6	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	6	144	150	14	**22**	36	**272**	5	**277**	463
05:00 PM	9	**157**	**166**	**24**	21	**45**	263	2	265	**476**
05:15 PM	**10**	140	150	11	20	31	229	**6**	235	416
05:30 PM	7	137	144	8	19	27	247	5	252	423
Total Volume	32	578	610	57	82	139	1011	18	1029	1778
% App. Total	5.2	94.8		41	59		98.3	1.7		
PHF	.800	.920	.919	.594	.932	.772	.929	.750	.929	.934

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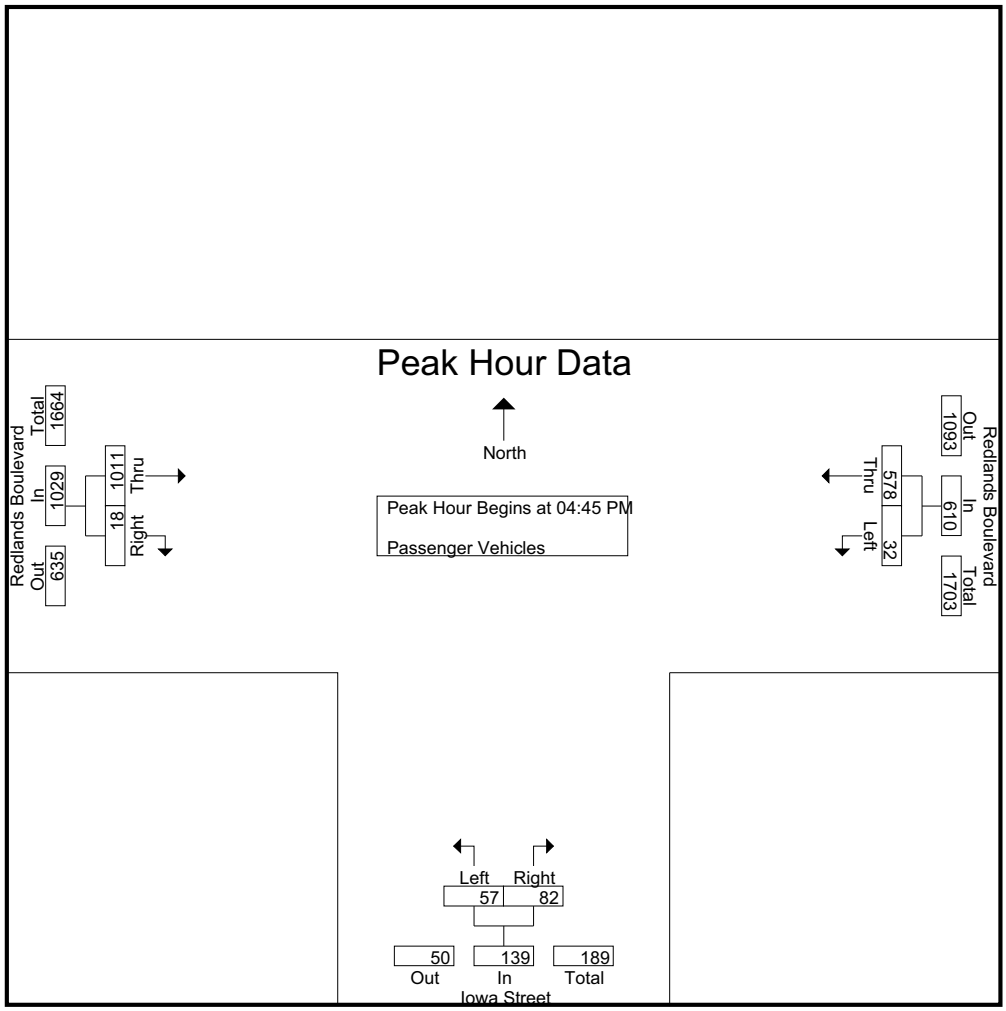

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	6	144	150	14	**22**	36	**272**	5	**277**
+15 mins.	9	**157**	**166**	**24**	21	**45**	263	2	265
+30 mins.	**10**	140	150	11	20	31	229	**6**	235
+45 mins.	7	137	144	8	19	27	247	5	252
Total Volume	32	578	610	57	82	139	1011	18	1029
% App. Total	5.2	94.8		41	59		98.3	1.7	
PHF	.800	.920	.919	.594	.932	.772	.929	.750	.929

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Groups Printed- Large 2 Axle Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	1	0	0	0	1	0	1	2
04:15 PM	1	0	1	0	0	0	5	1	6	7
04:30 PM	0	1	1	0	0	0	0	0	0	1
04:45 PM	0	1	1	0	0	0	2	0	2	3
Total	1	3	4	0	0	0	8	1	9	13
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	2	0	0	0	1	0	1	3
05:30 PM	0	2	2	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	4	4	0	0	0	3	0	3	7
Grand Total	1	7	8	0	0	0	11	1	12	20
Apprch %	12.5	87.5		0	0		91.7	8.3		
Total %	5	35	40	0	0	0	55	5	60	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	1	1	0	0	0	**2**	0	**2**	**3**
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**2**	**2**	0	0	0	1	0	1	3
05:30 PM	0	2	2	0	0	0	1	0	1	3
Total Volume	0	5	5	0	0	0	4	0	4	9
% App. Total	0	100		0	0		100	0		
PHF	.000	.625	.625	.000	.000	.000	.500	.000	.500	.750

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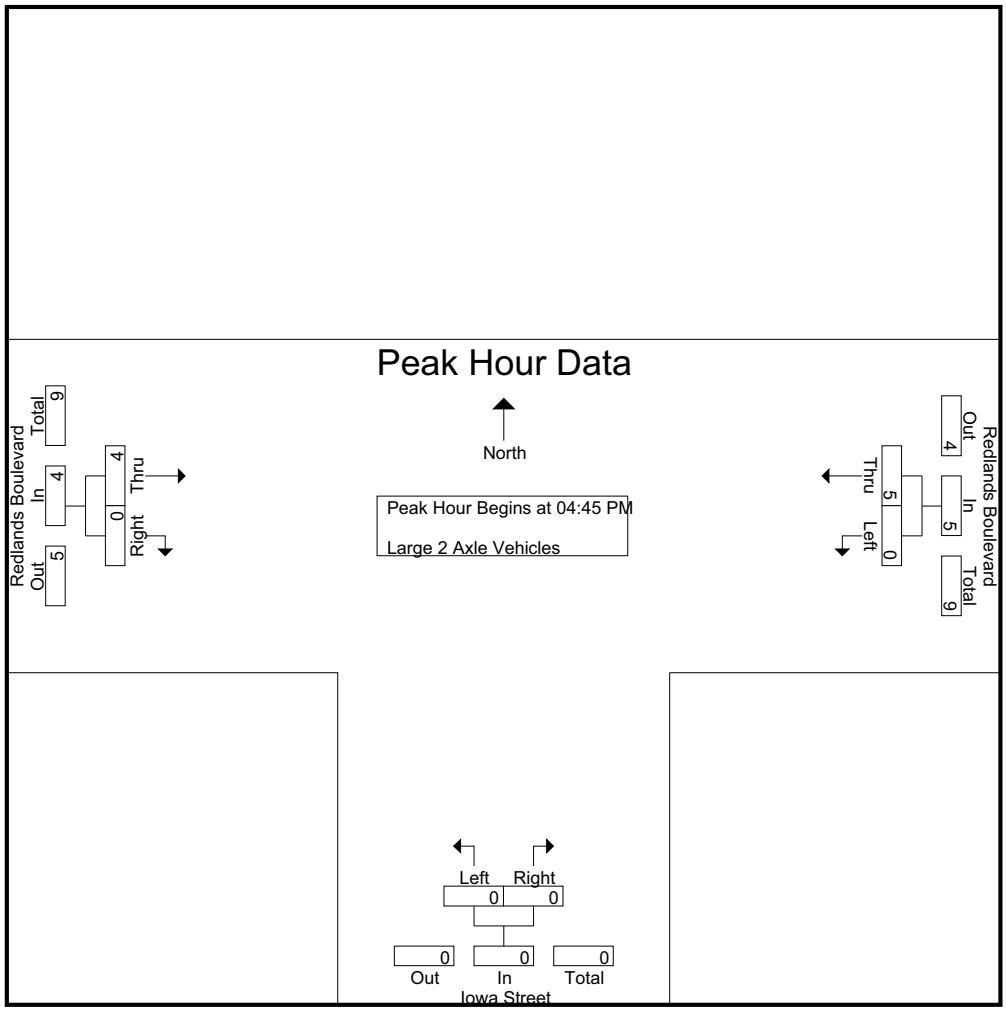

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	1	1	0	0	0	**2**	0	**2**
+15 mins.	0	0	0	0	0	0	0	0	0
+30 mins.	0	**2**	**2**	0	0	0	1	0	1
+45 mins.	0	2	2	0	0	0	1	0	1
Total Volume	0	5	5	0	0	0	4	0	4
% App. Total	0	100		0	0		100	0	
PHF	.000	.625	.625	.000	.000	.000	.500	.000	.500

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Groups Printed- 3 Axle Vehicles

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	1	1	1
04:30 PM	0	0	0	0	0	0	1	1	2	2
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	2	3	3
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	2	2	0	0	0	3
05:45 PM	0	0	0	0	0	0	0	1	1	1
Total	0	1	1	0	2	2	0	1	1	4
Grand Total	0	1	1	0	2	2	1	3	4	7
Apprch %	0	100		0	100		25	75		
Total %	0	14.3	14.3	0	28.6	28.6	14.3	42.9	57.1	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	**1**	**1**	0	**2**	**2**	0	0	0	**3**
Total Volume	0	1	1	0	2	2	0	0	0	3
% App. Total	0	100		0	100		0	0		
PHF	.000	.250	.250	.000	.250	.250	.000	.000	.000	.250

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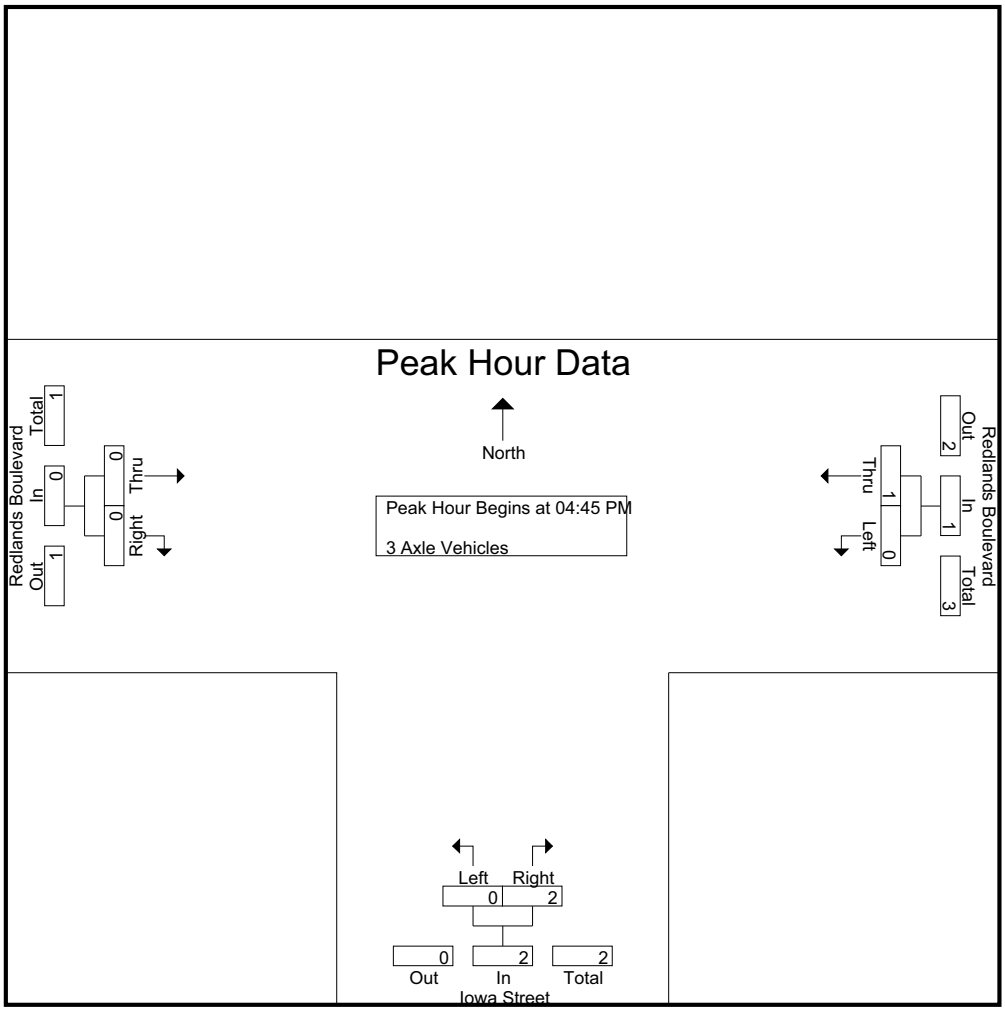

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- 4+ Axle Trucks

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	1	0	1	1
04:15 PM	0	2	2	0	0	0	0	0	0	2
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	2	2	0	0	0	1	0	1	3
05:00 PM	0	2	2	0	0	0	1	0	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	1	0	1	1
Total	0	3	3	0	0	0	2	0	2	5
Grand Total	0	5	5	0	0	0	3	0	3	8
Apprch %	0	100		0	0		100	0		
Total %	0	62.5	62.5	0	0	0	37.5	0	37.5	

	Redlands Boulevard Westbound			Iowa Street Northbound			Redlands Boulevard Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:45 PM										
04:45 PM	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	**2**	**2**	0	0	0	**1**	0	**1**	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	1	1	0	0	0	0	0	0	1
Total Volume	0	3	3	0	0	0	1	0	1	4
% App. Total	0	100		0	0		100	0		
PHF	.000	.375	.375	.000	.000	.000	.250	.000	.250	.333

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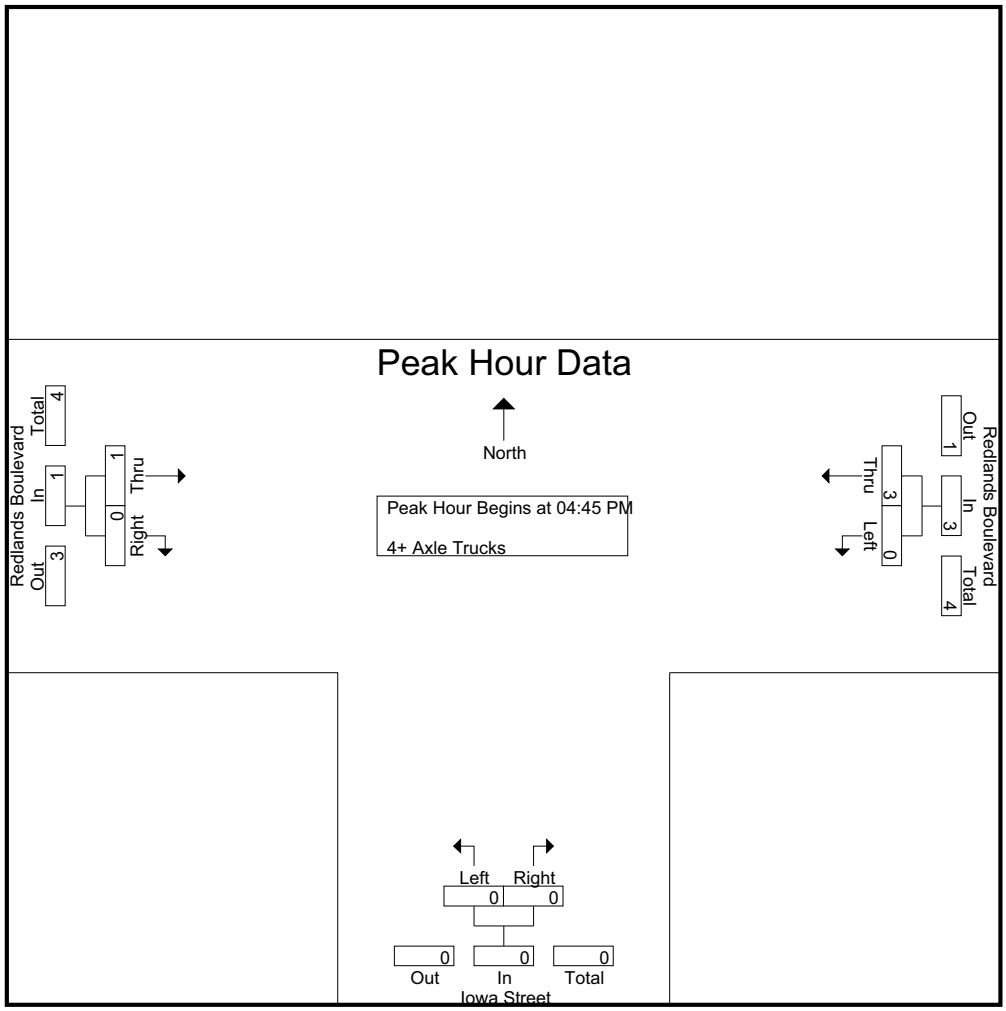
Weather: Clear

File Name : 01_RED IO RE PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 2



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

	04:45 PM			04:45 PM			04:45 PM		
+0 mins.	0	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	**2**	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	1	0	0	0	0	0	0
Total Volume	0	3	3	0	0	0	1	0	1
% App. Total	0	100		0	0		100	0	
PHF	.000	.375	.375	.000	.000	.000	.250	.000	.250

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City of Redlands
N/S: Iowa Street
E/W: Park Avenue
Weather: Clear

File Name : 02_RED IO PA AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	6	1	9	7	10	3	20	2	4	1	7	0	3	2	5	41
07:15 AM	0	7	0	7	3	8	1	12	2	6	0	8	3	11	2	16	43
07:30 AM	1	15	1	17	2	9	2	13	1	10	0	11	0	7	2	9	50
07:45 AM	1	11	3	15	3	13	3	19	5	32	1	38	2	10	2	14	86
Total	4	39	5	48	15	40	9	64	10	52	2	64	5	31	8	44	220
08:00 AM	1	8	2	11	6	8	5	19	5	15	0	20	1	6	2	9	59
08:15 AM	2	16	4	22	4	12	3	19	3	20	1	24	1	13	2	16	81
08:30 AM	5	14	1	20	7	8	1	16	3	14	0	17	1	8	4	13	66
08:45 AM	6	14	1	21	8	10	1	19	3	20	1	24	1	8	4	13	77
Total	14	52	8	74	25	38	10	73	14	69	2	85	4	35	12	51	283
Grand Total	18	91	13	122	40	78	19	137	24	121	4	149	9	66	20	95	503
Apprch %	14.8	74.6	10.7		29.2	56.9	13.9		16.1	81.2	2.7		9.5	69.5	21.1		
Total %	3.6	18.1	2.6	24.3	8	15.5	3.8	27.2	4.8	24.1	0.8	29.6	1.8	13.1	4	18.9	
Passenger Vehicles	18	90	11	119	40	74	18	132	23	117	4	144	8	63	12	83	478
% Passenger Vehicles	100	98.9	84.6	97.5	100	94.9	94.7	96.4	95.8	96.7	100	96.6	88.9	95.5	60	87.4	95
Large 2 Axle Vehicles	0	1	2	3	0	1	0	1	0	1	0	1	1	1	2	4	9
% Large 2 Axle Vehicles	0	1.1	15.4	2.5	0	1.3	0	0.7	0	0.8	0	0.7	11.1	1.5	10	4.2	1.8
3 Axle Vehicles	0	0	0	0	0	3	1	4	1	3	0	4	0	1	0	1	9
% 3 Axle Vehicles	0	0	0	0	0	3.8	5.3	2.9	4.2	2.5	0	2.7	0	1.5	0	1.1	1.8
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	7	7
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	30	7.4	1.4

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	11	3	15	3	**13**	3	**19**	**5**	**32**	**1**	**38**	**2**	10	2	14	**86**
08:00 AM	1	8	2	11	6	8	**5**	19	5	15	0	20	1	6	2	9	59
08:15 AM	2	**16**	**4**	**22**	4	12	3	19	3	20	1	24	1	**13**	2	**16**	81
08:30 AM	**5**	14	1	20	**7**	8	1	16	3	14	0	17	1	8	**4**	13	66
Total Volume	9	49	10	68	20	41	12	73	16	81	2	99	5	37	10	52	292
% App. Total	13.2	72.1	14.7		27.4	56.2	16.4		16.2	81.8	2		9.6	71.2	19.2		
PHF	.450	.766	.625	.773	.714	.788	.600	.961	.800	.633	.500	.651	.625	.712	.625	.813	.849

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City of Redlands
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File Name : 02_RED IO PA AM
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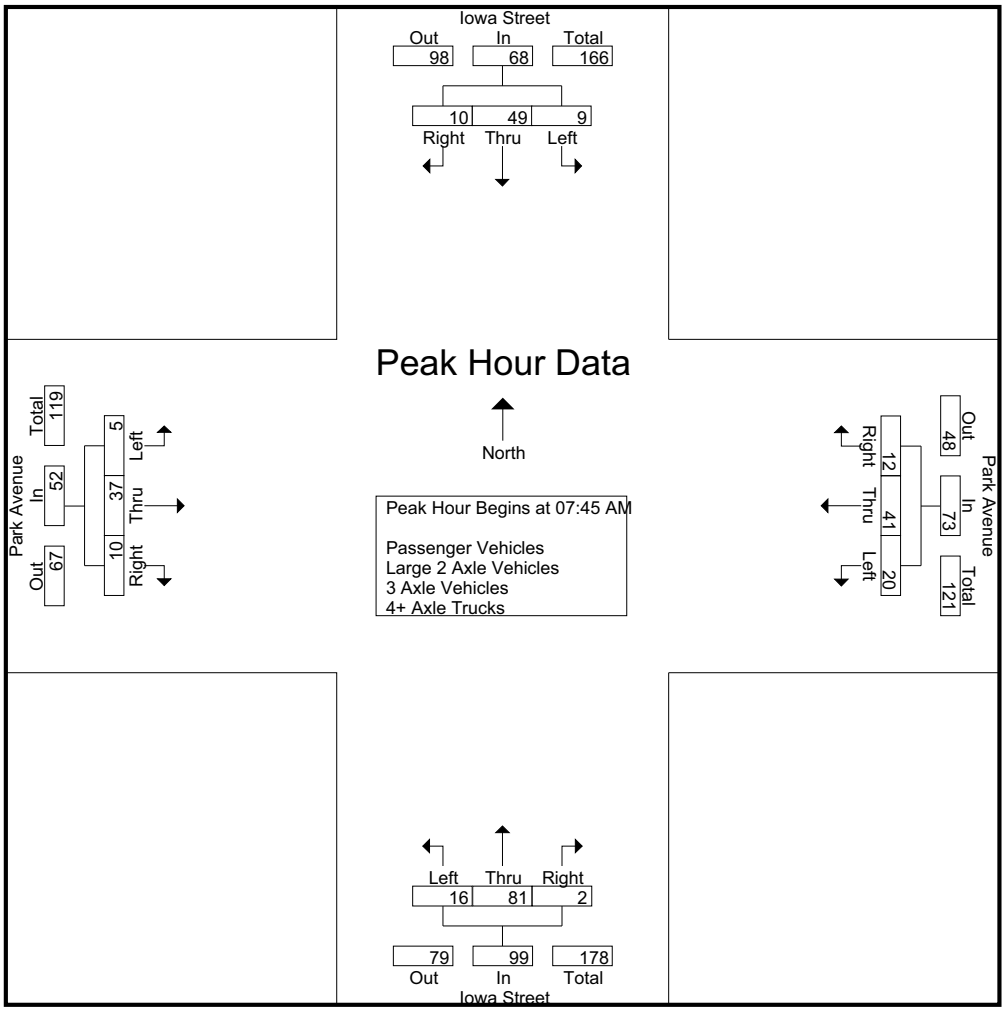

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	8	2	11	3	**13**	3	**19**	**5**	**32**	**1**	**38**	**2**	10	2	14
+15 mins.	2	**16**	**4**	**22**	6	8	**5**	19	5	15	0	20	1	6	2	9
+30 mins.	5	14	1	20	4	12	3	19	3	20	1	24	1	**13**	2	**16**
+45 mins.	**6**	14	1	21	**7**	8	1	16	3	14	0	17	1	8	**4**	13
Total Volume	14	52	8	74	20	41	12	73	16	81	2	99	5	37	10	52
% App. Total	18.9	70.3	10.8		27.4	56.2	16.4		16.2	81.8	2		9.6	71.2	19.2	
PHF	.583	.813	.500	.841	.714	.788	.600	.961	.800	.633	.500	.651	.625	.712	.625	.813

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Groups Printed- Passenger Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	2	6	1	9	7	10	2	19	2	4	1	7	0	3	1	4	39
07:15 AM	0	7	0	7	3	7	1	11	2	6	0	8	3	10	1	14	40
07:30 AM	1	15	1	17	2	9	2	13	1	10	0	11	0	6	2	8	49
07:45 AM	1	11	2	14	3	12	3	18	5	32	1	38	2	10	2	14	84
Total	4	39	4	47	15	38	8	61	10	52	2	64	5	29	6	40	212
08:00 AM	1	8	2	11	6	6	5	17	5	14	0	19	1	6	1	8	55
08:15 AM	2	15	3	20	4	12	3	19	3	18	1	22	1	12	1	14	75
08:30 AM	5	14	1	20	7	8	1	16	3	14	0	17	0	8	2	10	63
08:45 AM	6	14	1	21	8	10	1	19	2	19	1	22	1	8	2	11	73
Total	14	51	7	72	25	36	10	71	13	65	2	80	3	34	6	43	266
Grand Total	18	90	11	119	40	74	18	132	23	117	4	144	8	63	12	83	478
Apprch %	15.1	75.6	9.2		30.3	56.1	13.6		16	81.2	2.8		9.6	75.9	14.5		
Total %	3.8	18.8	2.3	24.9	8.4	15.5	3.8	27.6	4.8	24.5	0.8	30.1	1.7	13.2	2.5	17.4	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	1	11	2	14	3	**12**	3	18	**5**	**32**	**1**	**38**	**2**	10	**2**	**14**	**84**
08:00 AM	1	8	2	11	6	6	**5**	17	5	14	0	19	1	6	1	8	55
08:15 AM	2	**15**	**3**	**20**	4	12	3	**19**	3	18	1	22	1	**12**	1	14	75
08:30 AM	**5**	14	1	20	**7**	8	1	16	3	14	0	17	0	8	2	10	63
Total Volume	9	48	8	65	20	38	12	70	16	78	2	96	4	36	6	46	277
% App. Total	13.8	73.8	12.3		28.6	54.3	17.1		16.7	81.2	2.1		8.7	78.3	13		
PHF	.450	.800	.667	.813	.714	.792	.600	.921	.800	.609	.500	.632	.500	.750	.750	.821	.824

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File Name : 02_RED IO PA AM
Site Code : 07517744
Start Date : 11/1/2017
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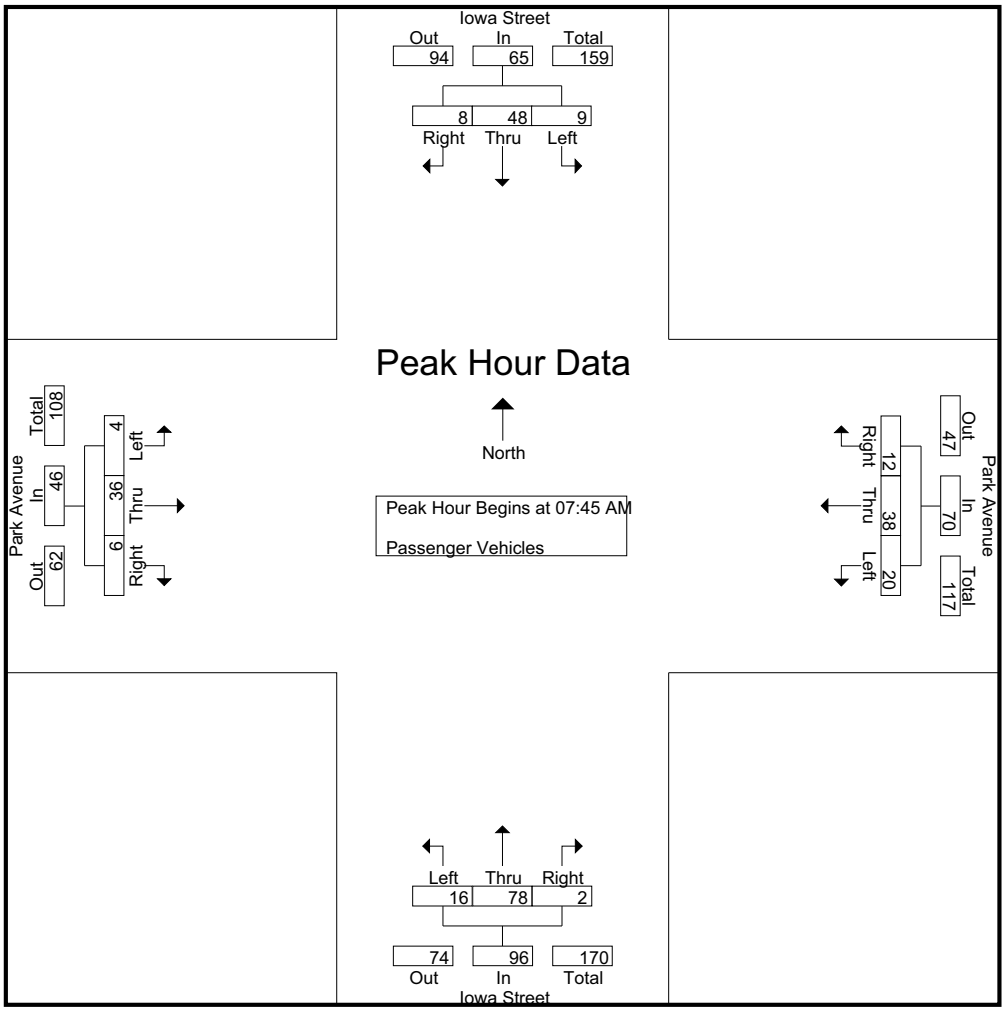

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	1	11	2	14	3	**12**	3	18	**5**	**32**	**1**	**38**	**2**	10	**2**	**14**
+15 mins.	1	8	2	11	6	6	**5**	17	5	14	0	19	1	6	1	8
+30 mins.	2	**15**	**3**	**20**	4	12	3	**19**	3	18	1	22	1	**12**	1	14
+45 mins.	**5**	14	1	20	**7**	8	1	16	3	14	0	17	0	8	2	10
Total Volume	9	48	8	65	20	38	12	70	16	78	2	96	4	36	6	46
% App. Total	13.8	73.8	12.3		28.6	54.3	17.1		16.7	81.2	2.1		8.7	78.3	13	
PHF	.450	.800	.667	.813	.714	.792	.600	.921	.800	.609	.500	.632	.500	.750	.750	.821

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Weather: Clear

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Site Code : 07517744
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	0	0	0	0	1	1	2	3
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	1	1	4
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	1	2	0	1	0	1	0	1	0	1	1	0	1	2	6
Grand Total	0	1	2	3	0	1	0	1	0	1	0	1	1	1	2	4	9
Apprch %	0	33.3	66.7		0	100	0		0	100	0		25	25	50		
Total %	0	11.1	22.2	33.3	0	11.1	0	11.1	0	11.1	0	11.1	11.1	11.1	22.2	44.4	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:15 AM	0	**1**	1	**2**	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**	**4**
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1	1
Total Volume	0	1	2	3	0	1	0	1	0	1	0	1	1	0	1	2	7
% App. Total	0	33.3	66.7		0	100	0		0	100	0		50	0	50		
PHF	.000	.250	.500	.375	.000	.250	.000	.250	.000	.250	.000	.250	.250	.000	.250	.500	.438

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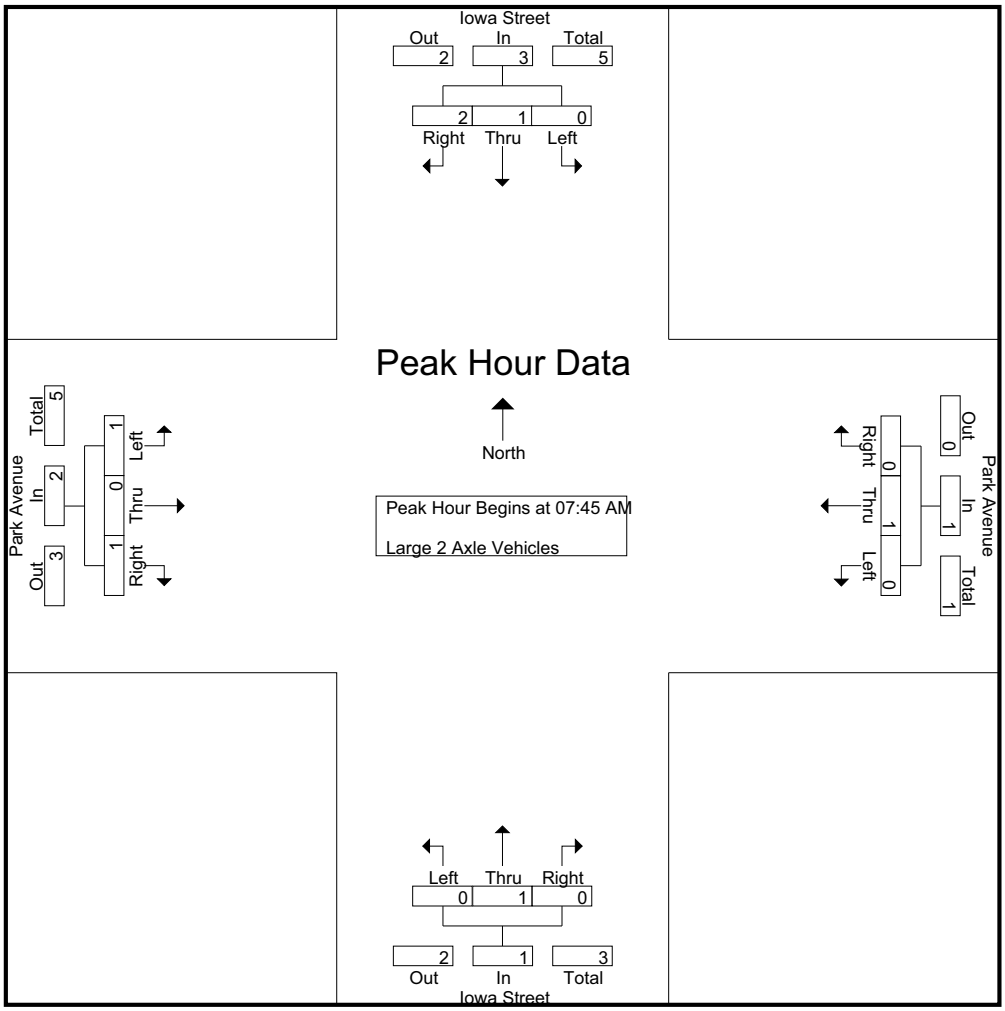

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	**1**	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	**1**	1	**2**	0	0	0	0	0	**1**	0	**1**	0	0	**1**	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	1
Total Volume	0	1	2	3	0	1	0	1	0	1	0	1	1	0	1	2
% App. Total	0	33.3	66.7		0	100	0		0	100	0		50	0	50	
PHF	.000	.250	.500	.375	.000	.250	.000	.250	.000	.250	.000	.250	.250	.000	.250	.500

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Weather: Clear

File Name : 02_RED IO PA AM
Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- 3 Axle Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	2	1	3	0	0	0	0	0	1	0	1	4
08:00 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	1	3	0	4	0	0	0	0	5
Grand Total	0	0	0	0	0	3	1	4	1	3	0	4	0	1	0	1	9
Apprch %	0	0	0		0	75	25		25	75	0		0	100	0		
Total %	0	0	0	0	0	33.3	11.1	44.4	11.1	33.3	0	44.4	0	11.1	0	11.1	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	1	0	1	0	**1**	0	**1**	0	0	0	0	**2**
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	2	0	2	0	2	0	2	0	0	0	0	4
% App. Total	0	0	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.500	.000	.500	.000	.500	.000	.500	.000	.000	.000	.000	.500

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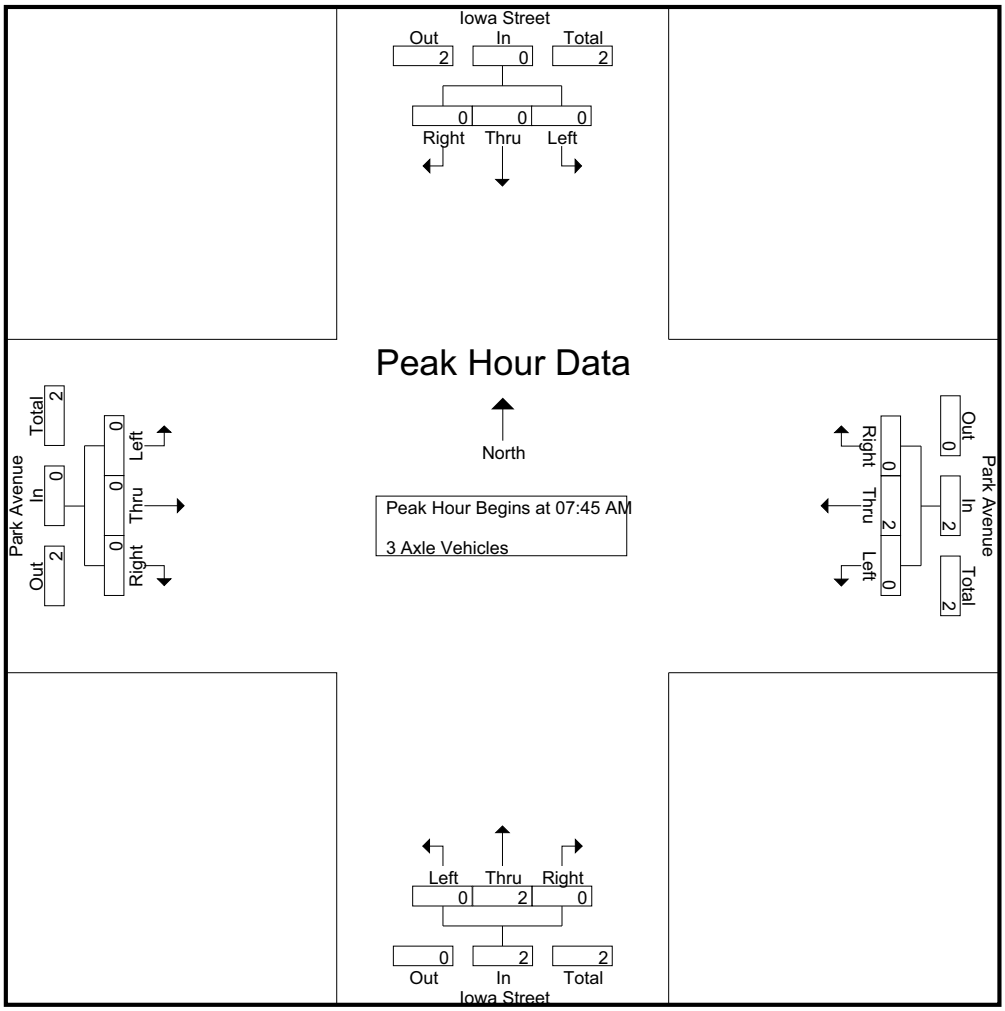

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	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	1	1	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	6	6
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	7	7
Apprch %	0	0	0		0	0	0		0	0	0		0	14.3	85.7		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	14.3	85.7	100	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	**2**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	4
% App. Total	0	0	0		0	0	0		0	0	0		0	25	75		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.375	.500	.500

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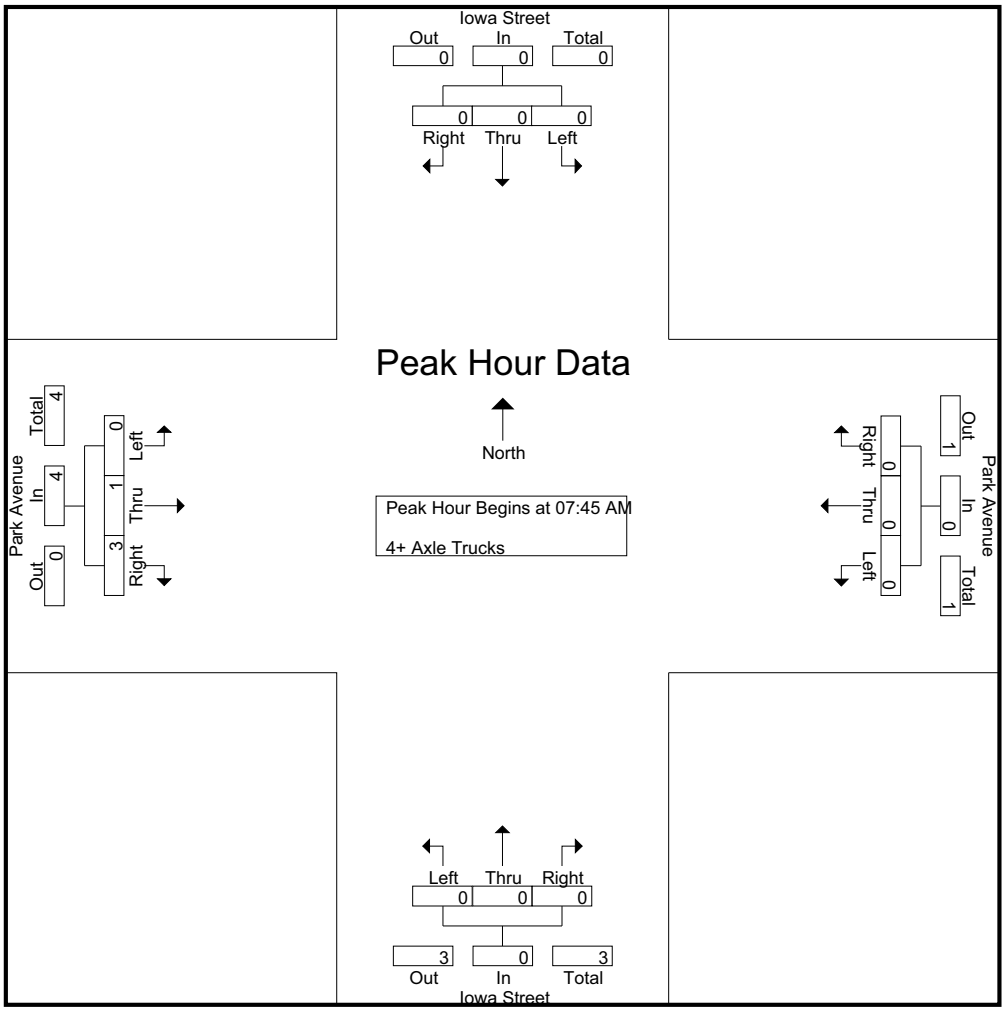

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4
% App. Total	0	0	0		0	0	0		0	0	0		0	25	75	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.375	.500

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

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	14	2	17	0	8	5	13	4	28	7	39	4	17	3	24	93
04:15 PM	2	9	2	13	0	11	4	15	3	15	2	20	4	12	2	18	66
04:30 PM	1	21	1	23	1	7	2	10	1	32	6	39	2	19	6	27	99
04:45 PM	4	13	0	17	2	20	2	24	0	17	3	20	4	21	2	27	88
Total	8	57	5	70	3	46	13	62	8	92	18	118	14	69	13	96	346
05:00 PM	3	18	0	21	0	12	5	17	2	33	4	39	3	20	4	27	104
05:15 PM	1	19	1	21	1	9	1	11	2	16	1	19	3	19	3	25	76
05:30 PM	9	4	0	13	0	10	5	15	2	19	2	23	2	23	1	26	77
05:45 PM	2	5	4	11	4	12	2	18	2	10	0	12	2	10	1	13	54
Total	15	46	5	66	5	43	13	61	8	78	7	93	10	72	9	91	311
Grand Total	23	103	10	136	8	89	26	123	16	170	25	211	24	141	22	187	657
Apprch %	16.9	75.7	7.4		6.5	72.4	21.1		7.6	80.6	11.8		12.8	75.4	11.8		
Total %	3.5	15.7	1.5	20.7	1.2	13.5	4	18.7	2.4	25.9	3.8	32.1	3.7	21.5	3.3	28.5	
Passenger Vehicles	23	100	10	133	7	87	26	120	16	166	25	207	24	141	17	182	642
% Passenger Vehicles	100	97.1	100	97.8	87.5	97.8	100	97.6	100	97.6	100	98.1	100	100	77.3	97.3	97.7
Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
% Large 2 Axle Vehicles	0	0	0	0	0	0	0	0	0	1.2	0	0.9	0	0	0	0	0.3
3 Axle Vehicles	0	3	0	3	1	0	0	1	0	2	0	2	0	0	1	1	7
% 3 Axle Vehicles	0	2.9	0	2.2	12.5	0	0	0.8	0	1.2	0	0.9	0	0	4.5	0.5	1.1
4+ Axle Trucks	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	4	6
% 4+ Axle Trucks	0	0	0	0	0	2.2	0	1.6	0	0	0	0	0	0	18.2	2.1	0.9

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	**21**	**1**	**23**	1	7	2	10	1	32	**6**	**39**	2	19	**6**	**27**	99
04:45 PM	**4**	13	0	17	**2**	**20**	2	**24**	0	17	3	20	**4**	**21**	2	27	88
05:00 PM	3	18	0	21	0	12	**5**	17	**2**	**33**	4	39	3	20	4	27	**104**
05:15 PM	1	19	1	21	1	9	1	11	2	16	1	19	3	19	3	25	76
Total Volume	9	71	2	82	4	48	10	62	5	98	14	117	12	79	15	106	367
% App. Total	11	86.6	2.4		6.5	77.4	16.1		4.3	83.8	12		11.3	74.5	14.2		
PHF	.563	.845	.500	.891	.500	.600	.500	.646	.625	.742	.583	.750	.750	.940	.625	.981	.882

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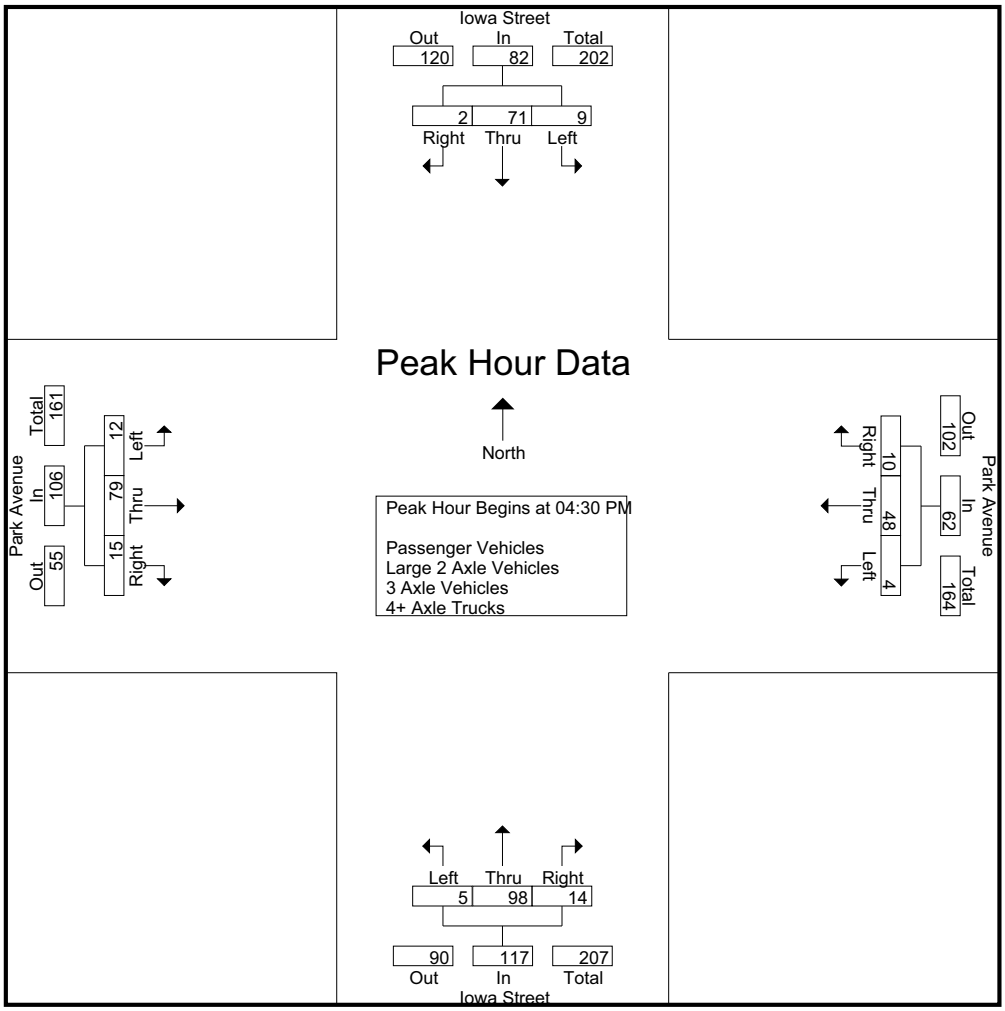

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:00 PM				04:30 PM			
+0 mins.	1	**21**	**1**	**23**	**2**	**20**	2	**24**	**4**	28	**7**	**39**	2	19	**6**	**27**
+15 mins.	**4**	13	0	17	0	12	**5**	17	3	15	2	20	**4**	**21**	2	27
+30 mins.	3	18	0	21	1	9	1	11	1	**32**	6	39	3	20	4	27
+45 mins.	1	19	1	21	0	10	5	15	0	17	3	20	3	19	3	25
Total Volume	9	71	2	82	3	51	13	67	8	92	18	118	12	79	15	106
% App. Total	11	86.6	2.4		4.5	76.1	19.4		6.8	78	15.3		11.3	74.5	14.2	
PHF	.563	.845	.500	.891	.375	.638	.650	.698	.500	.719	.643	.756	.750	.940	.625	.981

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Groups Printed- Passenger Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	14	2	17	0	8	5	13	4	26	7	37	4	17	3	24	91
04:15 PM	2	8	2	12	0	11	4	15	3	15	2	20	4	12	2	18	65
04:30 PM	1	20	1	22	0	6	2	8	1	32	6	39	2	19	5	26	95
04:45 PM	4	13	0	17	2	20	2	24	0	17	3	20	4	21	0	25	86
Total	8	55	5	68	2	45	13	60	8	90	18	116	14	69	10	93	337
05:00 PM	3	18	0	21	0	12	5	17	2	33	4	39	3	20	4	27	104
05:15 PM	1	19	1	21	1	9	1	11	2	16	1	19	3	19	1	23	74
05:30 PM	9	4	0	13	0	10	5	15	2	17	2	21	2	23	1	26	75
05:45 PM	2	4	4	10	4	11	2	17	2	10	0	12	2	10	1	13	52
Total	15	45	5	65	5	42	13	60	8	76	7	91	10	72	7	89	305
Grand Total	23	100	10	133	7	87	26	120	16	166	25	207	24	141	17	182	642
Apprch %	17.3	75.2	7.5		5.8	72.5	21.7		7.7	80.2	12.1		13.2	77.5	9.3		
Total %	3.6	15.6	1.6	20.7	1.1	13.6	4	18.7	2.5	25.9	3.9	32.2	3.7	22	2.6	28.3	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	1	**20**	**1**	**22**	0	6	2	8	1	32	**6**	**39**	2	19	**5**	26	95
04:45 PM	**4**	13	0	17	**2**	**20**	2	**24**	0	17	3	20	**4**	**21**	0	25	86
05:00 PM	3	18	0	21	0	12	**5**	17	**2**	**33**	4	39	3	20	4	**27**	**104**
05:15 PM	1	19	1	21	1	9	1	11	2	16	1	19	3	19	1	23	74
Total Volume	9	70	2	81	3	47	10	60	5	98	14	117	12	79	10	101	359
% App. Total	11.1	86.4	2.5		5	78.3	16.7		4.3	83.8	12		11.9	78.2	9.9		
PHF	.563	.875	.500	.920	.375	.588	.500	.625	.625	.742	.583	.750	.750	.940	.500	.935	.863

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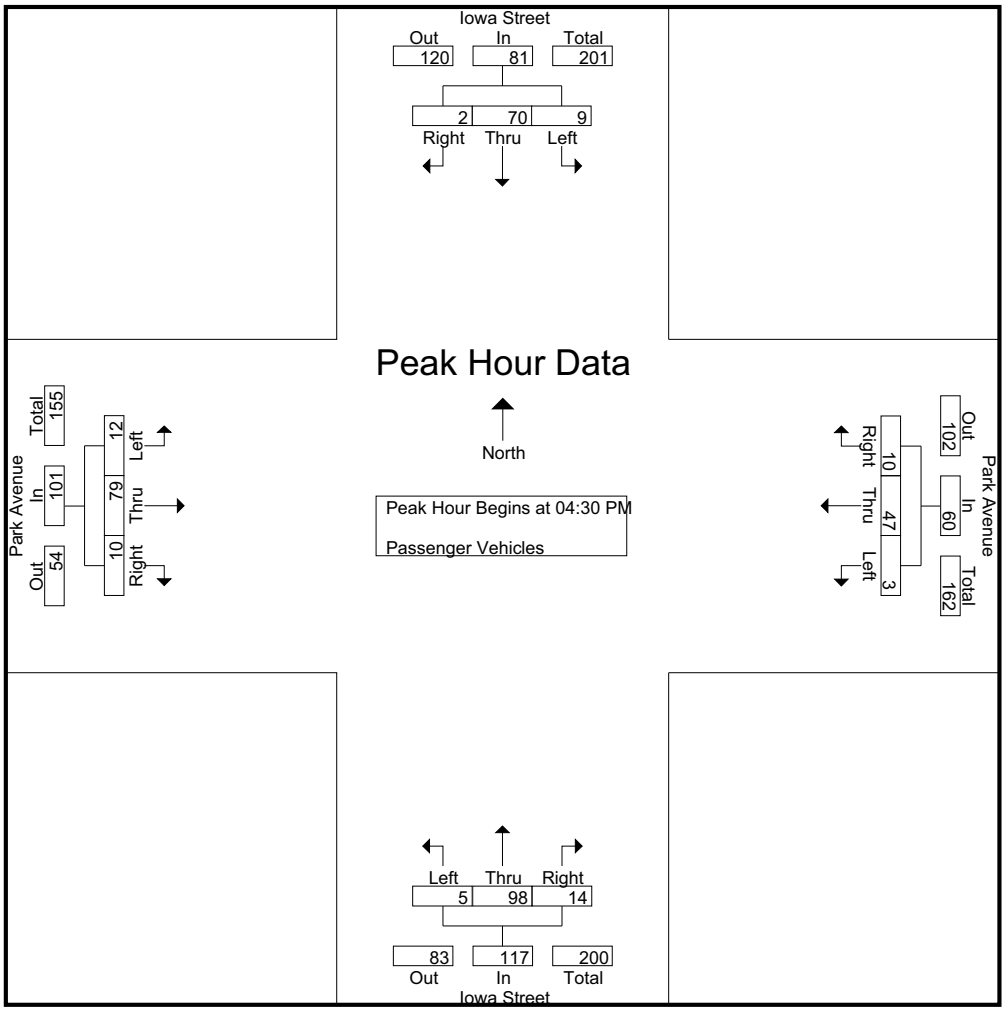

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	1	**20**	**1**	**22**	0	6	2	8	1	32	**6**	**39**	2	19	**5**	26
+15 mins.	**4**	13	0	17	**2**	**20**	2	**24**	0	17	3	20	**4**	**21**	0	25
+30 mins.	3	18	0	21	0	12	**5**	17	**2**	**33**	4	39	3	20	4	**27**
+45 mins.	1	19	1	21	1	9	1	11	2	16	1	19	3	19	1	23
Total Volume	9	70	2	81	3	47	10	60	5	98	14	117	12	79	10	101
% App. Total	11.1	86.4	2.5		5	78.3	16.7		4.3	83.8	12		11.9	78.2	9.9	
PHF	.563	.875	.500	.920	.375	.588	.500	.625	.625	.742	.583	.750	.750	.940	.500	.935

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Groups Printed- Large 2 Axle Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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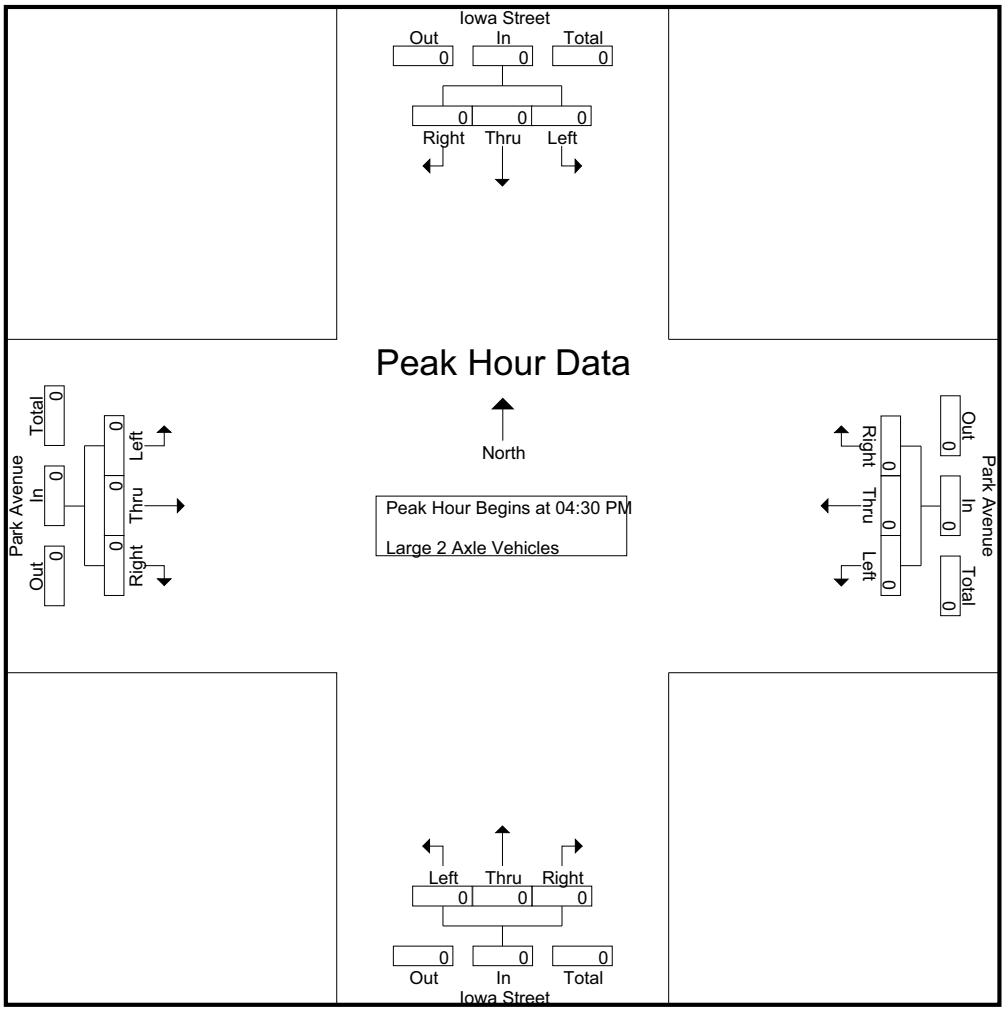

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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City of Redlands
N/S: Iowa Street
E/W: Park Avenue
Weather: Clear

File Name : 02_RED IO PA PM
Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- 3 Axle Vehicles

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	0	2	1	0	0	1	0	0	0	0	0	0	1	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
05:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Grand Total	0	3	0	3	1	0	0	1	0	2	0	2	0	0	1	1	7
Apprch %	0	100	0		100	0	0		0	100	0		0	0	100		
Total %	0	42.9	0	42.9	14.3	0	0	14.3	0	28.6	0	28.6	0	0	14.3	14.3	

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

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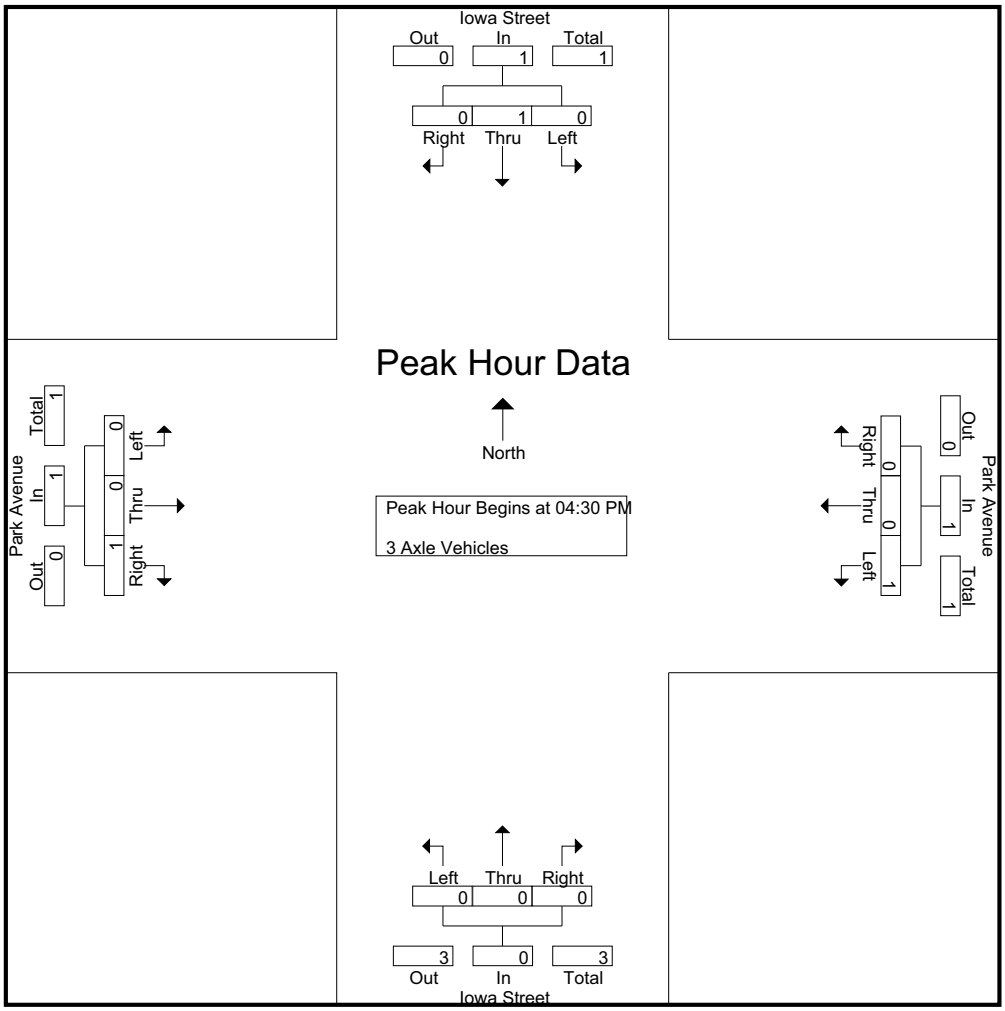

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	3
Grand Total	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	4	6
Apprch %	0	0	0		0	100	0		0	0	0		0	0	100		
Total %	0	0	0	0	0	33.3	0	33.3	0	0	0	0	0	0	66.7	66.7	

	Iowa Street Southbound				Park Avenue Westbound				Iowa Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	1	1	**2**
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**	2
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4	4	5
% App. Total	0	0	0		0	100	0		0	0	0		0	0	100		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.500	.500	.625

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Site Code : 07517744
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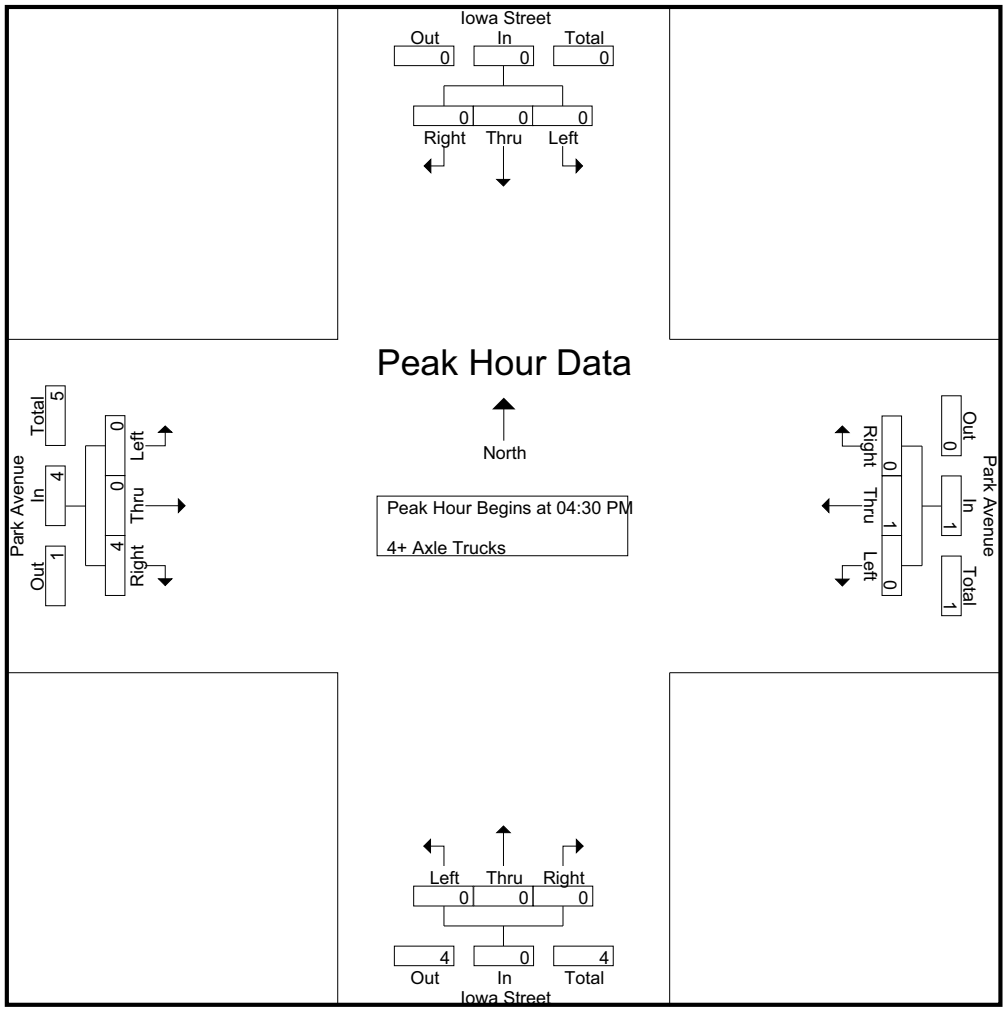

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	1	1
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	**2**
Total Volume	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4	4
% App. Total	0	0	0		0	100	0		0	0	0		0	0	100	
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.500	.500

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City of Redlands
N/S: Alabama Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01A_RED AL RE AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	21	89	23	133	8	48	17	73	9	113	2	124	11	28	5	44	374
07:15 AM	12	97	36	145	3	101	20	124	16	112	3	131	22	36	9	67	467
07:30 AM	24	113	47	184	11	124	20	155	9	119	1	129	21	37	5	63	531
07:45 AM	16	155	58	229	6	97	36	139	20	145	10	175	17	37	16	70	613
Total	73	454	164	691	28	370	93	491	54	489	16	559	71	138	35	244	1985
08:00 AM	24	121	60	205	12	70	28	110	20	148	11	179	21	35	8	64	558
08:15 AM	22	103	55	180	12	72	24	108	31	112	4	147	38	61	19	118	553
08:30 AM	25	95	53	173	12	75	20	107	9	116	6	131	35	54	5	94	505
08:45 AM	18	122	68	208	15	62	25	102	20	108	6	134	40	80	13	133	577
Total	89	441	236	766	51	279	97	427	80	484	27	591	134	230	45	409	2193
Grand Total	162	895	400	1457	79	649	190	918	134	973	43	1150	205	368	80	653	4178
Apprch %	11.1	61.4	27.5		8.6	70.7	20.7		11.7	84.6	3.7		31.4	56.4	12.3		
Total %	3.9	21.4	9.6	34.9	1.9	15.5	4.5	22	3.2	23.3	1	27.5	4.9	8.8	1.9	15.6	
Passenger Vehicles	154	880	390	1424	76	640	188	904	129	950	42	1121	194	357	76	627	4076
% Passenger Vehicles	95.1	98.3	97.5	97.7	96.2	98.6	98.9	98.5	96.3	97.6	97.7	97.5	94.6	97	95	96	97.6
Large 2 Axle Vehicles	7	10	4	21	2	7	2	11	5	17	0	22	5	7	4	16	70
% Large 2 Axle Vehicles	4.3	1.1	1	1.4	2.5	1.1	1.1	1.2	3.7	1.7	0	1.9	2.4	1.9	5	2.5	1.7
3 Axle Vehicles	0	2	1	3	0	1	0	1	0	3	1	4	5	2	0	7	15
% 3 Axle Vehicles	0	0.2	0.2	0.2	0	0.2	0	0.1	0	0.3	2.3	0.3	2.4	0.5	0	1.1	0.4
4+ Axle Trucks	1	3	5	9	1	1	0	2	0	3	0	3	1	2	0	3	17
% 4+ Axle Trucks	0.6	0.3	1.2	0.6	1.3	0.2	0	0.2	0	0.3	0	0.3	0.5	0.5	0	0.5	0.4

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**24**	113	47	184	11	**124**	20	**155**	9	119	1	129	21	37	5	63	531
07:45 AM	16	**155**	58	**229**	6	97	**36**	139	20	145	10	175	17	37	16	70	**613**
08:00 AM	24	121	**60**	205	**12**	70	28	110	20	**148**	**11**	**179**	21	35	8	64	558
08:15 AM	22	103	55	180	12	72	24	108	**31**	112	4	147	**38**	**61**	**19**	**118**	553
Total Volume	86	492	220	798	41	363	108	512	80	524	26	630	97	170	48	315	2255
% App. Total	10.8	61.7	27.6		8	70.9	21.1		12.7	83.2	4.1		30.8	54	15.2		
PHF	.896	.794	.917	.871	.854	.732	.750	.826	.645	.885	.591	.880	.638	.697	.632	.667	.920

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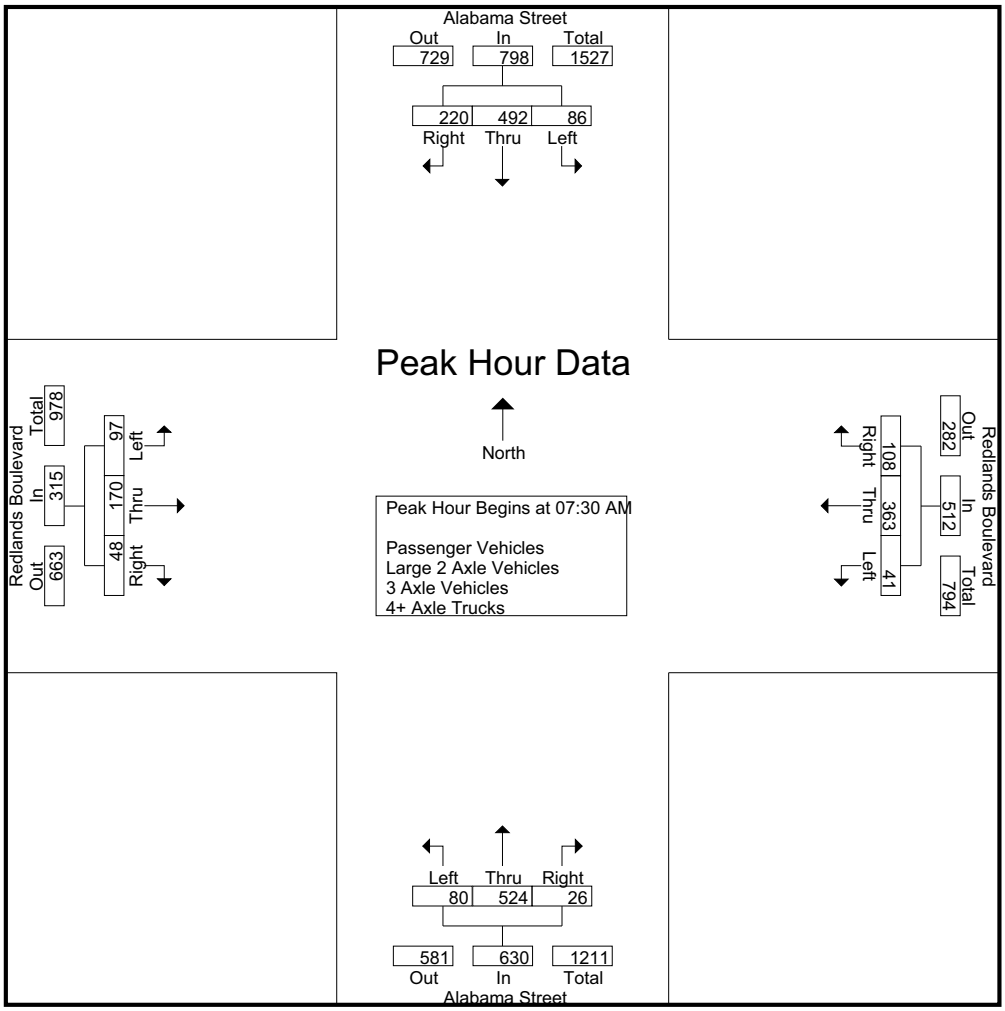
Weather: Clear

File Name : 01A_RED AL RE AM
Site Code : 07517744
Start Date : 11/1/2017



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

	07:30 AM				07:15 AM				07:45 AM				08:00 AM			
+0 mins.	**24**	113	47	184	3	101	20	124	20	145	10	175	21	35	8	64
+15 mins.	16	**155**	58	**229**	11	**124**	20	**155**	20	**148**	**11**	**179**	38	61	**19**	118
+30 mins.	24	121	**60**	205	6	97	**36**	139	**31**	112	4	147	35	54	5	94
+45 mins.	22	103	55	180	**12**	70	28	110	9	116	6	131	**40**	**80**	13	**133**
Total Volume	86	492	220	798	32	392	104	528	80	521	31	632	134	230	45	409
% App. Total	10.8	61.7	27.6		6.1	74.2	19.7		12.7	82.4	4.9		32.8	56.2	11	
PHF	.896	.794	.917	.871	.667	.790	.722	.852	.645	.880	.705	.883	.838	.719	.592	.769

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	19	87	22	128	8	48	16	72	8	109	1	118	11	28	5	44	362
07:15 AM	12	92	36	140	3	100	20	123	16	111	3	130	17	35	9	61	454
07:30 AM	21	113	46	180	11	122	19	152	8	118	1	127	19	37	5	61	520
07:45 AM	15	154	58	227	5	95	36	136	20	143	10	173	16	34	15	65	601
Total	67	446	162	675	27	365	91	483	52	481	15	548	63	134	34	231	1937
08:00 AM	24	119	59	202	12	69	28	109	19	145	11	175	21	33	8	62	548
08:15 AM	21	102	54	177	11	72	24	107	30	108	4	142	37	60	17	114	540
08:30 AM	25	94	49	168	12	74	20	106	9	113	6	128	34	52	5	91	493
08:45 AM	17	119	66	202	14	60	25	99	19	103	6	128	39	78	12	129	558
Total	87	434	228	749	49	275	97	421	77	469	27	573	131	223	42	396	2139
Grand Total	154	880	390	1424	76	640	188	904	129	950	42	1121	194	357	76	627	4076
Apprch %	10.8	61.8	27.4		8.4	70.8	20.8		11.5	84.7	3.7		30.9	56.9	12.1		
Total %	3.8	21.6	9.6	34.9	1.9	15.7	4.6	22.2	3.2	23.3	1	27.5	4.8	8.8	1.9	15.4	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	21	113	46	180	11	**122**	19	**152**	8	118	1	127	19	37	5	61	520
07:45 AM	15	**154**	58	**227**	5	95	**36**	136	20	143	10	173	16	34	15	65	**601**
08:00 AM	**24**	119	**59**	202	**12**	69	28	109	19	**145**	**11**	**175**	21	33	8	62	548
08:15 AM	21	102	54	177	11	72	24	107	**30**	108	4	142	**37**	**60**	**17**	**114**	540
Total Volume	81	488	217	786	39	358	107	504	77	514	26	617	93	164	45	302	2209
% App. Total	10.3	62.1	27.6		7.7	71	21.2		12.5	83.3	4.2		30.8	54.3	14.9		
PHF	.844	.792	.919	.866	.813	.734	.743	.829	.642	.886	.591	.881	.628	.683	.662	.662	.919

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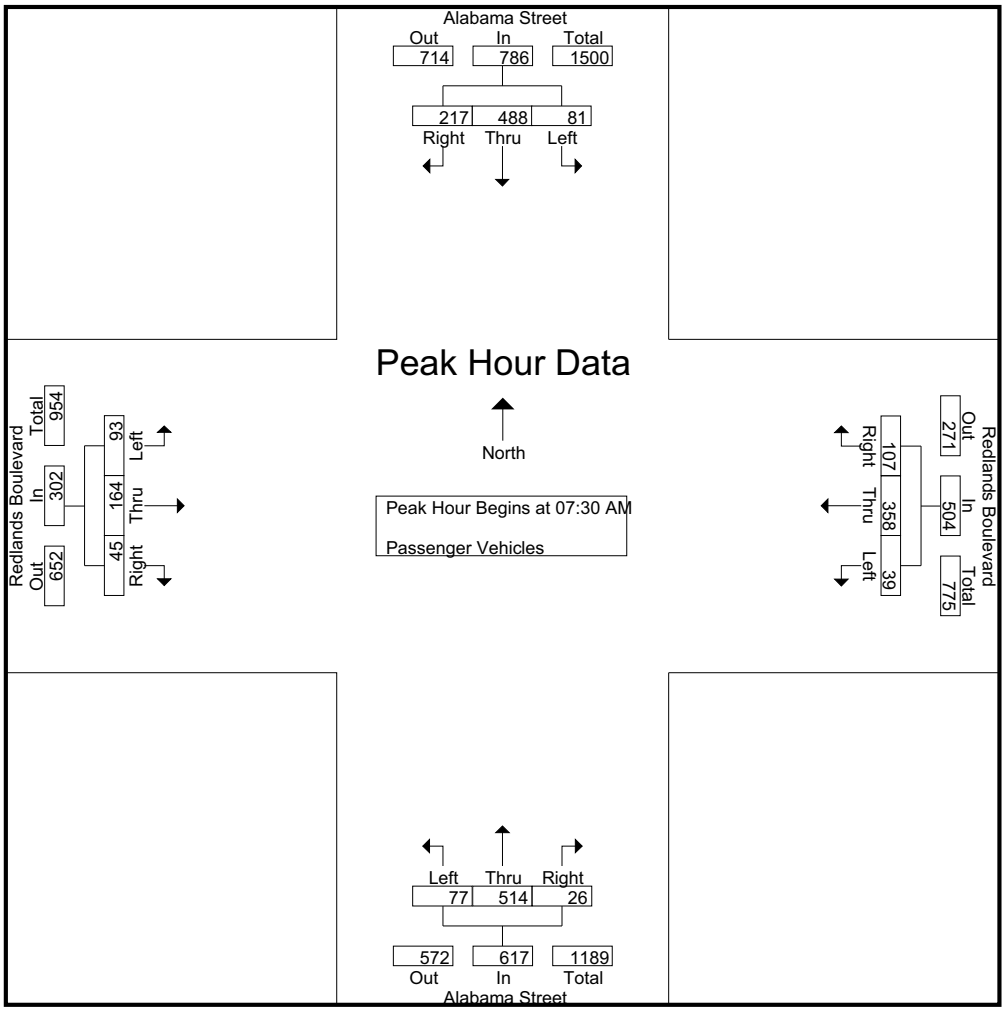

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	21	113	46	180	11	**122**	19	**152**	8	118	1	127	19	37	5	61
+15 mins.	15	**154**	58	**227**	5	95	**36**	136	20	143	10	173	16	34	15	65
+30 mins.	**24**	119	**59**	202	**12**	69	28	109	19	**145**	**11**	**175**	21	33	8	62
+45 mins.	21	102	54	177	11	72	24	107	**30**	108	4	142	**37**	**60**	**17**	**114**
Total Volume	81	488	217	786	39	358	107	504	77	514	26	617	93	164	45	302
% App. Total	10.3	62.1	27.6		7.7	71	21.2		12.5	83.3	4.2		30.8	54.3	14.9	
PHF	.844	.792	.919	.866	.813	.734	.743	.829	.642	.886	.591	.881	.628	.683	.662	.662

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	0	0	1	1	1	3	0	4	0	0	0	0	7
07:15 AM	0	3	0	3	0	0	0	0	0	1	0	1	2	0	0	2	6
07:30 AM	3	0	1	4	0	1	1	2	1	0	0	1	1	0	0	1	8
07:45 AM	1	0	0	1	0	2	0	2	0	2	0	2	1	2	1	4	9
Total	5	4	1	10	0	3	2	5	2	6	0	8	4	2	1	7	30
08:00 AM	0	2	0	2	0	1	0	1	1	2	0	3	0	1	0	1	7
08:15 AM	1	0	1	2	1	0	0	1	1	3	0	4	1	1	2	4	11
08:30 AM	0	1	1	2	0	1	0	1	0	3	0	3	0	1	0	1	7
08:45 AM	1	3	1	5	1	2	0	3	1	3	0	4	0	2	1	3	15
Total	2	6	3	11	2	4	0	6	3	11	0	14	1	5	3	9	40
Grand Total	7	10	4	21	2	7	2	11	5	17	0	22	5	7	4	16	70
Apprch %	33.3	47.6	19		18.2	63.6	18.2		22.7	77.3	0		31.2	43.8	25		
Total %	10	14.3	5.7	30	2.9	10	2.9	15.7	7.1	24.3	0	31.4	7.1	10	5.7	22.9	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**3**	0	**1**	**4**	0	1	**1**	**2**	**1**	0	0	1	**1**	0	0	1	8
07:45 AM	1	0	0	1	0	**2**	0	2	0	2	0	2	1	**2**	1	**4**	9
08:00 AM	0	**2**	0	2	0	1	0	1	1	2	0	3	0	1	0	1	7
08:15 AM	1	0	1	2	**1**	0	0	1	1	**3**	0	**4**	1	1	**2**	4	**11**
Total Volume	5	2	2	9	1	4	1	6	3	7	0	10	3	4	3	10	35
% App. Total	55.6	22.2	22.2		16.7	66.7	16.7		30	70	0		30	40	30		
PHF	.417	.250	.500	.563	.250	.500	.250	.750	.750	.583	.000	.625	.750	.500	.375	.625	.795

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City of Redlands
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Weather: Clear

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Site Code : 07517744
Start Date : 11/1/2017
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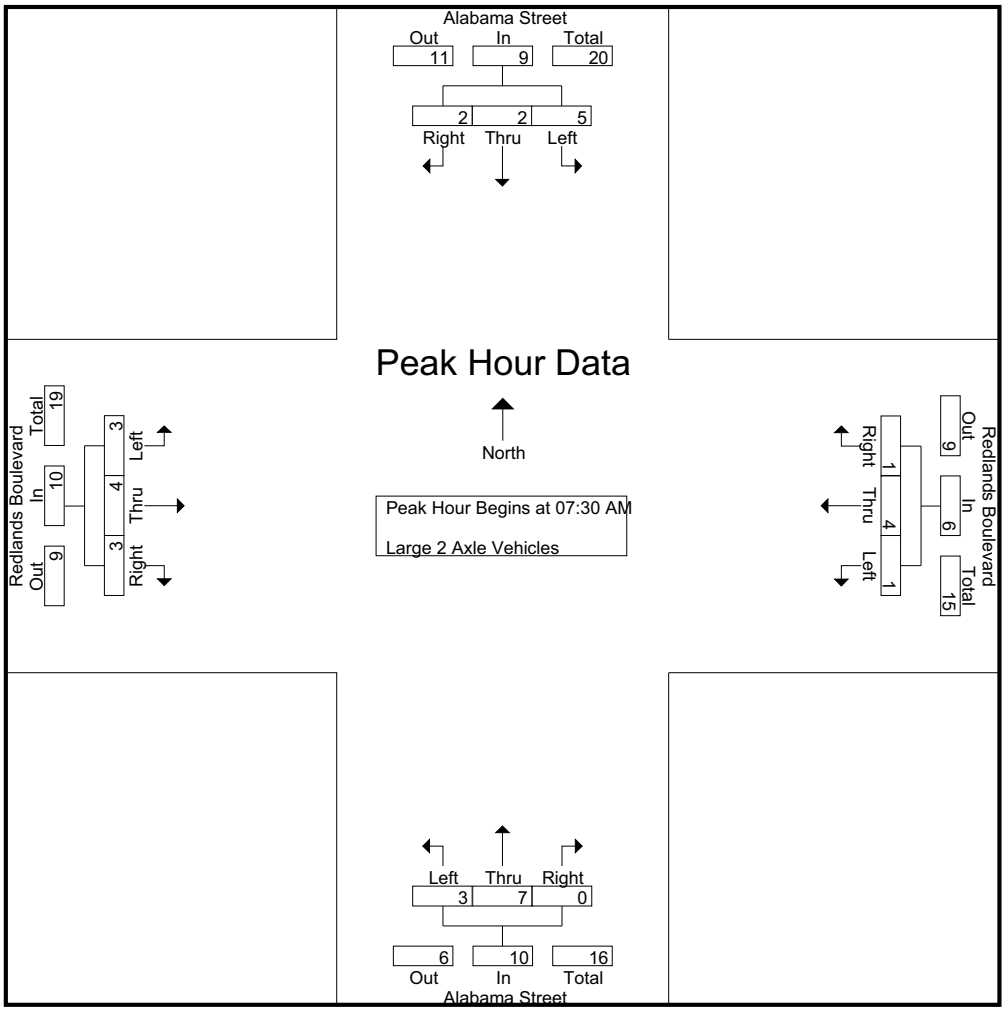

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**3**	0	**1**	**4**	0	1	**1**	**2**	**1**	0	0	1	**1**	0	0	1
+15 mins.	1	0	0	1	0	**2**	0	2	0	2	0	2	1	**2**	1	**4**
+30 mins.	0	**2**	0	2	0	1	0	1	1	2	0	3	0	1	0	1
+45 mins.	1	0	1	2	**1**	0	0	1	1	**3**	0	**4**	1	1	**2**	4
Total Volume	5	2	2	9	1	4	1	6	3	7	0	10	3	4	3	10
% App. Total	55.6	22.2	22.2		16.7	66.7	16.7		30	70	0		30	40	30	
PHF	.417	.250	.500	.563	.250	.500	.250	.750	.750	.583	.000	.625	.750	.500	.375	.625

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
07:15 AM	0	2	0	2	0	1	0	1	0	0	0	0	2	1	0	3	6
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	1	0	1	0	1	1	2	3	1	0	4	9
08:00 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	1	0	1	3
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
Total	0	0	1	1	0	0	0	0	0	2	0	2	2	1	0	3	6
Grand Total	0	2	1	3	0	1	0	1	0	3	1	4	5	2	0	7	15
Apprch %	0	66.7	33.3		0	100	0		0	75	25		71.4	28.6	0		
Total %	0	13.3	6.7	20	0	6.7	0	6.7	0	20	6.7	26.7	33.3	13.3	0	46.7	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	**1**	**1**	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1	**3**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	1	0	1	1	1	0	2	4
% App. Total	0	0	100		0	0	0		0	100	0		50	50	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250	.000	.500	.333

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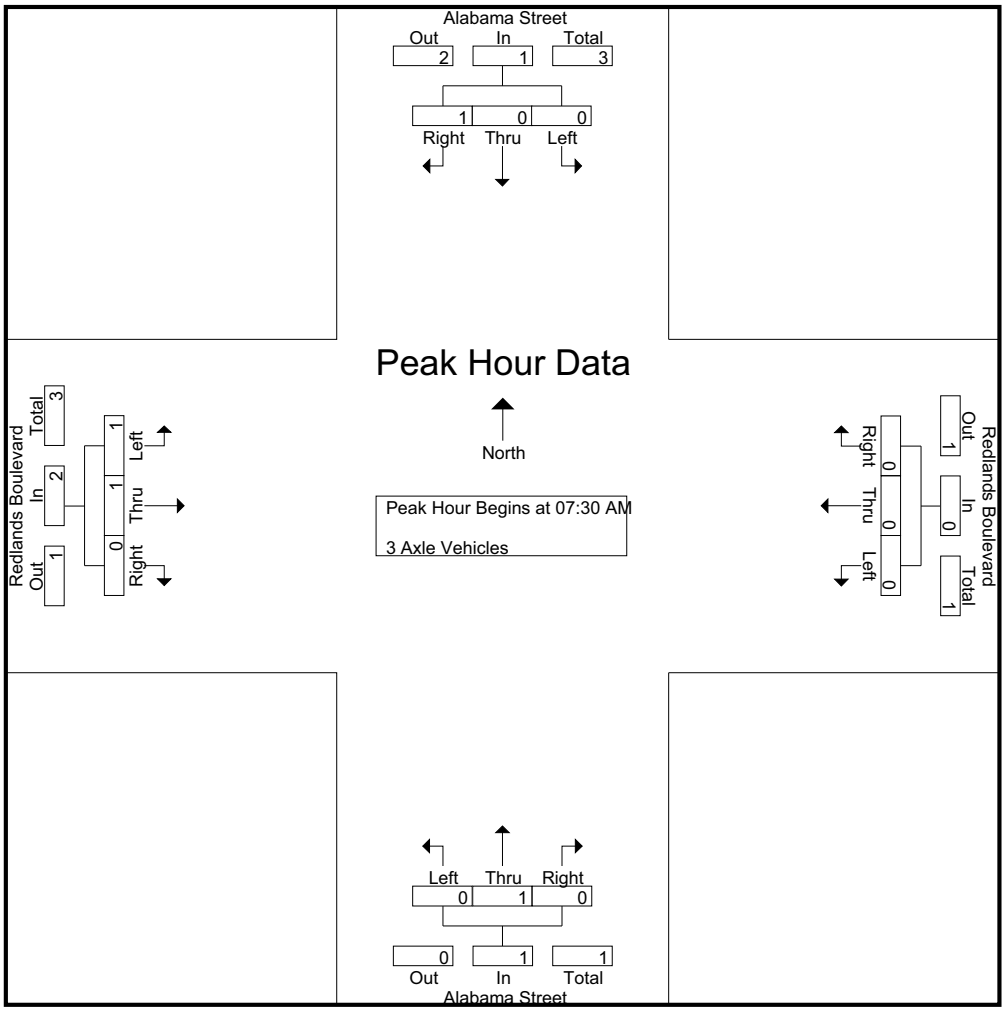

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	**1**	**1**	0	0	0	0	0	**1**	0	**1**	0	**1**	0	1
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	1	1	0	0	0	0	0	1	0	1	1	1	0	2
% App. Total	0	0	100		0	0	0		0	100	0		50	50	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.250	.000	.250	.250	.250	.000	.500

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:30 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
07:45 AM	0	1	0	1	1	0	0	1	0	0	0	0	0	1	0	1	3
Total	1	2	1	4	1	1	0	2	0	1	0	1	1	1	0	2	9
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	0	3	3	0	0	0	0	0	0	0	0	0	1	0	1	4
08:45 AM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	1	4	5	0	0	0	0	0	2	0	2	0	1	0	1	8
Grand Total	1	3	5	9	1	1	0	2	0	3	0	3	1	2	0	3	17
Apprch %	11.1	33.3	55.6		50	50	0		0	100	0		33.3	66.7	0		
Total %	5.9	17.6	29.4	52.9	5.9	5.9	0	11.8	0	17.6	0	17.6	5.9	11.8	0	17.6	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0	2
07:45 AM	0	**1**	0	**1**	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**	**3**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	2	0	2	1	1	0	2	0	2	0	2	0	1	0	1	7
% App. Total	0	100	0		50	50	0		0	100	0		0	100	0		
PHF	.000	.500	.000	.500	.250	.250	.000	.500	.000	.500	.000	.500	.000	.250	.000	.250	.583

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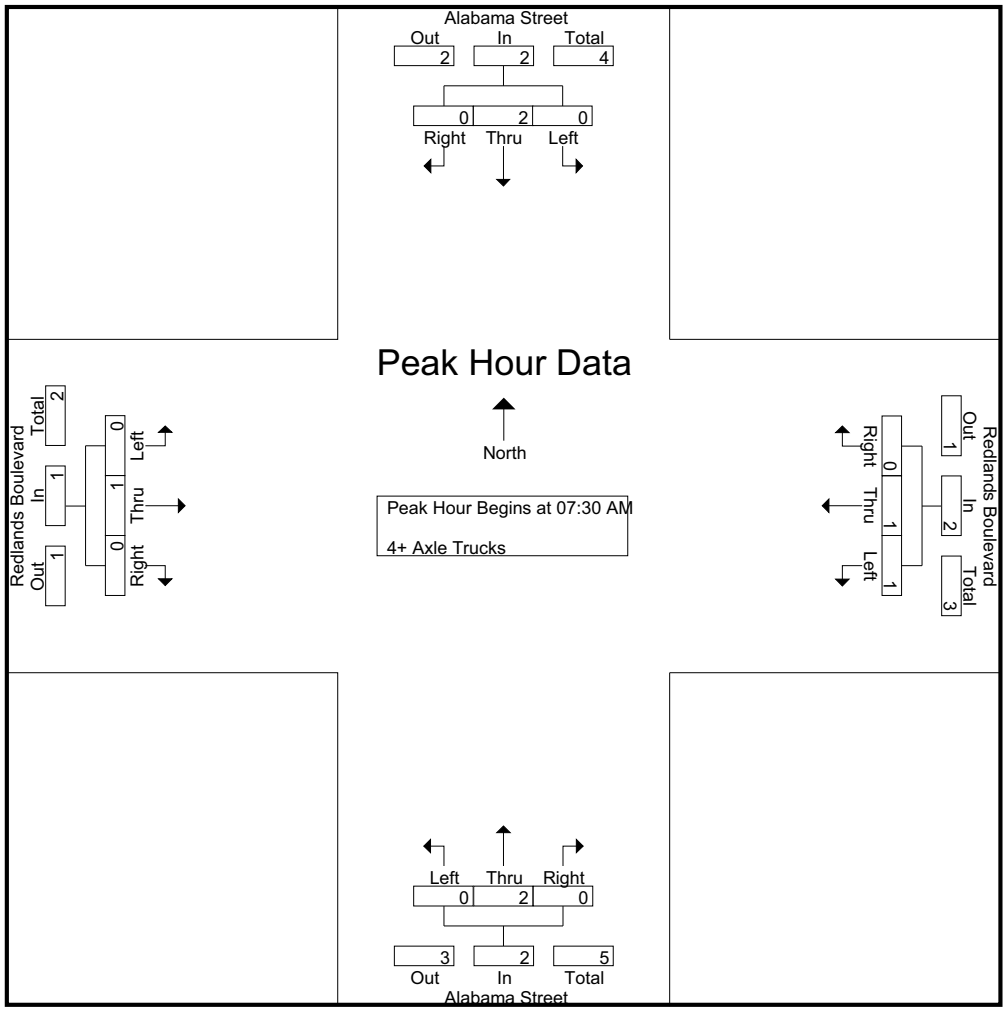

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	**1**	0	**1**	**1**	0	0	1	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	2	0	2	1	1	0	2	0	2	0	2	0	1	0	1
% App. Total	0	100	0		50	50	0		0	100	0		0	100	0	
PHF	.000	.500	.000	.500	.250	.250	.000	.500	.000	.500	.000	.500	.000	.250	.000	.250

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

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	23	146	39	208	24	74	43	141	24	138	22	184	71	122	30	223	756
04:15 PM	34	131	57	222	25	102	43	170	17	121	20	158	63	155	27	245	795
04:30 PM	33	129	37	199	25	90	41	156	26	141	29	196	77	175	25	277	828
04:45 PM	31	139	49	219	21	100	40	161	20	122	20	162	94	183	27	304	846
Total	121	545	182	848	95	366	167	628	87	522	91	700	305	635	109	1049	3225
05:00 PM	41	124	41	206	22	84	39	145	23	162	30	215	99	157	19	275	841
05:15 PM	44	123	39	206	21	91	38	150	18	152	23	193	91	183	28	302	851
05:30 PM	30	129	39	198	20	94	32	146	29	111	17	157	72	179	28	279	780
05:45 PM	33	146	43	222	18	75	27	120	15	116	15	146	63	126	35	224	712
Total	148	522	162	832	81	344	136	561	85	541	85	711	325	645	110	1080	3184
Grand Total	269	1067	344	1680	176	710	303	1189	172	1063	176	1411	630	1280	219	2129	6409
Apprch %	16	63.5	20.5		14.8	59.7	25.5		12.2	75.3	12.5		29.6	60.1	10.3		
Total %	4.2	16.6	5.4	26.2	2.7	11.1	4.7	18.6	2.7	16.6	2.7	22	9.8	20	3.4	33.2	
Passenger Vehicles	268	1059	337	1664	175	707	299	1181	167	1050	176	1393	626	1274	213	2113	6351
% Passenger Vehicles	99.6	99.3	98	99	99.4	99.6	98.7	99.3	97.1	98.8	100	98.7	99.4	99.5	97.3	99.2	99.1
Large 2 Axle Vehicles	1	4	2	7	1	2	4	7	5	7	0	12	0	5	5	10	36
% Large 2 Axle Vehicles	0.4	0.4	0.6	0.4	0.6	0.3	1.3	0.6	2.9	0.7	0	0.9	0	0.4	2.3	0.5	0.6
3 Axle Vehicles	0	3	2	5	0	0	0	0	0	2	0	2	3	1	0	4	11
% 3 Axle Vehicles	0	0.3	0.6	0.3	0	0	0	0	0	0.2	0	0.1	0.5	0.1	0	0.2	0.2
4+ Axle Trucks	0	1	3	4	0	1	0	1	0	4	0	4	1	0	1	2	11
% 4+ Axle Trucks	0	0.1	0.9	0.2	0	0.1	0	0.1	0	0.4	0	0.3	0.2	0	0.5	0.1	0.2

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	33	129	37	199	**25**	90	**41**	156	**26**	141	29	196	77	175	25	277	828
04:45 PM	31	**139**	**49**	**219**	21	**100**	40	**161**	20	122	20	162	94	**183**	27	**304**	846
05:00 PM	41	124	41	206	22	84	39	145	23	**162**	**30**	**215**	**99**	157	19	275	841
05:15 PM	**44**	123	39	206	21	91	38	150	18	152	23	193	91	183	**28**	302	**851**
Total Volume	149	515	166	830	89	365	158	612	87	577	102	766	361	698	99	1158	3366
% App. Total	18	62	20		14.5	59.6	25.8		11.4	75.3	13.3		31.2	60.3	8.5		
PHF	.847	.926	.847	.947	.890	.913	.963	.950	.837	.890	.850	.891	.912	.954	.884	.952	.989

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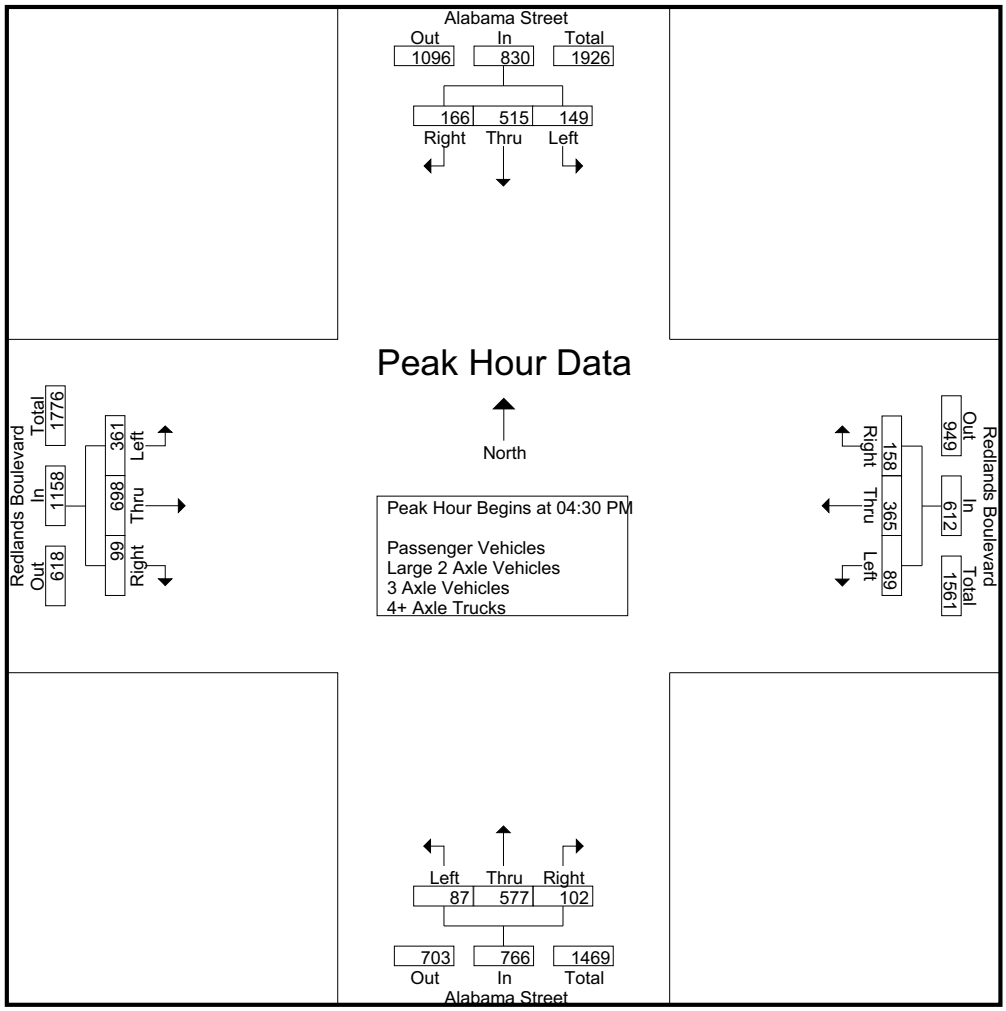

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:30 PM				04:45 PM			
+0 mins.	23	**146**	39	208	**25**	**102**	**43**	**170**	**26**	141	29	196	94	**183**	27	**304**
+15 mins.	**34**	131	**57**	**222**	25	90	41	156	20	122	20	162	**99**	157	19	275
+30 mins.	33	129	37	199	21	100	40	161	23	**162**	**30**	**215**	91	183	**28**	302
+45 mins.	31	139	49	219	22	84	39	145	18	152	23	193	72	179	28	279
Total Volume	121	545	182	848	93	376	163	632	87	577	102	766	356	702	102	1160
% App. Total	14.3	64.3	21.5		14.7	59.5	25.8		11.4	75.3	13.3		30.7	60.5	8.8	
PHF	.890	.933	.798	.955	.930	.922	.948	.929	.837	.890	.850	.891	.899	.959	.911	.954

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	22	144	39	205	23	73	42	138	23	135	22	180	70	122	30	222	745
04:15 PM	34	131	55	220	25	102	42	169	17	120	20	157	63	152	25	240	786
04:30 PM	33	127	37	197	25	89	41	155	24	139	29	192	76	175	25	276	820
04:45 PM	31	138	49	218	21	100	40	161	20	120	20	160	94	181	26	301	840
Total	120	540	180	840	94	364	165	623	84	514	91	689	303	630	106	1039	3191
05:00 PM	41	123	40	204	22	83	39	144	23	161	30	214	99	157	18	274	836
05:15 PM	44	123	38	205	21	91	36	148	16	151	23	190	91	183	27	301	844
05:30 PM	30	127	36	193	20	94	32	146	29	109	17	155	70	178	28	276	770
05:45 PM	33	146	43	222	18	75	27	120	15	115	15	145	63	126	34	223	710
Total	148	519	157	824	81	343	134	558	83	536	85	704	323	644	107	1074	3160
Grand Total	268	1059	337	1664	175	707	299	1181	167	1050	176	1393	626	1274	213	2113	6351
Apprch %	16.1	63.6	20.3		14.8	59.9	25.3		12	75.4	12.6		29.6	60.3	10.1		
Total %	4.2	16.7	5.3	26.2	2.8	11.1	4.7	18.6	2.6	16.5	2.8	21.9	9.9	20.1	3.4	33.3	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	33	127	37	197	**25**	89	**41**	155	**24**	139	29	192	76	175	25	276	820
04:45 PM	31	**138**	**49**	**218**	21	**100**	40	**161**	20	120	20	160	94	181	26	**301**	840
05:00 PM	41	123	40	204	22	83	39	144	23	**161**	**30**	**214**	**99**	157	18	274	836
05:15 PM	**44**	123	38	205	21	91	36	148	16	151	23	190	91	**183**	**27**	301	**844**
Total Volume	149	511	164	824	89	363	156	608	83	571	102	756	360	696	96	1152	3340
% App. Total	18.1	62	19.9		14.6	59.7	25.7		11	75.5	13.5		31.2	60.4	8.3		
PHF	.847	.926	.837	.945	.890	.908	.951	.944	.865	.887	.850	.883	.909	.951	.889	.957	.989

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City of Redlands
N/S: Alabama Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01A_RED AL RE PM
Site Code : 07517744
Start Date : 11/1/2017
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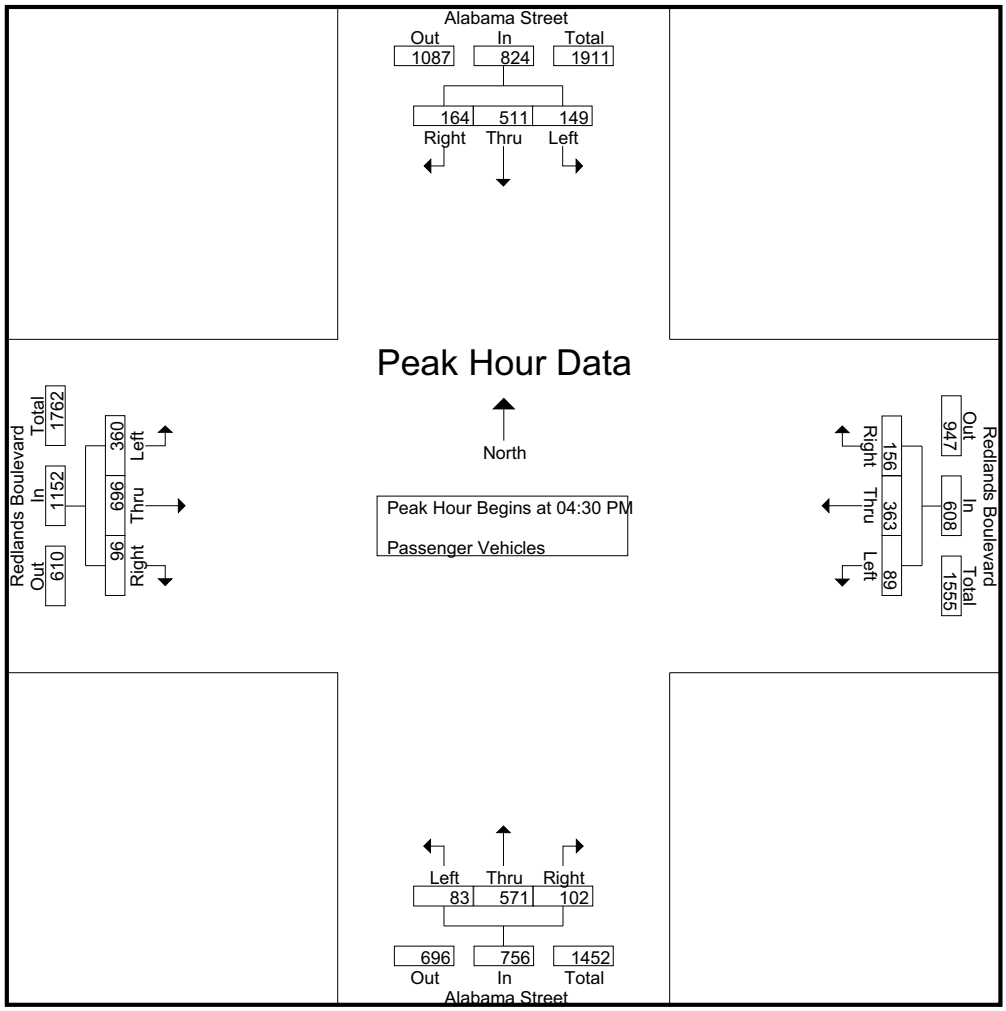

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	33	127	37	197	**25**	89	**41**	155	**24**	139	29	192	76	175	25	276
+15 mins.	31	**138**	**49**	**218**	21	**100**	40	**161**	20	120	20	160	94	181	26	**301**
+30 mins.	41	123	40	204	22	83	39	144	23	**161**	**30**	**214**	**99**	157	18	274
+45 mins.	**44**	123	38	205	21	91	36	148	16	151	23	190	91	**183**	**27**	301
Total Volume	149	511	164	824	89	363	156	608	83	571	102	756	360	696	96	1152
% App. Total	18.1	62	19.9		14.6	59.7	25.7		11	75.5	13.5		31.2	60.4	8.3	
PHF	.847	.926	.837	.945	.890	.908	.951	.944	.865	.887	.850	.883	.909	.951	.889	.957

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Weather: Clear

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Site Code : 07517744
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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	0	0	1	1	1	1	3	1	2	0	3	0	0	0	0	7
04:15 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	3	2	5	7
04:30 PM	0	1	0	1	0	1	0	1	2	1	0	3	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	3
Total	1	2	0	3	1	2	2	5	3	4	0	7	0	4	3	7	22
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	1	1	0	0	2	2	2	0	0	2	0	0	1	1	6
05:30 PM	0	1	1	2	0	0	0	0	0	2	0	2	0	1	0	1	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	2	2	4	0	0	2	2	2	3	0	5	0	1	2	3	14
Grand Total	1	4	2	7	1	2	4	7	5	7	0	12	0	5	5	10	36
Apprch %	14.3	57.1	28.6		14.3	28.6	57.1		41.7	58.3	0		0	50	50		
Total %	2.8	11.1	5.6	19.4	2.8	5.6	11.1	19.4	13.9	19.4	0	33.3	0	13.9	13.9	27.8	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	**1**	0	1	**2**	**1**	0	**3**	0	0	0	0	5
04:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	3
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	0	**1**	1	0	0	**2**	**2**	2	0	0	2	0	0	1	1	**6**
Total Volume	0	3	1	4	0	1	2	3	4	2	0	6	0	1	2	3	16
% App. Total	0	75	25		0	33.3	66.7		66.7	33.3	0		0	33.3	66.7		
PHF	.000	.750	.250	1.00	.000	.250	.250	.375	.500	.500	.000	.500	.000	.250	.500	.375	.667

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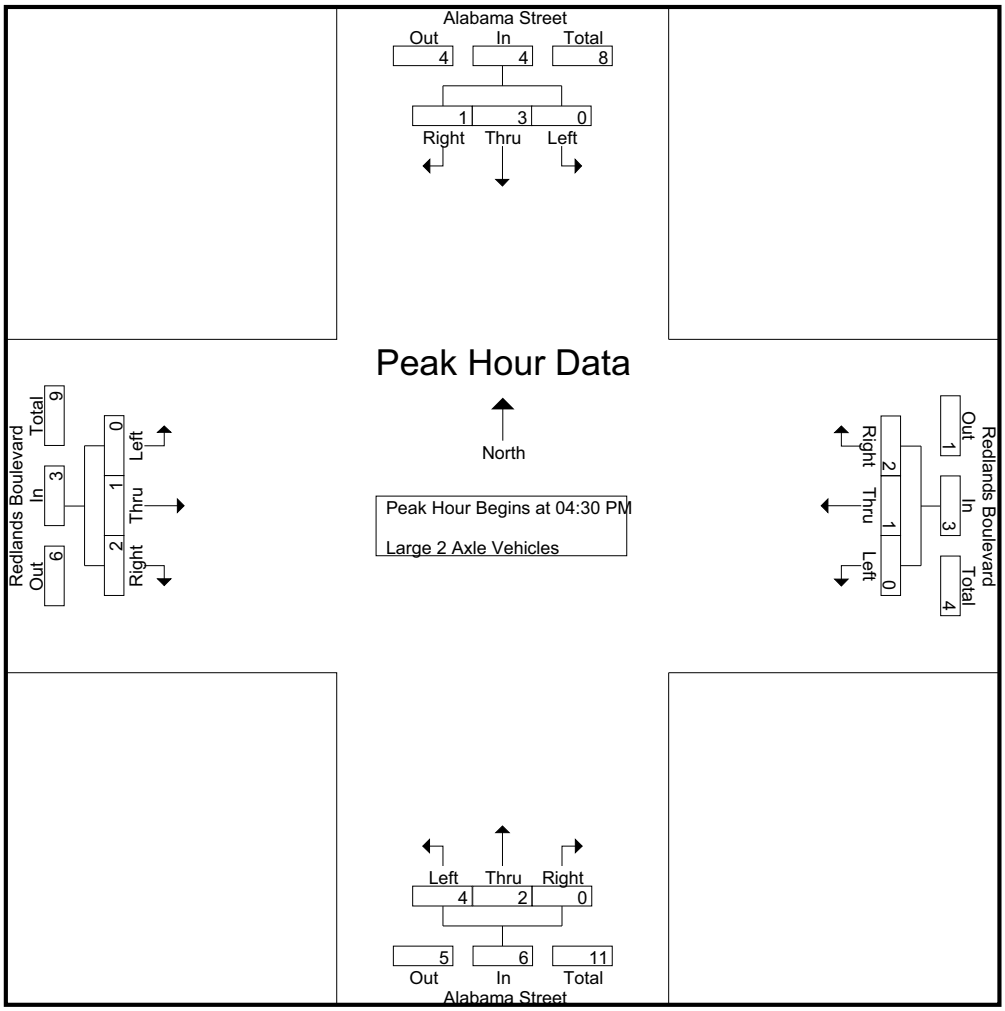
Weather: Clear

File Name : 01A_RED AL RE PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	**1**	0	1	**2**	**1**	0	**3**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	0	**1**	1	0	0	**2**	**2**	2	0	0	2	0	0	1	1
Total Volume	0	3	1	4	0	1	2	3	4	2	0	6	0	1	2	3
% App. Total	0	75	25		0	33.3	66.7		66.7	33.3	0		0	33.3	66.7	
PHF	.000	.750	.250	1.000	.000	.250	.250	.375	.500	.500	.000	.500	.000	.250	.500	.375

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	3
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2
Total	0	3	1	4	0	0	0	0	0	2	0	2	1	1	0	2	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	2	3
Grand Total	0	3	2	5	0	0	0	0	0	2	0	2	3	1	0	4	11
Apprch %	0	60	40		0	0	0		0	100	0		75	25	0		
Total %	0	27.3	18.2	45.5	0	0	0	0	0	18.2	0	18.2	27.3	9.1	0	36.4	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**	**3**
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	1	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	1	1	0	2	5
% App. Total	0	100	0		0	0	0		0	100	0		50	50	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.250	.250	.000	.500	.417

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File Name : 01A_RED AL RE PM
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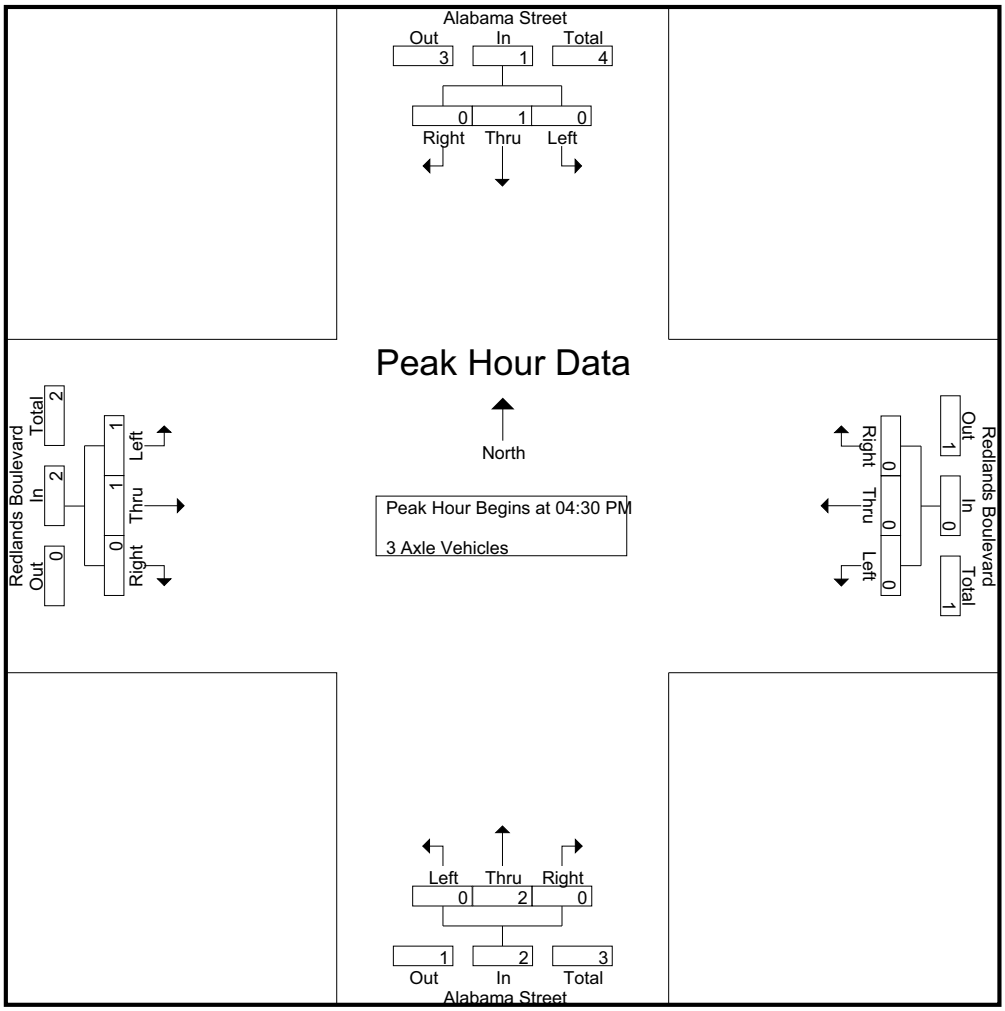

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	**1**	0	0	**1**
+15 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	**1**	0	1
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	2	0	2	1	1	0	2
% App. Total	0	100	0		0	0	0		0	100	0		50	50	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.500	.000	.500	.250	.250	.000	.500

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Weather: Clear

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	1	2
04:15 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	1	1	0	0	0	0	0	2	0	2	1	0	0	1	4
05:00 PM	0	0	1	1	0	1	0	1	0	0	0	0	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	2	3	0	1	0	1	0	2	0	2	0	0	1	1	7
Grand Total	0	1	3	4	0	1	0	1	0	4	0	4	1	0	1	2	11
Apprch %	0	25	75		0	100	0		0	100	0		50	0	50		
Total %	0	9.1	27.3	36.4	0	9.1	0	9.1	0	36.4	0	36.4	9.1	0	9.1	18.2	

	Alabama Street Southbound				Redlands Boulevard Westbound				Alabama Street Northbound				Redlands Boulevard Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	1
05:00 PM	0	0	**1**	**1**	0	**1**	0	**1**	0	0	0	0	0	0	**1**	**1**	**3**
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	0	1	1	0	1	0	1	0	2	0	2	0	0	1	1	5
% App. Total	0	0	100		0	100	0		0	100	0		0	0	100		
PHF	.000	.000	.250	.250	.000	.250	.000	.250	.000	.500	.000	.500	.000	.000	.250	.250	.417

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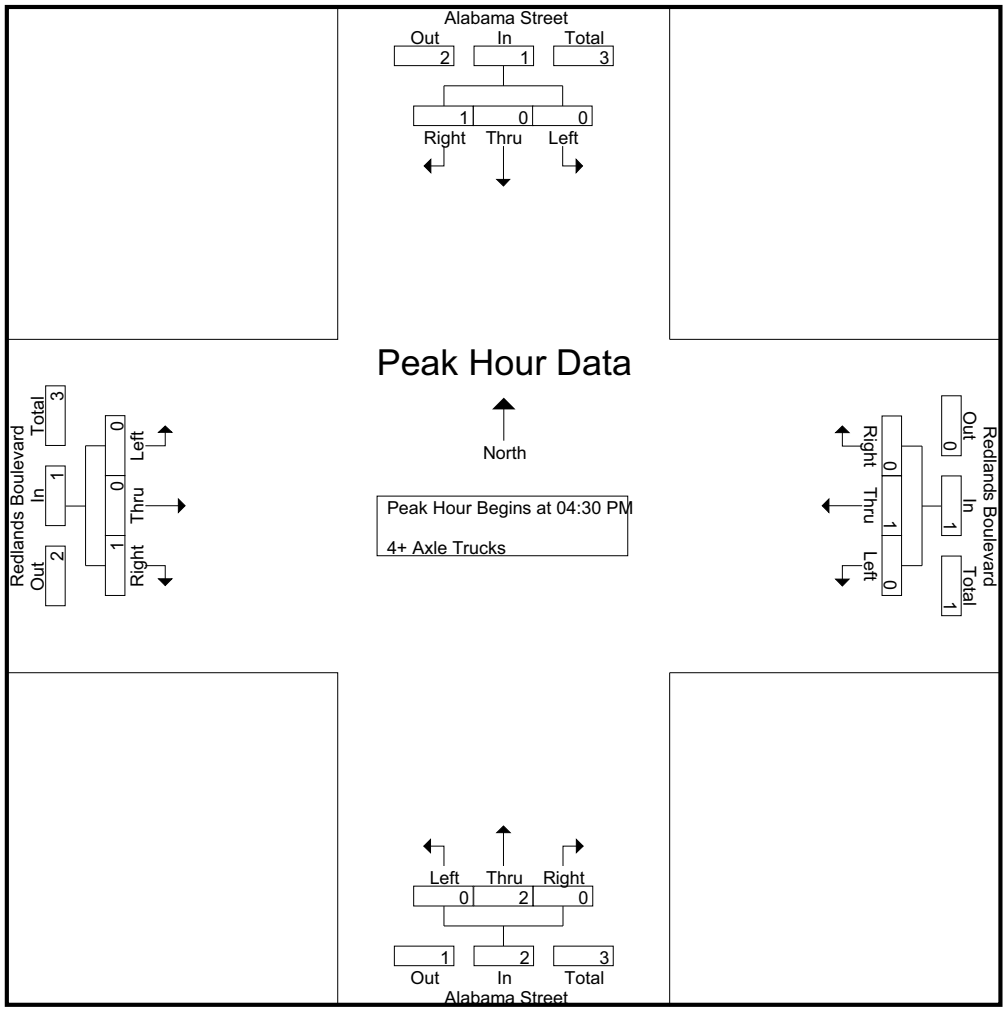

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Redlands
N/S: Alabama Street
E/W: Park Avenue
Weather: Clear

File Name : 02A_RED AL PA AM
Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	13	76	9	98	3	6	6	15	3	120	4	127	1	4	1	6	246
07:15 AM	14	88	5	107	4	6	3	13	2	123	4	129	2	8	1	11	260
07:30 AM	17	96	5	118	4	6	5	15	1	117	5	123	2	5	1	8	264
07:45 AM	25	146	9	180	2	6	10	18	6	174	14	194	3	6	3	12	404
Total	69	406	28	503	13	24	24	61	12	534	27	573	8	23	6	37	1174
08:00 AM	24	99	9	132	2	6	6	14	4	154	7	165	2	3	2	7	318
08:15 AM	14	102	13	129	2	5	14	21	3	131	5	139	3	10	2	15	304
08:30 AM	14	87	5	106	2	7	9	18	2	114	6	122	5	8	2	15	261
08:45 AM	16	110	12	138	4	4	6	14	5	119	9	133	4	9	2	15	300
Total	68	398	39	505	10	22	35	67	14	518	27	559	14	30	8	52	1183
Grand Total	137	804	67	1008	23	46	59	128	26	1052	54	1132	22	53	14	89	2357
Apprch %	13.6	79.8	6.6		18	35.9	46.1		2.3	92.9	4.8		24.7	59.6	15.7		
Total %	5.8	34.1	2.8	42.8	1	2	2.5	5.4	1.1	44.6	2.3	48	0.9	2.2	0.6	3.8	
Passenger Vehicles	129	782	64	975	16	40	48	104	23	1033	52	1108	19	49	14	82	2269
% Passenger Vehicles	94.2	97.3	95.5	96.7	69.6	87	81.4	81.2	88.5	98.2	96.3	97.9	86.4	92.5	100	92.1	96.3
Large 2 Axle Vehicles	8	16	3	27	5	4	8	17	2	17	1	20	2	3	0	5	69
% Large 2 Axle Vehicles	5.8	2	4.5	2.7	21.7	8.7	13.6	13.3	7.7	1.6	1.9	1.8	9.1	5.7	0	5.6	2.9
3 Axle Vehicles	0	2	0	2	2	2	1	5	1	1	1	3	0	1	0	1	11
% 3 Axle Vehicles	0	0.2	0	0.2	8.7	4.3	1.7	3.9	3.8	0.1	1.9	0.3	0	1.9	0	1.1	0.5
4+ Axle Trucks	0	4	0	4	0	0	2	2	0	1	0	1	1	0	0	1	8
% 4+ Axle Trucks	0	0.5	0	0.4	0	0	3.4	1.6	0	0.1	0	0.1	4.5	0	0	1.1	0.3

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	17	96	5	118	**4**	**6**	5	15	1	117	5	123	2	5	1	8	264
07:45 AM	**25**	**146**	9	**180**	2	6	10	18	**6**	**174**	**14**	**194**	**3**	6	**3**	12	**404**
08:00 AM	24	99	9	132	2	6	6	14	4	154	7	165	2	3	2	7	318
08:15 AM	14	102	**13**	129	2	5	**14**	**21**	3	131	5	139	3	**10**	2	**15**	304
Total Volume	80	443	36	559	10	23	35	68	14	576	31	621	10	24	8	42	1290
% App. Total	14.3	79.2	6.4		14.7	33.8	51.5		2.3	92.8	5		23.8	57.1	19		
PHF	.800	.759	.692	.776	.625	.958	.625	.810	.583	.828	.554	.800	.833	.600	.667	.700	.798

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City of Redlands
N/S: Alabama Street
E/W: Park Avenue
Weather: Clear

File Name : 02A_RED AL PA AM
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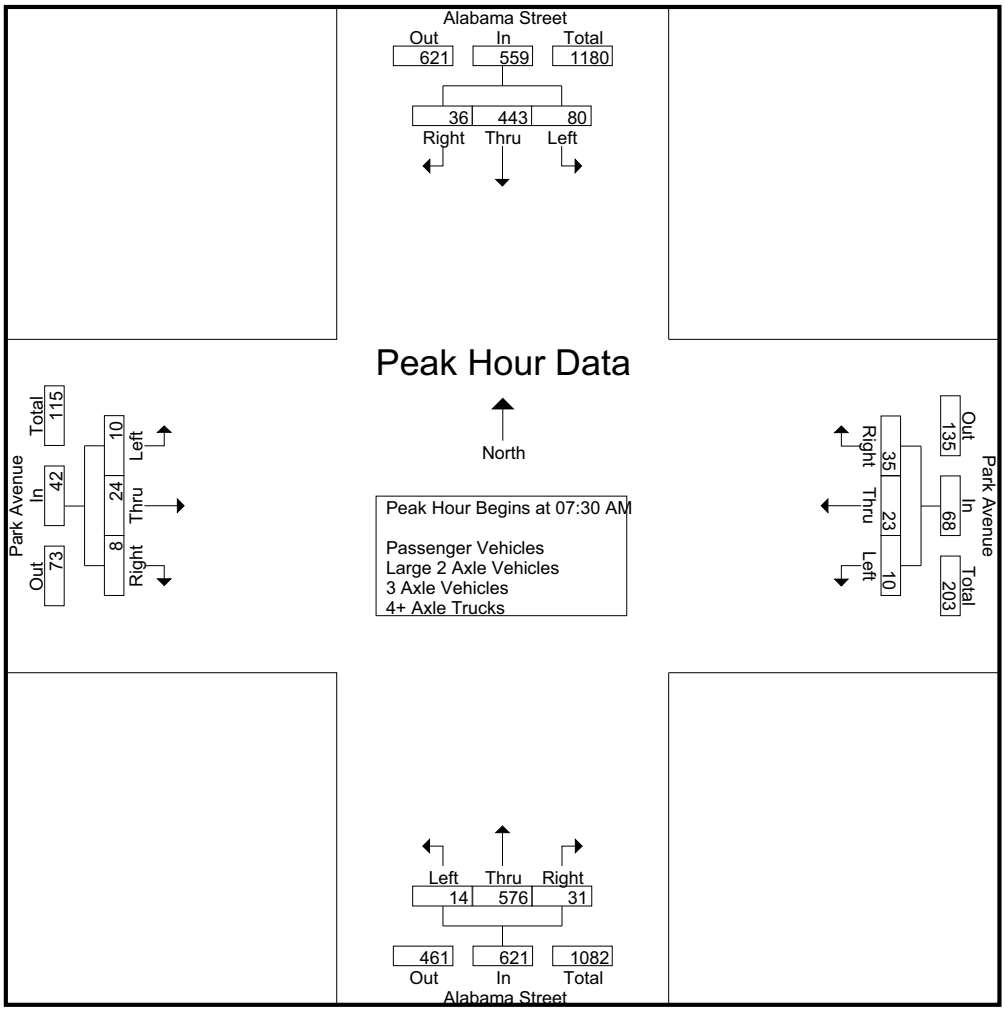

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:30 AM				08:00 AM			
+0 mins.	17	96	5	118	**2**	6	10	18	1	117	5	123	2	3	**2**	7
+15 mins.	**25**	**146**	9	**180**	2	6	6	14	**6**	**174**	**14**	**194**	3	**10**	2	**15**
+30 mins.	24	99	9	132	2	5	**14**	**21**	4	154	7	165	**5**	8	2	15
+45 mins.	14	102	**13**	129	2	**7**	9	18	3	131	5	139	4	9	2	15
Total Volume	80	443	36	559	8	24	39	71	14	576	31	621	14	30	8	52
% App. Total	14.3	79.2	6.4		11.3	33.8	54.9		2.3	92.8	5		26.9	57.7	15.4	
PHF	.800	.759	.692	.776	1.000	.857	.696	.845	.583	.828	.554	.800	.700	.750	1.000	.867

Counts Unlimited
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City of Redlands
N/S: Alabama Street
E/W: Park Avenue
Weather: Clear

File Name : 02A_RED AL PA AM
Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	12	74	9	95	0	6	5	11	3	118	4	125	1	4	1	6	237
07:15 AM	13	81	5	99	3	5	2	10	2	120	3	125	2	6	1	9	243
07:30 AM	16	96	5	117	3	5	4	12	1	115	5	121	2	3	1	6	256
07:45 AM	25	143	8	176	2	6	8	16	5	173	13	191	3	6	3	12	395
Total	66	394	27	487	8	22	19	49	11	526	25	562	8	19	6	33	1131
08:00 AM	23	97	8	128	0	5	4	9	3	152	7	162	2	3	2	7	306
08:15 AM	14	98	12	124	2	4	11	17	3	129	5	137	2	10	2	14	292
08:30 AM	13	87	5	105	2	5	8	15	2	112	6	120	4	8	2	14	254
08:45 AM	13	106	12	131	4	4	6	14	4	114	9	127	3	9	2	14	286
Total	63	388	37	488	8	18	29	55	12	507	27	546	11	30	8	49	1138
Grand Total	129	782	64	975	16	40	48	104	23	1033	52	1108	19	49	14	82	2269
Apprch %	13.2	80.2	6.6		15.4	38.5	46.2		2.1	93.2	4.7		23.2	59.8	17.1		
Total %	5.7	34.5	2.8	43	0.7	1.8	2.1	4.6	1	45.5	2.3	48.8	0.8	2.2	0.6	3.6	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	16	96	5	117	**3**	5	4	12	1	115	5	121	2	3	1	6	256
07:45 AM	**25**	**143**	8	**176**	2	**6**	8	16	**5**	**173**	**13**	**191**	**3**	6	**3**	12	**395**
08:00 AM	23	97	8	128	0	5	4	9	3	152	7	162	2	3	2	7	306
08:15 AM	14	98	**12**	124	2	4	**11**	**17**	3	129	5	137	2	**10**	2	**14**	292
Total Volume	78	434	33	545	7	20	27	54	12	569	30	611	9	22	8	39	1249
% App. Total	14.3	79.6	6.1		13	37	50		2	93.1	4.9		23.1	56.4	20.5		
PHF	.780	.759	.688	.774	.583	.833	.614	.794	.600	.822	.577	.800	.750	.550	.667	.696	.791

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Weather: Clear

File Name : 02A_RED AL PA AM
Site Code : 07517744
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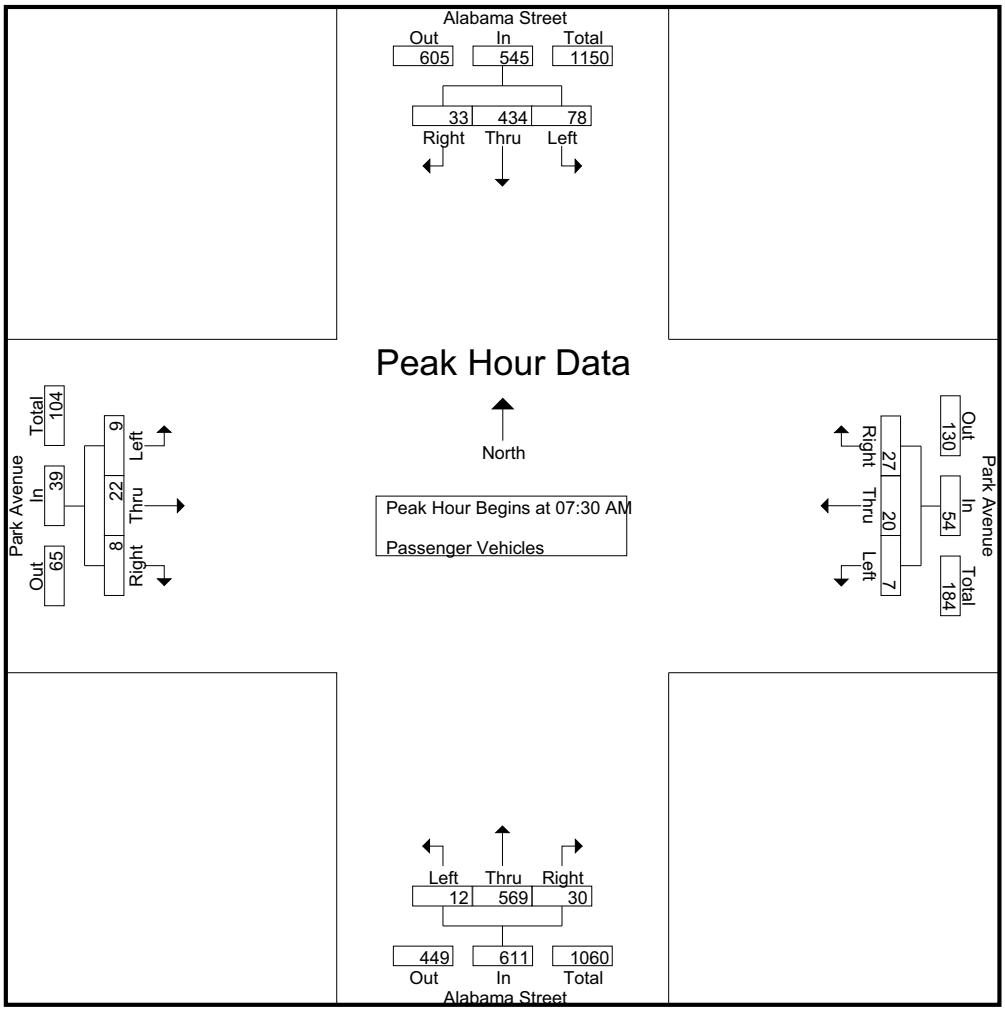

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	16	96	5	117	**3**	5	4	12	1	115	5	121	2	3	1	6
+15 mins.	**25**	**143**	8	**176**	2	**6**	8	16	**5**	**173**	**13**	**191**	**3**	6	**3**	12
+30 mins.	23	97	8	128	0	5	4	9	3	152	7	162	2	3	2	7
+45 mins.	14	98	**12**	124	2	4	**11**	**17**	3	129	5	137	2	**10**	2	**14**
Total Volume	78	434	33	545	7	20	27	54	12	569	30	611	9	22	8	39
% App. Total	14.3	79.6	6.1		13	37	50		2	93.1	4.9		23.1	56.4	20.5	
PHF	.780	.759	.688	.774	.583	.833	.614	.794	.600	.822	.577	.800	.750	.550	.667	.696

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	1	0	2	1	0	1	2	0	2	0	2	0	0	0	0	6
07:15 AM	1	5	0	6	1	0	0	1	0	3	0	3	0	2	0	2	12
07:30 AM	1	0	0	1	1	1	0	2	0	2	0	2	0	1	0	1	6
07:45 AM	0	1	1	2	0	0	2	2	0	1	1	2	0	0	0	0	6
Total	3	7	1	11	3	1	3	7	0	8	1	9	0	3	0	3	30
08:00 AM	1	2	1	4	2	0	1	3	1	2	0	3	0	0	0	0	10
08:15 AM	0	3	1	4	0	1	3	4	0	2	0	2	0	0	0	0	10
08:30 AM	1	0	0	1	0	2	1	3	0	2	0	2	1	0	0	1	7
08:45 AM	3	4	0	7	0	0	0	0	1	3	0	4	1	0	0	1	12
Total	5	9	2	16	2	3	5	10	2	9	0	11	2	0	0	2	39
Grand Total	8	16	3	27	5	4	8	17	2	17	1	20	2	3	0	5	69
Apprch %	29.6	59.3	11.1		29.4	23.5	47.1		10	85	5		40	60	0		
Total %	11.6	23.2	4.3	39.1	7.2	5.8	11.6	24.6	2.9	24.6	1.4	29	2.9	4.3	0	7.2	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**1**	0	0	1	1	**1**	0	2	0	**2**	0	2	0	**1**	0	**1**	6
07:45 AM	0	1	**1**	2	0	0	2	2	0	1	**1**	2	0	0	0	0	6
08:00 AM	1	2	1	**4**	**2**	0	1	3	**1**	2	0	**3**	0	0	0	0	**10**
08:15 AM	0	**3**	1	4	0	1	**3**	**4**	0	2	0	2	0	0	0	0	10
Total Volume	2	6	3	11	3	2	6	11	1	7	1	9	0	1	0	1	32
% App. Total	18.2	54.5	27.3		27.3	18.2	54.5		11.1	77.8	11.1		0	100	0		
PHF	.500	.500	.750	.688	.375	.500	.500	.688	.250	.875	.250	.750	.000	.250	.000	.250	.800

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City of Redlands
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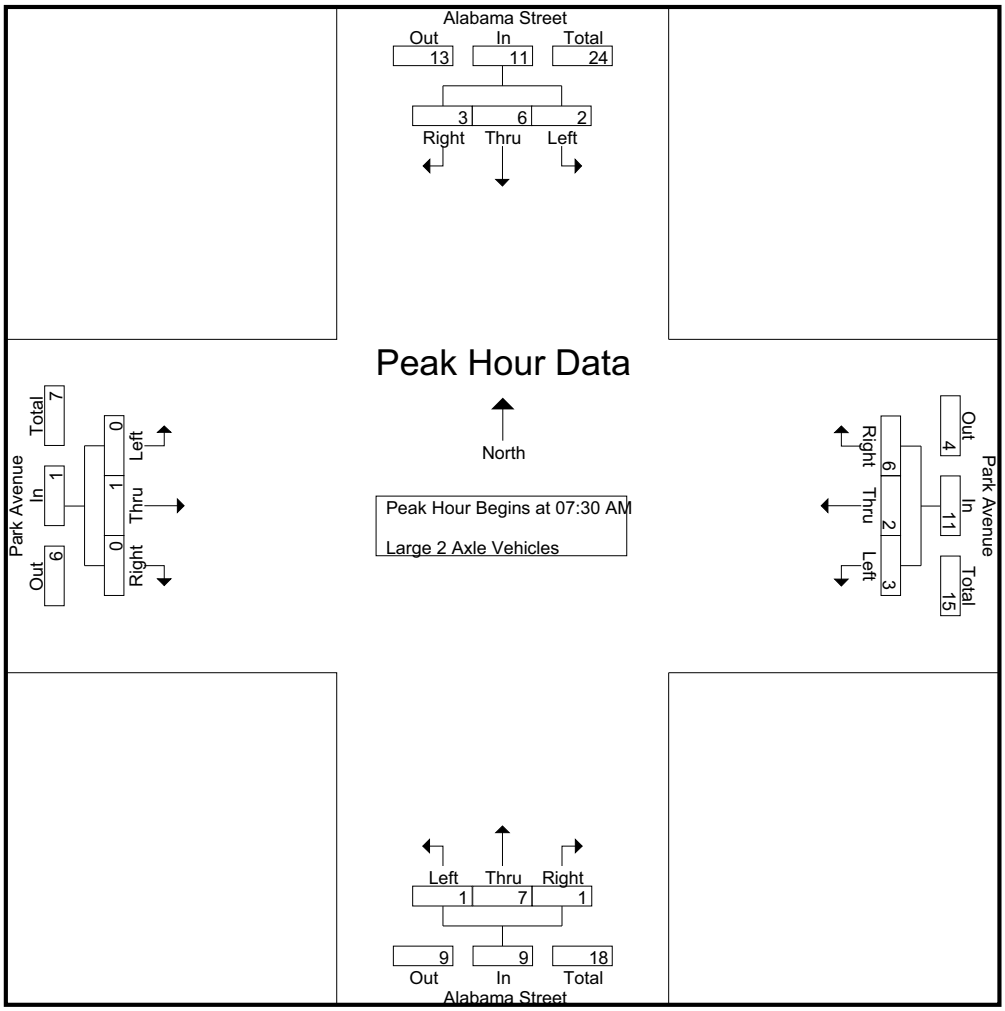

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	**1**	0	0	1	1	**1**	0	2	0	**2**	0	2	0	**1**	0	**1**
+15 mins.	0	1	**1**	2	0	0	2	2	0	1	**1**	2	0	0	0	0
+30 mins.	1	2	1	**4**	**2**	0	1	3	**1**	2	0	**3**	0	0	0	0
+45 mins.	0	**3**	1	4	0	1	**3**	**4**	0	2	0	2	0	0	0	0
Total Volume	2	6	3	11	3	2	6	11	1	7	1	9	0	1	0	1
% App. Total	18.2	54.5	27.3		27.3	18.2	54.5		11.1	77.8	11.1		0	100	0	
PHF	.500	.500	.750	.688	.375	.500	.500	.688	.250	.875	.250	.750	.000	.250	.000	.250

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
07:15 AM	0	2	0	2	0	1	1	2	0	0	1	1	0	0	0	0	5
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
Total	0	2	0	2	2	1	1	4	1	0	1	2	0	1	0	1	9
08:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Grand Total	0	2	0	2	2	2	1	5	1	1	1	3	0	1	0	1	11
Apprch %	0	100	0		40	40	20		33.3	33.3	33.3		0	100	0		
Total %	0	18.2	0	18.2	18.2	18.2	9.1	45.5	9.1	9.1	9.1	27.3	0	9.1	0	9.1	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	**1**	**1**
07:45 AM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	0	0	1
08:00 AM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	1	0	1	1	0	0	1	0	1	0	1	3
% App. Total	0	0	0		0	100	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.000	.250	.000	.250	.250	.000	.000	.250	.000	.250	.000	.250	.750

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City of Redlands
N/S: Alabama Street
E/W: Park Avenue
Weather: Clear

File Name : 02A_RED AL PA AM
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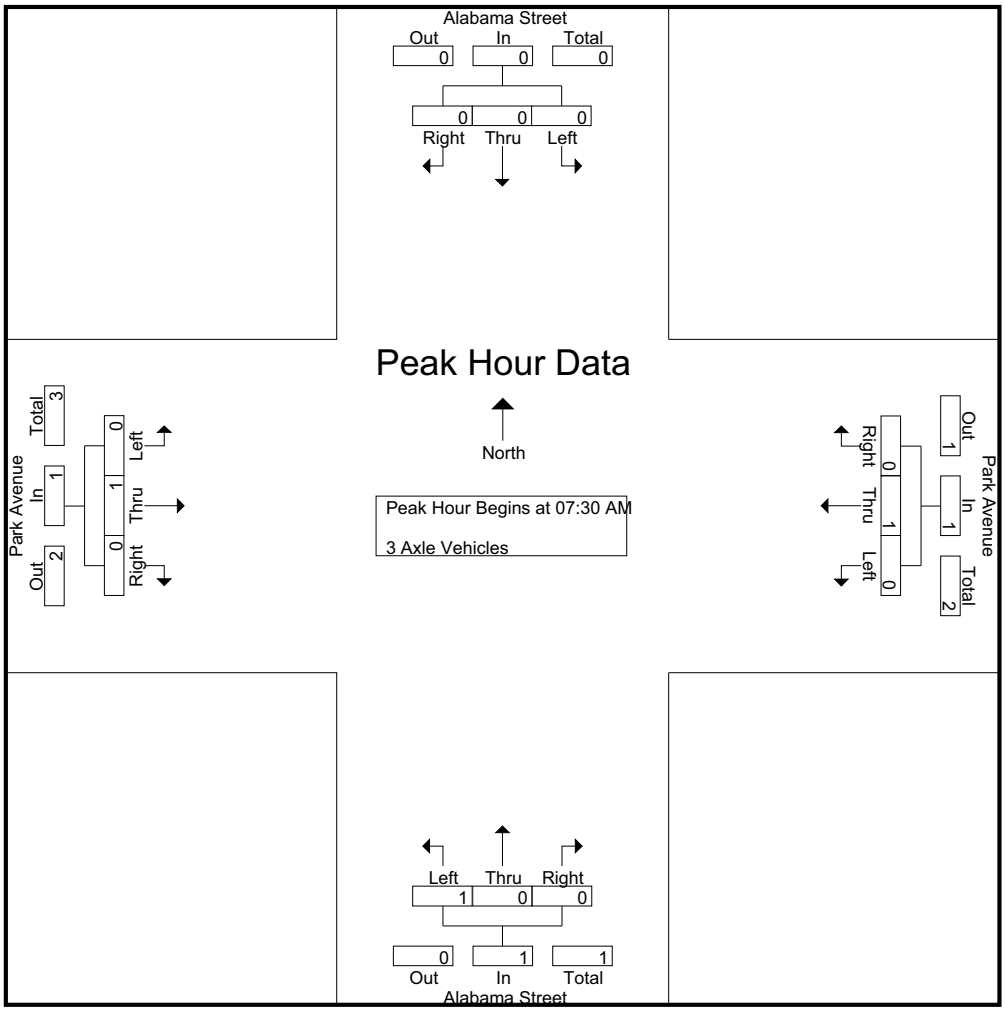

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Redlands
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Weather: Clear

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:45 AM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	3	0	3	0	0	1	1	0	0	0	0	0	0	0	0	4
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	1	1	0	1	0	1	1	0	0	1	4
Grand Total	0	4	0	4	0	0	2	2	0	1	0	1	1	0	0	1	8
Apprch %	0	100	0		0	0	100		0	100	0		100	0	0		
Total %	0	50	0	50	0	0	25	25	0	12.5	0	12.5	12.5	0	0	12.5	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	1
07:45 AM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
08:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**	2
Total Volume	0	3	0	3	0	0	2	2	0	0	0	0	1	0	0	1	6
% App. Total	0	100	0		0	0	100		0	0	0		100	0	0		
PHF	.000	.375	.000	.375	.000	.000	.500	.500	.000	.000	.000	.000	.250	.000	.000	.250	.750

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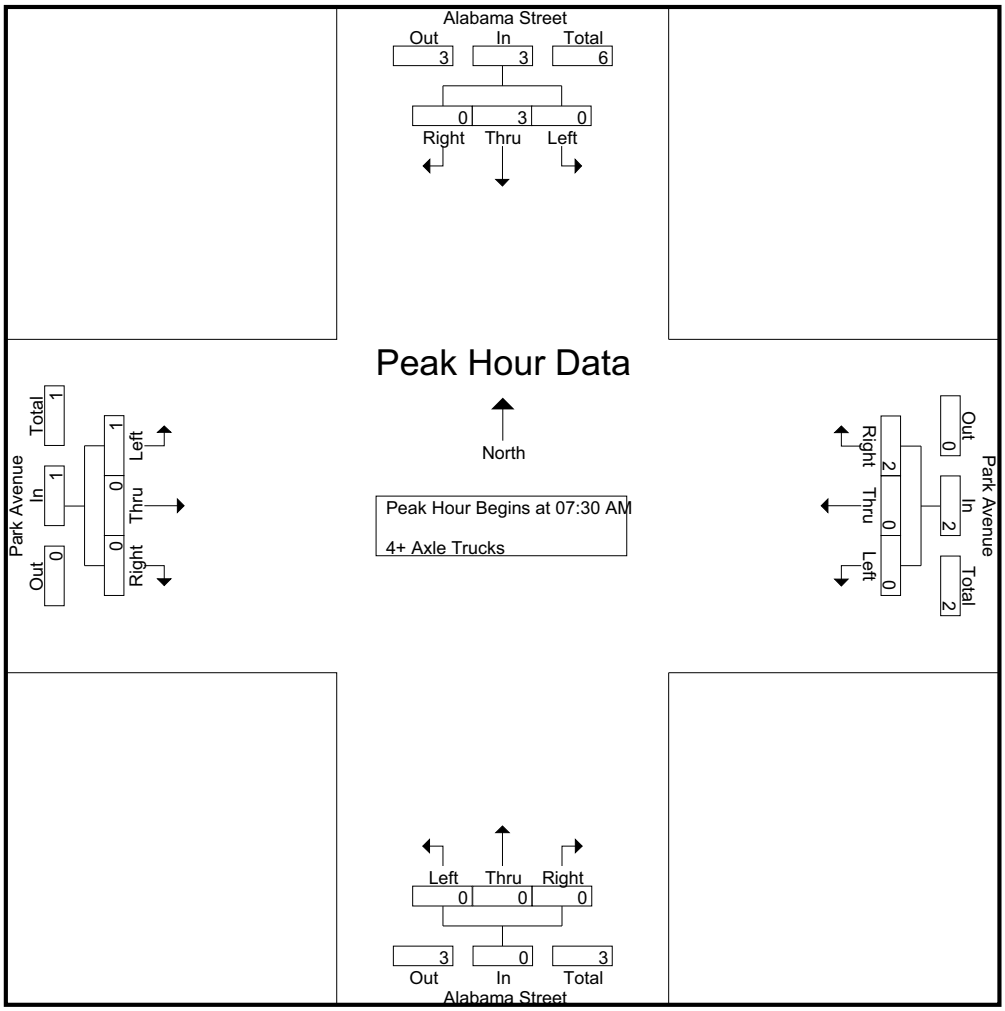

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	**1**	0	0	**1**
Total Volume	0	3	0	3	0	0	2	2	0	0	0	0	1	0	0	1
% App. Total	0	100	0		0	0	100		0	0	0		100	0	0	
PHF	.000	.375	.000	.375	.000	.000	.500	.500	.000	.000	.000	.000	.250	.000	.000	.250

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Weather: Clear

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

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	16	154	6	176	5	4	27	36	4	138	11	153	12	15	1	28	393
04:15 PM	13	129	6	148	6	6	12	24	2	121	8	131	6	9	5	20	323
04:30 PM	18	149	4	171	9	7	15	31	2	149	10	161	7	17	3	27	390
04:45 PM	11	158	4	173	7	13	14	34	6	114	11	131	3	22	6	31	369
Total	58	590	20	668	27	30	68	125	14	522	40	576	28	63	15	106	1475
05:00 PM	9	154	4	167	10	10	28	48	3	173	11	187	3	16	8	27	429
05:15 PM	11	159	0	170	9	8	17	34	2	153	12	167	2	14	5	21	392
05:30 PM	8	154	5	167	6	11	10	27	1	128	13	142	7	19	8	34	370
05:45 PM	11	186	5	202	7	8	5	20	3	132	6	141	2	7	5	14	377
Total	39	653	14	706	32	37	60	129	9	586	42	637	14	56	26	96	1568
Grand Total	97	1243	34	1374	59	67	128	254	23	1108	82	1213	42	119	41	202	3043
Apprch %	7.1	90.5	2.5		23.2	26.4	50.4		1.9	91.3	6.8		20.8	58.9	20.3		
Total %	3.2	40.8	1.1	45.2	1.9	2.2	4.2	8.3	0.8	36.4	2.7	39.9	1.4	3.9	1.3	6.6	
Passenger Vehicles	94	1223	33	1350	58	65	126	249	22	1089	78	1189	40	119	41	200	2988
% Passenger Vehicles	96.9	98.4	97.1	98.3	98.3	97	98.4	98	95.7	98.3	95.1	98	95.2	100	100	99	98.2
Large 2 Axle Vehicles	3	16	0	19	1	0	2	3	1	14	1	16	2	0	0	2	40
% Large 2 Axle Vehicles	3.1	1.3	0	1.4	1.7	0	1.6	1.2	4.3	1.3	1.2	1.3	4.8	0	0	1	1.3
3 Axle Vehicles	0	2	1	3	0	0	0	0	0	2	2	4	0	0	0	0	7
% 3 Axle Vehicles	0	0.2	2.9	0.2	0	0	0	0	0	0.2	2.4	0.3	0	0	0	0	0.2
4+ Axle Trucks	0	2	0	2	0	2	0	2	0	3	1	4	0	0	0	0	8
% 4+ Axle Trucks	0	0.2	0	0.1	0	3	0	0.8	0	0.3	1.2	0.3	0	0	0	0	0.3

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**18**	149	**4**	171	9	7	15	31	2	149	10	161	**7**	17	3	27	390
04:45 PM	11	158	4	**173**	7	**13**	14	34	**6**	114	11	131	3	**22**	6	**31**	369
05:00 PM	9	154	4	167	**10**	10	**28**	**48**	3	**173**	11	**187**	3	16	**8**	27	**429**
05:15 PM	11	**159**	0	170	9	8	17	34	2	153	**12**	167	2	14	5	21	392
Total Volume	49	620	12	681	35	38	74	147	13	589	44	646	15	69	22	106	1580
% App. Total	7.2	91	1.8		23.8	25.9	50.3		2	91.2	6.8		14.2	65.1	20.8		
PHF	.681	.975	.750	.984	.875	.731	.661	.766	.542	.851	.917	.864	.536	.784	.688	.855	.921

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City of Redlands
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Weather: Clear

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Site Code : 07517744
Start Date : 11/1/2017
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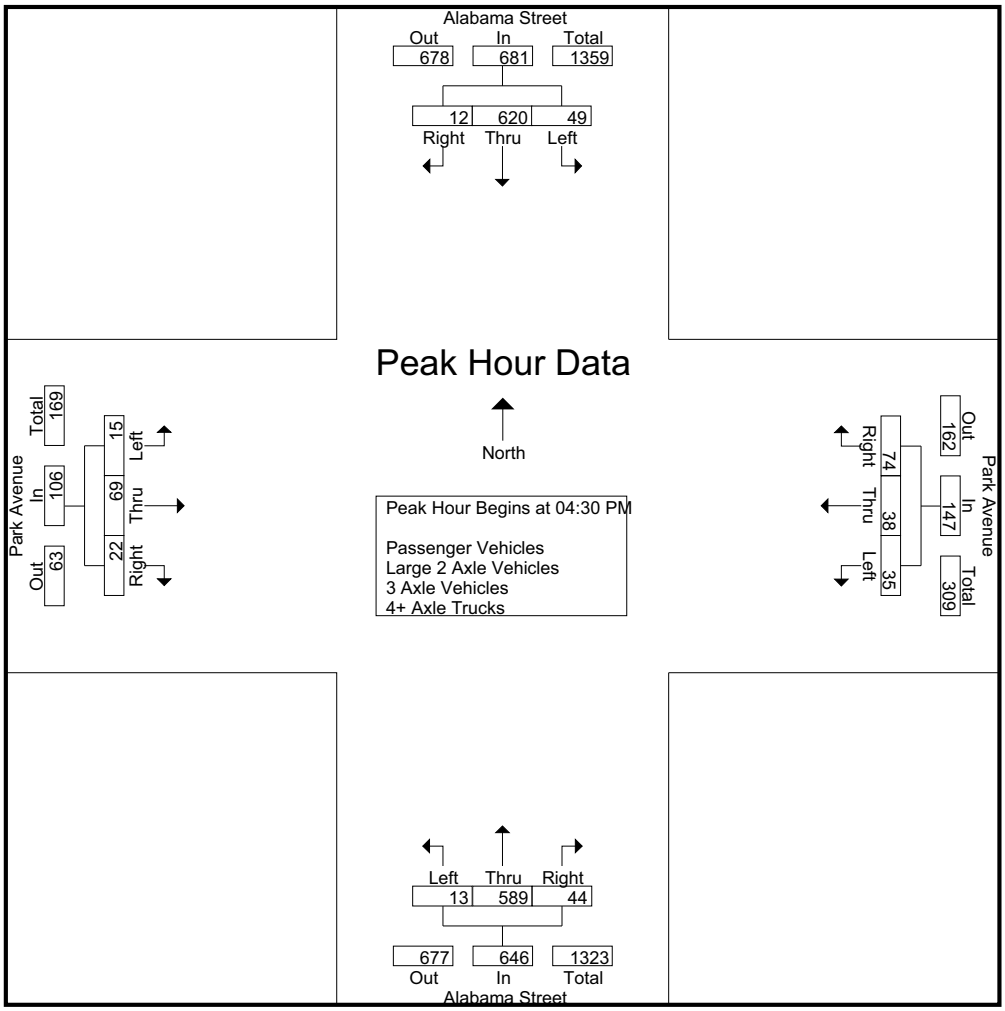

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:30 PM				04:45 PM			
+0 mins.	9	154	4	167	9	7	15	31	2	149	10	161	3	**22**	6	31
+15 mins.	**11**	159	0	170	7	**13**	14	34	**6**	114	11	131	3	16	**8**	27
+30 mins.	8	154	**5**	167	**10**	10	**28**	**48**	3	**173**	11	**187**	2	14	5	21
+45 mins.	11	**186**	5	**202**	9	8	17	34	2	153	**12**	167	**7**	19	8	**34**
Total Volume	39	653	14	706	35	38	74	147	13	589	44	646	15	71	27	113
% App. Total	5.5	92.5	2		23.8	25.9	50.3		2	91.2	6.8		13.3	62.8	23.9	
PHF	.886	.878	.700	.874	.875	.731	.661	.766	.542	.851	.917	.864	.536	.807	.844	.831

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	15	146	6	167	5	4	26	35	4	135	9	148	12	15	1	28	378
04:15 PM	13	127	6	146	6	6	12	24	2	119	7	128	6	9	5	20	318
04:30 PM	18	148	3	169	9	6	15	30	1	145	10	156	6	17	3	26	381
04:45 PM	11	156	4	171	7	13	14	34	6	112	10	128	3	22	6	31	364
Total	57	577	19	653	27	29	67	123	13	511	36	560	27	63	15	105	1441
05:00 PM	8	153	4	165	10	10	27	47	3	171	11	185	3	16	8	27	424
05:15 PM	10	157	0	167	9	8	17	34	2	151	12	165	1	14	5	20	386
05:30 PM	8	152	5	165	5	11	10	26	1	124	13	138	7	19	8	34	363
05:45 PM	11	184	5	200	7	7	5	19	3	132	6	141	2	7	5	14	374
Total	37	646	14	697	31	36	59	126	9	578	42	629	13	56	26	95	1547
Grand Total	94	1223	33	1350	58	65	126	249	22	1089	78	1189	40	119	41	200	2988
Apprch %	7	90.6	2.4		23.3	26.1	50.6		1.9	91.6	6.6		20	59.5	20.5		
Total %	3.1	40.9	1.1	45.2	1.9	2.2	4.2	8.3	0.7	36.4	2.6	39.8	1.3	4	1.4	6.7	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	**18**	148	3	169	9	6	15	30	1	145	10	156	**6**	17	3	26	381
04:45 PM	11	156	**4**	**171**	7	**13**	14	34	**6**	112	10	128	3	**22**	6	**31**	364
05:00 PM	8	153	4	165	**10**	10	**27**	**47**	3	**171**	11	**185**	3	16	**8**	27	**424**
05:15 PM	10	**157**	0	167	9	8	17	34	2	151	**12**	165	1	14	5	20	386
Total Volume	47	614	11	672	35	37	73	145	12	579	43	634	13	69	22	104	1555
% App. Total	7	91.4	1.6		24.1	25.5	50.3		1.9	91.3	6.8		12.5	66.3	21.2		
PHF	.653	.978	.688	.982	.875	.712	.676	.771	.500	.846	.896	.857	.542	.784	.688	.839	.917

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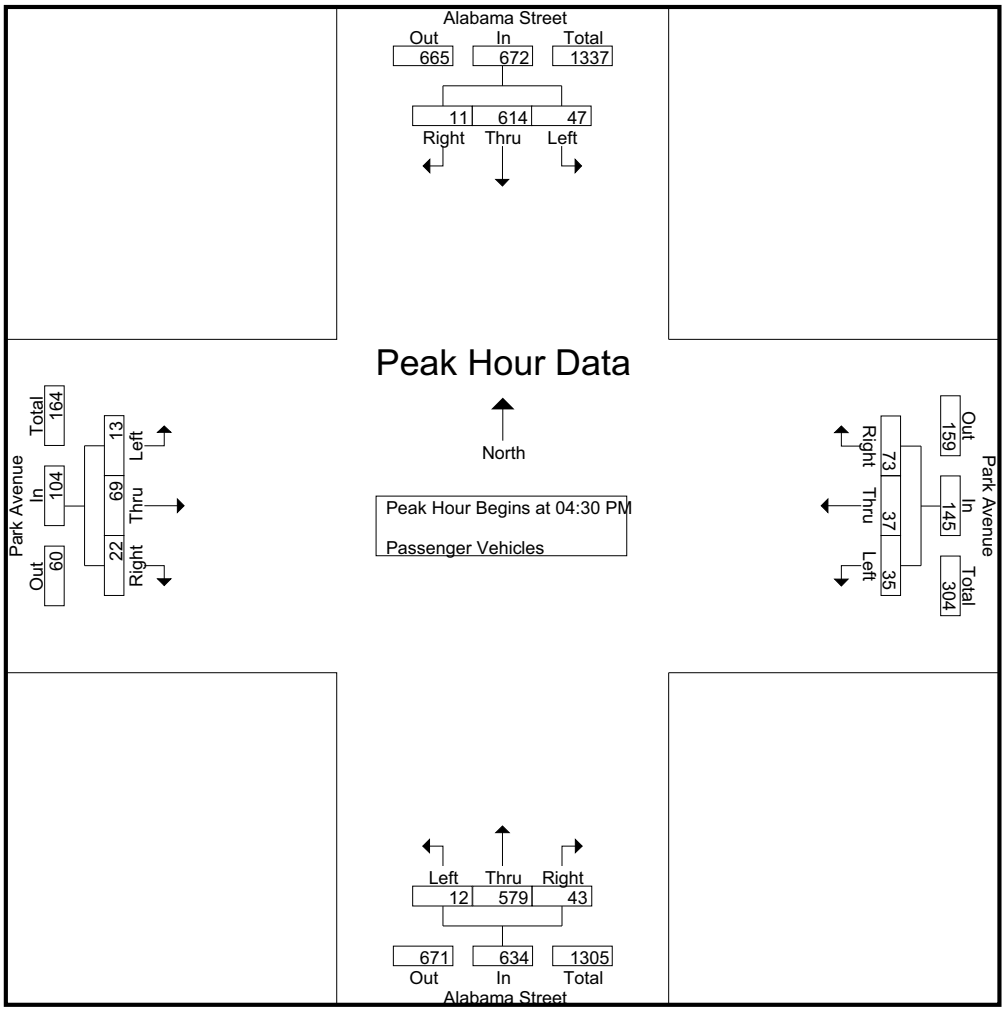

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	**18**	148	3	169	9	6	15	30	1	145	10	156	**6**	17	3	26
+15 mins.	11	156	**4**	**171**	7	**13**	14	34	**6**	112	10	128	3	**22**	6	**31**
+30 mins.	8	153	4	165	**10**	10	**27**	**47**	3	**171**	11	**185**	3	16	**8**	27
+45 mins.	10	**157**	0	167	9	8	17	34	2	151	**12**	165	1	14	5	20
Total Volume	47	614	11	672	35	37	73	145	12	579	43	634	13	69	22	104
% App. Total	7	91.4	1.6		24.1	25.5	50.3		1.9	91.3	6.8		12.5	66.3	21.2	
PHF	.653	.978	.688	.982	.875	.712	.676	.771	.500	.846	.896	.857	.542	.784	.688	.839

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	1	6	0	7	0	0	1	1	0	2	1	3	0	0	0	0	11
04:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:30 PM	0	1	0	1	0	0	0	0	1	3	0	4	1	0	0	1	6
04:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	1	11	0	12	0	0	1	1	1	7	1	9	1	0	0	1	23
05:00 PM	1	0	0	1	0	0	1	1	0	2	0	2	0	0	0	0	4
05:15 PM	1	2	0	3	0	0	0	0	0	1	0	1	1	0	0	1	5
05:30 PM	0	1	0	1	1	0	0	1	0	4	0	4	0	0	0	0	6
05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	2	5	0	7	1	0	1	2	0	7	0	7	1	0	0	1	17
Grand Total	3	16	0	19	1	0	2	3	1	14	1	16	2	0	0	2	40
Apprch %	15.8	84.2	0		33.3	0	66.7		6.2	87.5	6.2		100	0	0		
Total %	7.5	40	0	47.5	2.5	0	5	7.5	2.5	35	2.5	40	5	0	0	5	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	1	0	1	0	0	0	0	**1**	**3**	0	**4**	**1**	0	0	**1**	**6**
04:45 PM	0	**2**	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:00 PM	**1**	0	0	1	0	0	**1**	**1**	0	2	0	2	0	0	0	0	4
05:15 PM	1	2	0	**3**	0	0	0	0	0	1	0	1	1	0	0	1	5
Total Volume	2	5	0	7	0	0	1	1	1	6	0	7	2	0	0	2	17
% App. Total	28.6	71.4	0		0	0	100		14.3	85.7	0		100	0	0		
PHF	.500	.625	.000	.583	.000	.000	.250	.250	.250	.500	.000	.438	.500	.000	.000	.500	.708

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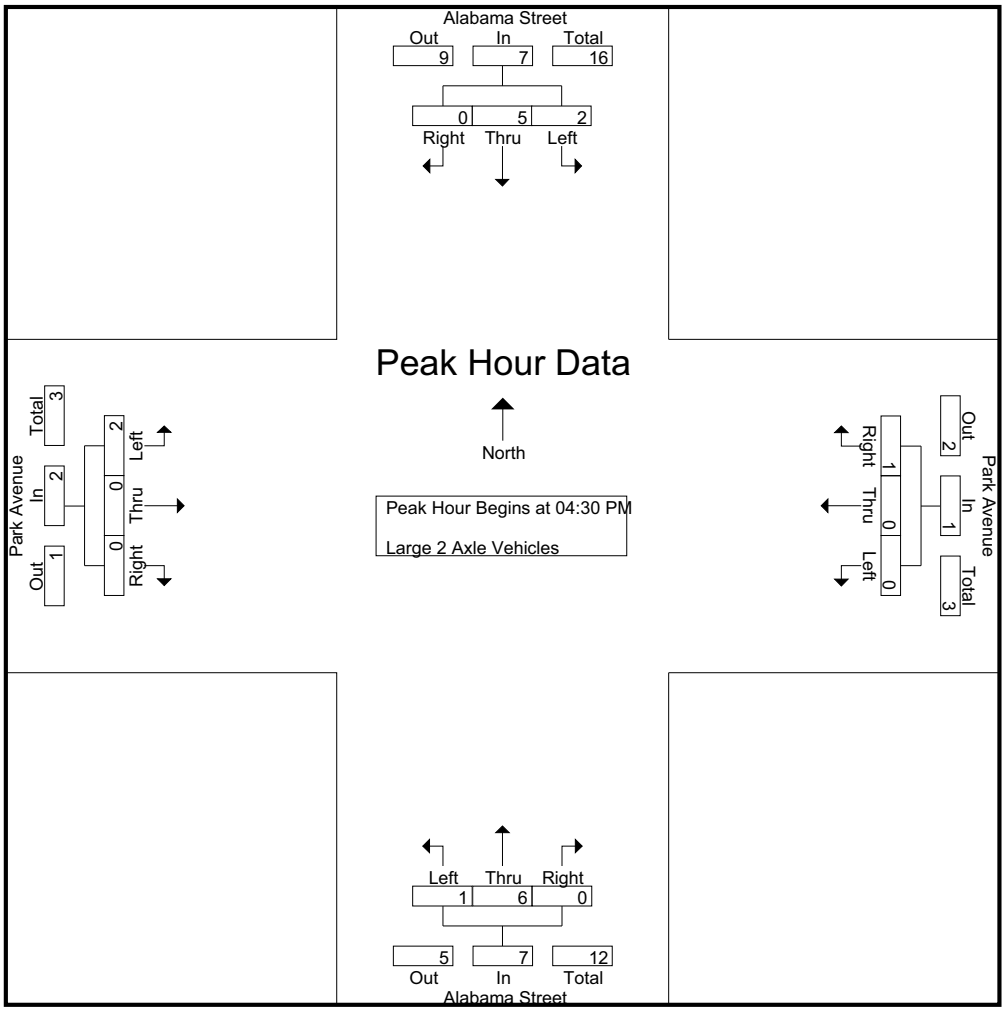

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	1	0	1	0	0	0	0	**1**	**3**	0	**4**	**1**	0	0	**1**
+15 mins.	0	**2**	0	2	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	**1**	0	0	1	0	0	**1**	**1**	0	2	0	2	0	0	0	0
+45 mins.	1	2	0	**3**	0	0	0	0	0	1	0	1	1	0	0	1
Total Volume	2	5	0	7	0	0	1	1	1	6	0	7	2	0	0	2
% App. Total	28.6	71.4	0		0	0	100		14.3	85.7	0		100	0	0	
PHF	.500	.625	.000	.583	.000	.000	.250	.250	.250	.500	.000	.438	.500	.000	.000	.500

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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	0	1	1	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
04:30 PM	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	1	3	0	0	0	0	0	2	2	4	0	0	0	0	7
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	1	3	0	0	0	0	0	2	2	4	0	0	0	0	7
Apprch %	0	66.7	33.3		0	0	0		0	50	50		0	0	0		
Total %	0	28.6	14.3	42.9	0	0	0	0	0	28.6	28.6	57.1	0	0	0	0	

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

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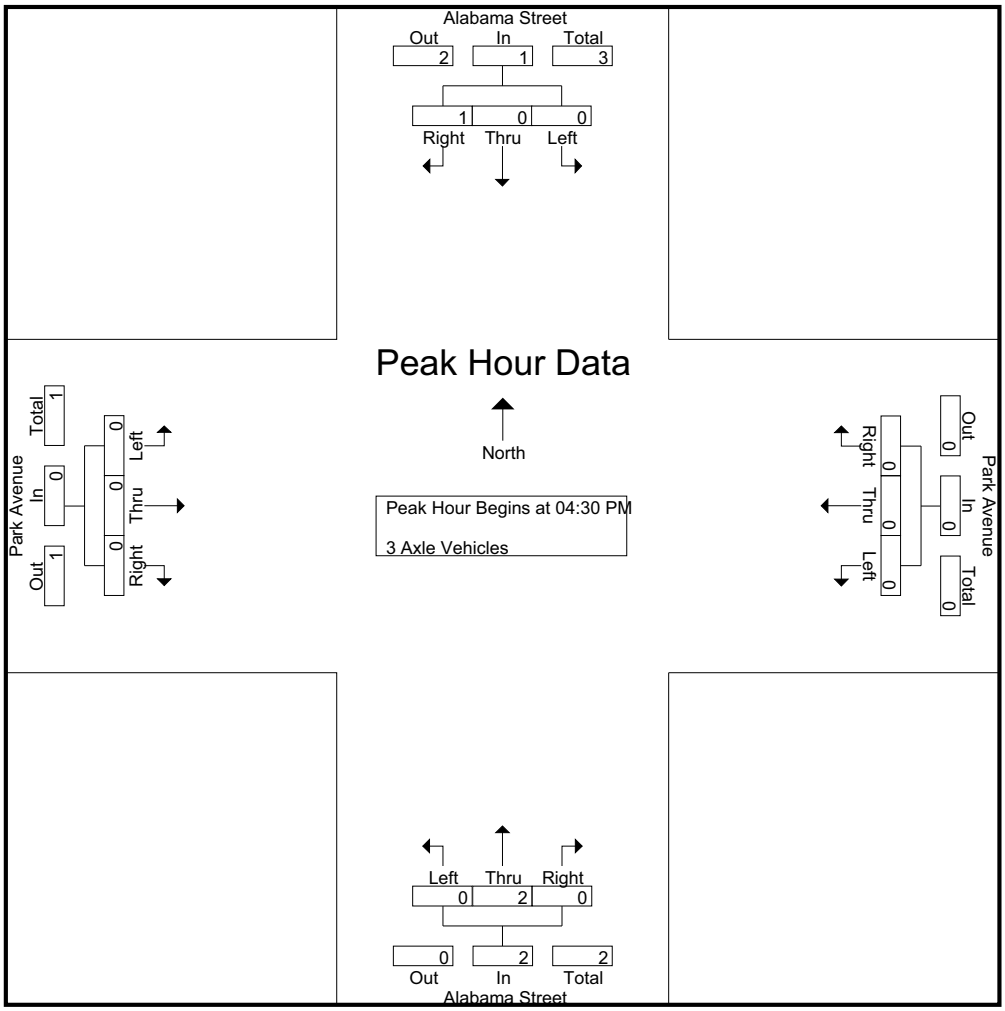

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
Total	0	0	0	0	0	1	0	1	0	2	1	3	0	0	0	0	4
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	2	0	2	0	1	0	1	0	1	0	1	0	0	0	0	4
Grand Total	0	2	0	2	0	2	0	2	0	3	1	4	0	0	0	0	8
Apprch %	0	100	0		0	100	0		0	75	25		0	0	0		
Total %	0	25	0	25	0	25	0	25	0	37.5	12.5	50	0	0	0	0	

	Alabama Street Southbound				Park Avenue Westbound				Alabama Street Northbound				Park Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0	**2**
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total Volume	0	1	0	1	0	1	0	1	0	2	1	3	0	0	0	0	5
% App. Total	0	100	0		0	100	0		0	66.7	33.3		0	0	0		
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.500	.250	.375	.000	.000	.000	.000	.625

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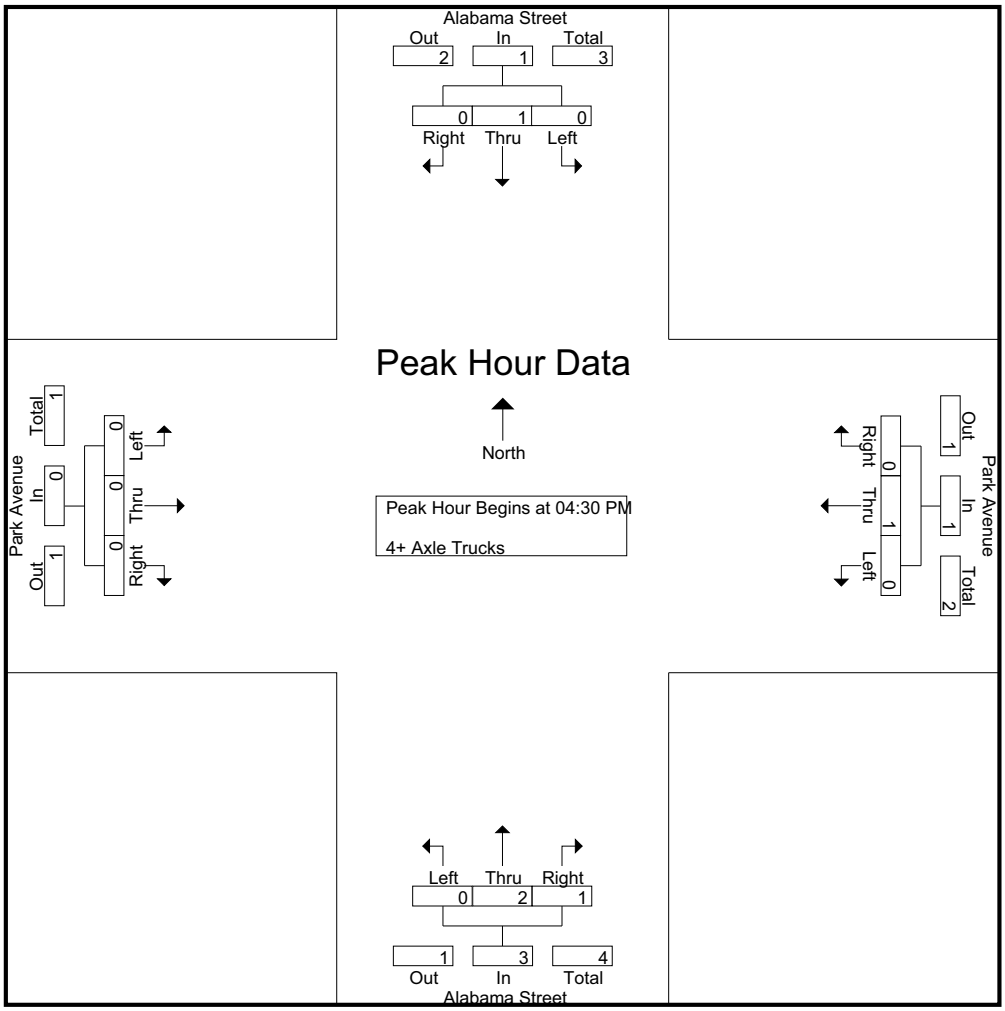

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**1**	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	0	0	0	0
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	1	0	1	0	1	0	1	0	2	1	3	0	0	0	0
% App. Total	0	100	0		0	100	0		0	66.7	33.3		0	0	0	
PHF	.000	.250	.000	.250	.000	.250	.000	.250	.000	.500	.250	.375	.000	.000	.000	.000

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City of Redlands
N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	8	81	0	89	3	13	10	26	3	117	6	126	0	5	0	5	246
07:15 AM	11	70	5	86	3	11	7	21	4	117	7	128	2	6	1	9	244
07:30 AM	7	77	3	87	8	20	11	39	0	107	4	111	0	10	2	12	249
07:45 AM	21	110	4	135	7	22	13	42	6	170	16	192	1	15	1	17	386
Total	47	338	12	397	21	66	41	128	13	511	33	557	3	36	4	43	1125
08:00 AM	10	74	2	86	2	24	14	40	6	163	10	179	2	17	4	23	328
08:15 AM	6	84	4	94	4	19	12	35	1	125	7	133	5	20	2	27	289
08:30 AM	4	68	3	75	2	13	9	24	1	113	10	124	6	26	0	32	255
08:45 AM	9	79	11	99	4	17	11	32	2	119	9	130	3	16	6	25	286
Total	29	305	20	354	12	73	46	131	10	520	36	566	16	79	12	107	1158
Grand Total	76	643	32	751	33	139	87	259	23	1031	69	1123	19	115	16	150	2283
Apprch %	10.1	85.6	4.3		12.7	53.7	33.6		2	91.8	6.1		12.7	76.7	10.7		
Total %	3.3	28.2	1.4	32.9	1.4	6.1	3.8	11.3	1	45.2	3	49.2	0.8	5	0.7	6.6	
Passenger Vehicles	67	627	32	726	33	137	79	249	23	1015	67	1105	19	115	16	150	2230
% Passenger Vehicles	88.2	97.5	100	96.7	100	98.6	90.8	96.1	100	98.4	97.1	98.4	100	100	100	100	97.7
Large 2 Axle Vehicles	6	10	0	16	0	2	8	10	0	13	2	15	0	0	0	0	41
% Large 2 Axle Vehicles	7.9	1.6	0	2.1	0	1.4	9.2	3.9	0	1.3	2.9	1.3	0	0	0	0	1.8
3 Axle Vehicles	2	3	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
% 3 Axle Vehicles	2.6	0.5	0	0.7	0	0	0	0	0	0.2	0	0.2	0	0	0	0	0.3
4+ Axle Trucks	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
% 4+ Axle Trucks	1.3	0.5	0	0.5	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.2

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**21**	**110**	**4**	**135**	**7**	22	13	**42**	**6**	**170**	**16**	**192**	1	15	1	17	**386**
08:00 AM	10	74	2	86	2	**24**	**14**	40	6	163	10	179	2	17	**4**	23	328
08:15 AM	6	84	4	94	4	19	12	35	1	125	7	133	5	20	2	27	289
08:30 AM	4	68	3	75	2	13	9	24	1	113	10	124	**6**	**26**	0	**32**	255
Total Volume	41	336	13	390	15	78	48	141	14	571	43	628	14	78	7	99	1258
% App. Total	10.5	86.2	3.3		10.6	55.3	34		2.2	90.9	6.8		14.1	78.8	7.1		
PHF	.488	.764	.813	.722	.536	.813	.857	.839	.583	.840	.672	.818	.583	.750	.438	.773	.815

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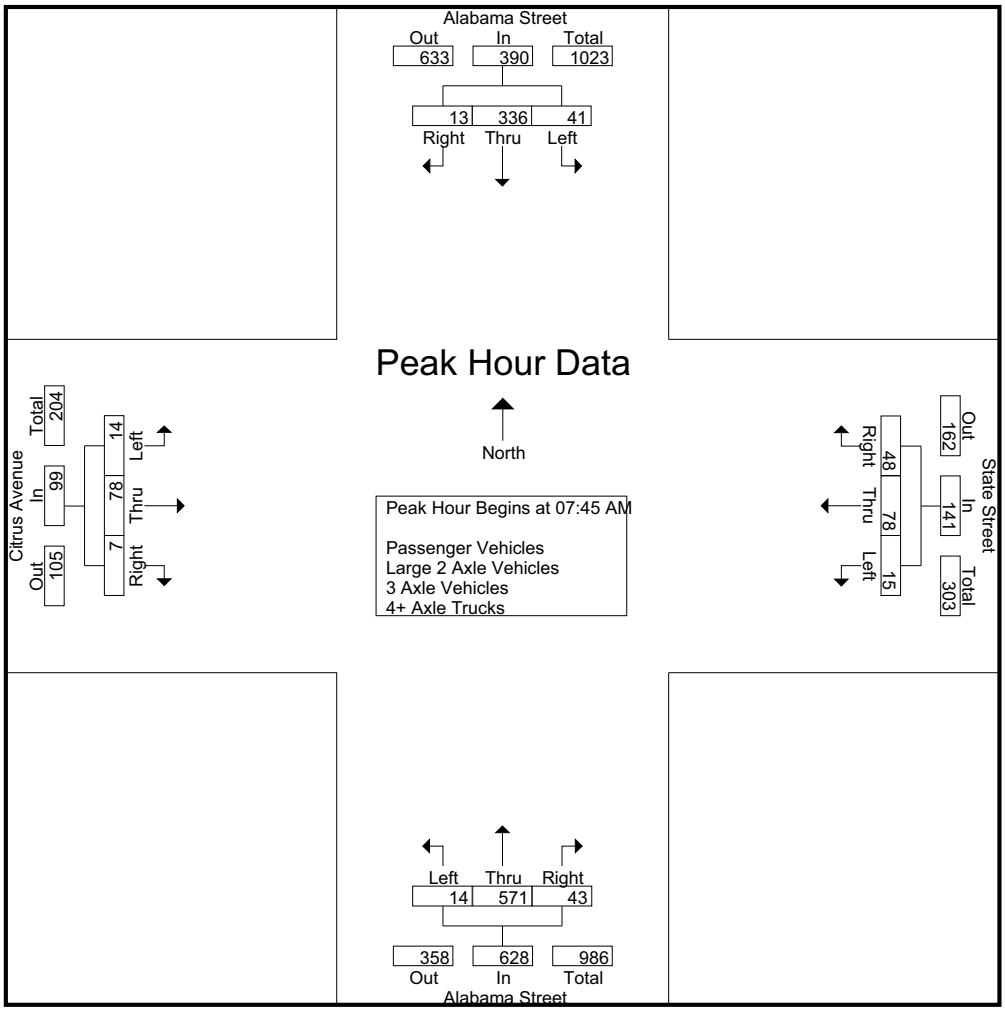
Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017



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

	07:30 AM				07:30 AM				07:45 AM				08:00 AM			
+0 mins.	7	77	3	87	**8**	20	11	39	**6**	**170**	**16**	**192**	2	17	4	23
+15 mins.	**21**	**110**	**4**	**135**	7	22	13	**42**	6	163	10	179	5	20	2	27
+30 mins.	10	74	2	86	2	**24**	**14**	40	1	125	7	133	**6**	**26**	0	**32**
+45 mins.	6	84	4	94	4	19	12	35	1	113	10	124	3	16	**6**	25
Total Volume	44	345	13	402	21	85	50	156	14	571	43	628	16	79	12	107
% App. Total	10.9	85.8	3.2		13.5	54.5	32.1		2.2	90.9	6.8		15	73.8	11.2	
PHF	.524	.784	.813	.744	.656	.885	.893	.929	.583	.840	.672	.818	.667	.760	.500	.836

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Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Passenger Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	7	78	0	85	3	13	9	25	3	117	6	126	0	5	0	5	241
07:15 AM	8	66	5	79	3	11	6	20	4	114	7	125	2	6	1	9	233
07:30 AM	7	76	3	86	8	20	10	38	0	106	4	110	0	10	2	12	246
07:45 AM	19	110	4	133	7	22	13	42	6	167	16	189	1	15	1	17	381
Total	41	330	12	383	21	66	38	125	13	504	33	550	3	36	4	43	1101
08:00 AM	9	71	2	82	2	23	13	38	6	161	10	177	2	17	4	23	320
08:15 AM	5	81	4	90	4	19	11	34	1	124	7	132	5	20	2	27	283
08:30 AM	4	68	3	75	2	12	8	22	1	110	8	119	6	26	0	32	248
08:45 AM	8	77	11	96	4	17	9	30	2	116	9	127	3	16	6	25	278
Total	26	297	20	343	12	71	41	124	10	511	34	555	16	79	12	107	1129
Grand Total	67	627	32	726	33	137	79	249	23	1015	67	1105	19	115	16	150	2230
Apprch %	9.2	86.4	4.4		13.3	55	31.7		2.1	91.9	6.1		12.7	76.7	10.7		
Total %	3	28.1	1.4	32.6	1.5	6.1	3.5	11.2	1	45.5	3	49.6	0.9	5.2	0.7	6.7	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**19**	**110**	**4**	**133**	**7**	22	**13**	**42**	**6**	**167**	**16**	**189**	1	15	1	17	**381**
08:00 AM	9	71	2	82	2	**23**	13	38	6	161	10	177	2	17	**4**	23	320
08:15 AM	5	81	4	90	4	19	11	34	1	124	7	132	5	20	2	27	283
08:30 AM	4	68	3	75	2	12	8	22	1	110	8	119	**6**	**26**	0	**32**	248
Total Volume	37	330	13	380	15	76	45	136	14	562	41	617	14	78	7	99	1232
% App. Total	9.7	86.8	3.4		11	55.9	33.1		2.3	91.1	6.6		14.1	78.8	7.1		
PHF	.487	.750	.813	.714	.536	.826	.865	.810	.583	.841	.641	.816	.583	.750	.438	.773	.808

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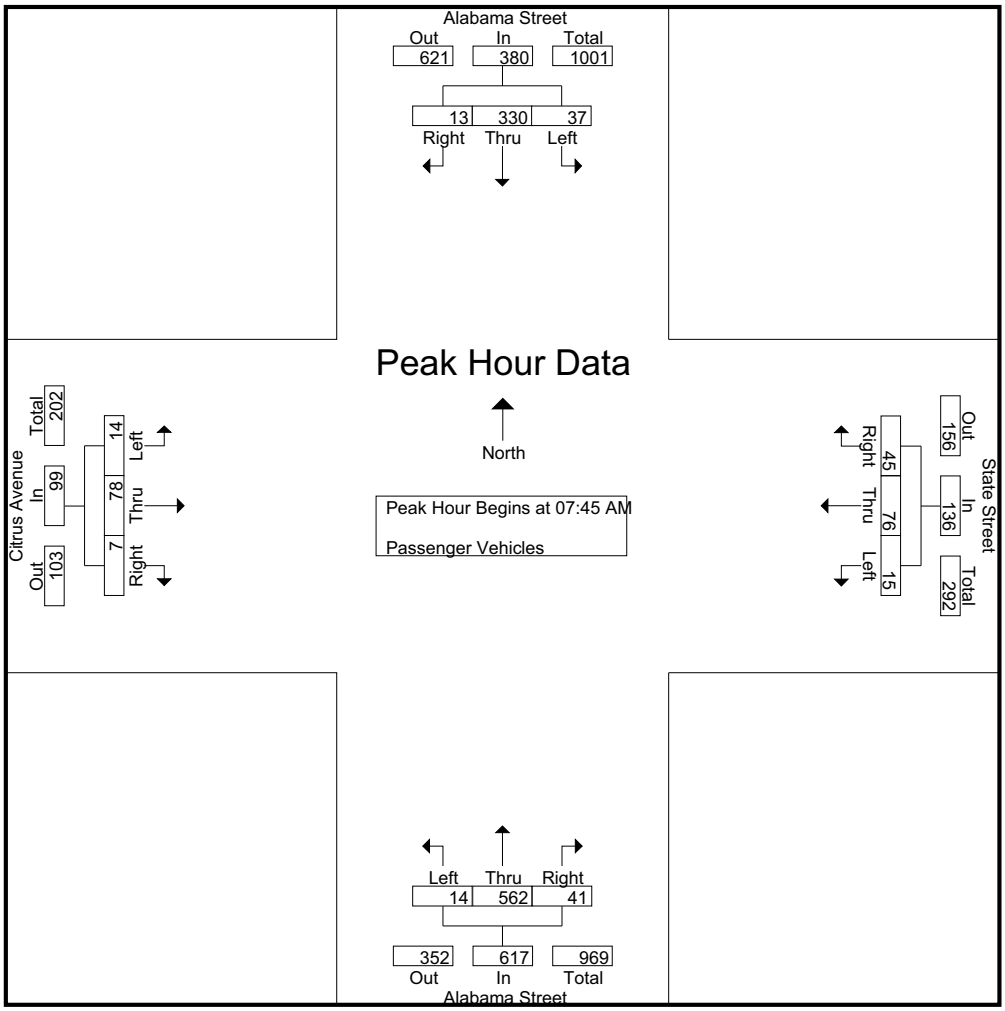
File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 2



Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	**19**	**110**	**4**	**133**	**7**	22	**13**	**42**	**6**	**167**	**16**	**189**	1	15	1	17
+15 mins.	9	71	2	82	2	**23**	13	38	6	161	10	177	2	17	**4**	23
+30 mins.	5	81	4	90	4	19	11	34	1	124	7	132	5	20	2	27
+45 mins.	4	68	3	75	2	12	8	22	1	110	8	119	**6**	**26**	0	**32**
Total Volume	37	330	13	380	15	76	45	136	14	562	41	617	14	78	7	99
% App. Total	9.7	86.8	3.4		11	55.9	33.1		2.3	91.1	6.6		14.1	78.8	7.1	
PHF	.487	.750	.813	.714	.536	.826	.865	.810	.583	.841	.641	.816	.583	.750	.438	.773

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City of Redlands
N/S: Alabama Street
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Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
07:15 AM	2	3	0	5	0	0	1	1	0	2	0	2	0	0	0	0	8
07:30 AM	0	1	0	1	0	0	1	1	0	1	0	1	0	0	0	0	3
07:45 AM	1	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	3	4	0	7	0	0	3	3	0	5	0	5	0	0	0	0	15
08:00 AM	1	2	0	3	0	1	1	2	0	2	0	2	0	0	0	0	7
08:15 AM	1	2	0	3	0	0	1	1	0	1	0	1	0	0	0	0	5
08:30 AM	0	0	0	0	0	1	1	2	0	3	2	5	0	0	0	0	7
08:45 AM	1	2	0	3	0	0	2	2	0	2	0	2	0	0	0	0	7
Total	3	6	0	9	0	2	5	7	0	8	2	10	0	0	0	0	26
Grand Total	6	10	0	16	0	2	8	10	0	13	2	15	0	0	0	0	41
Apprch %	37.5	62.5	0		0	20	80		0	86.7	13.3		0	0	0		
Total %	14.6	24.4	0	39	0	4.9	19.5	24.4	0	31.7	4.9	36.6	0	0	0	0	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**1**	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
08:00 AM	1	**2**	0	**3**	0	**1**	**1**	**2**	0	2	0	2	0	0	0	0	**7**
08:15 AM	1	2	0	3	0	0	1	1	0	1	0	1	0	0	0	0	5
08:30 AM	0	0	0	0	0	1	1	2	0	**3**	**2**	**5**	0	0	0	0	7
Total Volume	3	4	0	7	0	2	3	5	0	8	2	10	0	0	0	0	22
% App. Total	42.9	57.1	0		0	40	60		0	80	20		0	0	0		
PHF	.750	.500	.000	.583	.000	.500	.750	.625	.000	.667	.250	.500	.000	.000	.000	.000	.786

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City of Redlands
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File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
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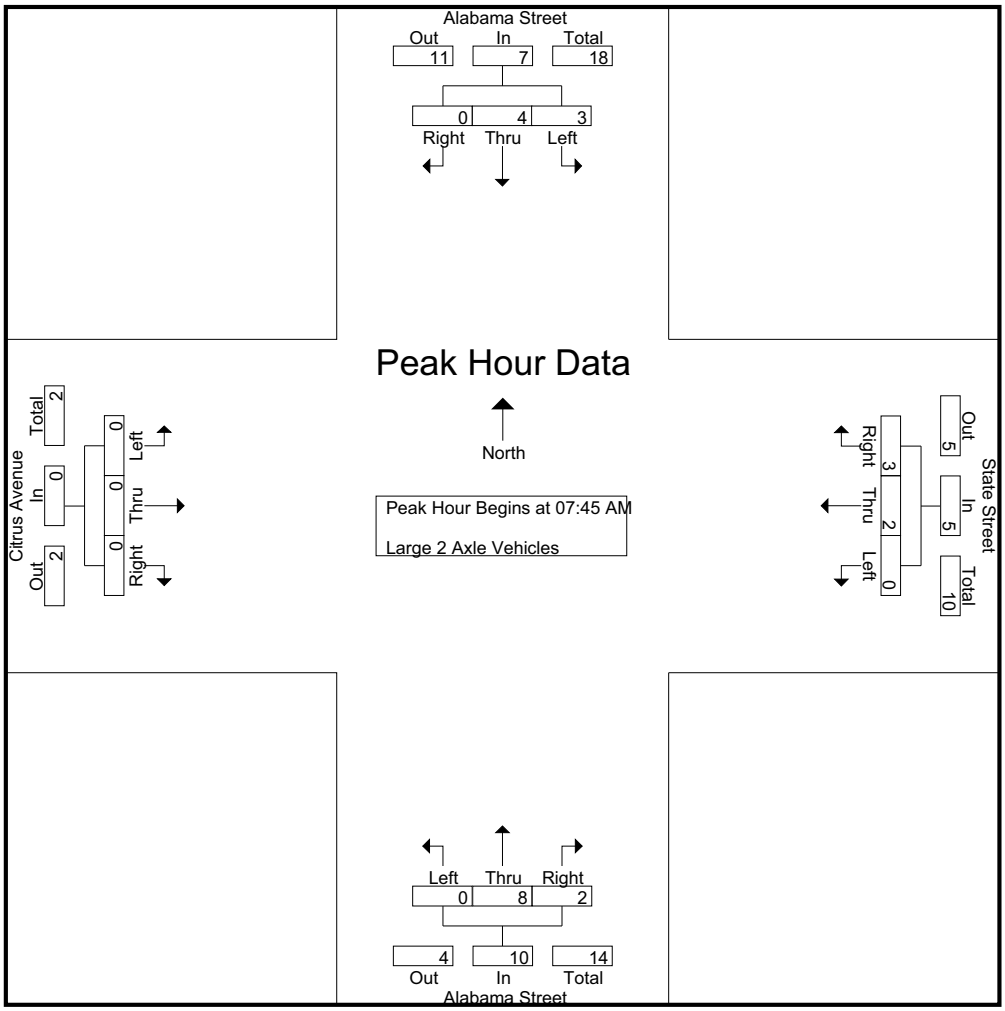

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	**1**	0	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	1	**2**	0	**3**	0	**1**	**1**	**2**	0	2	0	2	0	0	0	0
+30 mins.	1	2	0	3	0	0	1	1	0	1	0	1	0	0	0	0
+45 mins.	0	0	0	0	0	1	1	2	0	**3**	**2**	**5**	0	0	0	0
Total Volume	3	4	0	7	0	2	3	5	0	8	2	10	0	0	0	0
% App. Total	42.9	57.1	0		0	40	60		0	80	20		0	0	0	
PHF	.750	.500	.000	.583	.000	.500	.750	.625	.000	.667	.250	.500	.000	.000	.000	.000

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City of Redlands
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Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
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Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
07:15 AM	1	1	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	2	3	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	2	3	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
Apprch %	40	60	0		0	0	0		0	100	0		0	0	0		
Total %	28.6	42.9	0	71.4	0	0	0	0	0	28.6	0	28.6	0	0	0	0	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

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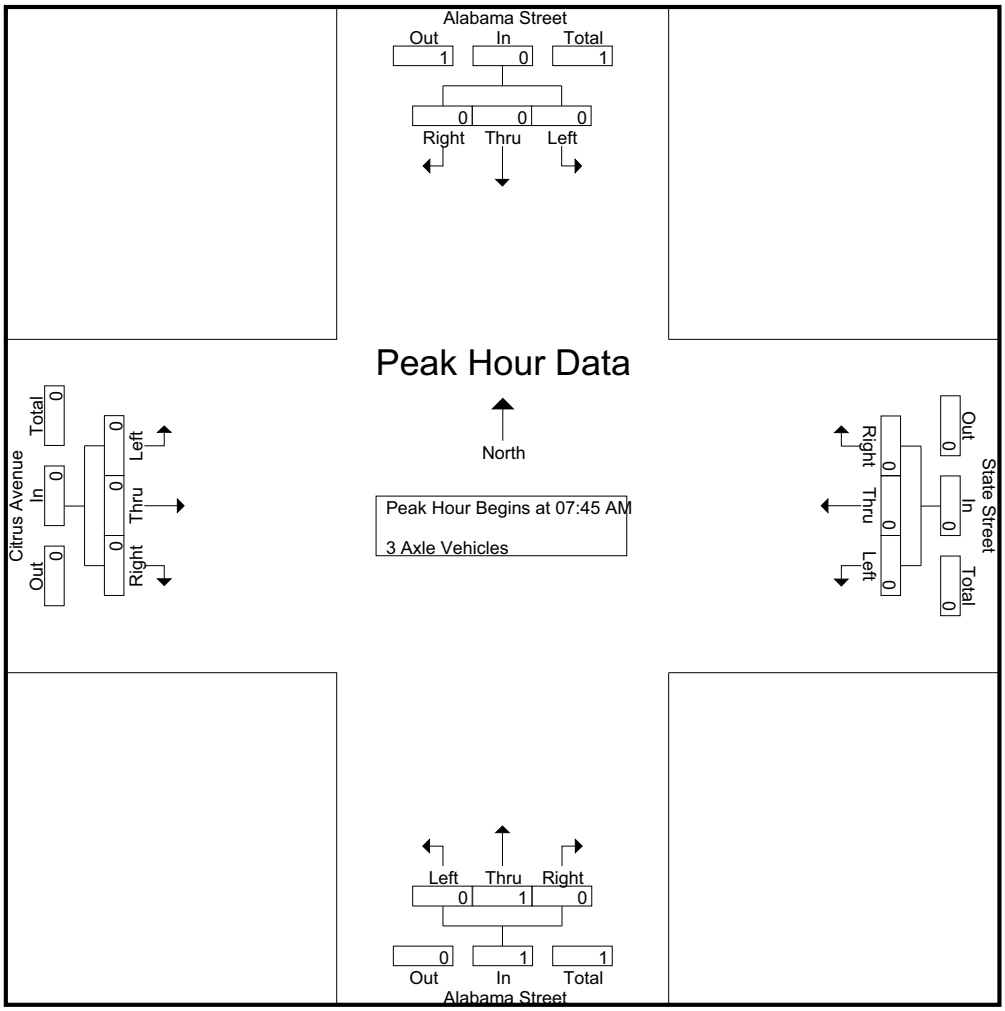

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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City of Redlands
N/S: Alabama Street
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Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Grand Total	1	3	0	4	0	0	0	0	0	1	0	1	0	0	0	0	5
Apprch %	25	75	0		0	0	0		0	100	0		0	0	0		
Total %	20	60	0	80	0	0	0	0	0	20	0	20	0	0	0	0	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
08:00 AM	0	**1**	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	33.3	66.7	0		0	0	0		0	0	0		0	0	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.750

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N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017
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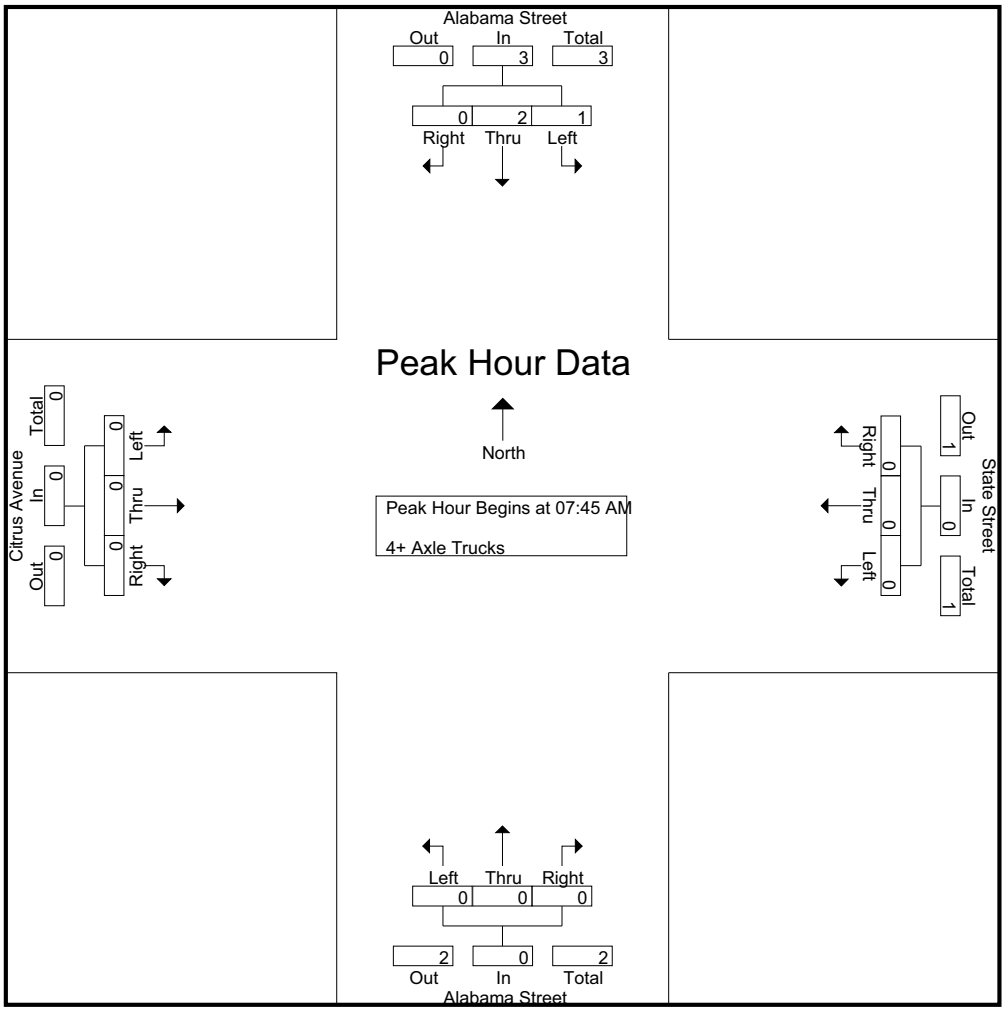

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	152	2	163	11	19	20	50	4	122	6	132	3	11	6	20	365
04:15 PM	8	128	0	136	7	15	10	32	1	96	9	106	4	15	4	23	297
04:30 PM	12	132	4	148	11	15	15	41	2	119	2	123	7	19	7	33	345
04:45 PM	8	113	2	123	7	19	11	37	4	108	5	117	5	24	6	35	312
Total	37	525	8	570	36	68	56	160	11	445	22	478	19	69	23	111	1319
05:00 PM	14	173	8	195	12	41	23	76	2	129	6	137	7	21	12	40	448
05:15 PM	12	145	4	161	13	10	17	40	4	126	2	132	2	26	5	33	366
05:30 PM	12	140	2	154	17	13	16	46	1	125	7	133	1	17	5	23	356
05:45 PM	9	167	4	180	14	9	10	33	3	128	9	140	4	14	0	18	371
Total	47	625	18	690	56	73	66	195	10	508	24	542	14	78	22	114	1541
Grand Total	84	1150	26	1260	92	141	122	355	21	953	46	1020	33	147	45	225	2860
Apprch %	6.7	91.3	2.1		25.9	39.7	34.4		2.1	93.4	4.5		14.7	65.3	20		
Total %	2.9	40.2	0.9	44.1	3.2	4.9	4.3	12.4	0.7	33.3	1.6	35.7	1.2	5.1	1.6	7.9	
Passenger Vehicles	75	1144	25	1244	89	140	112	341	21	940	44	1005	33	144	45	222	2812
% Passenger Vehicles	89.3	99.5	96.2	98.7	96.7	99.3	91.8	96.1	100	98.6	95.7	98.5	100	98	100	98.7	98.3
Large 2 Axle Vehicles	6	6	1	13	2	1	8	11	0	6	1	7	0	3	0	3	34
% Large 2 Axle Vehicles	7.1	0.5	3.8	1	2.2	0.7	6.6	3.1	0	0.6	2.2	0.7	0	2	0	1.3	1.2
3 Axle Vehicles	2	0	0	2	1	0	0	1	0	4	0	4	0	0	0	0	7
% 3 Axle Vehicles	2.4	0	0	0.2	1.1	0	0	0.3	0	0.4	0	0.4	0	0	0	0	0.2
4+ Axle Trucks	1	0	0	1	0	0	2	2	0	3	1	4	0	0	0	0	7
% 4+ Axle Trucks	1.2	0	0	0.1	0	0	1.6	0.6	0	0.3	2.2	0.4	0	0	0	0	0.2

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**14**	**173**	**8**	**195**	12	**41**	**23**	**76**	2	**129**	6	137	**7**	21	**12**	**40**	**448**
05:15 PM	12	145	4	161	13	10	17	40	**4**	126	2	132	2	**26**	5	33	366
05:30 PM	12	140	2	154	**17**	13	16	46	1	125	7	133	1	17	5	23	356
05:45 PM	9	167	4	180	14	9	10	33	3	128	**9**	**140**	4	14	0	18	371
Total Volume	47	625	18	690	56	73	66	195	10	508	24	542	14	78	22	114	1541
% App. Total	6.8	90.6	2.6		28.7	37.4	33.8		1.8	93.7	4.4		12.3	68.4	19.3		
PHF	.839	.903	.563	.885	.824	.445	.717	.641	.625	.984	.667	.968	.500	.750	.458	.713	.860

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Site Code : 07517744
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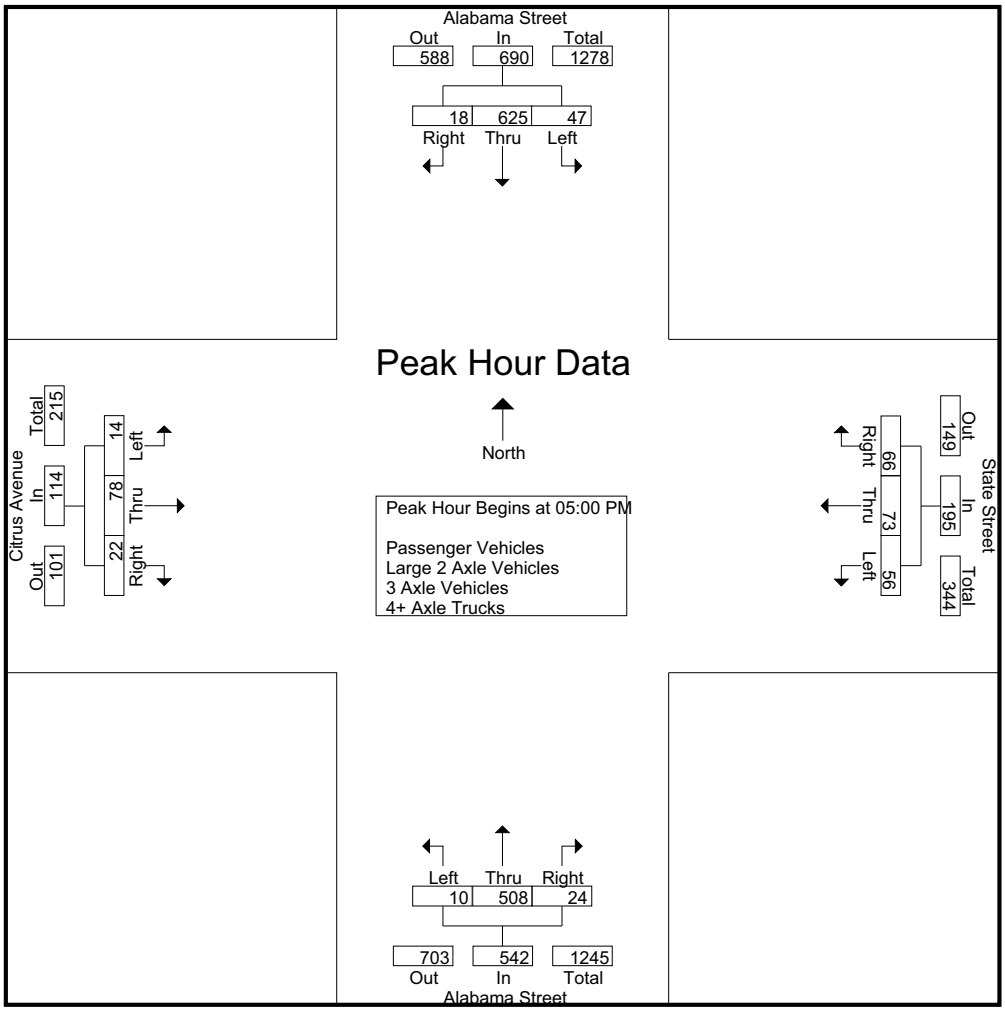

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				04:30 PM			
+0 mins.	**14**	**173**	**8**	**195**	7	19	11	37	2	**129**	6	137	**7**	19	7	33
+15 mins.	12	145	4	161	12	**41**	**23**	**76**	**4**	126	2	132	5	24	6	35
+30 mins.	12	140	2	154	13	10	17	40	1	125	7	133	7	21	**12**	**40**
+45 mins.	9	167	4	180	**17**	13	16	46	3	128	**9**	**140**	2	**26**	5	33
Total Volume	47	625	18	690	49	83	67	199	10	508	24	542	21	90	30	141
% App. Total	6.8	90.6	2.6		24.6	41.7	33.7		1.8	93.7	4.4		14.9	63.8	21.3	
PHF	.839	.903	.563	.885	.721	.506	.728	.655	.625	.984	.667	.968	.750	.865	.625	.881

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	149	2	160	11	18	19	48	4	119	5	128	3	10	6	19	355
04:15 PM	5	128	0	133	7	15	9	31	1	94	9	104	4	15	4	23	291
04:30 PM	11	132	4	147	11	15	14	40	2	117	2	121	7	19	7	33	341
04:45 PM	7	112	2	121	7	19	10	36	4	105	5	114	5	23	6	34	305
Total	32	521	8	561	36	67	52	155	11	435	21	467	19	67	23	109	1292
05:00 PM	14	173	8	195	11	41	21	73	2	127	6	135	7	21	12	40	443
05:15 PM	11	145	3	159	11	10	15	36	4	126	2	132	2	25	5	32	359
05:30 PM	11	139	2	152	17	13	14	44	1	124	6	131	1	17	5	23	350
05:45 PM	7	166	4	177	14	9	10	33	3	128	9	140	4	14	0	18	368
Total	43	623	17	683	53	73	60	186	10	505	23	538	14	77	22	113	1520
Grand Total	75	1144	25	1244	89	140	112	341	21	940	44	1005	33	144	45	222	2812
Apprch %	6	92	2		26.1	41.1	32.8		2.1	93.5	4.4		14.9	64.9	20.3		
Total %	2.7	40.7	0.9	44.2	3.2	5	4	12.1	0.7	33.4	1.6	35.7	1.2	5.1	1.6	7.9	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**14**	**173**	**8**	**195**	11	**41**	**21**	**73**	2	127	6	135	**7**	21	**12**	**40**	**443**
05:15 PM	11	145	3	159	11	10	15	36	**4**	126	2	132	2	**25**	5	32	359
05:30 PM	11	139	2	152	**17**	13	14	44	1	124	6	131	1	17	5	23	350
05:45 PM	7	166	4	177	14	9	10	33	3	**128**	**9**	**140**	4	14	0	18	368
Total Volume	43	623	17	683	53	73	60	186	10	505	23	538	14	77	22	113	1520
% App. Total	6.3	91.2	2.5		28.5	39.2	32.3		1.9	93.9	4.3		12.4	68.1	19.5		
PHF	.768	.900	.531	.876	.779	.445	.714	.637	.625	.986	.639	.961	.500	.770	.458	.706	.858

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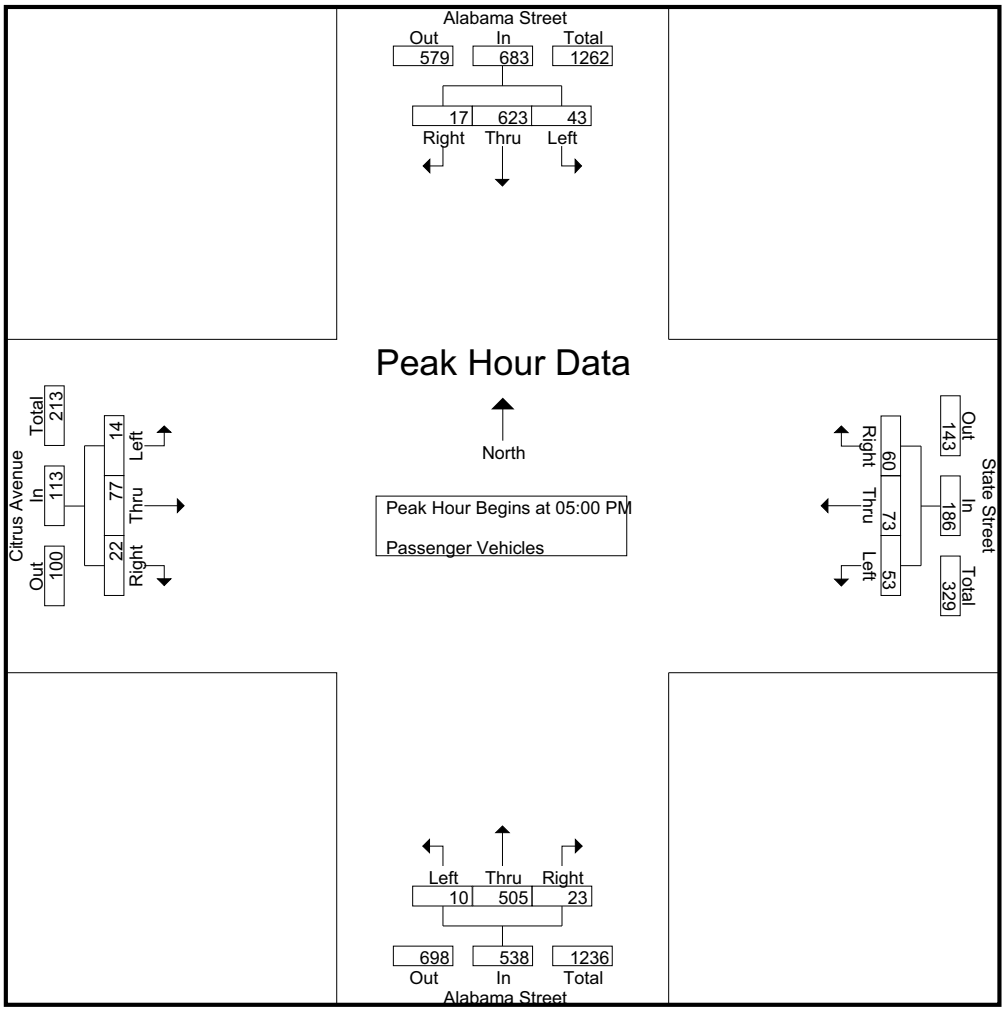

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**14**	**173**	**8**	**195**	11	**41**	**21**	**73**	2	127	6	135	**7**	21	**12**	**40**
+15 mins.	11	145	3	159	11	10	15	36	**4**	126	2	132	2	**25**	5	32
+30 mins.	11	139	2	152	**17**	13	14	44	1	124	6	131	1	17	5	23
+45 mins.	7	166	4	177	14	9	10	33	3	**128**	**9**	**140**	4	14	0	18
Total Volume	43	623	17	683	53	73	60	186	10	505	23	538	14	77	22	113
% App. Total	6.3	91.2	2.5		28.5	39.2	32.3		1.9	93.9	4.3		12.4	68.1	19.5	
PHF	.768	.900	.531	.876	.779	.445	.714	.637	.625	.986	.639	.961	.500	.770	.458	.706

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Weather: Clear

File Name : 03A_RED AL CI PM
Site Code : 07517744
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Page No : 1

Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	3	0	3	0	1	1	2	0	1	1	2	0	1	0	1	8
04:15 PM	2	0	0	2	0	0	1	1	0	1	0	1	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
04:45 PM	1	1	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
Total	3	4	0	7	0	1	3	4	0	4	1	5	0	2	0	2	18
05:00 PM	0	0	0	0	0	0	2	2	0	1	0	1	0	0	0	0	3
05:15 PM	1	0	1	2	2	0	1	3	0	0	0	0	0	1	0	1	6
05:30 PM	1	1	0	2	0	0	2	2	0	1	0	1	0	0	0	0	5
05:45 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	3	2	1	6	2	0	5	7	0	2	0	2	0	1	0	1	16
Grand Total	6	6	1	13	2	1	8	11	0	6	1	7	0	3	0	3	34
Apprch %	46.2	46.2	7.7		18.2	9.1	72.7		0	85.7	14.3		0	100	0		
Total %	17.6	17.6	2.9	38.2	5.9	2.9	23.5	32.4	0	17.6	2.9	20.6	0	8.8	0	8.8	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	**2**	2	0	**1**	0	**1**	0	0	0	0	3
05:15 PM	**1**	0	**1**	**2**	**2**	0	1	**3**	0	0	0	0	0	**1**	0	**1**	**6**
05:30 PM	1	**1**	0	2	0	0	2	2	0	1	0	1	0	0	0	0	5
05:45 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total Volume	3	2	1	6	2	0	5	7	0	2	0	2	0	1	0	1	16
% App. Total	50	33.3	16.7		28.6	0	71.4		0	100	0		0	100	0		
PHF	.750	.500	.250	.750	.250	.000	.625	.583	.000	.500	.000	.500	.000	.250	.000	.250	.667

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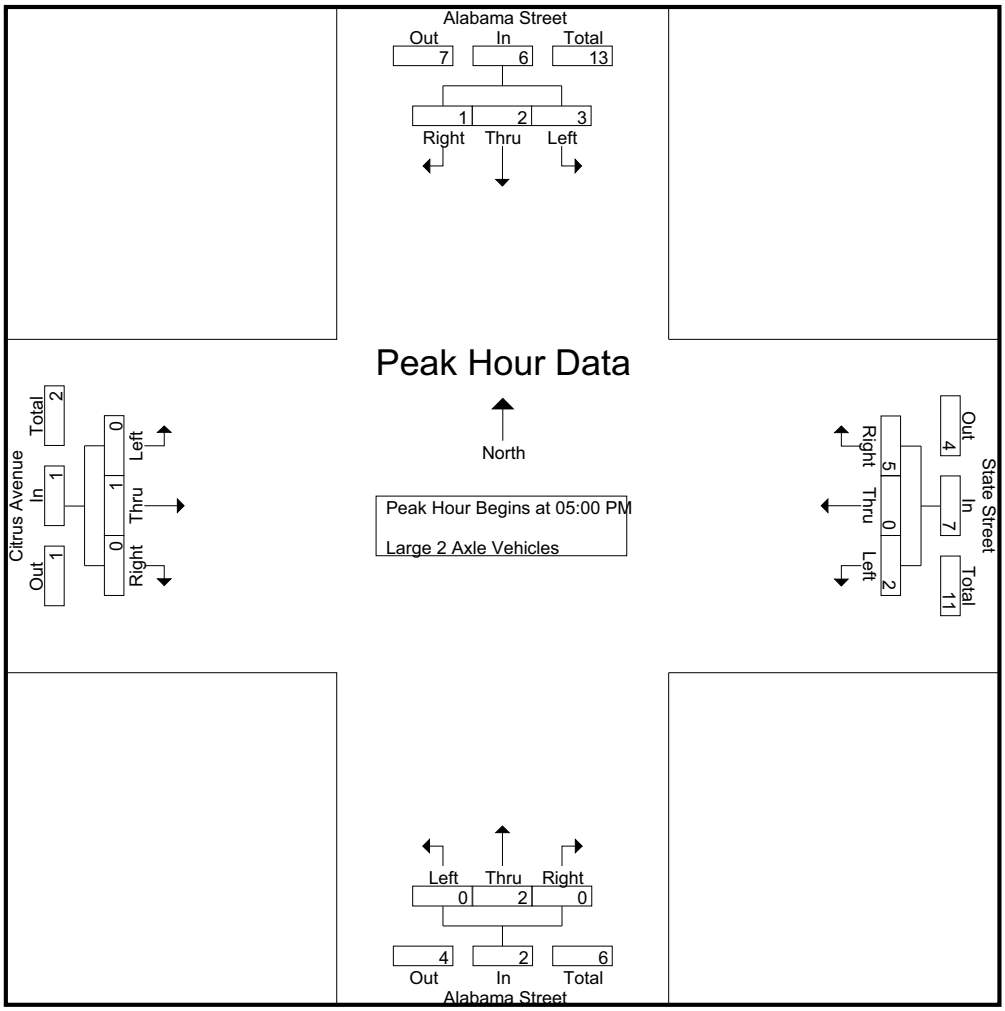

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	**2**	2	0	**1**	0	**1**	0	0	0	0
+15 mins.	**1**	0	**1**	**2**	**2**	0	1	**3**	0	0	0	0	0	**1**	0	**1**
+30 mins.	1	**1**	0	2	0	0	2	2	0	1	0	1	0	0	0	0
+45 mins.	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	3	2	1	6	2	0	5	7	0	2	0	2	0	1	0	1
% App. Total	50	33.3	16.7		28.6	0	71.4		0	100	0		0	100	0	
PHF	.750	.500	.250	.750	.250	.000	.625	.583	.000	.500	.000	.500	.000	.250	.000	.250

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Weather: Clear

File Name : 03A_RED AL CI PM
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Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:30 PM	1	0	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	2	0	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
05:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
Grand Total	2	0	0	2	1	0	0	1	0	4	0	4	0	0	0	0	7
Apprch %	100	0	0		100	0	0		0	100	0		0	0	0		
Total %	28.6	0	0	28.6	14.3	0	0	14.3	0	57.1	0	57.1	0	0	0	0	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250

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City of Redlands
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E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI PM
Site Code : 07517744
Start Date : 11/1/2017
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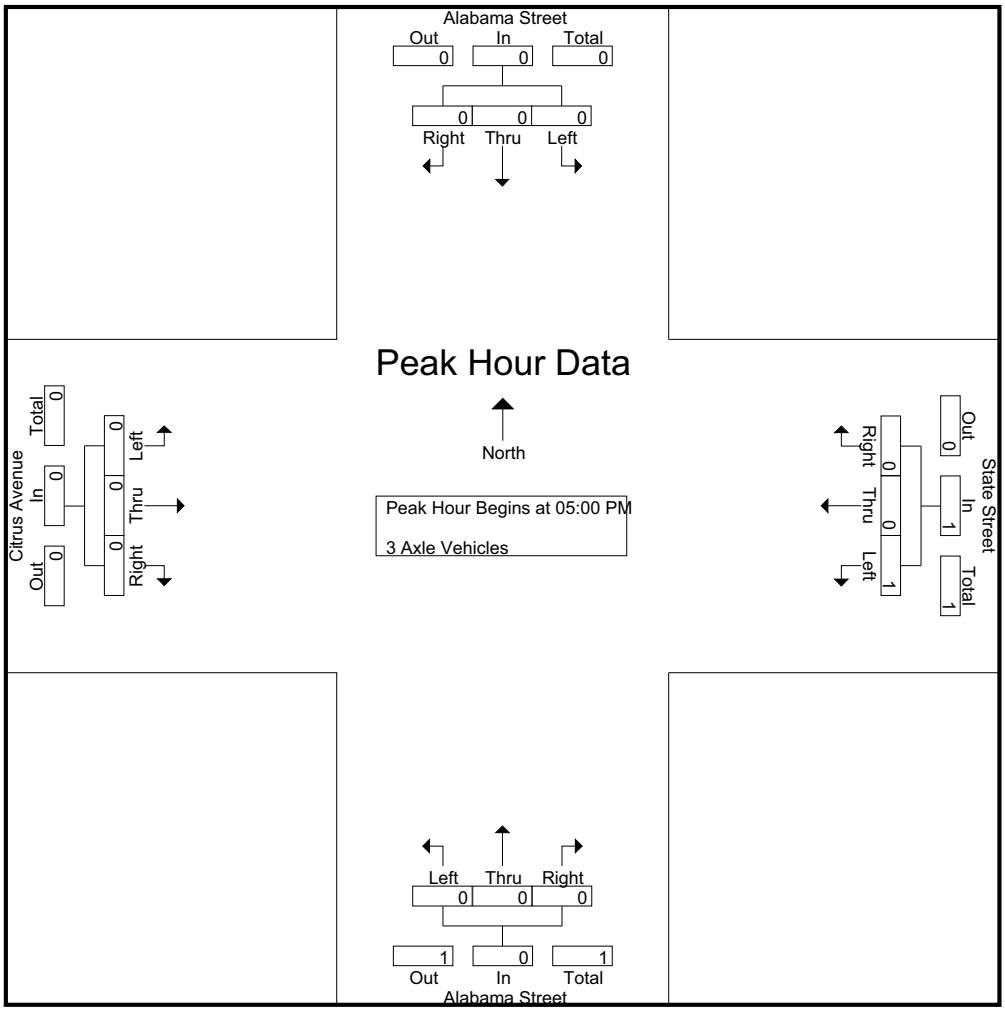

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	**1**	0	0	**1**	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
% App. Total	0	0	0		100	0	0		0	0	0		0	0	0	
PHF	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0	2
Total	0	0	0	0	0	0	1	1	0	2	0	2	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	0	0	1	0	0	1	1	0	1	1	2	0	0	0	0	4
Grand Total	1	0	0	1	0	0	2	2	0	3	1	4	0	0	0	0	7
Apprch %	100	0	0		0	0	100		0	75	25		0	0	0		
Total %	14.3	0	0	14.3	0	0	28.6	28.6	0	42.9	14.3	57.1	0	0	0	0	

	Alabama Street Southbound				State Street Westbound				Alabama Street Northbound				Citrus Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0	1
05:45 PM	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	0	0	1	0	0	1	1	0	1	1	2	0	0	0	0	4
% App. Total	100	0	0		0	0	100		0	50	50		0	0	0		
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.250	.250	.500	.000	.000	.000	.000	1.00

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File Name : 03A_RED AL CI PM
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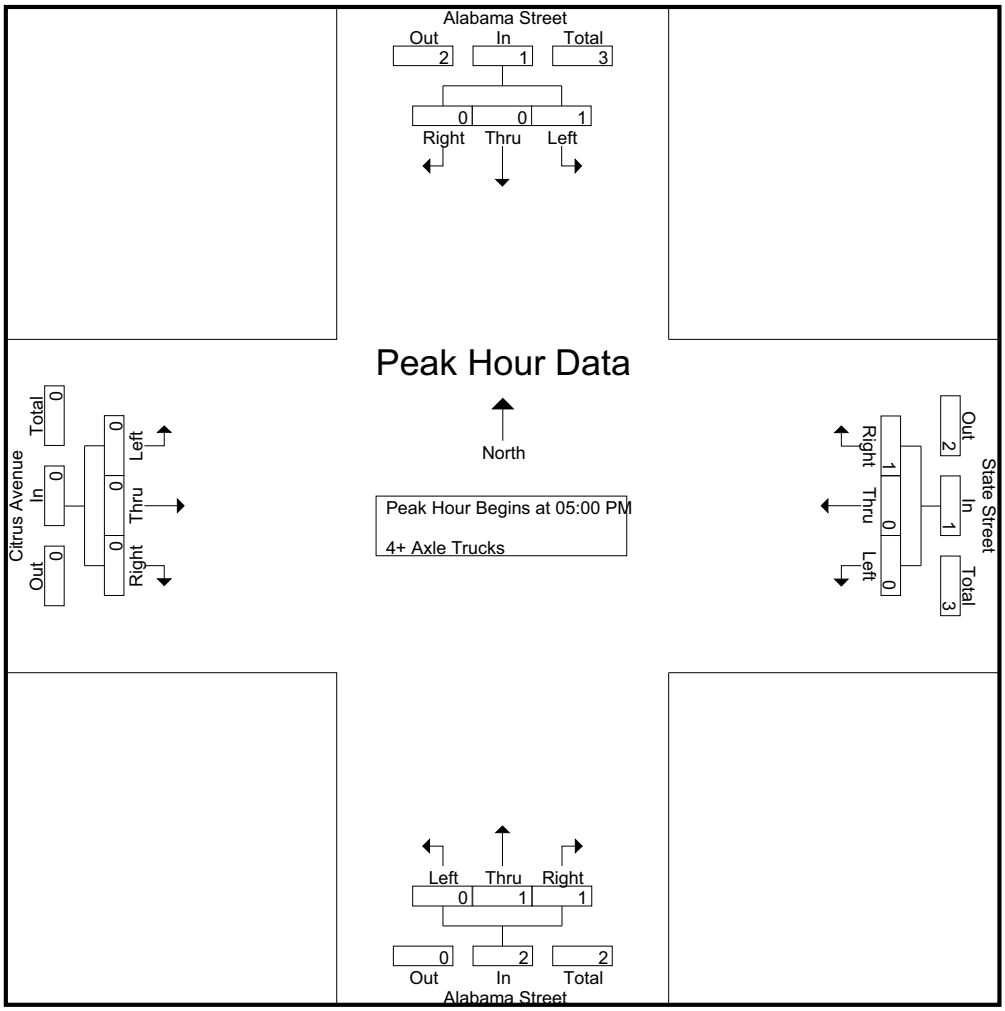

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	**1**	**1**	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	**1**	1	0	0	0	0
+45 mins.	**1**	0	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	0	0	1	0	0	1	1	0	1	1	2	0	0	0	0
% App. Total	100	0	0		0	0	100		0	50	50		0	0	0	
PHF	.250	.000	.000	.250	.000	.000	.250	.250	.000	.250	.250	.500	.000	.000	.000	.000

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E/W: Orange Avenue
Weather: Clear

File Name : 04A_RED AL OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

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

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	55	10	69	5	13	51	69	3	68	6	77	5	15	1	21	236
07:15 AM	7	66	8	81	13	35	44	92	3	77	4	84	6	17	3	26	283
07:30 AM	2	68	13	83	16	30	43	89	1	70	4	75	7	15	9	31	278
07:45 AM	18	95	14	127	12	38	69	119	5	125	9	139	5	24	9	38	423
Total	31	284	45	360	46	116	207	369	12	340	23	375	23	71	22	116	1220
08:00 AM	8	62	12	82	10	25	52	87	2	105	5	112	12	24	9	45	326
08:15 AM	14	68	7	89	2	20	29	51	5	91	4	100	4	14	11	29	269
08:30 AM	5	54	10	69	6	14	23	43	7	98	5	110	4	10	7	21	243
08:45 AM	12	73	11	96	4	11	23	38	3	111	3	117	3	6	6	15	266
Total	39	257	40	336	22	70	127	219	17	405	17	439	23	54	33	110	1104
Grand Total	70	541	85	696	68	186	334	588	29	745	40	814	46	125	55	226	2324
Apprch %	10.1	77.7	12.2		11.6	31.6	56.8		3.6	91.5	4.9		20.4	55.3	24.3		
Total %	3	23.3	3.7	29.9	2.9	8	14.4	25.3	1.2	32.1	1.7	35	2	5.4	2.4	9.7	
Passenger Vehicles	70	534	84	688	68	186	334	588	29	739	40	808	46	123	55	224	2308
% Passenger Vehicles	100	98.7	98.8	98.9	100	100	100	100	100	99.2	100	99.3	100	98.4	100	99.1	99.3
Large 2 Axle Vehicles	0	3	0	3	0	0	0	0	0	3	0	3	0	1	0	1	7
% Large 2 Axle Vehicles	0	0.6	0	0.4	0	0	0	0	0	0.4	0	0.4	0	0.8	0	0.4	0.3
3 Axle Vehicles	0	2	1	3	0	0	0	0	0	2	0	2	0	1	0	1	6
% 3 Axle Vehicles	0	0.4	1.2	0.4	0	0	0	0	0	0.3	0	0.2	0	0.8	0	0.4	0.3
4+ Axle Trucks	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
% 4+ Axle Trucks	0	0.4	0	0.3	0	0	0	0	0	0.1	0	0.1	0	0	0	0	0.1

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	66	8	81	13	35	44	92	3	77	4	84	6	17	3	26	283
07:30 AM	2	68	13	83	**16**	30	43	89	1	70	4	75	7	15	**9**	31	278
07:45 AM	**18**	**95**	**14**	**127**	12	**38**	**69**	**119**	**5**	**125**	**9**	**139**	5	**24**	9	38	**423**
08:00 AM	8	62	12	82	10	25	52	87	2	105	5	112	**12**	24	9	**45**	326
Total Volume	35	291	47	373	51	128	208	387	11	377	22	410	30	80	30	140	1310
% App. Total	9.4	78	12.6		13.2	33.1	53.7		2.7	92	5.4		21.4	57.1	21.4		
PHF	.486	.766	.839	.734	.797	.842	.754	.813	.550	.754	.611	.737	.625	.833	.833	.778	.774

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Weather: Clear

File Name : 04A_RED AL OR AM
Site Code : 07517744
Start Date : 11/1/2017
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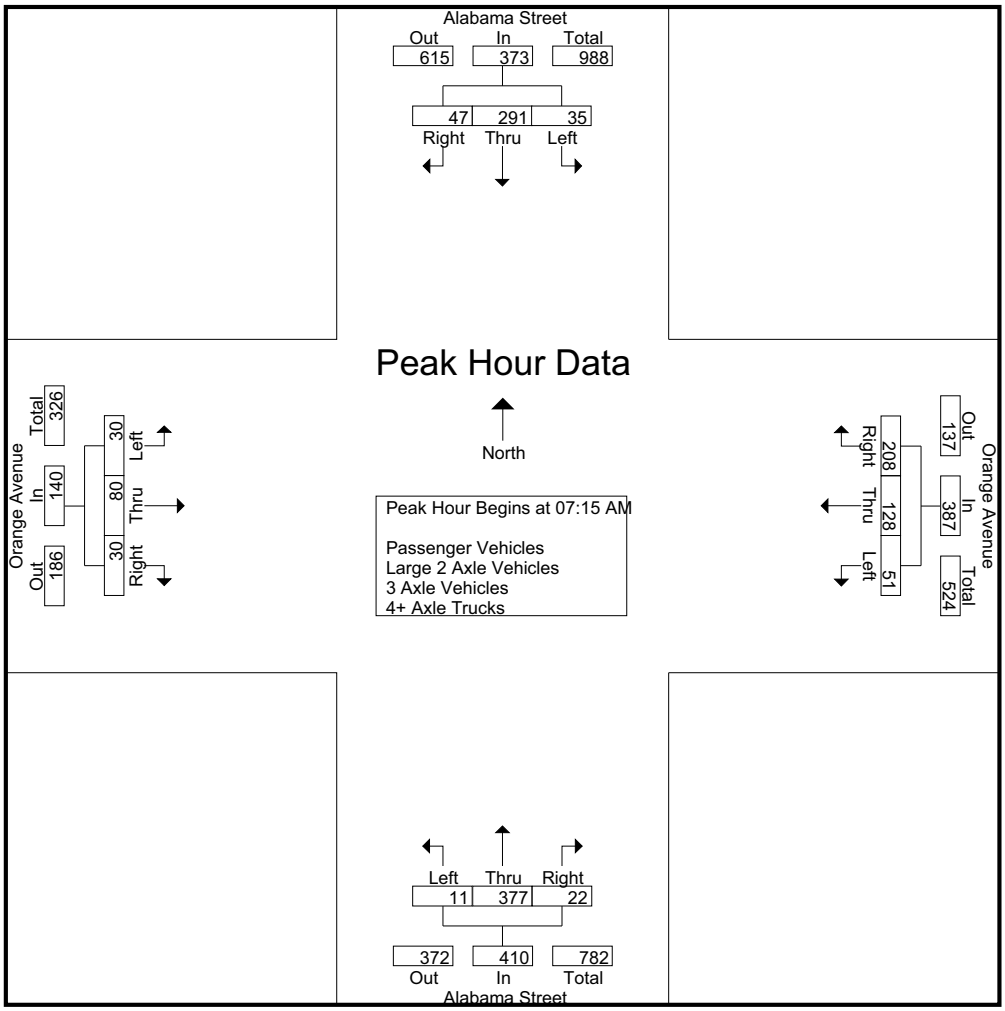

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:45 AM				07:30 AM			
+0 mins.	2	68	13	83	13	35	44	92	5	**125**	**9**	**139**	7	15	9	31
+15 mins.	**18**	**95**	**14**	**127**	**16**	30	43	89	2	105	5	112	5	**24**	9	38
+30 mins.	8	62	12	82	12	**38**	**69**	**119**	5	91	4	100	**12**	24	9	**45**
+45 mins.	14	68	7	89	10	25	52	87	**7**	98	5	110	4	14	**11**	29
Total Volume	42	293	46	381	51	128	208	387	19	419	23	461	28	77	38	143
% App. Total	11	76.9	12.1		13.2	33.1	53.7		4.1	90.9	5		19.6	53.8	26.6	
PHF	.583	.771	.821	.750	.797	.842	.754	.813	.679	.838	.639	.829	.583	.802	.864	.794

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	53	9	66	5	13	51	69	3	68	6	77	5	15	1	21	233
07:15 AM	7	64	8	79	13	35	44	92	3	75	4	82	6	17	3	26	279
07:30 AM	2	67	13	82	16	30	43	89	1	70	4	75	7	14	9	30	276
07:45 AM	18	95	14	127	12	38	69	119	5	124	9	138	5	24	9	38	422
Total	31	279	44	354	46	116	207	369	12	337	23	372	23	70	22	115	1210
08:00 AM	8	60	12	80	10	25	52	87	2	104	5	111	12	24	9	45	323
08:15 AM	14	68	7	89	2	20	29	51	5	90	4	99	4	13	11	28	267
08:30 AM	5	54	10	69	6	14	23	43	7	98	5	110	4	10	7	21	243
08:45 AM	12	73	11	96	4	11	23	38	3	110	3	116	3	6	6	15	265
Total	39	255	40	334	22	70	127	219	17	402	17	436	23	53	33	109	1098
Grand Total	70	534	84	688	68	186	334	588	29	739	40	808	46	123	55	224	2308
Apprch %	10.2	77.6	12.2		11.6	31.6	56.8		3.6	91.5	5		20.5	54.9	24.6		
Total %	3	23.1	3.6	29.8	2.9	8.1	14.5	25.5	1.3	32	1.7	35	2	5.3	2.4	9.7	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	7	64	8	79	13	35	44	92	3	75	4	82	6	17	3	26	279
07:30 AM	2	67	13	82	**16**	30	43	89	1	70	4	75	7	14	**9**	30	276
07:45 AM	**18**	**95**	**14**	**127**	12	**38**	**69**	**119**	**5**	**124**	**9**	**138**	5	**24**	9	38	**422**
08:00 AM	8	60	12	80	10	25	52	87	2	104	5	111	**12**	24	9	**45**	323
Total Volume	35	286	47	368	51	128	208	387	11	373	22	406	30	79	30	139	1300
% App. Total	9.5	77.7	12.8		13.2	33.1	53.7		2.7	91.9	5.4		21.6	56.8	21.6		
PHF	.486	.753	.839	.724	.797	.842	.754	.813	.550	.752	.611	.736	.625	.823	.833	.772	.770

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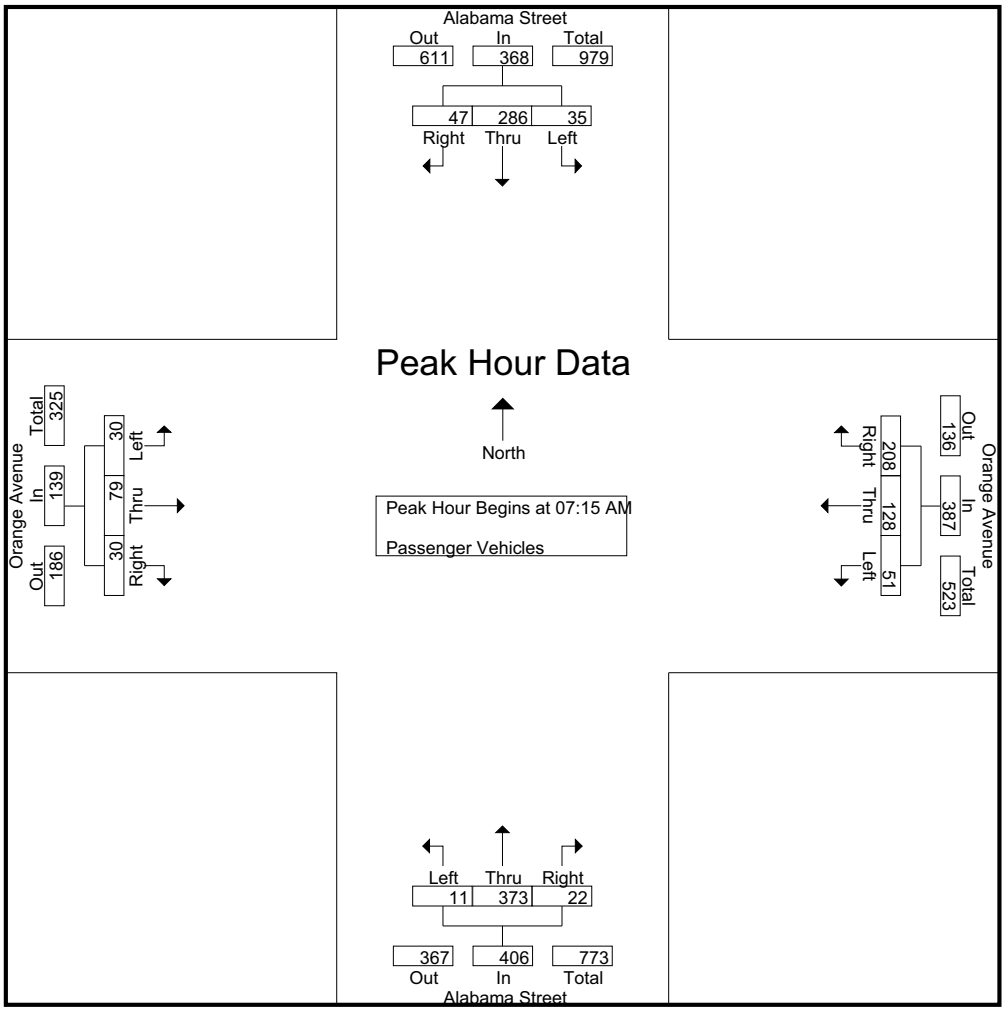

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	7	64	8	79	13	35	44	92	3	75	4	82	6	17	3	26
+15 mins.	2	67	13	82	**16**	30	43	89	1	70	4	75	7	14	**9**	30
+30 mins.	**18**	**95**	**14**	**127**	12	**38**	**69**	**119**	**5**	**124**	**9**	**138**	5	**24**	9	38
+45 mins.	8	60	12	80	10	25	52	87	2	104	5	111	**12**	24	9	**45**
Total Volume	35	286	47	368	51	128	208	387	11	373	22	406	30	79	30	139
% App. Total	9.5	77.7	12.8		13.2	33.1	53.7		2.7	91.9	5.4		21.6	56.8	21.6	
PHF	.486	.753	.839	.724	.797	.842	.754	.813	.550	.752	.611	.736	.625	.823	.833	.772

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Groups Printed- Large 2 Axle Vehicles

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	1	0	1	0	1	0	1	4
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Grand Total	0	3	0	3	0	0	0	0	0	3	0	3	0	1	0	1	7
Apprch %	0	100	0		0	0	0		0	100	0		0	100	0		
Total %	0	42.9	0	42.9	0	0	0	0	0	42.9	0	42.9	0	14.3	0	14.3	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
07:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	**1**	0	**1**	2
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	3	0	3	0	0	0	0	0	2	0	2	0	1	0	1	6
% App. Total	0	100	0		0	0	0		0	100	0		0	100	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250	.750

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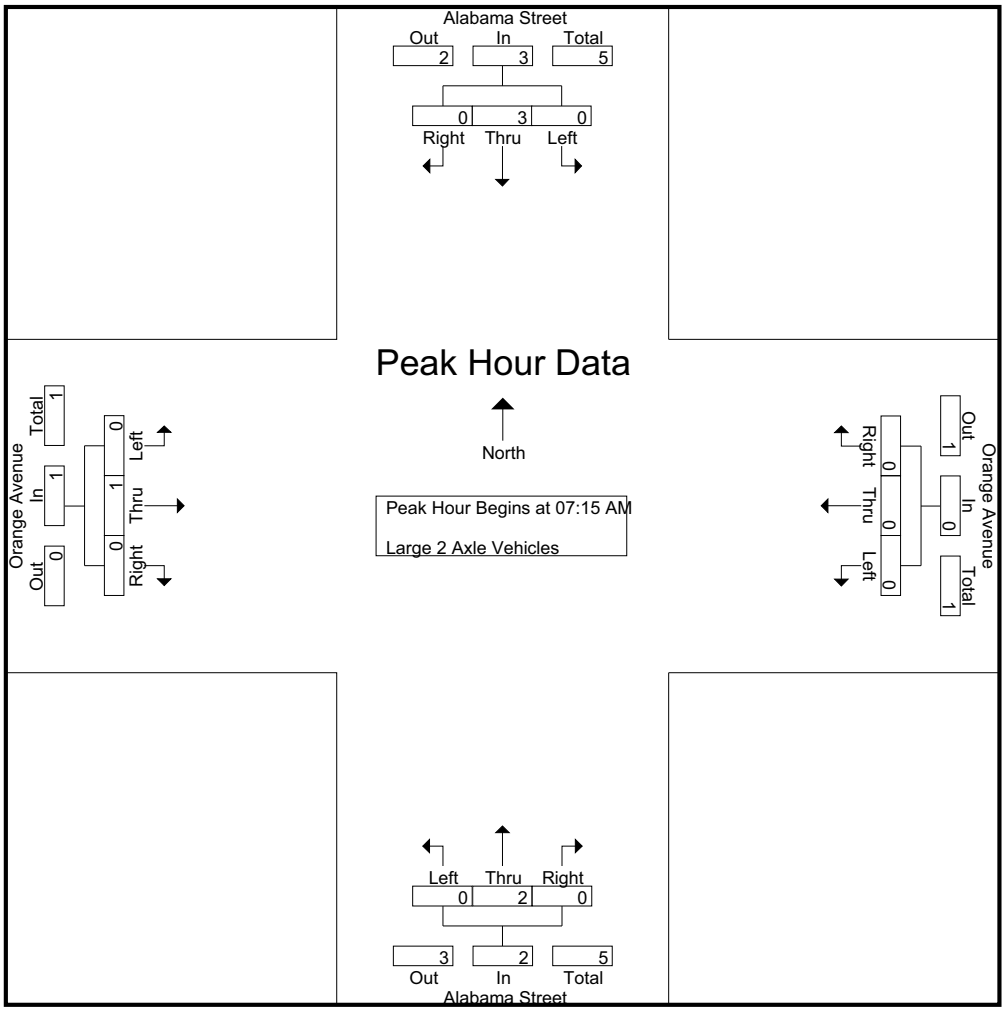

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	**1**	0	**1**
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	3	0	3	0	0	0	0	0	2	0	2	0	1	0	1
% App. Total	0	100	0		0	0	0		0	100	0		0	100	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.500	.000	.500	.000	.250	.000	.250

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City of Redlands
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E/W: Orange Avenue
Weather: Clear

File Name : 04A_RED AL OR AM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	2	1	3	0	0	0	0	0	2	0	2	0	0	0	0	5
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Grand Total	0	2	1	3	0	0	0	0	0	2	0	2	0	1	0	1	6
Apprch %	0	66.7	33.3		0	0	0		0	100	0		0	100	0		
Total %	0	33.3	16.7	50	0	0	0	0	0	33.3	0	33.3	0	16.7	0	16.7	

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

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Site Code : 07517744
Start Date : 11/1/2017
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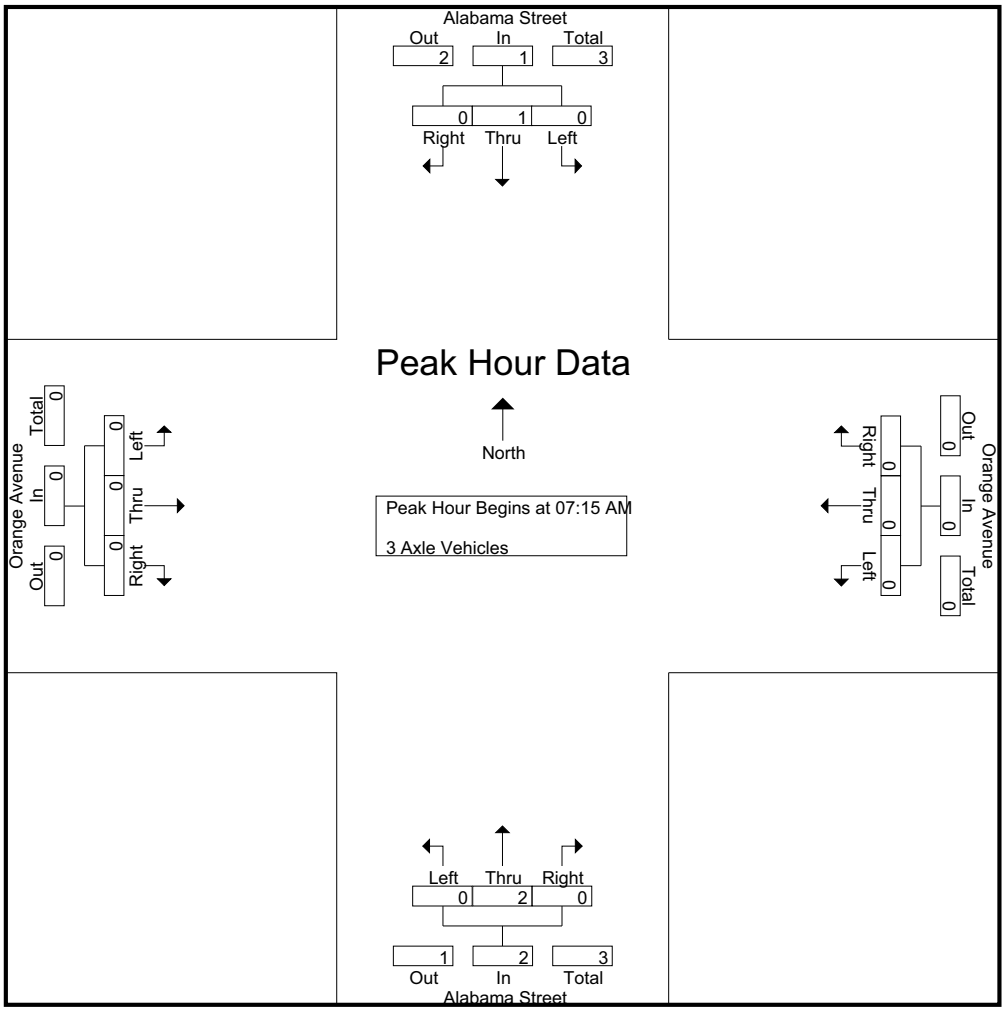

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Grand Total	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	66.7	0	66.7	0	0	0	0	0	33.3	0	33.3	0	0	0	0	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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Site Code : 07517744
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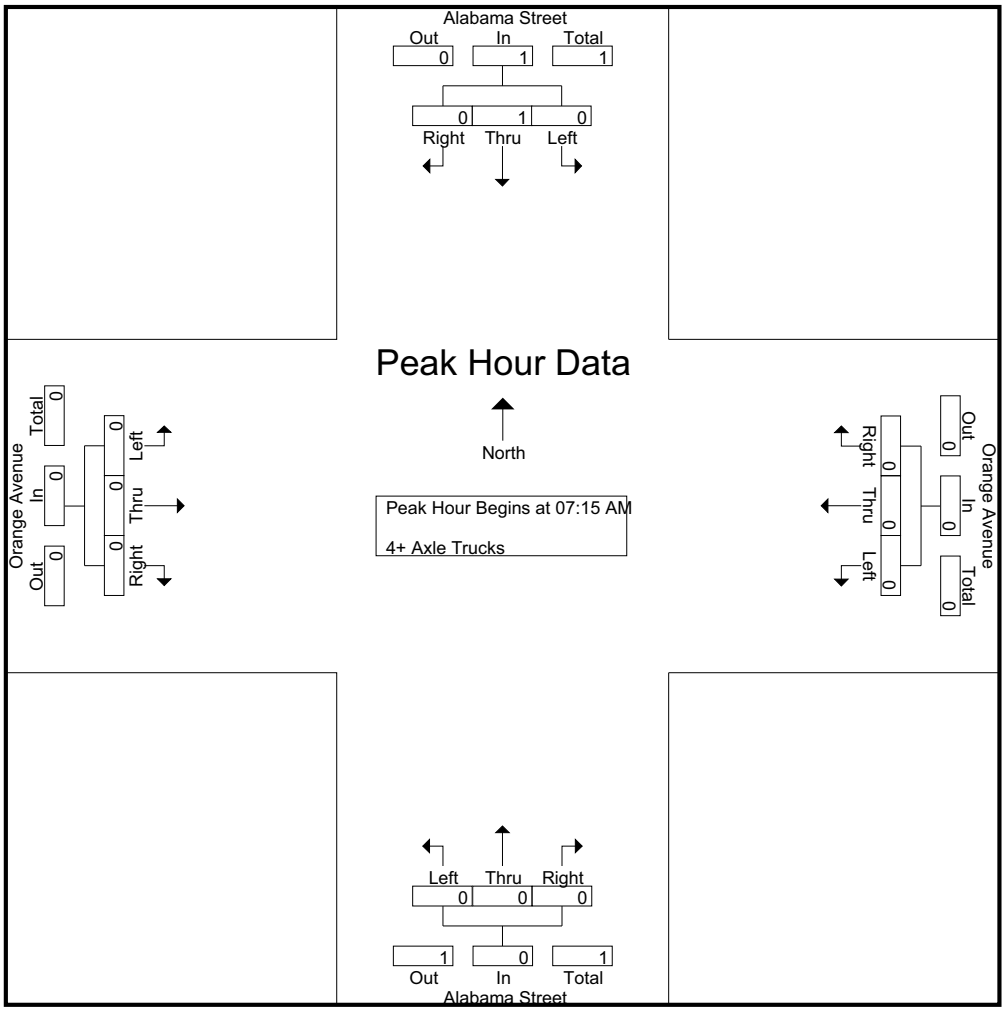

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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Weather: Clear

File Name : 04A_RED AL OR PM
Site Code : 07517744
Start Date : 11/1/2017
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Groups Printed- Passenger Vehicles - Large 2 Axle Vehicles - 3 Axle Vehicles - 4+ Axle Trucks

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	20	129	13	162	6	17	12	35	6	104	9	119	19	28	10	57	373
04:15 PM	20	119	7	146	3	12	10	25	1	88	11	100	13	15	13	41	312
04:30 PM	20	115	14	149	7	14	18	39	2	102	8	112	8	28	14	50	350
04:45 PM	30	99	11	140	5	11	21	37	2	87	11	100	11	25	17	53	330
Total	90	462	45	597	21	54	61	136	11	381	39	431	51	96	54	201	1365
05:00 PM	38	147	6	191	8	13	19	40	2	110	12	124	11	36	18	65	420
05:15 PM	29	133	8	170	3	14	30	47	5	106	16	127	7	39	16	62	406
05:30 PM	25	126	4	155	2	10	30	42	5	86	12	103	3	24	10	37	337
05:45 PM	36	146	7	189	5	10	21	36	3	118	13	134	5	19	8	32	391
Total	128	552	25	705	18	47	100	165	15	420	53	488	26	118	52	196	1554
Grand Total	218	1014	70	1302	39	101	161	301	26	801	92	919	77	214	106	397	2919
Apprch %	16.7	77.9	5.4		13	33.6	53.5		2.8	87.2	10		19.4	53.9	26.7		
Total %	7.5	34.7	2.4	44.6	1.3	3.5	5.5	10.3	0.9	27.4	3.2	31.5	2.6	7.3	3.6	13.6	
Passenger Vehicles	217	1007	69	1293	38	101	160	299	26	788	89	903	77	214	106	397	2892
% Passenger Vehicles	99.5	99.3	98.6	99.3	97.4	100	99.4	99.3	100	98.4	96.7	98.3	100	100	100	100	99.1
Large 2 Axle Vehicles	1	5	1	7	1	0	1	2	0	5	3	8	0	0	0	0	17
% Large 2 Axle Vehicles	0.5	0.5	1.4	0.5	2.6	0	0.6	0.7	0	0.6	3.3	0.9	0	0	0	0	0.6
3 Axle Vehicles	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
% 3 Axle Vehicles	0	0.2	0	0.2	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.2
4+ Axle Trucks	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
% 4+ Axle Trucks	0	0	0	0	0	0	0	0	0	0.5	0	0.4	0	0	0	0	0.1

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**38**	**147**	6	**191**	**8**	13	19	40	2	110	12	124	**11**	36	**18**	**65**	**420**
05:15 PM	29	133	**8**	170	3	**14**	**30**	**47**	**5**	106	**16**	127	7	**39**	16	62	406
05:30 PM	25	126	4	155	2	10	30	42	5	86	12	103	3	24	10	37	337
05:45 PM	36	146	7	189	5	10	21	36	3	**118**	13	**134**	5	19	8	32	391
Total Volume	128	552	25	705	18	47	100	165	15	420	53	488	26	118	52	196	1554
% App. Total	18.2	78.3	3.5		10.9	28.5	60.6		3.1	86.1	10.9		13.3	60.2	26.5		
PHF	.842	.939	.781	.923	.563	.839	.833	.878	.750	.890	.828	.910	.591	.756	.722	.754	.925

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Weather: Clear

File Name : 04A_RED AL OR PM
Site Code : 07517744
Start Date : 11/1/2017
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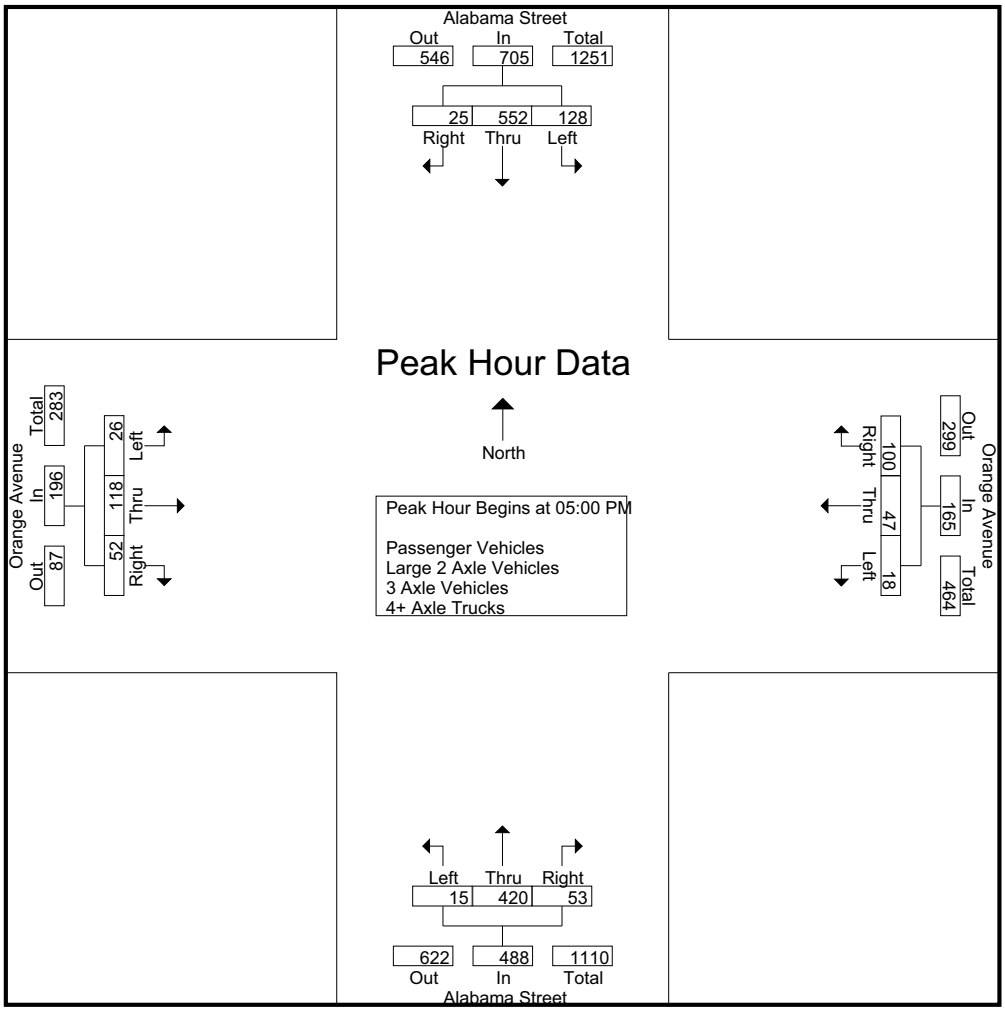

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				05:00 PM				04:30 PM			
+0 mins.	**38**	**147**	6	**191**	5	11	21	37	2	110	12	124	8	28	14	50
+15 mins.	29	133	**8**	170	**8**	13	19	40	**5**	106	**16**	127	**11**	25	17	53
+30 mins.	25	126	4	155	3	**14**	**30**	**47**	5	86	12	103	11	36	**18**	**65**
+45 mins.	36	146	7	189	2	10	30	42	3	**118**	13	**134**	7	**39**	16	62
Total Volume	128	552	25	705	18	48	100	166	15	420	53	488	37	128	65	230
% App. Total	18.2	78.3	3.5		10.8	28.9	60.2		3.1	86.1	10.9		16.1	55.7	28.3	
PHF	.842	.939	.781	.923	.563	.857	.833	.883	.750	.890	.828	.910	.841	.821	.903	.885

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Groups Printed- Passenger Vehicles

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	20	126	12	158	6	17	11	34	6	101	9	116	19	28	10	57	365
04:15 PM	20	119	7	146	3	12	10	25	1	86	10	97	13	15	13	41	309
04:30 PM	20	115	14	149	6	14	18	38	2	99	8	109	8	28	14	50	346
04:45 PM	30	98	11	139	5	11	21	37	2	85	10	97	11	25	17	53	326
Total	90	458	44	592	20	54	60	134	11	371	37	419	51	96	54	201	1346
05:00 PM	38	146	6	190	8	13	19	40	2	109	12	123	11	36	18	65	418
05:15 PM	29	132	8	169	3	14	30	47	5	106	16	127	7	39	16	62	405
05:30 PM	25	125	4	154	2	10	30	42	5	84	11	100	3	24	10	37	333
05:45 PM	35	146	7	188	5	10	21	36	3	118	13	134	5	19	8	32	390
Total	127	549	25	701	18	47	100	165	15	417	52	484	26	118	52	196	1546
Grand Total	217	1007	69	1293	38	101	160	299	26	788	89	903	77	214	106	397	2892
Apprch %	16.8	77.9	5.3		12.7	33.8	53.5		2.9	87.3	9.9		19.4	53.9	26.7		
Total %	7.5	34.8	2.4	44.7	1.3	3.5	5.5	10.3	0.9	27.2	3.1	31.2	2.7	7.4	3.7	13.7	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**38**	**146**	6	**190**	**8**	13	19	40	2	109	12	123	**11**	36	**18**	**65**	**418**
05:15 PM	29	132	**8**	169	3	**14**	**30**	**47**	**5**	106	**16**	127	7	**39**	16	62	405
05:30 PM	25	125	4	154	2	10	30	42	5	84	11	100	3	24	10	37	333
05:45 PM	35	146	7	188	5	10	21	36	3	**118**	13	**134**	5	19	8	32	390
Total Volume	127	549	25	701	18	47	100	165	15	417	52	484	26	118	52	196	1546
% App. Total	18.1	78.3	3.6		10.9	28.5	60.6		3.1	86.2	10.7		13.3	60.2	26.5		
PHF	.836	.940	.781	.922	.563	.839	.833	.878	.750	.883	.813	.903	.591	.756	.722	.754	.925

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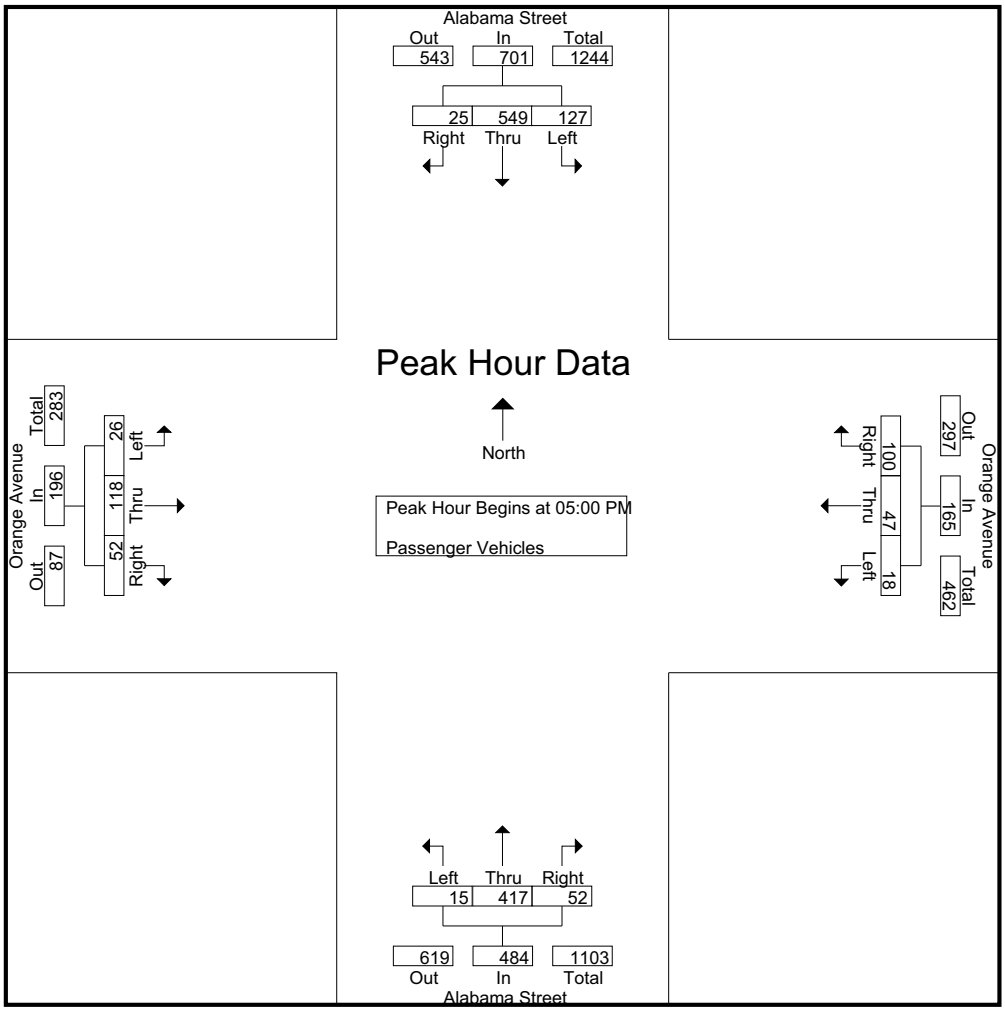

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**38**	**146**	6	**190**	**8**	13	19	40	2	109	12	123	**11**	36	**18**	**65**
+15 mins.	29	132	**8**	169	3	**14**	**30**	**47**	**5**	106	**16**	127	7	**39**	16	62
+30 mins.	25	125	4	154	2	10	30	42	5	84	11	100	3	24	10	37
+45 mins.	35	146	7	188	5	10	21	36	3	**118**	13	**134**	5	19	8	32
Total Volume	127	549	25	701	18	47	100	165	15	417	52	484	26	118	52	196
% App. Total	18.1	78.3	3.6		10.9	28.5	60.6		3.1	86.2	10.7		13.3	60.2	26.5	
PHF	.836	.940	.781	.922	.563	.839	.833	.878	.750	.883	.813	.903	.591	.756	.722	.754

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File Name : 04A_RED AL OR PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- Large 2 Axle Vehicles

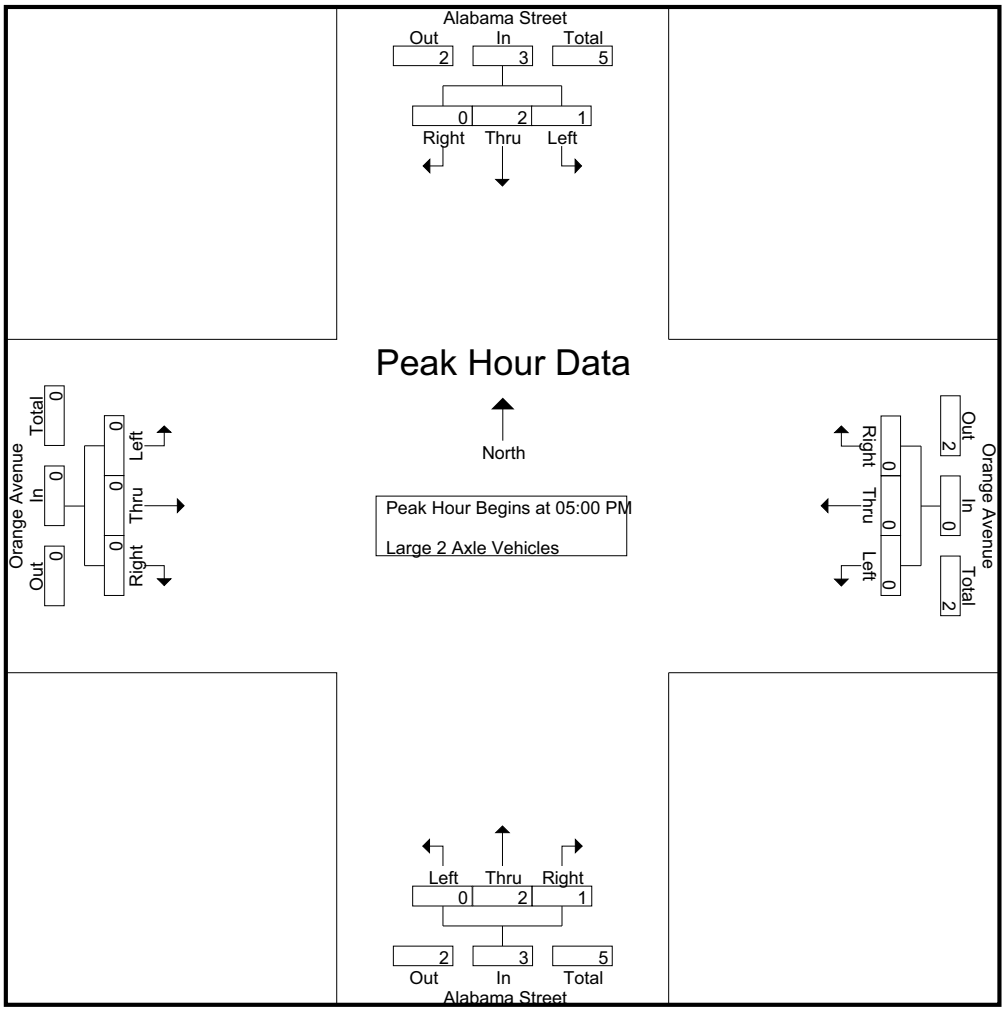
	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	1	3	0	0	1	1	0	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	2
04:30 PM	0	0	0	0	1	0	0	1	0	2	0	2	0	0	0	0	3
04:45 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
Total	0	3	1	4	1	0	1	2	0	3	2	5	0	0	0	0	11
05:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:15 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	1	1	2	0	0	0	0	3
05:45 PM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	1	2	0	3	0	0	0	0	0	2	1	3	0	0	0	0	6
Grand Total	1	5	1	7	1	0	1	2	0	5	3	8	0	0	0	0	17
Apprch %	14.3	71.4	14.3		50	0	50		0	62.5	37.5		0	0	0		
Total %	5.9	29.4	5.9	41.2	5.9	0	5.9	11.8	0	29.4	17.6	47.1	0	0	0	0	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0	1
05:15 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	1	**1**	**2**	0	0	0	0	**3**
05:45 PM	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	1	2	0	3	0	0	0	0	0	2	1	3	0	0	0	0	6
% App. Total	33.3	66.7	0		0	0	0		0	66.7	33.3		0	0	0		
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.500	.250	.375	.000	.000	.000	.000	.500

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

City of Redlands
N/S: Alabama Street
E/W: Orange Avenue
Weather: Clear

File Name : 04A_RED AL OR PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	**1**	0	1	0	0	0	0
+15 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	1	**1**	**2**	0	0	0	0
+45 mins.	**1**	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	1	2	0	3	0	0	0	0	0	2	1	3	0	0	0	0
% App. Total	33.3	66.7	0		0	0	0		0	66.7	33.3		0	0	0	
PHF	.250	.500	.000	.750	.000	.000	.000	.000	.000	.500	.250	.375	.000	.000	.000	.000

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E/W: Orange Avenue
Weather: Clear

File Name : 04A_RED AL OR PM
Site Code : 07517744
Start Date : 11/1/2017
Page No : 1

Groups Printed- 3 Axle Vehicles

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	33.3	0	33.3	0	0	0	0	0	66.7	0	66.7	0	0	0	0	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	**1**
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

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City of Redlands
N/S: Alabama Street
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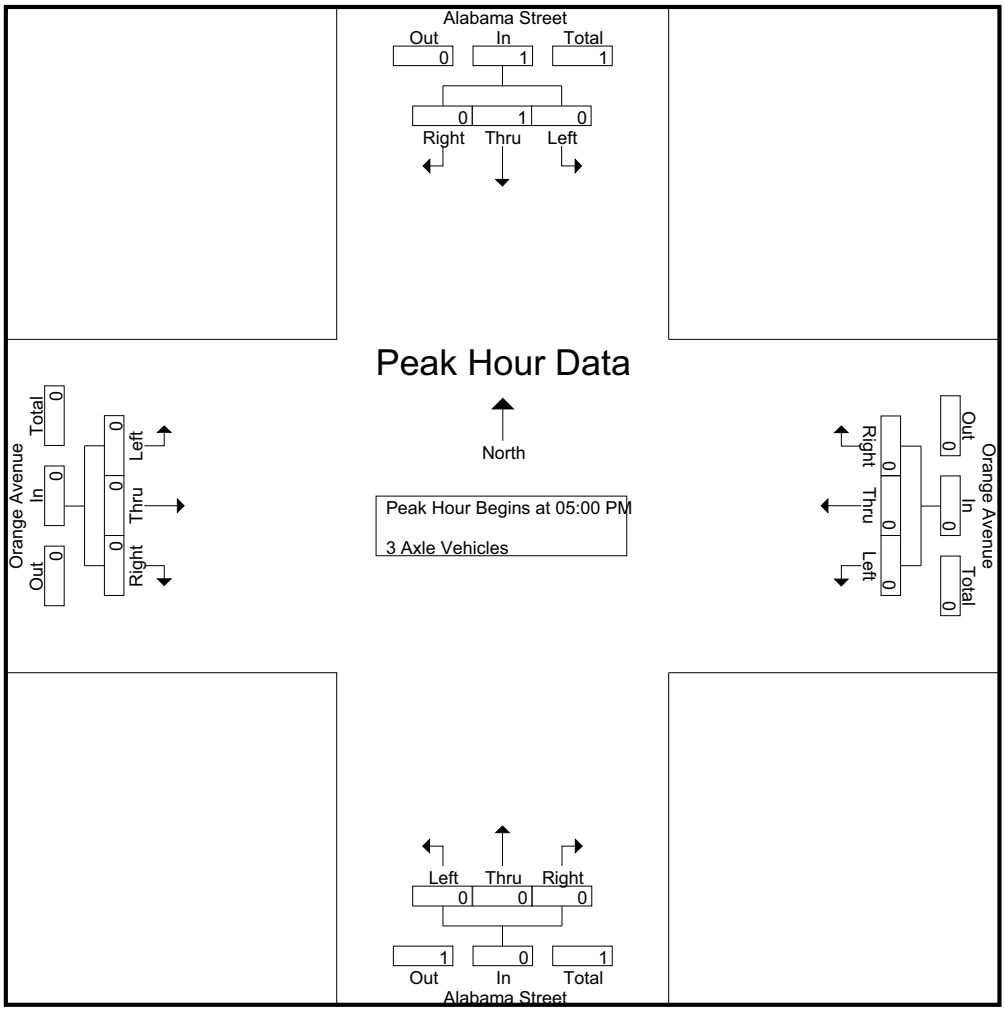
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	100	0		0	0	0		0	0	0		0	0	0	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Start Date : 11/1/2017
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Groups Printed- 4+ Axle Trucks

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	4
Apprch %	0	0	0		0	0	0		0	100	0		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	100	0	100	0	0	0	0	

	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**1**
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000	.250

Counts Unlimited
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Corona, CA 92878
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City of Redlands
N/S: Alabama Street
E/W: Orange Avenue
Weather: Clear

File Name : 04A_RED AL OR PM
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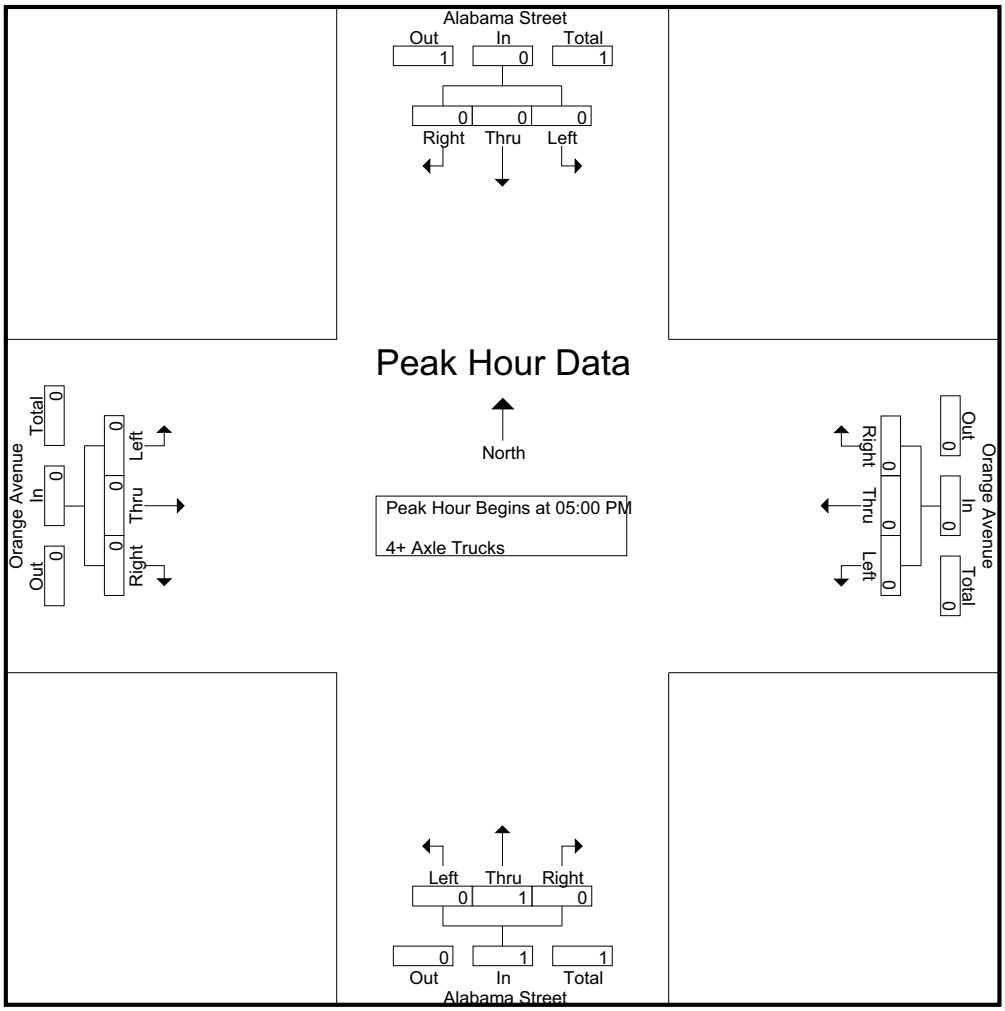
Page No : 2



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

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
% App. Total	0	0	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.250	.000	.000	.000	.000

APPENDIX D

TRAVEL DEMAND MODEL PLOTS

AVERAGE DAILY TRAFFIC

Regional Travel Model ID	INTERSECTION	LEG	MODEL 2012 ADT	EXISTING 2017 ADT	MODEL 2040 ADT	FUTURE 2040 ADT[1]	OPENING 2020 ADT
1	Iowa Street at:	North	922	**2,300**	3,379	3,400	2,600
	Orange Street	South	922	**2,600**	3,379	3,400	2,900
		East	1,585	**3,600**	5,449	6,000	4,000
		West	1,585	**3,400**	5,449	6,000	3,800
2	Alabama Street at:	North	24,226	**22,300**	31,600	31,600	23,100
	Redlands Boulevard	South	14,345	**17,100**	16,640	19,000	17,300
		East	15,085	**18,000**	21,176	21,200	18,700
		West	3,687	**20,600**	5,928	22,400	20,900
3	Alabama Street at:	North	14,345	**15,800**	16,640	16,600	16,000
	Park Avenue	South	14,063	**15,400**	16,106	16,100	15,600
		East	1,229	**3,600**	1,335	3,700	3,600
		West	4,185	**2,000**	5,791	5,800	2,200
4	Alabama Street at:	North	14,048	**14,900**	16,106	17,700	15,100
	Citrus Street	South	14,286	**14,400**	16,855	18,500	14,700
		East	1,108	**4,100**	2,767	5,500	4,300
		West	-	**2,500**	-	2,500	2,500
5	Alabama Street at:	North	14,238	**14,900**	16,855	18,500	15,200
	Orange Street	South	9,765	**14,400**	8,130	14,500	14,600
		East	5,243	**4,100**	7,744	8,500	4,400
		West	1,585	**2,500**	5,449	6,000	2,900
6	Project West Access at:	North	-		-	-	-
	Orange Street	South	-		-	-	-
		East	1,585	**3,600**	5,449	6,000	4,000
		West	1,585	**3,600**	5,449	6,000	4,000
7	Project East Access at:	North	-		-	-	-
	Orange Street	South	-		-	-	-
		East	1,585	**3,600**	5,449	5,990	4,000
		West	1,585	**3,600**	5,449	6,000	4,000
8	Alabama Street at:	North	9,765	**14,400**	8,130	14,500	14,600
	Project South Access	South	9,765	**14,400**	8,130	14,500	14,600
		East	-		-	-	-
		West	-		-	-	-
9			-		-	-	-
			-		-	-	-
			-		-	-	-
			-		-	-	-
10			-		-	-	-
			-		-	-	-
			-		-	-	-
			-		-	-	-

Adjusted for minimum 10% growth over existing average daily traffic volumes for year 2040.

Iowa Street (NS) / Orange Avenue (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**53**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**72**	IN ...	**170**	BOUND	THRU	**88**	IN ...	**150**
	RIGHT	**30**	OUT ...	**140**		RIGHT	**39**	OUT ...	**110**
SOUTH	LEFT	**3**	NORTH LEG		SOUTH	LEFT	**21**	NORTH LEG	
BOUND	THRU	**44**	IN ...	**50**	BOUND	THRU	**52**	IN ...	**120**
	RIGHT	**4**	OUT ...	**110**		RIGHT	**24**	OUT ...	**110**
EAST	LEFT	**8**	WEST LEG		EAST	LEFT	**7**	WEST LEG	
BOUND	THRU	**96**	IN ...	**150**	BOUND	THRU	**164**	IN ...	**220**
	RIGHT	**37**	OUT ...	**210**		RIGHT	**22**	OUT ...	**120**
WEST	LEFT	**57**	EAST LEG		WEST	LEFT	**14**	EAST LEG	
BOUND	THRU	**123**	IN ...	**230**	BOUND	THRU	**70**	IN ...	**100**
	RIGHT	**18**	OUT ...	**140**		RIGHT	**5**	OUT ...	**250**

YEAR 2020 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**53**	**58**	NORTH LEG	NORTH	LEFT	**12**	**13**	NORTH LEG	
BOUND	THRU	**72**	**79**	RATIO **6.5%**	BOUND	THRU	**88**	**96**	RATIO **9.3%**	
	RIGHT	**30**	**32**	ADT 2,480		RIGHT	**39**	**41**	ADT 2,480	
SOUTH	LEFT	**3**	**3**	SOUTH LEG	SOUTH	LEFT	**21**	**25**	SOUTH LEG	
BOUND	THRU	**44**	**45**	RATIO **11.3%**	BOUND	THRU	**52**	**66**	RATIO **9.3%**	
	RIGHT	**4**	**4**	ADT 2,780		RIGHT	**24**	**29**	ADT 2,780	
EAST	LEFT	**8**	**9**	EAST LEG	EAST	LEFT	**7**	**8**	EAST LEG	
BOUND	THRU	**96**	**104**	RATIO **9.5%**	BOUND	THRU	**164**	**185**	RATIO **9.0%**	
	RIGHT	**37**	**38**	ADT 3,880		RIGHT	**22**	**27**	ADT 3,880	
WEST	LEFT	**57**	**61**	WEST LEG	WEST	LEFT	**14**	**16**	WEST LEG	
BOUND	THRU	**123**	**147**	RATIO **9.8%**	BOUND	THRU	**70**	**78**	RATIO **9.2%**	
	RIGHT	**18**	**22**	ADT 3,680		RIGHT	**5**	**6**	ADT 3,680	

Alabama Street (NS) / Redlands Boulevard (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**82**	SOUTH LEG		NORTH	LEFT	**89**	SOUTH LEG	
BOUND	THRU	**533**	IN ...	**650**	BOUND	THRU	**584**	IN ...	**800**
	RIGHT	**26**	OUT ...	**610**		RIGHT	**102**	OUT ...	**720**
SOUTH	LEFT	**89**	NORTH LEG		SOUTH	LEFT	**149**	NORTH LEG	
BOUND	THRU	**497**	IN ...	**840**	BOUND	THRU	**518**	IN ...	**880**
	RIGHT	**222**	OUT ...	**780**		RIGHT	**169**	OUT ...	**1,160**
EAST	LEFT	**100**	WEST LEG		EAST	LEFT	**362**	WEST LEG	
BOUND	THRU	**175**	IN ...	**330**	BOUND	THRU	**700**	IN ...	**1,190**
	RIGHT	**50**	OUT ...	**690**		RIGHT	**102**	OUT ...	**640**
WEST	LEFT	**44**	EAST LEG		WEST	LEFT	**89**	EAST LEG	
BOUND	THRU	**367**	IN ...	**560**	BOUND	THRU	**368**	IN ...	**650**
	RIGHT	**109**	OUT ...	**310**		RIGHT	**159**	OUT ...	**1,000**

YEAR 2020 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**82**	**84**	NORTH LEG	NORTH	LEFT	**89**	**92**	NORTH LEG	
BOUND	THRU	**533**	**550**	RATIO **7.1%**	BOUND	THRU	**584**	**609**	RATIO **8.9%**	
	RIGHT	**26**	**27**	ADT 22,800		RIGHT	**102**	**107**	ADT 22,800	
SOUTH	LEFT	**89**	**101**	SOUTH LEG	SOUTH	LEFT	**149**	**170**	SOUTH LEG	
BOUND	THRU	**497**	**516**	RATIO **7.4%**	BOUND	THRU	**518**	**534**	RATIO **8.9%**	
	RIGHT	**222**	**228**	ADT 17,300		RIGHT	**169**	**176**	ADT 17,300	
EAST	LEFT	**100**	**103**	EAST LEG	EAST	LEFT	**362**	**372**	EAST LEG	
BOUND	THRU	**175**	**181**	RATIO **4.7%**	BOUND	THRU	**700**	**723**	RATIO **9.0%**	
	RIGHT	**50**	**51**	ADT 18,400		RIGHT	**102**	**105**	ADT 18,400	
WEST	LEFT	**44**	**47**	WEST LEG	WEST	LEFT	**89**	**92**	WEST LEG	
BOUND	THRU	**367**	**388**	RATIO **5.0%**	BOUND	THRU	**368**	**380**	RATIO **8.9%**	
	RIGHT	**109**	**128**	ADT 20,800		RIGHT	**159**	**179**	ADT 20,800	

Alabama Street (NS) / Park Avenue (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**16**	SOUTH LEG		NORTH	LEFT	**14**	SOUTH LEG	
BOUND	THRU	**580**	IN ...	**640**	BOUND	THRU	**598**	IN ...	**680**
	RIGHT	**32**	OUT ...	**480**		RIGHT	**46**	OUT ...	**690**
SOUTH	LEFT	**81**	NORTH LEG		SOUTH	LEFT	**50**	NORTH LEG	
BOUND	THRU	**452**	IN ...	**590**	BOUND	THRU	**625**	IN ...	**700**
	RIGHT	**38**	OUT ...	**640**		RIGHT	**13**	OUT ...	**710**
EAST	LEFT	**12**	WEST LEG		EAST	LEFT	**16**	WEST LEG	
BOUND	THRU	**26**	IN ...	**50**	BOUND	THRU	**69**	IN ...	**120**
	RIGHT	**8**	OUT ...	**100**		RIGHT	**22**	OUT ...	**70**
WEST	LEFT	**12**	EAST LEG		WEST	LEFT	**35**	EAST LEG	
BOUND	THRU	**25**	IN ...	**80**	BOUND	THRU	**40**	IN ...	**150**
	RIGHT	**42**	OUT ...	**140**		RIGHT	**75**	OUT ...	**170**

YEAR 2020 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**16**	**21**	NORTH LEG		NORTH	LEFT	**14**	**15**	NORTH LEG	
BOUND	THRU	**580**	**597**	RATIO	**7.8%**	BOUND	THRU	**598**	**617**	RATIO	**8.9%**
	RIGHT	**32**	**33**	ADT	16,000		RIGHT	**46**	**47**	ADT	16,000
SOUTH	LEFT	**81**	**83**	SOUTH LEG		SOUTH	LEFT	**50**	**51**	SOUTH LEG	
BOUND	THRU	**452**	**465**	RATIO	**7.3%**	BOUND	THRU	**625**	**643**	RATIO	**8.9%**
	RIGHT	**38**	**50**	ADT	15,500		RIGHT	**13**	**14**	ADT	15,500
EAST	LEFT	**12**	**13**	EAST LEG		EAST	LEFT	**16**	**19**	EAST LEG	
BOUND	THRU	**26**	**28**	RATIO	**6.3%**	BOUND	THRU	**69**	**76**	RATIO	**9.0%**
	RIGHT	**8**	**9**	ADT	3,630		RIGHT	**22**	**25**	ADT	3,630
WEST	LEFT	**12**	**12**	WEST LEG		WEST	LEFT	**35**	**36**	WEST LEG	
BOUND	THRU	**25**	**30**	RATIO	**7.2%**	BOUND	THRU	**40**	**41**	RATIO	**9.0%**
	RIGHT	**42**	**43**	ADT	2,110		RIGHT	**75**	**77**	ADT	2,110

Alabama Street (NS) / Citrus Avenue (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**14**	SOUTH LEG		NORTH	LEFT	**10**	SOUTH LEG	
BOUND	THRU	**576**	IN ...	**640**	BOUND	THRU	**511**	IN ...	**570**
	RIGHT	**44**	OUT ...	**380**		RIGHT	**26**	OUT ...	**720**
SOUTH	LEFT	**45**	NORTH LEG		SOUTH	LEFT	**51**	NORTH LEG	
BOUND	THRU	**342**	IN ...	**410**	BOUND	THRU	**626**	IN ...	**710**
	RIGHT	**13**	OUT ...	**650**		RIGHT	**19**	OUT ...	**620**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**14**	WEST LEG	
BOUND	THRU	**78**	IN ...	**100**	BOUND	THRU	**79**	IN ...	**120**
	RIGHT	**7**	OUT ...	**110**		RIGHT	**22**	OUT ...	**100**
WEST	LEFT	**15**	EAST LEG		WEST	LEFT	**58**	EAST LEG	
BOUND	THRU	**79**	IN ...	**150**	BOUND	THRU	**73**	IN ...	**210**
	RIGHT	**50**	OUT ...	**170**		RIGHT	**71**	OUT ...	**170**

YEAR 2020 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**14**	**14**	NORTH LEG	NORTH	LEFT	**10**	**10**	NORTH LEG	
BOUND	THRU	**576**	**593**	RATIO **7.2%**	BOUND	THRU	**511**	**531**	RATIO **8.9%**	
	RIGHT	**44**	**46**	ADT 15,000		RIGHT	**26**	**29**	ADT 15,000	
SOUTH	LEFT	**45**	**46**	SOUTH LEG	SOUTH	LEFT	**51**	**56**	SOUTH LEG	
BOUND	THRU	**342**	**356**	RATIO **7.1%**	BOUND	THRU	**626**	**644**	RATIO **8.9%**	
	RIGHT	**13**	**13**	ADT 14,600		RIGHT	**19**	**20**	ADT 14,600	
EAST	LEFT	**14**	**14**	EAST LEG	EAST	LEFT	**14**	**14**	EAST LEG	
BOUND	THRU	**78**	**80**	RATIO **7.7%**	BOUND	THRU	**79**	**85**	RATIO **9.1%**	
	RIGHT	**7**	**7**	ADT 4,220		RIGHT	**22**	**23**	ADT 4,220	
WEST	LEFT	**15**	**16**	WEST LEG	WEST	LEFT	**58**	**62**	WEST LEG	
BOUND	THRU	**79**	**83**	RATIO **8.4%**	BOUND	THRU	**73**	**75**	RATIO **9.0%**	
	RIGHT	**50**	**52**	ADT 2,520		RIGHT	**71**	**76**	ADT 2,520	

Alabama Street (NS) / Orange Avenue (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2020 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2020 TOTAL
NORTH	LEFT	**14**	SOUTH LEG		NORTH	LEFT	**10**	SOUTH LEG	
BOUND	THRU	**576**	IN ...	**630**	BOUND	THRU	**511**	IN ...	**550**
	RIGHT	**44**	OUT ...	**360**		RIGHT	**26**	OUT ...	**710**
SOUTH	LEFT	**45**	NORTH LEG		SOUTH	LEFT	**51**	NORTH LEG	
BOUND	THRU	**342**	IN ...	**420**	BOUND	THRU	**626**	IN ...	**710**
	RIGHT	**13**	OUT ...	**650**		RIGHT	**19**	OUT ...	**620**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**14**	WEST LEG	
BOUND	THRU	**78**	IN ...	**110**	BOUND	THRU	**79**	IN ...	**150**
	RIGHT	**7**	OUT ...	**140**		RIGHT	**22**	OUT ...	**110**
WEST	LEFT	**15**	EAST LEG		WEST	LEFT	**58**	EAST LEG	
BOUND	THRU	**79**	IN ...	**160**	BOUND	THRU	**73**	IN ...	**210**
	RIGHT	**50**	OUT ...	**180**		RIGHT	**71**	OUT ...	**180**

YEAR 2020 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2020 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**14**	**18**	NORTH LEG		NORTH	LEFT	**10**	**10**	NORTH LEG	
BOUND	THRU	**576**	**593**	RATIO	**7.2%**	BOUND	THRU	**511**	**526**	RATIO	**8.9%**
	RIGHT	**44**	**45**	ADT	15,100		RIGHT	**26**	**27**	ADT	15,100
SOUTH	LEFT	**45**	**54**	SOUTH LEG		SOUTH	LEFT	**51**	**54**	SOUTH LEG	
BOUND	THRU	**342**	**352**	RATIO	**7.1%**	BOUND	THRU	**626**	**644**	RATIO	**8.9%**
	RIGHT	**13**	**22**	ADT	14,500		RIGHT	**19**	**22**	ADT	14,500
EAST	LEFT	**14**	**18**	EAST LEG		EAST	LEFT	**14**	**21**	EAST LEG	
BOUND	THRU	**78**	**87**	RATIO	**8.2%**	BOUND	THRU	**79**	**102**	RATIO	**9.3%**
	RIGHT	**7**	**7**	ADT	4,280		RIGHT	**22**	**27**	ADT	4,280
WEST	LEFT	**15**	**15**	WEST LEG		WEST	LEFT	**58**	**60**	WEST LEG	
BOUND	THRU	**79**	**100**	RATIO	**9.1%**	BOUND	THRU	**73**	**78**	RATIO	**9.4%**
	RIGHT	**50**	**51**	ADT	2,780		RIGHT	**71**	**79**	ADT	2,780

Iowa Street (NS) / Orange Avenue (EW) - #1

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**53**	SOUTH LEG		NORTH	LEFT	**12**	SOUTH LEG	
BOUND	THRU	**72**	IN ...	**270**	BOUND	THRU	**88**	IN ...	**200**
	RIGHT	**30**	OUT ...	**170**		RIGHT	**39**	OUT ...	**220**
SOUTH	LEFT	**3**	NORTH LEG		SOUTH	LEFT	**21**	NORTH LEG	
BOUND	THRU	**44**	IN ...	**80**	BOUND	THRU	**52**	IN ...	**230**
	RIGHT	**4**	OUT ...	**210**		RIGHT	**24**	OUT ...	**160**
EAST	LEFT	**8**	WEST LEG		EAST	LEFT	**7**	WEST LEG	
BOUND	THRU	**96**	IN ...	**190**	BOUND	THRU	**164**	IN ...	**410**
	RIGHT	**37**	OUT ...	**390**		RIGHT	**22**	OUT ...	**190**
WEST	LEFT	**57**	EAST LEG		WEST	LEFT	**14**	EAST LEG	
BOUND	THRU	**123**	IN ...	**410**	BOUND	THRU	**70**	IN ...	**170**
	RIGHT	**18**	OUT ...	**180**		RIGHT	**5**	OUT ...	**440**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**53**	**89**	NORTH LEG	NORTH	LEFT	**12**	**15**	NORTH LEG	
BOUND	THRU	**72**	**143**	RATIO **8.6%**	BOUND	THRU	**88**	**133**	RATIO **11.6%**	
	RIGHT	**30**	**38**	ADT 3,380		RIGHT	**39**	**53**	ADT 3,380	
SOUTH	LEFT	**3**	**6**	SOUTH LEG	SOUTH	LEFT	**21**	**47**	SOUTH LEG	
BOUND	THRU	**44**	**63**	RATIO **13.2%**	BOUND	THRU	**52**	**135**	RATIO **12.5%**	
	RIGHT	**4**	**11**	ADT 3,380		RIGHT	**24**	**49**	ADT 3,380	
EAST	LEFT	**8**	**18**	EAST LEG	EAST	LEFT	**7**	**16**	EAST LEG	
BOUND	THRU	**96**	**136**	RATIO **9.9%**	BOUND	THRU	**164**	**341**	RATIO **10.2%**	
	RIGHT	**37**	**41**	ADT 5,990		RIGHT	**22**	**53**	ADT 5,990	
WEST	LEFT	**57**	**71**	WEST LEG	WEST	LEFT	**14**	**32**	WEST LEG	
BOUND	THRU	**123**	**290**	RATIO **9.8%**	BOUND	THRU	**70**	**127**	RATIO **10.0%**	
	RIGHT	**18**	**50**	ADT 5,990		RIGHT	**5**	**11**	ADT 5,990	

Alabama Street (NS) / Redlands Boulevard (EW) - #2

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**82**	SOUTH LEG		NORTH	LEFT	**89**	SOUTH LEG	
BOUND	THRU	**533**	IN ...	**710**	BOUND	THRU	**584**	IN ...	**940**
	RIGHT	**26**	OUT ...	**750**		RIGHT	**102**	OUT ...	**760**
SOUTH	LEFT	**89**	NORTH LEG		SOUTH	LEFT	**149**	NORTH LEG	
BOUND	THRU	**497**	IN ...	**1,070**	BOUND	THRU	**518**	IN ...	**1,130**
	RIGHT	**222**	OUT ...	**1,020**		RIGHT	**169**	OUT ...	**1,460**
EAST	LEFT	**100**	WEST LEG		EAST	LEFT	**362**	WEST LEG	
BOUND	THRU	**175**	IN ...	**360**	BOUND	THRU	**700**	IN ...	**1,380**
	RIGHT	**50**	OUT ...	**790**		RIGHT	**102**	OUT ...	**710**
WEST	LEFT	**44**	EAST LEG		WEST	LEFT	**89**	EAST LEG	
BOUND	THRU	**367**	IN ...	**830**	BOUND	THRU	**368**	IN ...	**830**
	RIGHT	**109**	OUT ...	**410**		RIGHT	**159**	OUT ...	**1,340**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**82**	**90**	NORTH LEG	NORTH	LEFT	**89**	**98**	NORTH LEG	
BOUND	THRU	**533**	**630**	RATIO **6.6%**	BOUND	THRU	**584**	**733**	RATIO **8.2%**	
	RIGHT	**26**	**30**	ADT 31,600		RIGHT	**102**	**137**	ADT 31,600	
SOUTH	LEFT	**89**	**177**	SOUTH LEG	SOUTH	LEFT	**149**	**321**	SOUTH LEG	
BOUND	THRU	**497**	**644**	RATIO **8.0%**	BOUND	THRU	**518**	**595**	RATIO **9.3%**	
	RIGHT	**222**	**246**	ADT 19,000		RIGHT	**169**	**210**	ADT 19,000	
EAST	LEFT	**100**	**120**	EAST LEG	EAST	LEFT	**362**	**427**	EAST LEG	
BOUND	THRU	**175**	**203**	RATIO **5.8%**	BOUND	THRU	**700**	**882**	RATIO **10.2%**	
	RIGHT	**50**	**55**	ADT 21,200		RIGHT	**102**	**112**	ADT 21,200	
WEST	LEFT	**44**	**69**	WEST LEG	WEST	LEFT	**89**	**98**	WEST LEG	
BOUND	THRU	**367**	**491**	RATIO **5.4%**	BOUND	THRU	**368**	**431**	RATIO **9.6%**	
	RIGHT	**109**	**270**	ADT 22,400		RIGHT	**159**	**301**	ADT 22,400	

Alabama Street (NS) / Park Avenue (EW) - #3

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**16**	SOUTH LEG		NORTH	LEFT	**14**	SOUTH LEG	
BOUND	THRU	**580**	IN ...	**720**	BOUND	THRU	**598**	IN ...	**790**
	RIGHT	**32**	OUT ...	**570**		RIGHT	**46**	OUT ...	**750**
SOUTH	LEFT	**81**	NORTH LEG		SOUTH	LEFT	**50**	NORTH LEG	
BOUND	THRU	**452**	IN ...	**730**	BOUND	THRU	**625**	IN ...	**750**
	RIGHT	**38**	OUT ...	**700**		RIGHT	**13**	OUT ...	**850**
EAST	LEFT	**12**	WEST LEG		EAST	LEFT	**16**	WEST LEG	
BOUND	THRU	**26**	IN ...	**70**	BOUND	THRU	**69**	IN ...	**200**
	RIGHT	**8**	OUT ...	**200**		RIGHT	**22**	OUT ...	**100**
WEST	LEFT	**12**	EAST LEG		WEST	LEFT	**35**	EAST LEG	
BOUND	THRU	**25**	IN ...	**90**	BOUND	THRU	**40**	IN ...	**170**
	RIGHT	**42**	OUT ...	**150**		RIGHT	**75**	OUT ...	**190**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS						EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP		APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**16**	**44**	NORTH LEG		NORTH	LEFT	**14**	**22**	NORTH LEG	
BOUND	THRU	**580**	**648**	RATIO	**8.8%**	BOUND	THRU	**598**	**729**	RATIO	**9.7%**
	RIGHT	**32**	**35**	ADT	16,600		RIGHT	**46**	**51**	ADT	16,600
SOUTH	LEFT	**81**	**89**	SOUTH LEG		SOUTH	LEFT	**50**	**55**	SOUTH LEG	
BOUND	THRU	**452**	**547**	RATIO	**8.1%**	BOUND	THRU	**625**	**688**	RATIO	**9.8%**
	RIGHT	**38**	**108**	ADT	16,100		RIGHT	**13**	**22**	ADT	16,100
EAST	LEFT	**12**	**20**	EAST LEG		EAST	LEFT	**16**	**40**	EAST LEG	
BOUND	THRU	**26**	**37**	RATIO	**7.3%**	BOUND	THRU	**69**	**112**	RATIO	**10.7%**
	RIGHT	**8**	**14**	ADT	3,690		RIGHT	**22**	**46**	ADT	3,690
WEST	LEFT	**12**	**13**	WEST LEG		WEST	LEFT	**35**	**39**	WEST LEG	
BOUND	THRU	**25**	**48**	RATIO	**4.7%**	BOUND	THRU	**40**	**56**	RATIO	**5.1%**
	RIGHT	**42**	**46**	ADT	5,790		RIGHT	**75**	**83**	ADT	5,790

Alabama Street (NS) / Citrus Avenue (EW) - #4

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**14**	SOUTH LEG		NORTH	LEFT	**10**	SOUTH LEG	
BOUND	THRU	**576**	IN ...	**720**	BOUND	THRU	**511**	IN ...	**720**
	RIGHT	**44**	OUT ...	**480**		RIGHT	**26**	OUT ...	**780**
SOUTH	LEFT	**45**	NORTH LEG		SOUTH	LEFT	**51**	NORTH LEG	
BOUND	THRU	**342**	IN ...	**500**	BOUND	THRU	**626**	IN ...	**770**
	RIGHT	**13**	OUT ...	**730**		RIGHT	**19**	OUT ...	**730**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**14**	WEST LEG	
BOUND	THRU	**78**	IN ...	**110**	BOUND	THRU	**79**	IN ...	**130**
	RIGHT	**7**	OUT ...	**120**		RIGHT	**22**	OUT ...	**110**
WEST	LEFT	**15**	EAST LEG		WEST	LEFT	**58**	EAST LEG	
BOUND	THRU	**79**	IN ...	**200**	BOUND	THRU	**73**	IN ...	**250**
	RIGHT	**50**	OUT ...	**190**		RIGHT	**71**	OUT ...	**260**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**14**	**15**	NORTH LEG	NORTH	LEFT	**10**	**12**	NORTH LEG	
BOUND	THRU	**576**	**643**	RATIO **7.0%**	BOUND	THRU	**511**	**639**	RATIO **8.7%**	
	RIGHT	**44**	**54**	ADT 17,700		RIGHT	**26**	**67**	ADT 17,700	
SOUTH	LEFT	**45**	**50**	SOUTH LEG	SOUTH	LEFT	**51**	**89**	SOUTH LEG	
BOUND	THRU	**342**	**442**	RATIO **6.4%**	BOUND	THRU	**626**	**689**	RATIO **8.2%**	
	RIGHT	**13**	**14**	ADT 18,500		RIGHT	**19**	**21**	ADT 18,500	
EAST	LEFT	**14**	**15**	EAST LEG	EAST	LEFT	**14**	**15**	EAST LEG	
BOUND	THRU	**78**	**86**	RATIO **7.1%**	BOUND	THRU	**79**	**104**	RATIO **9.4%**	
	RIGHT	**7**	**9**	ADT 5,460		RIGHT	**22**	**24**	ADT 5,460	
WEST	LEFT	**15**	**29**	WEST LEG	WEST	LEFT	**58**	**87**	WEST LEG	
BOUND	THRU	**79**	**96**	RATIO **9.3%**	BOUND	THRU	**73**	**82**	RATIO **10.2%**	
	RIGHT	**50**	**73**	ADT 2,530		RIGHT	**71**	**82**	ADT 2,530	

Alabama Street (NS) / Orange Avenue (EW) - #5

FUTURE DIRECTIONAL TURN VOLUMES FROM FUTURE DIRECTIONAL LINK VOLUMES

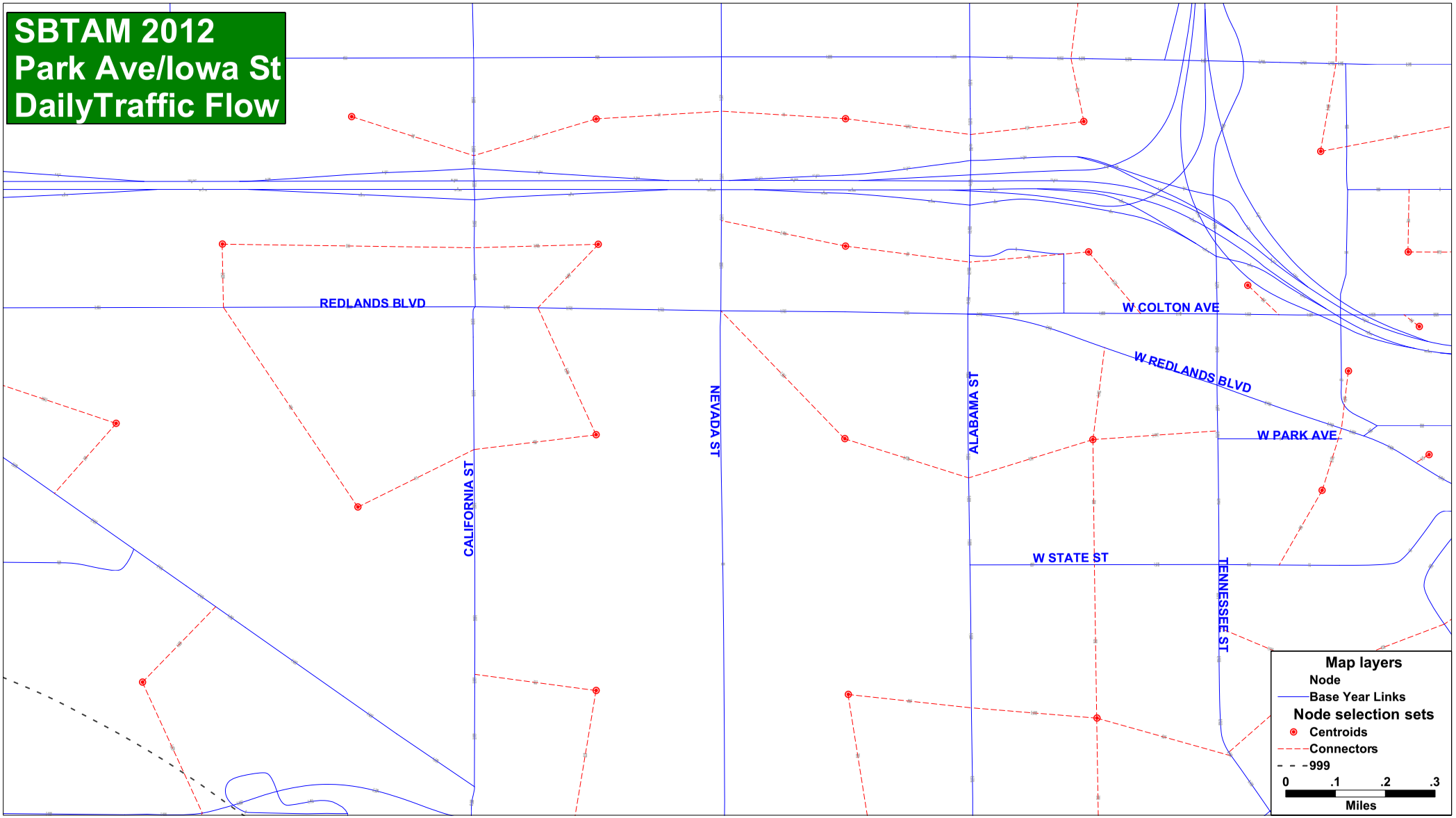
NCHRP 255

YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**14**	SOUTH LEG		NORTH	LEFT	**10**	SOUTH LEG	
BOUND	THRU	**576**	IN ...	**630**	BOUND	THRU	**511**	IN ...	**550**
	RIGHT	**44**	OUT ...	**360**		RIGHT	**26**	OUT ...	**710**
SOUTH	LEFT	**45**	NORTH LEG		SOUTH	LEFT	**51**	NORTH LEG	
BOUND	THRU	**342**	IN ...	**520**	BOUND	THRU	**626**	IN ...	**770**
	RIGHT	**13**	OUT ...	**730**		RIGHT	**19**	OUT ...	**770**
EAST	LEFT	**14**	WEST LEG		EAST	LEFT	**14**	WEST LEG	
BOUND	THRU	**78**	IN ...	**150**	BOUND	THRU	**79**	IN ...	**340**
	RIGHT	**7**	OUT ...	**320**		RIGHT	**22**	OUT ...	**180**
WEST	LEFT	**15**	EAST LEG		WEST	LEFT	**58**	EAST LEG	
BOUND	THRU	**79**	IN ...	**260**	BOUND	THRU	**73**	IN ...	**270**
	RIGHT	**50**	OUT ...	**210**		RIGHT	**71**	OUT ...	**300**

YEAR 2040 TRAFFIC CONDITIONS										
MORNING PEAK HOUR RESULTS					EVENING PEAK HOUR RESULTS					
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	YEAR 2040 FORECAST	PEAK - DAILY RELATIONSHIP	
NORTH	LEFT	**14**	**28**	NORTH LEG	NORTH	LEFT	**10**	**11**	NORTH LEG	
BOUND	THRU	**576**	**634**	RATIO **7.0%**	BOUND	THRU	**511**	**562**	RATIO **8.6%**	
	RIGHT	**44**	**48**	ADT 18,500		RIGHT	**26**	**29**	ADT 18,500	
SOUTH	LEFT	**45**	**81**	SOUTH LEG	SOUTH	LEFT	**51**	**73**	SOUTH LEG	
BOUND	THRU	**342**	**376**	RATIO **7.7%**	BOUND	THRU	**626**	**689**	RATIO **9.6%**	
	RIGHT	**13**	**94**	ADT 14,500		RIGHT	**19**	**55**	ADT 14,500	
EAST	LEFT	**14**	**42**	EAST LEG	EAST	LEFT	**14**	**87**	EAST LEG	
BOUND	THRU	**78**	**107**	RATIO **6.1%**	BOUND	THRU	**79**	**215**	RATIO **7.3%**	
	RIGHT	**7**	**8**	ADT 8,520		RIGHT	**22**	**43**	ADT 8,520	
WEST	LEFT	**15**	**17**	WEST LEG	WEST	LEFT	**58**	**64**	WEST LEG	
BOUND	THRU	**79**	**198**	RATIO **8.0%**	BOUND	THRU	**73**	**116**	RATIO **8.8%**	
	RIGHT	**50**	**67**	ADT 5,990		RIGHT	**71**	**129**	ADT 5,990	

APPENDIX E

POST-PROCESSING WORKSHEETS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Park Ave/Iowa St
DailyTraffic Flow
REDLANDS BLVD
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CALIFORNIA ST
NEVADA ST
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TENNESSEE ST
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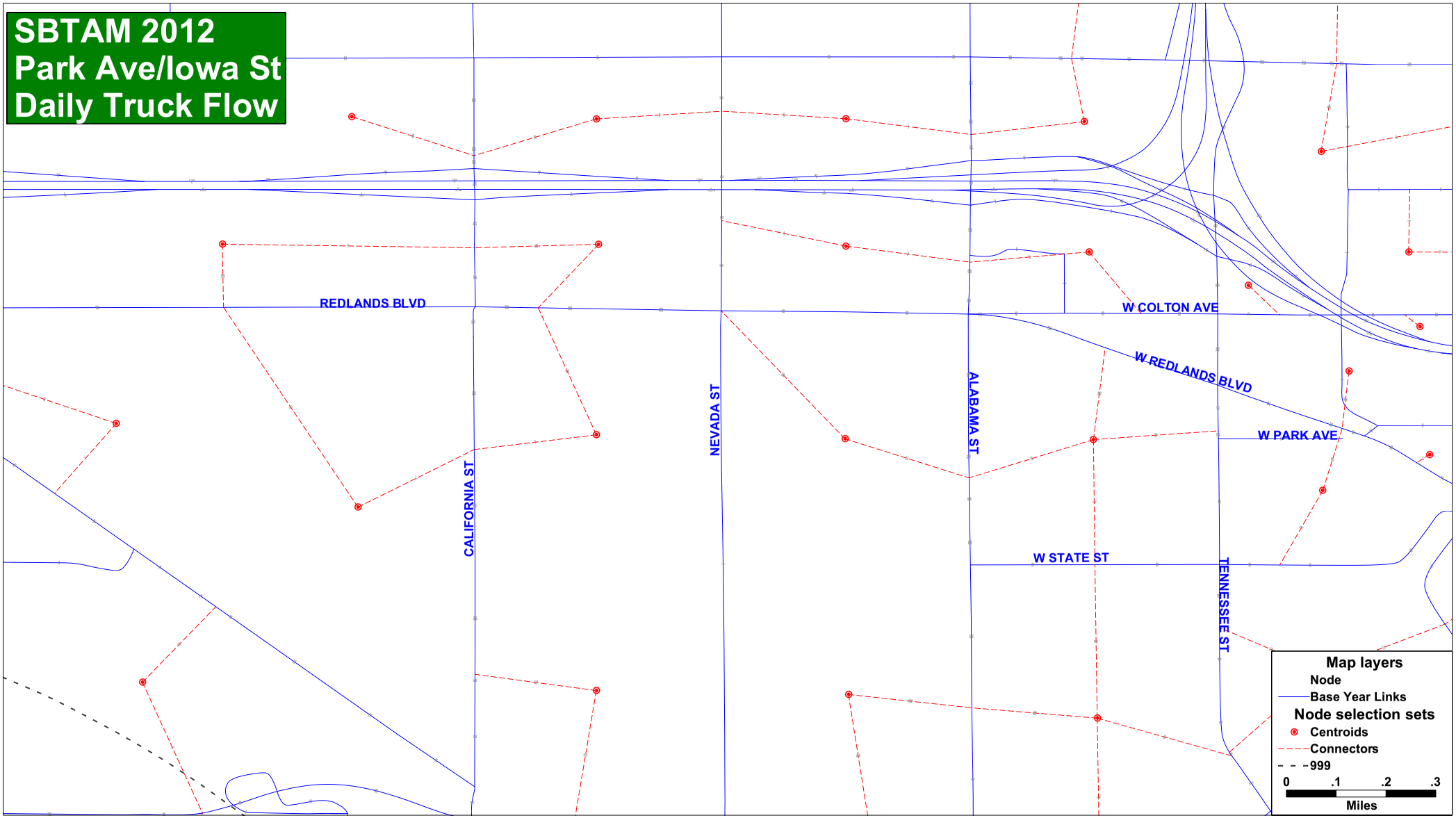
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Daily Truck Flow
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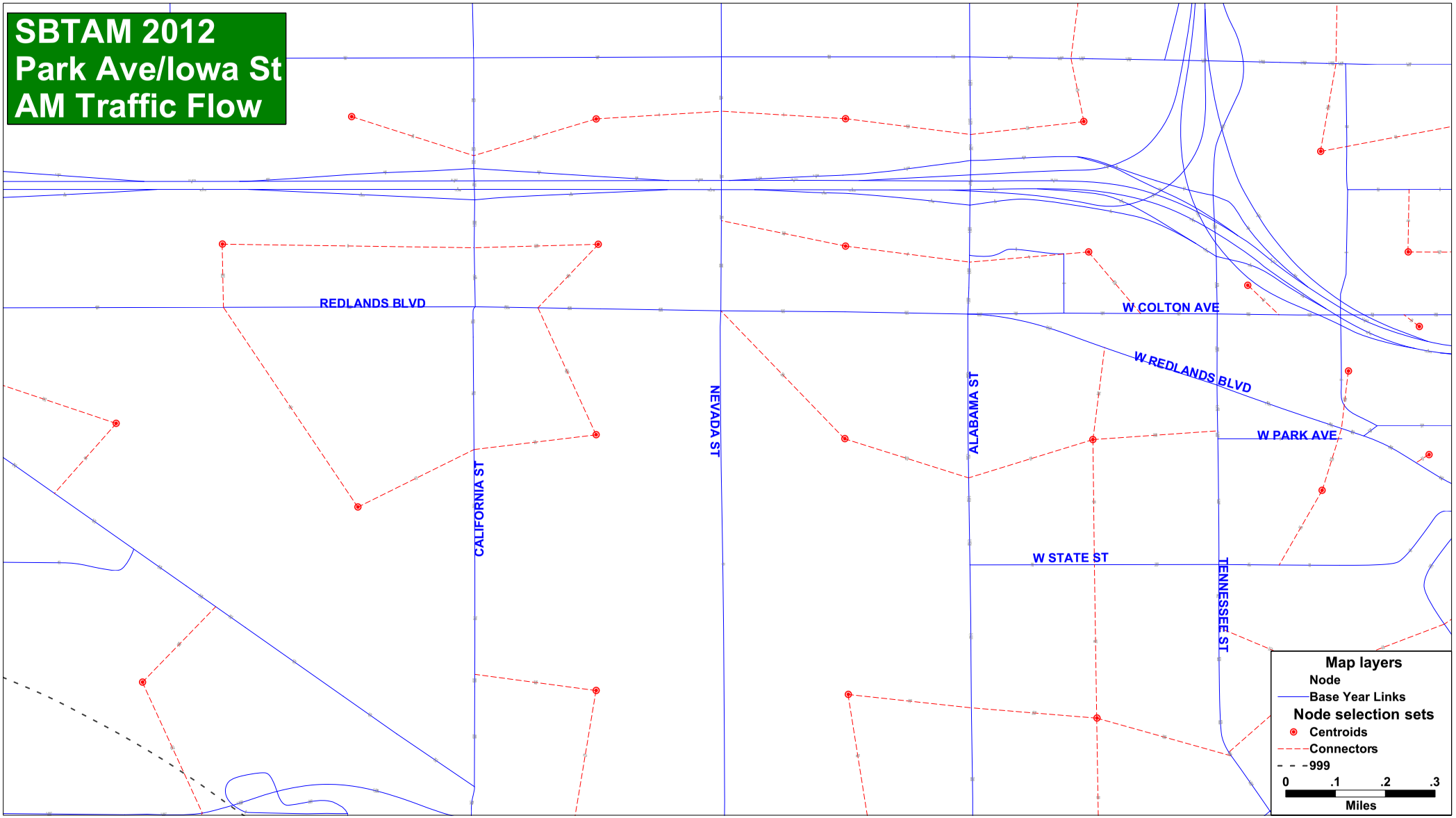
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REDLANDS BLVD
CALIFORNIA ST
NEVADA ST
ALABAMA ST
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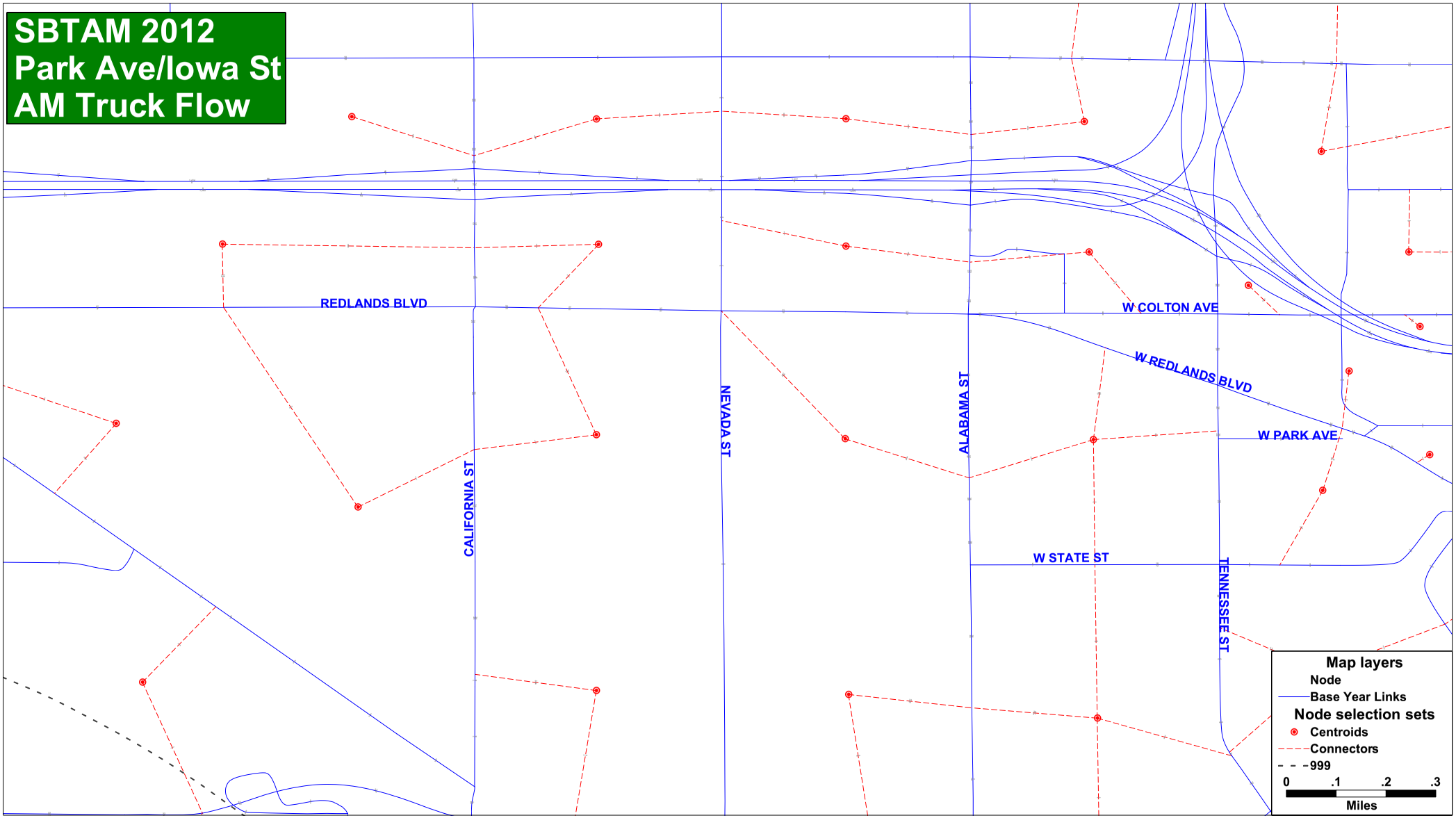
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AM Truck Flow
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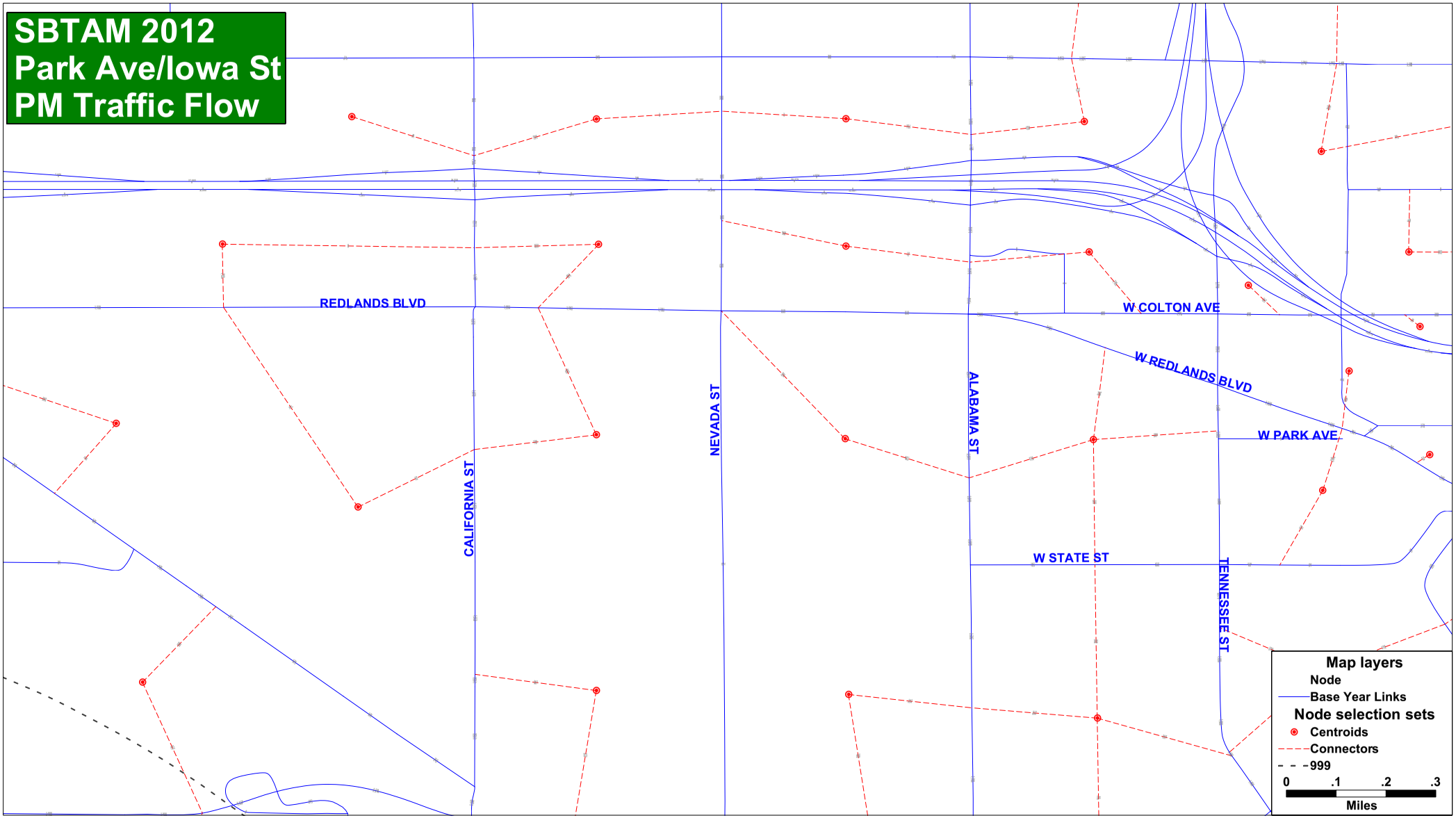
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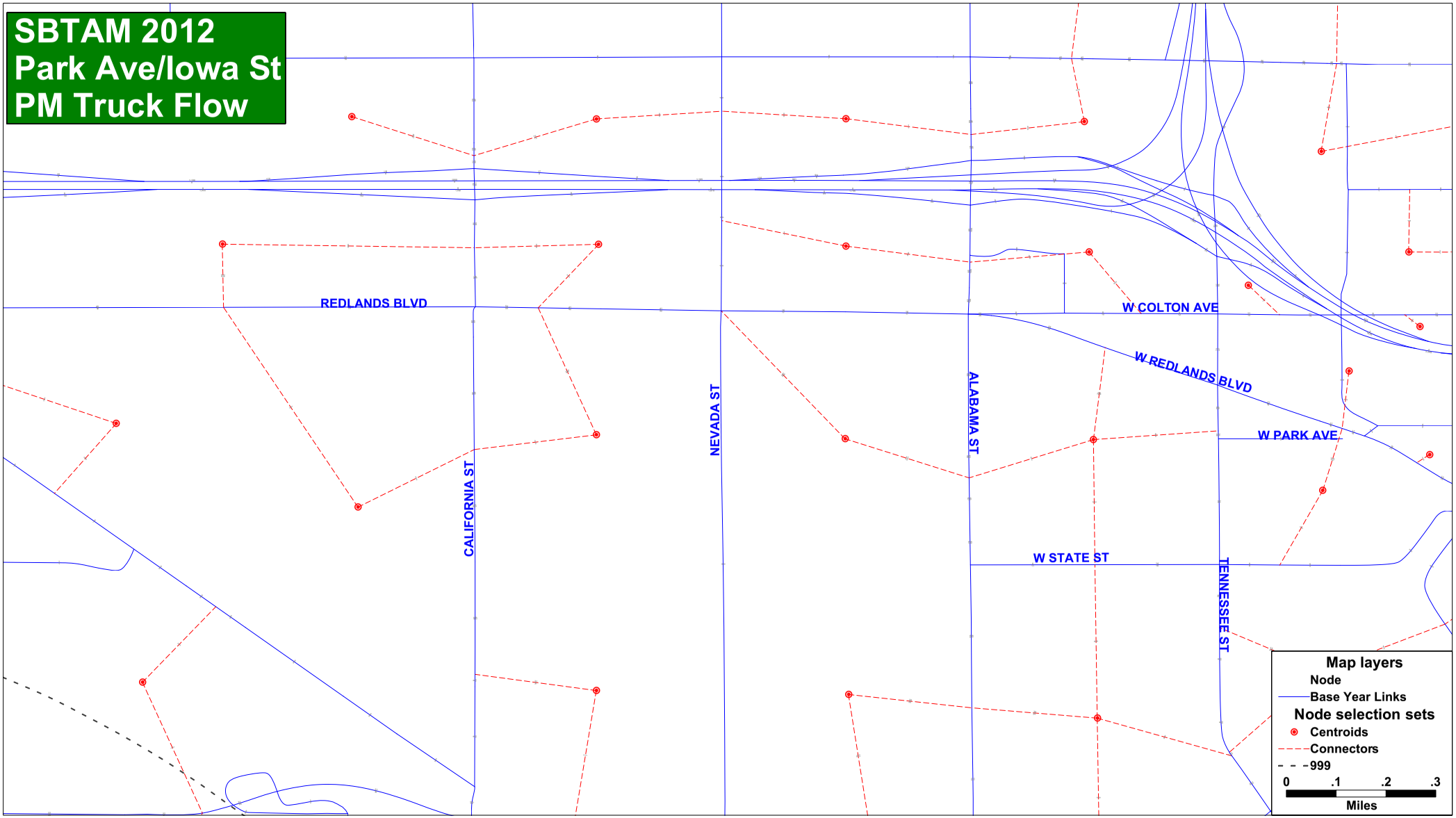
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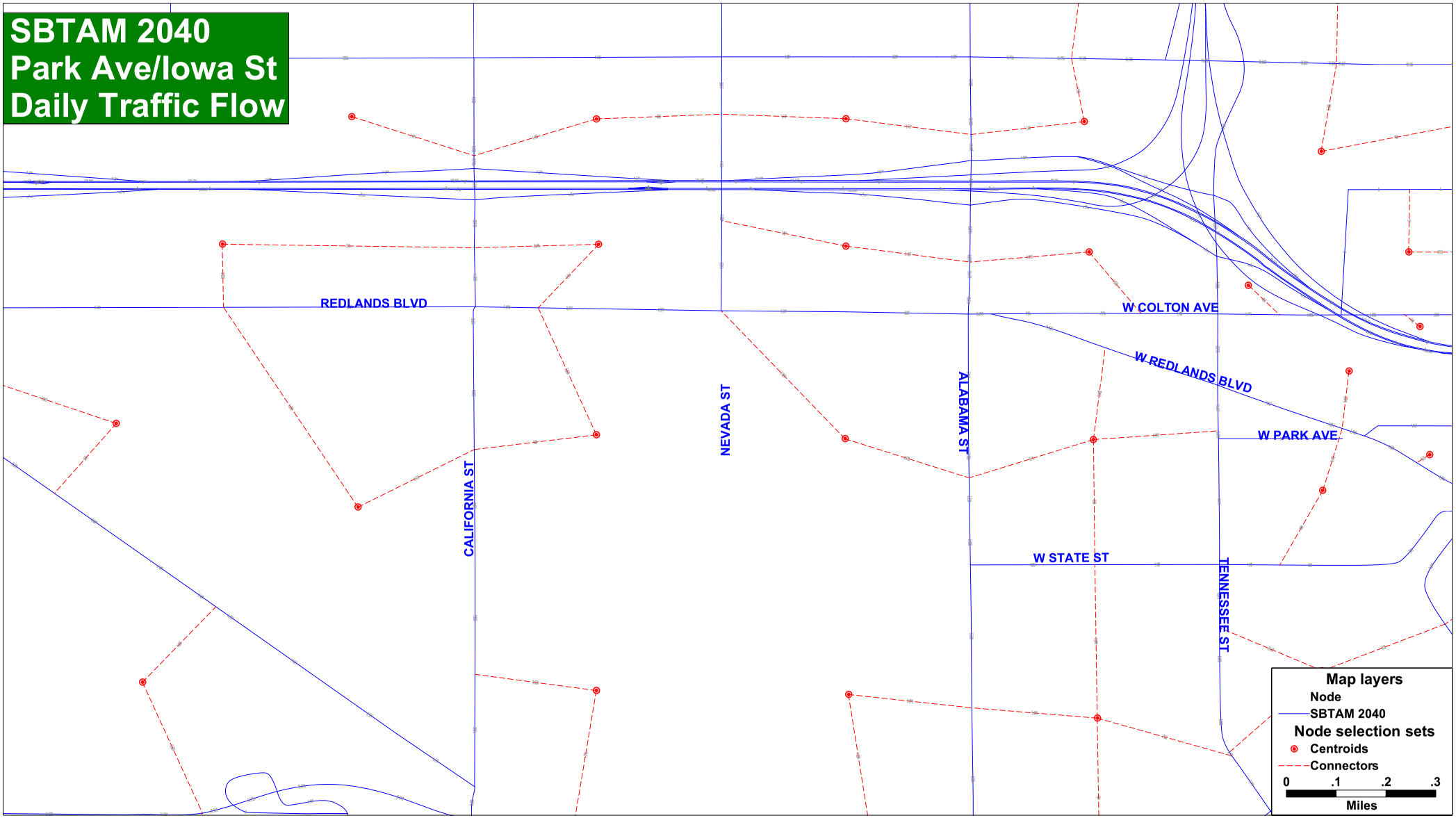
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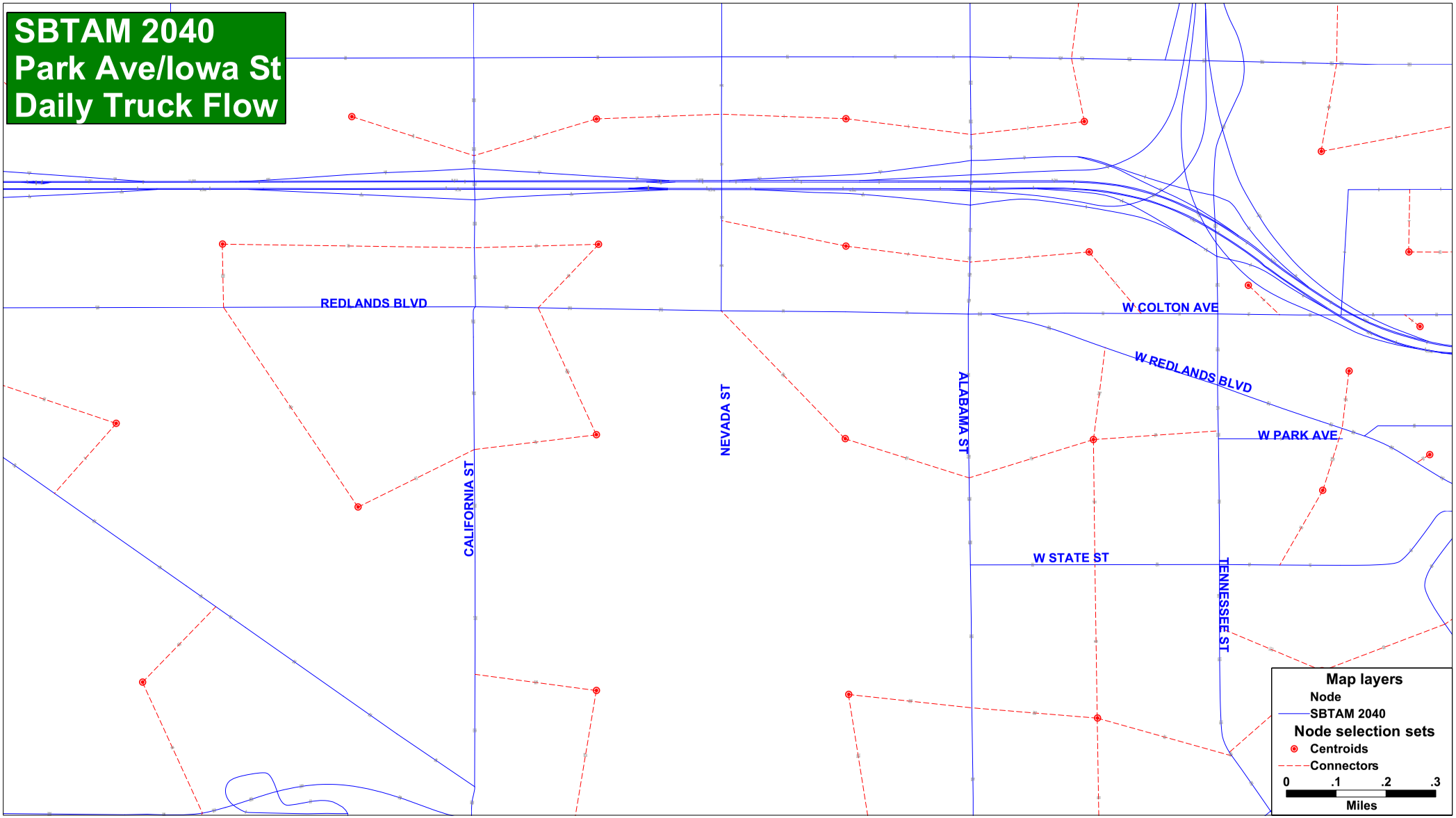
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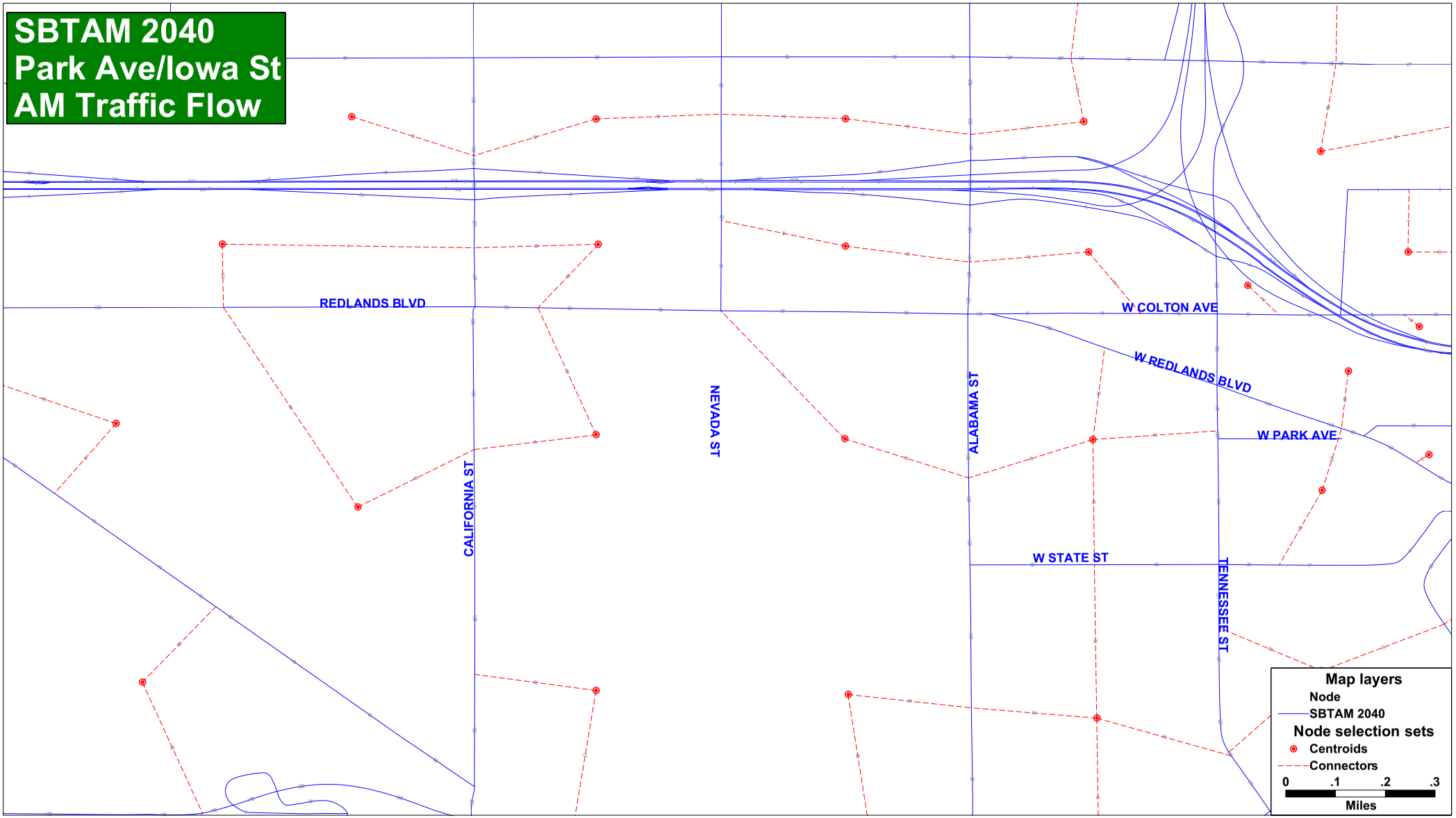
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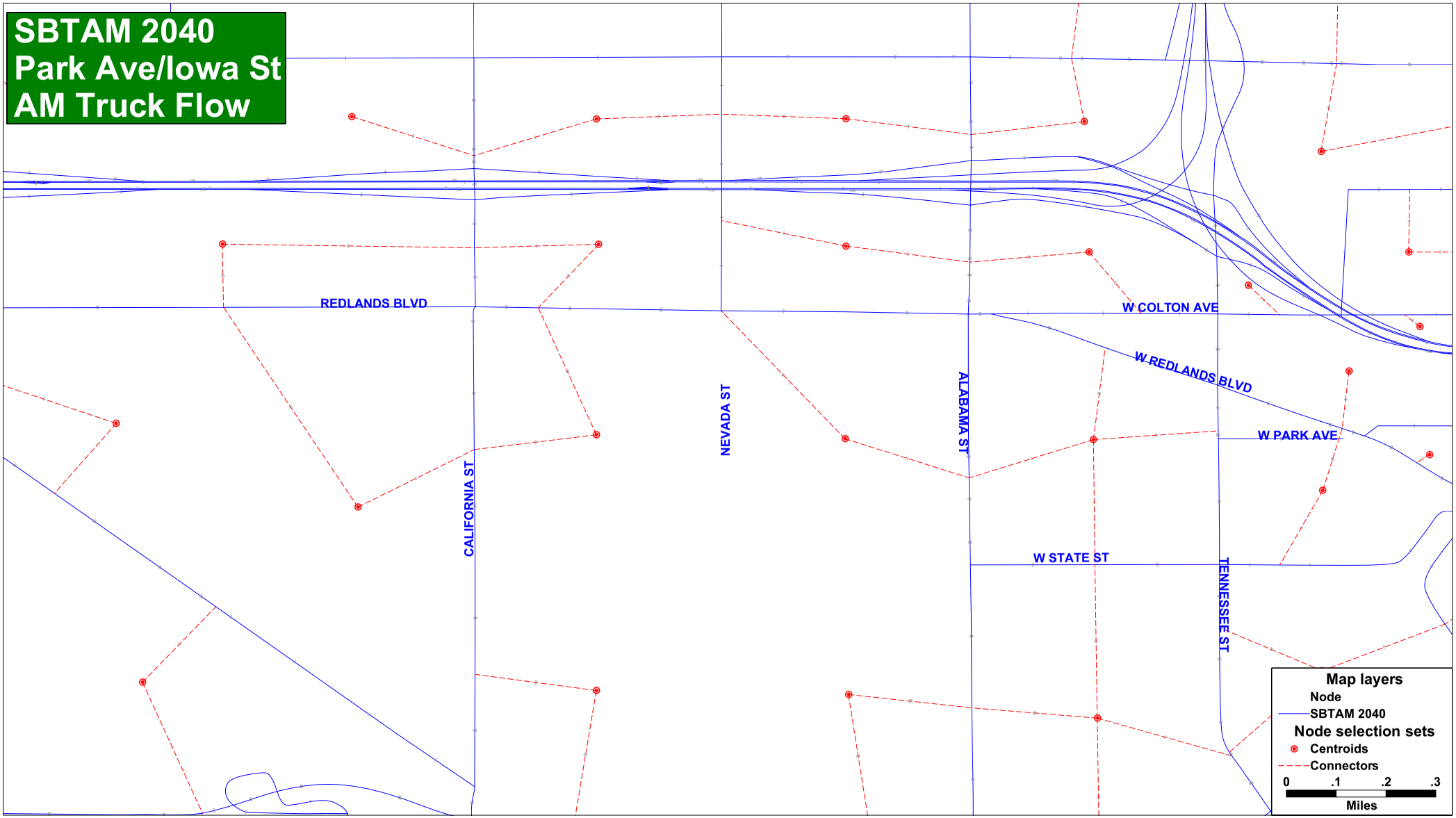
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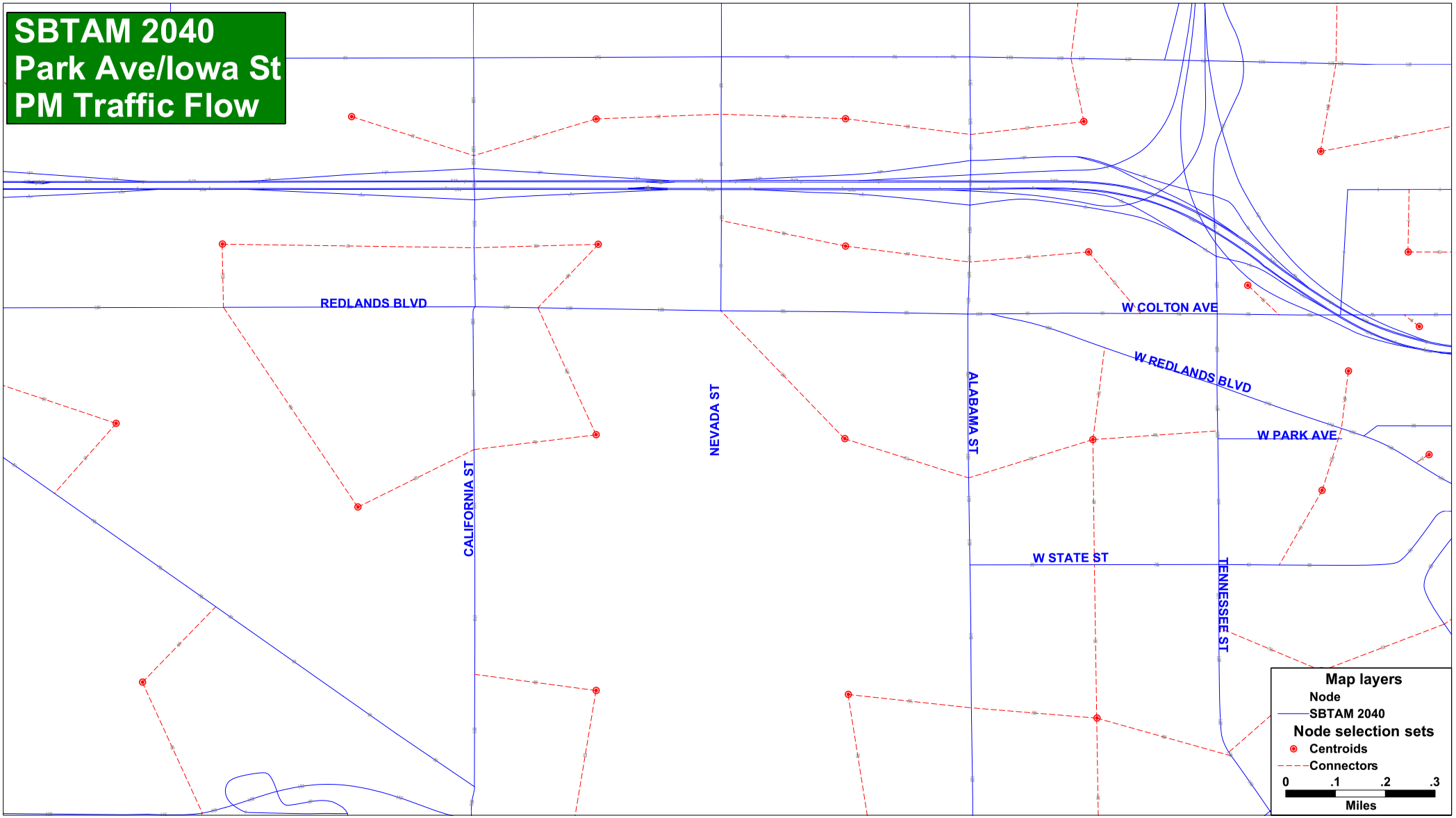
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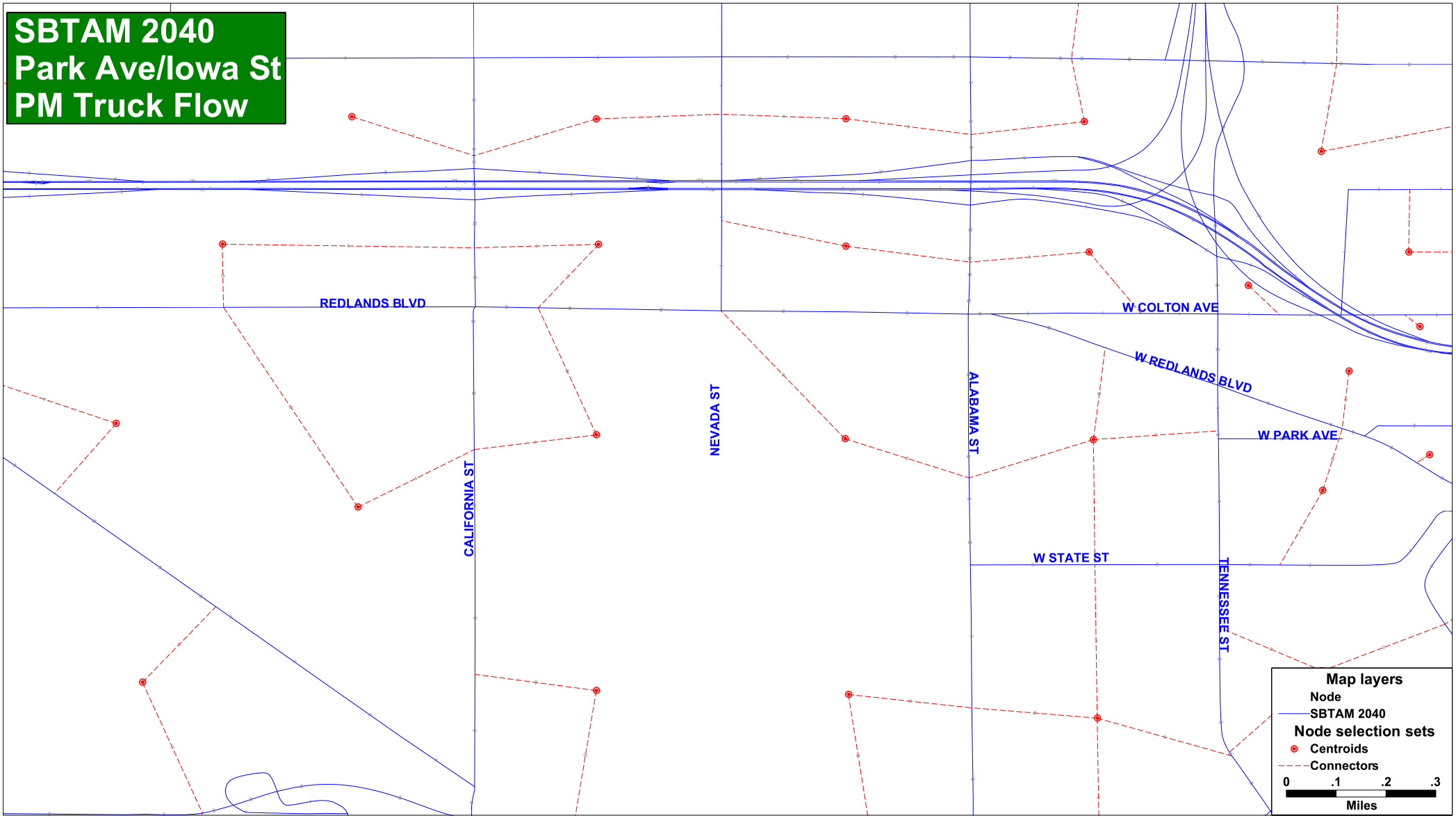
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Node selection sets
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APPENDIX F

LEVEL OF SERVICE WORKSHEETS

EXISTING

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AME.vistro
Report File: G:\...\AME.pdf

Scenario 1 Existing Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.379	10.5	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.438	28.9	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.347	19.7	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.378	12.3	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.339	18.0	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	10.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.379

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	53	72	30	3	44	4	8	96	37	57	123	18
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	53	72	30	3	44	4	8	96	37	57	123	18
Peak Hour Factor	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988
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	23	9	1	14	1	3	30	12	18	38	6
Total Analysis Volume [veh/h]	66	90	38	4	55	5	10	120	46	71	154	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	604	715	605	642	741	655
Degree of Utilization, x	0.26	0.05	0.11	0.20	0.06	0.38

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.02	0.17	0.35	0.75	0.20	1.77
95th-Percentile Queue Length [ft]	25.62	4.20	8.83	18.81	4.95	44.22
Approach Delay [s/veh]	10.19		9.65	9.24		11.82
Approach LOS	B		A	A		B
Intersection Delay [s/veh]	10.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.438

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	82	533	26	89	497	222	100	175	50	44	367	109
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	82	533	26	89	497	222	100	175	50	44	367	109
Peak Hour Factor	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197
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]	22	145	7	24	135	60	27	48	14	12	100	30
Total Analysis Volume [veh/h]	89	580	28	97	540	241	109	190	54	48	399	119
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	5	7	4	1
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	7
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	11	43	0	11	43	0	12	39	11	12	39	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	32	0	0	28	0	0	28	0	0	28	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	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	Yes		No	Yes		No	Yes		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
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	42	42	7	42	42	7	35	35	5	34	34
g / C, Green / Cycle	0.06	0.40	0.40	0.06	0.40	0.40	0.06	0.33	0.33	0.05	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.12	0.03	0.23	0.23	0.03	0.06	0.04	0.01	0.12	0.08
s, saturation flow rate [veh/h]	3329	3427	1758	3329	1800	1614	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	207	1377	706	210	725	650	214	1138	508	169	1091	487
d1, Uniform Delay [s]	47.47	21.29	21.30	47.49	24.28	24.29	47.55	24.82	24.30	48.03	27.62	26.47
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
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
d2, Incremental Delay [s]	1.41	0.54	1.05	1.57	3.21	3.58	1.87	0.07	0.09	0.91	0.21	0.26
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.29	0.29	0.46	0.57	0.57	0.51	0.17	0.11	0.28	0.37	0.24
d, Delay for Lane Group [s/veh]	48.88	21.82	22.36	49.06	27.49	27.87	49.41	24.89	24.39	48.94	27.83	26.72
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.15	3.36	3.57	1.24	8.16	7.40	1.41	1.63	0.92	0.61	3.76	2.17
50th-Percentile Queue Length [ft/ln]	28.74	84.01	89.33	31.12	204.10	184.92	35.15	40.83	22.90	15.37	94.08	54.20
95th-Percentile Queue Length [veh/ln]	2.07	6.05	6.43	2.24	12.85	11.86	2.53	2.94	1.65	1.11	6.77	3.90
95th-Percentile Queue Length [ft/ln]	51.73	151.22	160.80	56.02	321.25	296.43	63.27	73.50	41.22	27.66	169.35	97.55

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.88	21.99	22.36	49.06	27.58	27.87	49.41	24.89	24.39	48.94	27.83	26.72
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	25.44			30.03			32.39			29.39		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.93											
Intersection LOS	C											
Intersection V/C	0.438											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.819	2.914	2.802	2.765
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]	743	743	667	667
d_b, Bicycle Delay [s]	20.74	20.74	23.33	23.33
l_b,int, Bicycle LOS Score for Intersection	1.943	2.284	1.851	2.027
Bicycle LOS	A	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.347

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	16	580	32	81	452	38	12	26	8	12	25	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	16	580	32	81	452	38	12	26	8	12	25	42
Peak Hour Factor	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983
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	182	10	25	142	12	4	8	3	4	8	13
Total Analysis Volume [veh/h]	20	727	40	101	566	48	15	33	10	15	31	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	6	39	39	32	32	32	32
g / C, Green / Cycle	0.03	0.41	0.41	0.07	0.45	0.45	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.03	0.06	0.17	0.17	0.01	0.02	0.01	0.05
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1751	1335	1729	1385	1620
c, Capacity [veh/h]	54	1407	628	129	817	795	511	646	552	605
d1, Uniform Delay [s]	40.36	18.75	15.17	38.64	15.31	15.32	19.92	17.12	18.86	17.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.23	0.30	0.04	10.00	0.29	0.30	0.11	0.20	0.09	0.48
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	0.37	0.52	0.06	0.78	0.38	0.38	0.03	0.07	0.03	0.14
d, Delay for Lane Group [s/veh]	44.58	19.05	15.21	48.64	15.60	15.62	20.02	17.32	18.95	18.08
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.46	5.04	0.45	2.37	3.74	3.64	0.22	0.56	0.21	1.14
50th-Percentile Queue Length [ft/ln]	11.58	125.96	11.27	59.20	93.39	91.11	5.38	14.04	5.19	28.43
95th-Percentile Queue Length [veh/ln]	0.83	8.72	0.81	4.26	6.72	6.56	0.39	1.01	0.37	2.05
95th-Percentile Queue Length [ft/ln]	20.84	217.99	20.28	106.56	168.10	163.99	9.69	25.27	9.34	51.17

Movement, Approach, & Intersection Results

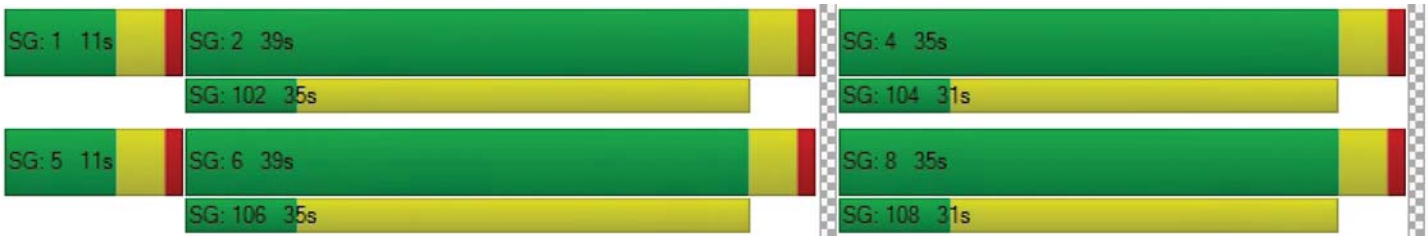
d_M, Delay for Movement [s/veh]	44.58	19.05	15.21	48.64	15.61	15.62	20.02	17.32	17.32	18.95	18.08	18.08
Movement LOS	D	B	B	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.50			20.28			18.02			18.22		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.71											
Intersection LOS	B											
Intersection V/C	0.347											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.836	2.757	1.988	2.025
Crosswalk LOS	C	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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.209	2.149	1.655	1.723
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	576	44	45	342	13	14	78	7	15	79	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	576	44	45	342	13	14	78	7	15	79	50
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	177	14	14	105	4	4	24	2	5	24	15
Total Analysis Volume [veh/h]	17	707	54	55	420	16	17	96	9	18	97	61
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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	43	0	11	42	0	0	17	0	0	17	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	2	32	32	4	34	34	12	12	12	12
g / C, Green / Cycle	0.03	0.53	0.53	0.07	0.57	0.57	0.20	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.03	0.12	0.12	0.07	0.01	0.01	0.09
s, saturation flow rate [veh/h]	1714	1800	1755	1714	1800	1777	1608	1530	1320	1685
c, Capacity [veh/h]	49	946	923	120	1021	1007	397	312	169	344
d1, Uniform Delay [s]	28.58	8.58	8.59	26.80	6.41	6.41	20.28	19.11	28.18	20.97
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.07	1.30	1.33	2.71	0.48	0.49	0.39	0.04	0.27	0.96
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	0.34	0.41	0.41	0.46	0.21	0.22	0.28	0.03	0.11	0.46
d, Delay for Lane Group [s/veh]	32.65	9.88	9.92	29.51	6.89	6.90	20.67	19.15	28.45	21.92
Lane Group LOS	C	A	A	C	A	A	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.27	2.46	2.41	0.77	1.04	1.04	1.30	0.10	0.25	1.90
50th-Percentile Queue Length [ft/ln]	6.82	61.47	60.24	19.21	26.08	25.88	32.41	2.43	6.33	47.60
95th-Percentile Queue Length [veh/ln]	0.49	4.43	4.34	1.38	1.88	1.86	2.33	0.18	0.46	3.43
95th-Percentile Queue Length [ft/ln]	12.27	110.64	108.42	34.58	46.94	46.58	58.34	4.38	11.40	85.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	32.65	9.90	9.92	29.51	6.89	6.90	20.67	20.67	19.15	28.45	21.92	21.92
Movement LOS	C	A	A	C	A	A	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	10.40			9.43			20.56			22.59		
Approach LOS	B			A			C			C		
d_I, Intersection Delay [s/veh]	12.25											
Intersection LOS	B											
Intersection V/C	0.378											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	20.01	0.00	20.01
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.766	0.000	2.041
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	1267	433	433
d_b, Bicycle Delay [s]	3.68	4.03	18.41	18.41
l_b,int, Bicycle LOS Score for Intersection	2.201	1.965	1.761	1.850
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.339

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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	576	44	45	342	13	14	78	7	15	79	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	576	44	45	342	13	14	78	7	15	79	50
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	177	14	14	105	4	4	24	2	5	24	15
Total Analysis Volume [veh/h]	17	707	54	55	420	16	17	96	9	18	97	61
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	2	30	30	5	33	33	30	30	30	30
g / C, Green / Cycle	0.03	0.39	0.39	0.06	0.43	0.43	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.03	0.12	0.12	0.06	0.01	0.07	0.04
s, saturation flow rate [veh/h]	1714	1800	1755	1714	1800	1777	1739	1530	1735	1530
c, Capacity [veh/h]	50	702	684	110	765	755	732	596	731	596
d1, Uniform Delay [s]	36.62	18.23	18.23	34.80	14.49	14.50	15.29	14.41	15.30	14.92
k, delay calibration	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	3.90	0.74	0.77	3.44	0.20	0.21	0.10	0.01	0.10	0.07
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	0.34	0.55	0.55	0.50	0.29	0.29	0.15	0.02	0.16	0.10
d, Delay for Lane Group [s/veh]	40.52	18.97	19.00	38.23	14.69	14.70	15.38	14.42	15.40	15.00
Lane Group LOS	D	B	B	D	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.35	4.78	4.67	1.04	2.22	2.20	1.24	0.09	1.27	0.66
50th-Percentile Queue Length [ft/ln]	8.74	119.50	116.80	25.98	55.40	54.90	31.07	2.34	31.66	16.42
95th-Percentile Queue Length [veh/ln]	0.63	8.37	8.22	1.87	3.99	3.95	2.24	0.17	2.28	1.18
95th-Percentile Queue Length [ft/ln]	15.73	209.15	205.42	46.77	99.72	98.83	55.92	4.21	56.98	29.55

Movement, Approach, & Intersection Results

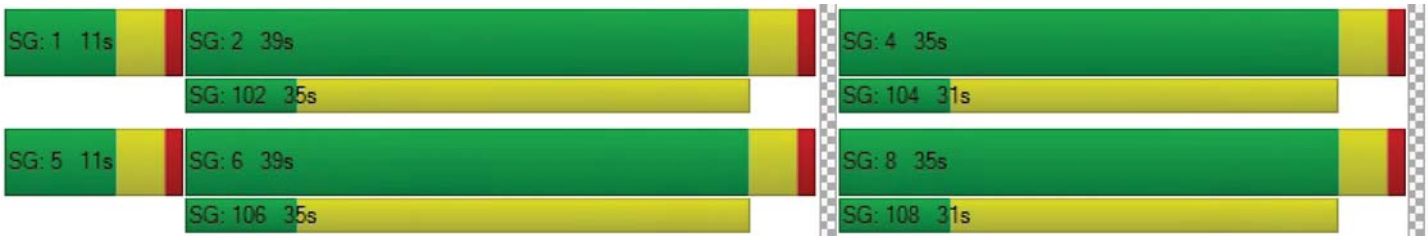
d_M, Delay for Movement [s/veh]	40.52	18.98	19.00	38.23	14.70	14.70	15.38	15.38	14.42	15.40	15.40	15.00
Movement LOS	D	B	B	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.45			17.33			15.31			15.26		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.00											
Intersection LOS	B											
Intersection V/C	0.339											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.774	2.785	2.019	2.061
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.201	1.965	1.761	1.850
Bicycle LOS	B	A	A	A

Sequence

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



SD Homes/ Redlands Apartment Project

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Scenario 1 Existing Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.264	9.3	A
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.533	23.6	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.321	18.6	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.338	20.0	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.349	17.6	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.264

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	12	88	39	21	52	24	7	164	22	14	70	5
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	12	88	39	21	52	24	7	164	22	14	70	5
Peak Hour Factor	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481
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]	3	23	10	6	14	6	2	43	6	4	18	1
Total Analysis Volume [veh/h]	13	93	41	22	55	25	7	173	23	15	74	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	658	765	668	680	788	663
Degree of Utilization, x	0.16	0.05	0.15	0.26	0.03	0.14

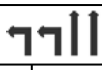
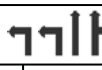
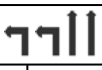
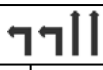
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.57	0.17	0.54	1.06	0.09	0.49
95th-Percentile Queue Length [ft]	14.28	4.24	13.41	26.51	2.25	12.32
Approach Delay [s/veh]	8.79		9.36	9.60		9.33
Approach LOS	A		A	A		A
Intersection Delay [s/veh]	9.29					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.533

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	89	584	102	149	518	169	362	700	102	89	368	159
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	89	584	102	149	518	169	362	700	102	89	368	159
Peak Hour Factor	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888
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]	23	148	26	38	131	43	92	177	26	23	93	40
Total Analysis Volume [veh/h]	90	591	103	151	524	171	366	708	103	90	372	161
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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	18	0	11	18	0	15	20	0	11	16	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
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	17	17	7	18	18	9	15	15	6	12	12
g / C, Green / Cycle	0.09	0.29	0.29	0.11	0.30	0.30	0.15	0.25	0.25	0.09	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.05	0.20	0.20	0.11	0.21	0.07	0.03	0.11	0.11
s, saturation flow rate [veh/h]	3329	3427	1668	3329	1800	1650	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	310	986	480	363	547	501	488	840	375	310	656	293
d1, Uniform Delay [s]	25.49	17.69	17.73	25.08	18.30	18.31	24.67	21.66	18.43	25.49	22.11	22.03
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
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
d2, Incremental Delay [s]	0.51	1.61	3.39	0.76	6.22	6.78	2.34	2.41	0.39	0.51	0.77	1.61
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	0.29	0.47	0.48	0.42	0.66	0.66	0.75	0.84	0.27	0.29	0.57	0.55
d, Delay for Lane Group [s/veh]	26.01	19.30	21.12	25.84	24.52	25.09	27.02	24.07	18.82	26.01	22.89	23.64
Lane Group LOS	C	B	C	C	C	C	C	C	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.58	2.58	2.79	0.95	4.70	4.39	2.41	4.42	1.06	0.57	2.19	1.96
50th-Percentile Queue Length [ft/ln]	14.50	64.45	69.72	23.82	117.48	109.83	60.21	110.43	26.62	14.24	54.77	48.99
95th-Percentile Queue Length [veh/ln]	1.04	4.64	5.02	1.72	8.25	7.83	4.34	7.86	1.92	1.03	3.94	3.53
95th-Percentile Queue Length [ft/ln]	26.10	116.01	125.50	42.88	206.35	195.77	108.39	196.60	47.91	25.63	98.59	88.18

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	26.01	19.69	21.12	25.84	24.69	25.09	27.02	24.07	18.82	26.01	22.89	23.64
Movement LOS	C	B	C	C	C	C	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	20.61			24.98			24.53			23.53		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	23.56											
Intersection LOS	C											
Intersection V/C	0.533											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.815	2.936	2.908	2.866
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]	467	467	533	400
d_b, Bicycle Delay [s]	17.63	17.63	16.13	19.20
l_b,int, Bicycle LOS Score for Intersection	1.991	2.258	2.531	2.074
Bicycle LOS	A	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.321

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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	598	46	50	625	13	16	69	22	35	40	75
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	598	46	50	625	13	16	69	22	35	40	75
Peak Hour Factor	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207
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	162	12	14	170	4	4	19	6	10	11	20
Total Analysis Volume [veh/h]	15	650	50	54	679	14	17	75	24	38	43	81
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	2	35	35	5	38	38	33	33	33	33
g / C, Green / Cycle	0.02	0.41	0.41	0.06	0.45	0.45	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.03	0.03	0.19	0.19	0.01	0.06	0.03	0.08
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1787	1287	1726	1317	1614
c, Capacity [veh/h]	43	1405	627	103	800	795	496	672	523	628
d1, Uniform Delay [s]	40.75	18.27	15.31	38.79	16.26	16.26	19.95	16.83	19.47	17.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.69	0.24	0.05	4.10	0.37	0.38	0.13	0.46	0.27	0.70
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	0.35	0.46	0.08	0.53	0.43	0.43	0.03	0.15	0.07	0.20
d, Delay for Lane Group [s/veh]	45.44	18.51	15.36	42.90	16.63	16.63	20.07	17.30	19.74	17.89
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.36	4.38	0.57	1.18	4.38	4.36	0.25	1.30	0.54	1.68
50th-Percentile Queue Length [ft/ln]	8.94	109.49	14.19	29.55	109.61	108.90	6.13	32.51	13.58	41.89
95th-Percentile Queue Length [veh/ln]	0.64	7.81	1.02	2.13	7.82	7.78	0.44	2.34	0.98	3.02
95th-Percentile Queue Length [ft/ln]	16.10	195.29	25.55	53.19	195.46	194.47	11.03	58.52	24.44	75.40

Movement, Approach, & Intersection Results

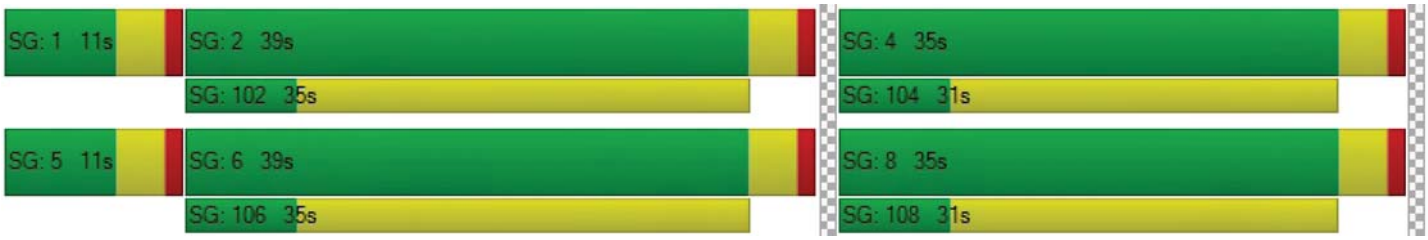
d_M, Delay for Movement [s/veh]	45.44	18.51	15.36	42.90	16.63	16.63	20.07	17.30	17.30	19.74	17.89	17.89
Movement LOS	D	B	B	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.86			18.53			17.70			18.33		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.59											
Intersection LOS	B											
Intersection V/C	0.321											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.881	2.757	1.998	2.048
Crosswalk LOS	C	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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.149	2.176	1.751	1.827
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.338

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	511	26	51	626	19	14	79	22	58	73	71
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	10	511	26	51	626	19	14	79	22	58	73	71
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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]	3	149	8	15	182	6	4	23	6	17	21	21
Total Analysis Volume [veh/h]	12	594	30	59	728	22	16	92	26	67	85	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]	100
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	11	39	0	0	49	0	0	49	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	100	100	100	100	100	100	100	100	100	100
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	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]	2	47	47	6	51	51	35	35	35	35
g / C, Green / Cycle	0.02	0.47	0.47	0.06	0.51	0.51	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.17	0.03	0.21	0.21	0.06	0.02	0.05	0.10
s, saturation flow rate [veh/h]	1714	1800	1770	1714	1800	1781	1721	1530	1325	1656
c, Capacity [veh/h]	36	851	837	98	917	907	643	535	454	579
d1, Uniform Delay [s]	48.27	16.83	16.84	46.02	15.23	15.23	22.49	21.51	26.70	23.53
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	5.34	1.23	1.26	5.75	1.36	1.38	0.12	0.04	0.15	0.27
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.33	0.37	0.37	0.60	0.41	0.41	0.17	0.05	0.15	0.29
d, Delay for Lane Group [s/veh]	53.61	18.07	18.10	51.76	16.59	16.61	22.61	21.54	26.85	23.80
Lane Group LOS	D	B	B	D	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.34	4.51	4.45	1.54	5.14	5.09	1.77	0.41	1.21	2.88
50th-Percentile Queue Length [ft/ln]	8.48	112.66	111.17	38.50	128.50	127.32	44.13	10.17	30.27	72.04
95th-Percentile Queue Length [veh/ln]	0.61	7.99	7.91	2.77	8.86	8.79	3.18	0.73	2.18	5.19
95th-Percentile Queue Length [ft/ln]	15.26	199.70	197.63	69.30	221.46	219.84	79.44	18.31	54.48	129.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	53.61	18.08	18.10	51.76	16.60	16.61	22.61	22.61	21.54	26.85	23.80	23.80
Movement LOS	D	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	18.75			19.17			22.41			24.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.97											
Intersection LOS	B											
Intersection V/C	0.338											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	39.61	0.00	39.61
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.847	0.000	2.080
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	720	700	900	900
d_b, Bicycle Delay [s]	20.48	21.13	15.13	15.13
l_b,int, Bicycle LOS Score for Intersection	2.084	2.227	1.781	1.947
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	17.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.349

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	10	511	26	51	626	19	14	79	22	58	73	71
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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]	10	511	26	51	626	19	14	79	22	58	73	71
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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]	3	149	8	15	182	6	4	23	6	17	21	21
Total Analysis Volume [veh/h]	12	594	30	59	728	22	16	92	26	67	85	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]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	11	39	0	0	44	0	0	44	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	2	30	30	5	33	33	30	30	30	30
g / C, Green / Cycle	0.02	0.39	0.39	0.07	0.43	0.43	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.17	0.03	0.21	0.21	0.06	0.02	0.11	0.05
s, saturation flow rate [veh/h]	1714	1800	1770	1714	1800	1781	1742	1530	1447	1530
c, Capacity [veh/h]	38	700	688	114	780	772	731	595	630	595
d1, Uniform Delay [s]	37.14	17.45	17.46	34.80	15.66	15.66	15.32	14.65	16.52	15.23
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	4.65	0.45	0.46	3.57	0.48	0.49	0.09	0.03	0.20	0.11
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
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	0.32	0.45	0.45	0.52	0.48	0.48	0.15	0.04	0.24	0.14
d, Delay for Lane Group [s/veh]	41.79	17.90	17.92	38.37	16.14	16.15	15.42	14.68	16.71	15.34
Lane Group LOS	D	B	B	D	B	B	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.26	3.71	3.66	1.12	4.18	4.14	1.19	0.27	1.85	0.91
50th-Percentile Queue Length [ft/ln]	6.48	92.77	91.48	27.94	104.62	103.61	29.75	6.86	46.23	22.80
95th-Percentile Queue Length [veh/ln]	0.47	6.68	6.59	2.01	7.53	7.46	2.14	0.49	3.33	1.64
95th-Percentile Queue Length [ft/ln]	11.66	166.99	164.66	50.29	188.31	186.49	53.55	12.36	83.21	41.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.79	17.91	17.92	38.37	16.15	16.15	15.42	15.42	14.68	16.71	16.71	15.34
Movement LOS	D	B	B	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.36			17.77			15.27			16.23		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	17.59											
Intersection LOS	B											
Intersection V/C	0.349											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	37.14	37.14	37.14	37.14
l_p,int, Pedestrian LOS Score for Intersection	2.906	2.844	2.025	2.078
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]	758	737	842	842
d_b, Bicycle Delay [s]	18.32	18.95	15.92	15.92
l_b,int, Bicycle LOS Score for Intersection	2.084	2.227	1.781	1.947
Bicycle LOS	B	B	A	A

Sequence

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

EXISTING PLUS PROJECT

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AME.vistro
Report File: G:\...\AMEp.pdf

Scenario 2 Existing Plus Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.436	11.0	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.446	29.3	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.368	19.9	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.401	14.8	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.441	18.5	B
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.003	10.0	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	11.4	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.436

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	53	72	30	3	44	4	8	96	37	57	123	18
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	0	4	0	11	17	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
Total Hourly Volume [veh/h]	53	72	33	3	44	4	8	100	37	68	140	18
Peak Hour Factor	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988
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	23	10	1	14	1	3	31	12	21	44	6
Total Analysis Volume [veh/h]	66	90	41	4	55	5	10	125	46	85	175	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	593	697	591	635	730	650
Degree of Utilization, x	0.26	0.06	0.11	0.21	0.06	0.44

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.05	0.19	0.36	0.80	0.20	2.21
95th-Percentile Queue Length [ft]	26.31	4.67	9.06	20.02	5.03	55.25
Approach Delay [s/veh]	10.36		9.83	9.41		12.75
Approach LOS	B		A	A		B
Intersection Delay [s/veh]	11.01					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.446

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	82	533	26	89	497	222	100	175	50	44	367	109
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	18	17	0	6	0	0	0	4	4	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]	99	551	43	89	503	222	100	175	54	48	367	109
Peak Hour Factor	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197
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]	27	150	12	24	137	60	27	48	15	13	100	30
Total Analysis Volume [veh/h]	108	599	47	97	547	241	109	190	59	52	399	119
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	5	7	4	1
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	7	7	7	7
Maximum Green [s]	30	30	0	30	30	0	30	30	30	30	30	30
Amber [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
Split [s]	11	43	0	11	43	0	12	39	11	12	39	11
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	32	0	0	28	0	0	28	0	0	28	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	2.0	2.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	No		No	No	
Pedestrian Recall	No	Yes		No	Yes		No	Yes		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
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	42	42	7	42	42	7	35	35	5	34	34
g / C, Green / Cycle	0.06	0.40	0.40	0.06	0.40	0.40	0.06	0.33	0.33	0.05	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.12	0.13	0.03	0.23	0.23	0.03	0.06	0.04	0.02	0.12	0.08
s, saturation flow rate [veh/h]	3329	3427	1734	3329	1800	1616	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	214	1371	694	210	718	645	214	1137	508	175	1097	490
d1, Uniform Delay [s]	47.54	21.60	21.63	47.49	24.66	24.67	47.55	24.82	24.39	47.90	27.48	26.33
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
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
d2, Incremental Delay [s]	1.84	0.59	1.19	1.57	3.37	3.76	1.87	0.07	0.10	0.94	0.20	0.25
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	0.50	0.31	0.31	0.46	0.58	0.58	0.51	0.17	0.12	0.30	0.36	0.24
d, Delay for Lane Group [s/veh]	49.38	22.20	22.82	49.06	28.03	28.42	49.41	24.89	24.49	48.84	27.68	26.58
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.41	3.63	3.82	1.24	8.34	7.56	1.41	1.63	1.00	0.66	3.75	2.16
50th-Percentile Queue Length [ft/ln]	35.13	90.80	95.62	31.12	208.41	188.98	35.15	40.84	25.11	16.62	93.78	54.02
95th-Percentile Queue Length [veh/ln]	2.53	6.54	6.88	2.24	13.07	12.07	2.53	2.94	1.81	1.20	6.75	3.89
95th-Percentile Queue Length [ft/ln]	63.23	163.44	172.11	56.02	326.79	301.71	63.27	73.51	45.19	29.92	168.81	97.24

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.38	22.37	22.82	49.06	28.13	28.42	49.41	24.89	24.49	48.84	27.68	26.58
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	26.27			30.50			32.29			29.38		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.26											
Intersection LOS	C											
Intersection V/C	0.446											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.831	2.919	2.807	2.769
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]	743	743	667	667
d_b, Bicycle Delay [s]	20.74	20.74	23.33	23.33
l_b,int, Bicycle LOS Score for Intersection	1.974	2.290	1.855	2.030
Bicycle LOS	A	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.368

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	16	580	32	81	452	38	12	26	8	12	25	42
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	52	0	0	14	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]	16	632	32	81	466	38	12	26	8	12	25	42
Peak Hour Factor	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983
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	198	10	25	146	12	4	8	3	4	8	13
Total Analysis Volume [veh/h]	20	792	40	101	584	48	15	33	10	15	31	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	6	39	39	32	32	32	32
g / C, Green / Cycle	0.03	0.41	0.41	0.07	0.45	0.45	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.03	0.06	0.18	0.18	0.01	0.02	0.01	0.05
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1752	1335	1729	1385	1620
c, Capacity [veh/h]	54	1407	628	129	817	796	511	646	552	605
d1, Uniform Delay [s]	40.36	19.22	15.17	38.64	15.40	15.41	19.92	17.12	18.86	17.60
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.23	0.36	0.04	10.00	0.31	0.31	0.11	0.20	0.09	0.48
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	0.37	0.56	0.06	0.78	0.39	0.39	0.03	0.07	0.03	0.14
d, Delay for Lane Group [s/veh]	44.58	19.57	15.21	48.64	15.71	15.72	20.02	17.32	18.95	18.08
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.46	5.63	0.45	2.37	3.87	3.78	0.22	0.56	0.21	1.14
50th-Percentile Queue Length [ft/ln]	11.58	140.73	11.27	59.20	96.71	94.39	5.38	14.04	5.19	28.43
95th-Percentile Queue Length [veh/ln]	0.83	9.52	0.81	4.26	6.96	6.80	0.39	1.01	0.37	2.05
95th-Percentile Queue Length [ft/ln]	20.84	238.01	20.28	106.56	174.08	169.90	9.69	25.27	9.34	51.17

Movement, Approach, & Intersection Results

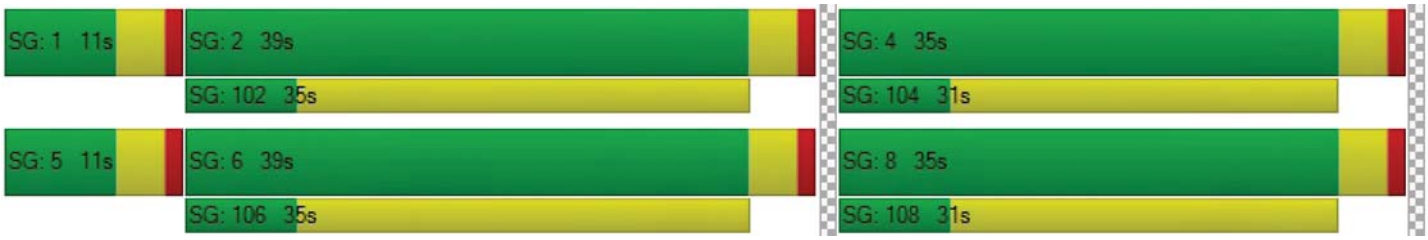
d_M, Delay for Movement [s/veh]	44.58	19.57	15.21	48.64	15.72	15.72	20.02	17.32	17.32	18.95	18.08	18.08
Movement LOS	D	B	B	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.95			20.25			18.02			18.22		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.92											
Intersection LOS	B											
Intersection V/C	0.368											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.849	2.773	1.988	2.025
Crosswalk LOS	C	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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.263	2.164	1.655	1.723
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	14.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	576	44	45	342	13	14	78	7	15	79	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	52	0	0	14	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	628	44	45	356	13	14	78	7	15	79	50
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	14	14	109	4	4	24	2	5	24	15
Total Analysis Volume [veh/h]	17	771	54	55	437	16	17	96	9	18	97	61
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]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	33	0	11	32	0	0	16	0	0	16	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
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	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]	3	66	66	5	68	68	12	12	12	12
g / C, Green / Cycle	0.03	0.69	0.69	0.06	0.72	0.72	0.13	0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.23	0.03	0.13	0.13	0.11	0.01	0.01	0.09
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1778	1012	1530	1320	1685
c, Capacity [veh/h]	48	1241	1212	99	1294	1278	172	194	79	214
d1, Uniform Delay [s]	45.36	5.97	5.97	43.61	4.30	4.30	39.12	36.43	47.49	39.96
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.46	0.73	0.75	4.87	0.30	0.30	4.21	0.10	1.44	4.92
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
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	0.36	0.34	0.34	0.56	0.18	0.18	0.66	0.05	0.23	0.74
d, Delay for Lane Group [s/veh]	49.82	6.70	6.72	48.48	4.59	4.60	43.33	36.53	48.93	44.88
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.44	2.76	2.70	1.34	1.10	1.10	2.63	0.19	0.45	3.81
50th-Percentile Queue Length [ft/ln]	10.97	68.95	67.56	33.62	27.61	27.39	65.81	4.70	11.37	95.21
95th-Percentile Queue Length [veh/ln]	0.79	4.96	4.86	2.42	1.99	1.97	4.74	0.34	0.82	6.86
95th-Percentile Queue Length [ft/ln]	19.74	124.12	121.61	60.52	49.69	49.30	118.47	8.45	20.47	171.38

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.82	6.71	6.72	48.48	4.60	4.60	43.33	43.33	36.53	48.93	44.88	44.88
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	7.58			9.35			42.83			45.30		
Approach LOS	A			A			D			D		
d_I, Intersection Delay [s/veh]	14.76											
Intersection LOS	B											
Intersection V/C	0.401											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	37.14	0.00	37.14
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.810	0.000	2.066
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	611	589	253	253
d_b, Bicycle Delay [s]	22.93	23.63	36.26	36.26
l_b,int, Bicycle LOS Score for Intersection	2.254	1.979	1.761	1.850
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.441

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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	576	44	45	342	13	14	78	7	15	79	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	0	0	14	52	6	23	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]	19	576	44	45	342	27	66	84	30	15	81	50
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	177	14	14	105	8	20	26	9	5	25	15
Total Analysis Volume [veh/h]	23	707	54	55	420	33	81	103	37	18	99	61
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	11	39	0	0	54	0	0	54	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	3	30	30	5	32	32	30	30	30	30
g / C, Green / Cycle	0.04	0.39	0.39	0.06	0.42	0.42	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.03	0.13	0.13	0.16	0.02	0.07	0.04
s, saturation flow rate [veh/h]	1714	1800	1755	1714	1800	1754	1144	1530	1578	1530
c, Capacity [veh/h]	63	702	684	111	751	732	513	596	669	596
d1, Uniform Delay [s]	36.17	18.23	18.23	34.80	14.97	14.98	19.54	14.68	15.38	14.92
k, delay calibration	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	3.45	0.74	0.77	3.43	0.23	0.23	0.42	0.04	0.12	0.07
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	0.36	0.55	0.55	0.50	0.30	0.31	0.36	0.06	0.17	0.10
d, Delay for Lane Group [s/veh]	39.63	18.97	19.00	38.23	15.19	15.22	19.96	14.73	15.50	15.00
Lane Group LOS	D	B	B	D	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.46	4.78	4.67	1.04	2.37	2.33	2.63	0.39	1.29	0.66
50th-Percentile Queue Length [ft/ln]	11.44	119.51	116.80	25.98	59.32	58.24	65.83	9.79	32.31	16.42
95th-Percentile Queue Length [veh/ln]	0.82	8.37	8.22	1.87	4.27	4.19	4.74	0.71	2.33	1.18
95th-Percentile Queue Length [ft/ln]	20.59	209.16	205.42	46.77	106.78	104.83	118.49	17.63	58.15	29.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.63	18.98	19.00	38.23	15.20	15.22	19.96	19.96	14.73	15.50	15.50	15.00
Movement LOS	D	B	B	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.59			17.70			19.09			15.33		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.51											
Intersection LOS	B											
Intersection V/C	0.441											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.793	2.906	2.070	2.074
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]	686	667	952	952
d_b, Bicycle Delay [s]	22.67	23.33	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.206	1.979	1.924	1.853
Bicycle LOS	B	A	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	134	106	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	6	0	7	22	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	6	0	141	128	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	0	35	32	0
Total Analysis Volume [veh/h]	2	6	0	141	128	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.01	8.92	7.45	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.70	0.70	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.19		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: Apt East Access (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	134	0	0	106	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	38	41	0	9	3	2	3	11	0	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	0	38	41	0	9	3	136	3	11	106	11
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	10	11	0	2	1	37	1	3	29	3
Total Analysis Volume [veh/h]	14	0	41	45	0	10	3	148	3	12	115	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.05	0.07	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	10.96	11.28	9.31	11.29	11.42	9.34	7.45	0.00	0.00	7.52	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.22	0.27	0.27	0.27	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	5.41	5.41	5.41	6.78	6.78	6.78	0.15	0.15	0.15	0.58	0.58	0.58
d_A, Approach Delay [s/veh]	9.73			10.94			0.15			0.65		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	3.10											
Intersection LOS	B											

SD Homes/ Redlands Apartment Project

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Scenario 2 Existing Plus Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.294	9.5	A
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	SB Right	0.549	24.0	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.330	18.8	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.355	20.1	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.464	19.4	B
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.003	10.8	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.000	12.2	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	12	88	39	21	52	24	7	164	22	14	70	5
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	0	0	0	0	17	0	6	9	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
Total Hourly Volume [veh/h]	12	88	50	21	52	24	7	181	22	20	79	5
Peak Hour Factor	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481
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]	3	23	13	6	14	6	2	48	6	5	21	1
Total Analysis Volume [veh/h]	13	93	53	22	55	25	7	191	23	21	83	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	646	749	654	674	778	653
Degree of Utilization, x	0.16	0.07	0.16	0.29	0.03	0.17

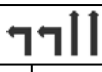
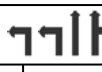
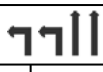
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.58	0.23	0.55	1.22	0.09	0.60
95th-Percentile Queue Length [ft]	14.60	5.70	13.75	30.60	2.28	14.90
Approach Delay [s/veh]	8.87		9.52	9.97		9.62
Approach LOS	A		A	A		A
Intersection Delay [s/veh]	9.53					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	24.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.549

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	89	584	102	149	518	169	362	700	102	89	368	159
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	11	9	0	21	0	0	0	17	17	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]	98	595	111	149	539	169	362	700	119	106	368	159
Peak Hour Factor	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888
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]	25	150	28	38	136	43	92	177	30	27	93	40
Total Analysis Volume [veh/h]	99	602	112	151	545	171	366	708	120	107	372	161
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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	18	0	11	18	0	15	20	0	11	16	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60	60	60
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	17	17	7	18	18	9	15	15	6	12	12
g / C, Green / Cycle	0.10	0.28	0.28	0.11	0.30	0.30	0.15	0.24	0.24	0.10	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.05	0.21	0.21	0.11	0.21	0.08	0.03	0.11	0.11
s, saturation flow rate [veh/h]	3329	3427	1661	3329	1800	1654	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	321	968	469	363	531	488	488	836	373	330	674	301
d1, Uniform Delay [s]	25.37	18.04	18.08	25.08	18.90	18.90	24.67	21.72	18.70	25.28	21.83	21.75
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
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
d2, Incremental Delay [s]	0.54	1.80	3.80	0.76	7.57	8.22	2.34	2.48	0.49	0.56	0.71	1.48
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	0.49	0.50	0.42	0.70	0.70	0.75	0.85	0.32	0.32	0.55	0.54
d, Delay for Lane Group [s/veh]	25.90	19.84	21.88	25.84	26.47	27.13	27.02	24.20	19.19	25.84	22.54	23.23
Lane Group LOS	C	B	C	C	C	C	C	C	B	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.64	2.71	2.93	0.95	5.08	4.76	2.41	4.43	1.26	0.67	2.17	1.94
50th-Percentile Queue Length [ft/ln]	15.91	67.71	73.20	23.82	127.02	119.08	60.21	110.77	31.50	16.85	54.19	48.39
95th-Percentile Queue Length [veh/ln]	1.15	4.88	5.27	1.72	8.78	8.34	4.34	7.88	2.27	1.21	3.90	3.48
95th-Percentile Queue Length [ft/ln]	28.63	121.88	131.76	42.88	219.44	208.56	108.39	197.07	56.70	30.34	97.55	87.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.90	20.26	21.88	25.84	26.68	27.13	27.02	24.20	19.19	25.84	22.54	23.23
Movement LOS	C	C	C	C	C	C	C	C	B	C	C	C
d_A, Approach Delay [s/veh]	21.17			26.62			24.56			23.26		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.05											
Intersection LOS	C											
Intersection V/C	0.549											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.829	2.942	2.912	2.871
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]	467	467	533	400
d_b, Bicycle Delay [s]	17.63	17.63	16.13	19.20
l_b,int, Bicycle LOS Score for Intersection	2.007	2.275	2.545	2.088
Bicycle LOS	B	B	B	B

Sequence

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

Intersection Level Of Service Report
Intersection 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.330

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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	598	46	50	625	13	16	69	22	35	40	75
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	55	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	627	46	50	680	13	16	69	22	35	40	75
Peak Hour Factor	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207
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	170	12	14	185	4	4	19	6	10	11	20
Total Analysis Volume [veh/h]	15	681	50	54	739	14	17	75	24	38	43	81
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	2	35	35	5	38	38	33	33	33	33
g / C, Green / Cycle	0.02	0.41	0.41	0.06	0.45	0.45	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.03	0.03	0.21	0.21	0.01	0.06	0.03	0.08
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1788	1287	1726	1317	1614
c, Capacity [veh/h]	43	1405	627	103	800	795	496	672	523	628
d1, Uniform Delay [s]	40.75	18.48	15.31	38.79	16.60	16.60	19.95	16.83	19.47	17.19
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.69	0.26	0.05	4.10	0.43	0.44	0.13	0.46	0.27	0.70
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	0.35	0.48	0.08	0.53	0.47	0.47	0.03	0.15	0.07	0.20
d, Delay for Lane Group [s/veh]	45.44	18.74	15.36	42.90	17.03	17.04	20.07	17.30	19.74	17.89
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.36	4.64	0.57	1.18	4.87	4.84	0.25	1.30	0.54	1.68
50th-Percentile Queue Length [ft/ln]	8.94	116.04	14.19	29.55	121.71	120.95	6.13	32.51	13.58	41.89
95th-Percentile Queue Length [veh/ln]	0.64	8.17	1.02	2.13	8.49	8.45	0.44	2.34	0.98	3.02
95th-Percentile Queue Length [ft/ln]	16.10	204.37	25.55	53.19	212.17	211.14	11.03	58.52	24.44	75.40

Movement, Approach, & Intersection Results

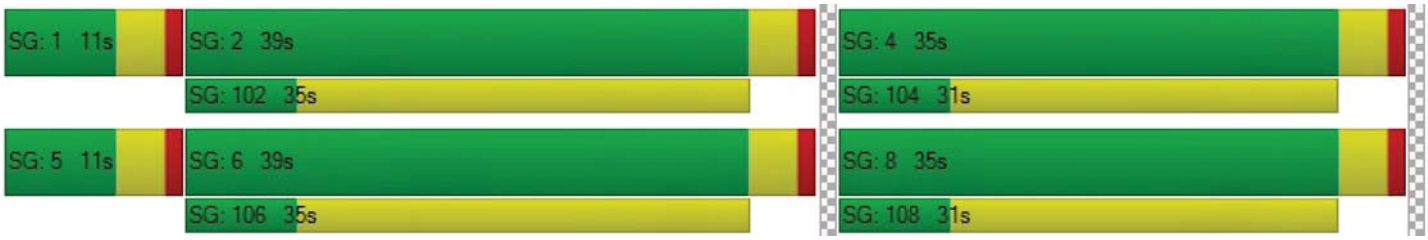
d_M, Delay for Movement [s/veh]	45.44	18.74	15.36	42.90	17.04	17.04	20.07	17.30	17.30	19.74	17.89	17.89
Movement LOS	D	B	B	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	19.05			18.77			17.70			18.33		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.78											
Intersection LOS	B											
Intersection V/C	0.330											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.896	2.774	1.998	2.048
Crosswalk LOS	C	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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.175	2.225	1.751	1.827
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.355

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	511	26	51	626	19	14	79	22	58	73	71
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	29	0	0	55	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]	10	540	26	51	681	19	14	79	22	58	73	71
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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]	3	157	8	15	198	6	4	23	6	17	21	21
Total Analysis Volume [veh/h]	12	628	30	59	792	22	16	92	26	67	85	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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	47	0	12	47	0	0	51	0	0	51	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
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	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]	2	57	57	6	61	61	35	35	35	35
g / C, Green / Cycle	0.02	0.52	0.52	0.05	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.18	0.18	0.03	0.23	0.23	0.06	0.02	0.05	0.10
s, saturation flow rate [veh/h]	1714	1800	1771	1714	1800	1783	1721	1530	1325	1656
c, Capacity [veh/h]	35	934	919	93	994	985	585	487	405	527
d1, Uniform Delay [s]	53.13	15.60	15.61	50.96	14.26	14.26	27.20	26.01	32.03	28.45
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	5.63	1.06	1.08	7.08	1.26	1.27	0.15	0.05	0.19	0.35
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	0.34	0.35	0.36	0.64	0.41	0.41	0.18	0.05	0.17	0.32
d, Delay for Lane Group [s/veh]	58.76	16.66	16.69	58.05	15.52	15.53	27.35	26.05	32.22	28.80
Lane Group LOS	E	B	B	E	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.37	4.79	4.73	1.73	5.69	5.64	2.09	0.48	1.42	3.41
50th-Percentile Queue Length [ft/ln]	9.34	119.81	118.23	43.28	142.29	141.04	52.16	12.02	35.53	85.16
95th-Percentile Queue Length [veh/ln]	0.67	8.38	8.30	3.12	9.60	9.54	3.76	0.87	2.56	6.13
95th-Percentile Queue Length [ft/ln]	16.82	209.56	207.40	77.90	240.10	238.42	93.89	21.64	63.95	153.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.76	16.67	16.69	58.05	15.53	15.53	27.35	27.35	26.05	32.22	28.80	28.80
Movement LOS	E	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.43			18.40			27.10			29.78		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.07											
Intersection LOS	C											
Intersection V/C	0.355											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	44.55	0.00	44.55
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.875	0.000	2.085
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	782	782	855	855
d_b, Bicycle Delay [s]	20.40	20.40	18.04	18.04
l_b,int, Bicycle LOS Score for Intersection	2.112	2.280	1.781	1.947
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.464

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	10	511	26	51	626	19	14	79	22	58	73	71
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	0	0	55	29	3	12	0	6	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]	33	511	26	51	626	74	43	82	34	58	79	71
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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]	10	149	8	15	182	22	13	24	10	17	23	21
Total Analysis Volume [veh/h]	38	594	30	59	728	86	50	95	40	67	92	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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	41	0	11	40	0	0	53	0	0	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	4	30	30	5	31	31	30	30	30	30
g / C, Green / Cycle	0.05	0.39	0.39	0.07	0.40	0.40	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.03	0.23	0.23	0.15	0.03	0.18	0.05
s, saturation flow rate [veh/h]	1714	1800	1770	1714	1800	1734	939	1530	908	1530
c, Capacity [veh/h]	89	700	688	114	726	700	428	595	420	595
d1, Uniform Delay [s]	35.44	17.45	17.46	34.80	17.84	17.84	17.56	14.79	20.57	15.23
k, delay calibration	0.11	0.11	0.11	0.11	0.15	0.15	0.11	0.11	0.11	0.11
I, 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]	3.17	0.45	0.46	3.57	0.99	1.03	0.46	0.05	0.56	0.11
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
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	0.42	0.45	0.45	0.52	0.57	0.57	0.34	0.07	0.38	0.14
d, Delay for Lane Group [s/veh]	38.61	17.91	17.92	38.37	18.83	18.87	18.02	14.84	21.14	15.34
Lane Group LOS	D	B	B	D	B	B	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.73	3.71	3.66	1.12	5.16	4.98	1.66	0.43	2.49	0.91
50th-Percentile Queue Length [ft/ln]	18.24	92.79	91.46	27.94	128.89	124.43	41.57	10.66	62.19	22.80
95th-Percentile Queue Length [veh/ln]	1.31	6.68	6.59	2.01	8.88	8.64	2.99	0.77	4.48	1.64
95th-Percentile Queue Length [ft/ln]	32.83	167.03	164.63	50.29	221.99	215.90	74.83	19.19	111.94	41.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.61	17.91	17.92	38.37	18.85	18.87	18.02	18.02	14.84	21.14	21.14	15.34
Movement LOS	D	B	B	D	B	B	B	B	B	C	C	B
d_A, Approach Delay [s/veh]	19.10			20.17			17.33			19.15		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.42											
Intersection LOS	B											
Intersection V/C	0.464											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.920	2.921	2.078	2.086
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]	705	686	933	933
d_b, Bicycle Delay [s]	22.02	22.67	14.93	14.93
l_b,int, Bicycle LOS Score for Intersection	2.106	2.280	1.865	1.959
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	224	89	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	28	12	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	0	252	101	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	68	27	0
Total Analysis Volume [veh/h]	2	3	0	274	110	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	10.81	8.82	7.41	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.48	0.48	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.62		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: Apt East Access (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	115	0	0	102	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	21	21	0	5	15	2	13	40	0	44
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
Total Hourly Volume [veh/h]	7	0	21	21	0	5	15	117	13	40	102	44
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	6	6	0	1	4	32	4	11	28	12
Total Analysis Volume [veh/h]	8	0	23	23	0	5	16	127	14	43	111	48
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.02	0.04	0.00	0.01	0.01	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	11.73	12.25	9.10	11.95	12.21	9.23	7.54	0.00	0.00	7.55	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.12	0.12	0.12	0.15	0.15	0.15	0.03	0.03	0.03	0.08	0.08	0.08
95th-Percentile Queue Length [ft/ln]	3.08	3.08	3.08	3.76	3.76	3.76	0.79	0.79	0.79	2.12	2.12	2.12
d_A, Approach Delay [s/veh]	9.78			11.47			0.77			1.61		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.56											
Intersection LOS	B											

OPENING YEAR (2020) WITHOUT PROJECT

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AMOY.vistro
Report File: G:\...\AMOY.pdf

Scenario 1 Opening Year Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.456	11.4	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.608	29.3	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.401	22.2	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.403	15.1	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.387	19.0	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.456

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	58	79	32	3	45	4	9	104	38	61	147	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1	8	0	0	3	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
Total Hourly Volume [veh/h]	58	79	32	3	45	4	10	112	38	61	150	22
Peak Hour Factor	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988
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]	18	25	10	1	14	1	3	35	12	19	47	7
Total Analysis Volume [veh/h]	73	99	40	4	56	5	13	140	48	76	188	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	583	685	578	624	717	640
Degree of Utilization, x	0.30	0.06	0.11	0.25	0.07	0.46

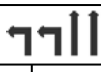
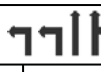
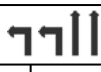
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.23	0.19	0.38	0.96	0.21	2.39
95th-Percentile Queue Length [ft]	30.68	4.64	9.45	23.98	5.37	59.66
Approach Delay [s/veh]	10.85		10.02	9.80		13.26
Approach LOS	B		B	A		B
Intersection Delay [s/veh]	11.42					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.608

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	84	550	27	101	516	228	103	181	51	47	388	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	7	30	272	67	56	37	0	15	44	25
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]	84	618	34	131	788	295	159	218	51	62	432	153
Peak Hour Factor	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197
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]	23	168	9	36	214	80	43	59	14	17	117	42
Total Analysis Volume [veh/h]	91	672	37	142	857	321	173	237	55	67	470	166
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	16	0	11	16	0	37	38	0	15	16	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
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	57	57	7	57	57	8	19	19	6	17	17
g / C, Green / Cycle	0.06	0.54	0.54	0.07	0.55	0.55	0.07	0.18	0.18	0.06	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.04	0.34	0.34	0.05	0.07	0.04	0.02	0.14	0.11
s, saturation flow rate [veh/h]	3329	3427	1752	3329	1800	1636	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	209	1854	948	221	980	891	248	624	279	194	569	254
d1, Uniform Delay [s]	47.46	12.83	12.84	47.85	16.55	16.65	47.50	37.76	36.46	47.58	42.37	41.01
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
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
d2, Incremental Delay [s]	1.42	0.33	0.65	3.10	3.02	3.42	3.54	0.38	0.34	1.06	3.12	2.84
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	0.43	0.25	0.25	0.64	0.63	0.63	0.70	0.38	0.20	0.35	0.83	0.65
d, Delay for Lane Group [s/veh]	48.88	13.16	13.48	50.95	19.57	20.07	51.04	38.14	36.80	48.64	45.49	43.85
Lane Group LOS	D	B	B	D	B	C	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.18	2.87	3.03	1.87	10.06	9.39	2.28	2.65	1.20	0.85	5.97	4.11
50th-Percentile Queue Length [ft/ln]	29.39	71.63	75.79	46.73	251.59	234.87	57.08	66.18	29.95	21.36	149.23	102.81
95th-Percentile Queue Length [veh/ln]	2.12	5.16	5.46	3.36	15.27	14.42	4.11	4.77	2.16	1.54	9.98	7.40
95th-Percentile Queue Length [ft/ln]	52.91	128.94	136.43	84.11	381.65	360.54	102.74	119.13	53.91	38.45	249.40	185.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	48.88	13.26	13.48	50.95	19.71	20.07	51.04	38.14	36.80	48.64	45.49	43.85
Movement LOS	D	B	B	D	B	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	17.32			23.16			42.78			45.40		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.27											
Intersection LOS	C											
Intersection V/C	0.608											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.890	3.034	2.851	2.809
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]	229	229	648	229
d_b, Bicycle Delay [s]	41.19	41.19	24.00	41.19
l_b,int, Bicycle LOS Score for Intersection	2.000	2.649	1.943	2.140
Bicycle LOS	A	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.401

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	21	597	33	83	465	50	13	28	9	12	30	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	47	0	0	107	165	29	0	3	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]	39	644	33	83	572	215	42	28	12	12	31	43
Peak Hour Factor	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983
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	202	10	26	179	67	13	9	4	4	10	13
Total Analysis Volume [veh/h]	49	807	41	104	717	269	53	35	15	15	39	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	5	35	35	6	37	37	32	32	32	32
g / C, Green / Cycle	0.06	0.41	0.41	0.08	0.43	0.43	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.24	0.03	0.06	0.29	0.29	0.04	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1635	1324	1709	1376	1633
c, Capacity [veh/h]	97	1406	628	131	774	703	501	636	544	608
d1, Uniform Delay [s]	38.93	19.33	15.18	38.61	19.37	19.38	20.80	17.26	19.09	17.77
k, delay calibration	0.11	0.11	0.11	0.11	0.20	0.21	0.50	0.50	0.50	0.50
I, 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]	3.98	0.37	0.04	10.36	1.88	2.09	0.42	0.24	0.09	0.53
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	0.50	0.57	0.07	0.79	0.67	0.67	0.11	0.08	0.03	0.15
d, Delay for Lane Group [s/veh]	42.91	19.70	15.23	48.97	21.26	21.47	21.22	17.50	19.18	18.30
Lane Group LOS	D	B	B	D	C	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.07	5.77	0.46	2.45	7.89	7.22	0.79	0.66	0.21	1.27
50th-Percentile Queue Length [ft/ln]	26.86	144.26	11.56	61.19	197.21	180.41	19.85	16.46	5.23	31.73
95th-Percentile Queue Length [veh/ln]	1.93	9.71	0.83	4.41	12.49	11.62	1.43	1.19	0.38	2.28
95th-Percentile Queue Length [ft/ln]	48.34	242.75	20.81	110.13	312.36	290.55	35.73	29.63	9.42	57.11

Movement, Approach, & Intersection Results

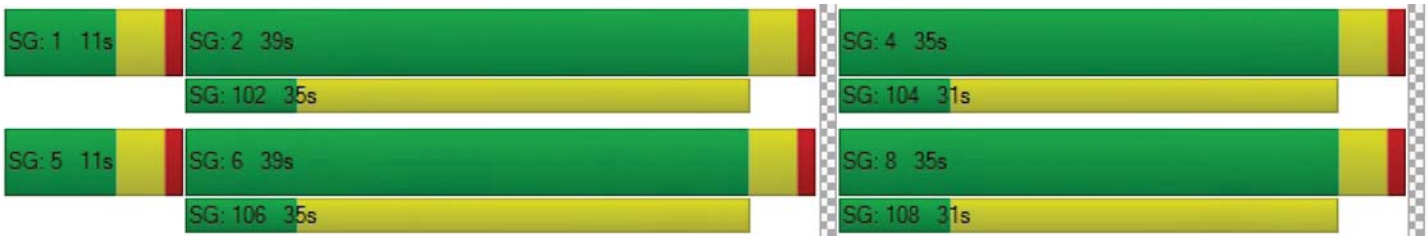
d_M, Delay for Movement [s/veh]	42.91	19.70	15.23	48.97	21.32	21.47	21.22	17.50	17.50	19.18	18.30	18.30
Movement LOS	D	B	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.76			23.99			19.42			18.43		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.19											
Intersection LOS	C											
Intersection V/C	0.401											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.879	2.905	2.086	2.030
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.300	2.459	1.730	1.738
Bicycle LOS	B	B	A	A

Sequence

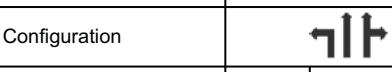
Ring 1	1	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	5	6	8	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.403

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	593	46	46	356	13	14	80	7	16	83	52
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	57	0	0	31	3	8	0	3	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]	15	650	46	46	387	16	22	80	10	16	83	52
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	199	14	14	119	5	7	25	3	5	25	16
Total Analysis Volume [veh/h]	18	798	56	56	475	20	27	98	12	20	102	64
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]	95
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	29	0	11	29	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	95	95	95	95	95	95	95	95	95	95
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	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]	3	62	62	5	64	64	16	16	16	16
g / C, Green / Cycle	0.03	0.65	0.65	0.06	0.68	0.68	0.17	0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.03	0.14	0.14	0.10	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1775	1194	1530	1318	1685
c, Capacity [veh/h]	48	1169	1142	98	1221	1204	246	256	108	282
d1, Uniform Delay [s]	45.34	7.69	7.69	43.66	5.71	5.71	35.53	33.20	45.88	36.54
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.71	0.90	0.92	5.16	0.38	0.38	1.63	0.07	0.81	1.95
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	0.37	0.37	0.37	0.57	0.20	0.20	0.51	0.05	0.18	0.59
d, Delay for Lane Group [s/veh]	50.06	8.59	8.61	48.82	6.09	6.09	37.16	33.27	46.69	38.49
Lane Group LOS	D	A	A	D	A	A	D	C	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.46	3.53	3.46	1.37	1.55	1.54	2.67	0.24	0.49	3.67
50th-Percentile Queue Length [ft/ln]	11.62	88.31	86.49	34.37	38.86	38.47	66.83	5.90	12.21	91.64
95th-Percentile Queue Length [veh/ln]	0.84	6.36	6.23	2.47	2.80	2.77	4.81	0.42	0.88	6.60
95th-Percentile Queue Length [ft/ln]	20.92	158.97	155.68	61.86	69.94	69.25	120.30	10.62	21.97	164.95

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	50.06	8.60	8.61	48.82	6.09	6.09	37.16	37.16	33.27	46.69	38.49	38.49
Movement LOS	D	A	A	D	A	A	D	D	C	D	D	D
d_A, Approach Delay [s/veh]	9.46			10.43			36.82			39.37		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	15.10											
Intersection LOS	B											
Intersection V/C	0.403											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	37.14	0.00	37.14
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.845	0.000	2.071
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	526	526	337	337
d_b, Bicycle Delay [s]	25.79	25.79	32.85	32.85
l_b,int, Bicycle LOS Score for Intersection	2.279	2.014	1.786	1.867
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.387

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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	593	45	54	352	22	18	87	7	15	100	51
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	52	0	0	32	2	5	0	3	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]	19	645	45	54	384	24	23	87	10	15	100	52
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	198	14	17	118	7	7	27	3	5	31	16
Total Analysis Volume [veh/h]	23	792	55	66	471	29	28	107	12	18	123	64
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	3	30	30	5	33	33	30	30	30	30
g / C, Green / Cycle	0.04	0.39	0.39	0.07	0.42	0.42	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.04	0.14	0.14	0.08	0.01	0.08	0.04
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1764	1697	1530	1750	1530
c, Capacity [veh/h]	63	697	682	120	757	742	714	593	731	593
d1, Uniform Delay [s]	36.40	19.06	19.06	34.82	15.11	15.12	15.70	14.64	15.76	15.16
k, delay calibration	0.11	0.17	0.17	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	3.47	1.36	1.40	3.88	0.26	0.26	0.13	0.01	0.13	0.08
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	0.36	0.61	0.61	0.55	0.33	0.33	0.19	0.02	0.19	0.11
d, Delay for Lane Group [s/veh]	39.87	20.42	20.46	38.70	15.37	15.38	15.83	14.65	15.89	15.24
Lane Group LOS	D	C	C	D	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.46	5.66	5.54	1.26	2.66	2.61	1.52	0.13	1.60	0.70
50th-Percentile Queue Length [ft/ln]	11.52	141.38	138.38	31.44	66.41	65.37	38.11	3.16	39.93	17.48
95th-Percentile Queue Length [veh/ln]	0.83	9.56	9.39	2.26	4.78	4.71	2.74	0.23	2.88	1.26
95th-Percentile Queue Length [ft/ln]	20.74	238.88	234.84	56.59	119.54	117.66	68.60	5.69	71.88	31.47

Movement, Approach, & Intersection Results

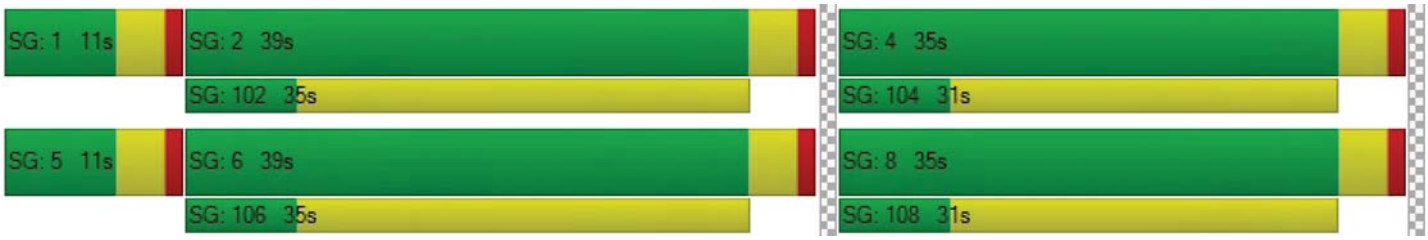
d_M, Delay for Movement [s/veh]	39.87	20.44	20.46	38.70	15.37	15.38	15.83	15.83	14.65	15.89	15.89	15.24
Movement LOS	D	C	C	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.95			18.09			15.73			15.68		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	19.01											
Intersection LOS	B											
Intersection V/C	0.387											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.809	2.843	2.041	2.077
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.277	2.027	1.802	1.898
Bicycle LOS	B	B	A	A

Sequence

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



SD Homes/ Redlands Apartment Project

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Report File: G:\...\PMOY.pdf

Scenario 1 Opening Year Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.316	9.9	A
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.648	28.3	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.481	20.4	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.378	20.9	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.449	18.7	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.316

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	13	96	41	25	66	29	8	185	27	16	78	6
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1	0	6	0	0	9	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
Total Hourly Volume [veh/h]	13	96	41	25	66	30	8	191	27	16	87	6
Peak Hour Factor	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481
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]	3	25	11	7	17	8	2	50	7	4	23	2
Total Analysis Volume [veh/h]	14	101	43	26	70	32	8	201	28	17	92	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	634	732	646	661	763	641
Degree of Utilization, x	0.18	0.06	0.20	0.32	0.04	0.18

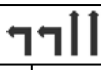
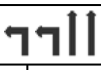
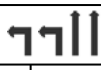
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.66	0.19	0.73	1.35	0.11	0.65
95th-Percentile Queue Length [ft]	16.47	4.67	18.35	33.86	2.86	16.26
Approach Delay [s/veh]	9.17		9.95	10.28		9.85
Approach LOS	A		A	B		A
Intersection Delay [s/veh]	9.86					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.648

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	92	609	107	170	534	176	372	723	105	92	380	179
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	287	18	41	92	70	89	61	0	8	48	45
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]	92	896	125	211	626	246	461	784	105	100	428	224
Peak Hour Factor	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888
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]	23	227	32	53	158	62	117	198	27	25	108	57
Total Analysis Volume [veh/h]	93	906	126	213	633	249	466	793	106	101	433	227
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]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	25	0	12	26	0	16	22	0	11	17	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	23	23	7	24	24	12	18	18	6	12	12
g / C, Green / Cycle	0.08	0.33	0.33	0.10	0.34	0.34	0.17	0.26	0.26	0.09	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.06	0.26	0.26	0.14	0.23	0.07	0.03	0.13	0.15
s, saturation flow rate [veh/h]	3329	3427	1690	3329	1800	1629	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	284	1128	556	332	618	559	557	877	392	292	604	270
d1, Uniform Delay [s]	30.23	19.80	19.82	30.43	20.39	20.40	28.32	25.30	20.89	30.16	27.28	27.99
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
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
d2, Incremental Delay [s]	0.66	2.49	5.01	2.08	8.10	8.93	3.40	3.82	0.37	0.70	1.61	6.99
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	0.33	0.61	0.61	0.64	0.75	0.75	0.84	0.90	0.27	0.35	0.72	0.84
d, Delay for Lane Group [s/veh]	30.90	22.29	24.83	32.51	28.49	29.34	31.72	29.12	21.26	30.86	28.89	34.98
Lane Group LOS	C	C	C	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.73	4.70	5.04	1.71	7.28	6.73	3.76	6.21	1.31	0.78	3.28	3.90
50th-Percentile Queue Length [ft/ln]	18.26	117.48	126.04	42.83	182.01	168.27	93.94	155.15	32.68	19.53	81.94	97.59
95th-Percentile Queue Length [veh/ln]	1.31	8.25	8.72	3.08	11.71	10.99	6.76	10.29	2.35	1.41	5.90	7.03
95th-Percentile Queue Length [ft/ln]	32.87	206.35	218.09	77.09	292.64	274.64	169.09	257.29	58.83	35.15	147.49	175.66

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.90	22.89	24.83	32.51	28.72	29.34	31.72	29.12	21.26	30.86	28.89	34.98
Movement LOS	C	C	C	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	23.77			29.60			29.40			30.97		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.27											
Intersection LOS	C											
Intersection V/C	0.648											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	24.86	24.86	24.86	24.86
l_p,int, Pedestrian LOS Score for Intersection	2.899	3.080	2.978	2.932
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]	600	629	514	371
d_b, Bicycle Delay [s]	17.15	16.46	19.31	23.21
l_b,int, Bicycle LOS Score for Intersection	2.178	2.463	2.686	2.187
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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.481

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	15	617	47	51	643	14	19	76	25	36	41	77
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	94	0	0	66	31	205	1	19	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	711	47	51	709	45	224	77	44	36	41	77
Peak Hour Factor	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207
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	193	13	14	193	12	61	21	12	10	11	21
Total Analysis Volume [veh/h]	20	772	51	55	770	49	243	84	48	39	45	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	5	37	37	33	33	33	33
g / C, Green / Cycle	0.03	0.41	0.41	0.06	0.44	0.44	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.03	0.03	0.23	0.23	0.19	0.08	0.03	0.08
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1762	1281	1691	1278	1614
c, Capacity [veh/h]	54	1405	627	104	790	773	491	657	491	627
d1, Uniform Delay [s]	40.34	19.11	15.32	38.77	17.40	17.40	24.48	17.24	20.39	17.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.11	0.34	0.05	4.15	0.54	0.55	3.54	0.69	0.32	0.74
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	0.37	0.55	0.08	0.53	0.52	0.52	0.50	0.20	0.08	0.21
d, Delay for Lane Group [s/veh]	44.45	19.45	15.37	42.92	17.94	17.95	28.03	17.93	20.70	18.02
Lane Group LOS	D	B	B	D	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.46	5.45	0.58	1.20	5.56	5.45	4.46	1.78	0.58	1.75
50th-Percentile Queue Length [ft/ln]	11.55	136.21	14.49	30.10	138.93	136.13	111.52	44.56	14.39	43.79
95th-Percentile Queue Length [veh/ln]	0.83	9.28	1.04	2.17	9.42	9.27	7.92	3.21	1.04	3.15
95th-Percentile Queue Length [ft/ln]	20.79	231.92	26.08	54.18	235.58	231.80	198.11	80.20	25.89	78.82

Movement, Approach, & Intersection Results

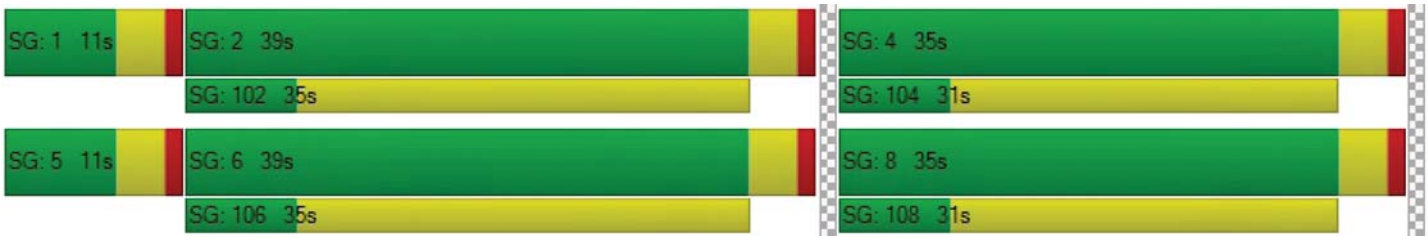
d_M, Delay for Movement [s/veh]	44.45	19.45	15.37	42.92	17.94	17.95	28.03	17.93	17.93	20.70	18.02	18.02
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.80			19.52			24.47			18.64		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	20.38											
Intersection LOS	C											
Intersection V/C	0.481											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.922	3.169	2.096	2.053
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.255	2.281	2.178	1.837
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.378

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	531	29	56	644	20	14	85	23	62	75	76
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	47	0	0	71	9	5	0	2	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]	13	578	29	56	715	29	19	85	25	62	75	76
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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	168	8	16	208	8	6	25	7	18	22	22
Total Analysis Volume [veh/h]	15	672	34	65	831	34	22	99	29	72	87	88
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	13	41	0	0	53	0	0	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
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	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]	3	52	52	6	55	55	35	35	35	35
g / C, Green / Cycle	0.02	0.50	0.50	0.06	0.53	0.53	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.20	0.04	0.24	0.24	0.07	0.02	0.05	0.11
s, saturation flow rate [veh/h]	1714	1800	1770	1714	1800	1775	1621	1530	1317	1653
c, Capacity [veh/h]	42	891	876	99	950	937	581	510	357	551
d1, Uniform Delay [s]	50.38	16.69	16.69	48.46	15.44	15.44	25.04	23.79	33.84	26.10
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.99	1.34	1.36	7.27	1.59	1.61	0.18	0.05	0.27	0.33
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
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	0.36	0.40	0.40	0.66	0.46	0.46	0.21	0.06	0.20	0.32
d, Delay for Lane Group [s/veh]	55.37	18.02	18.05	55.74	17.03	17.05	25.21	23.84	34.11	26.43
Lane Group LOS	E	B	B	E	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.44	5.28	5.20	1.82	6.28	6.19	2.18	0.50	1.54	3.29
50th-Percentile Queue Length [ft/ln]	10.88	131.92	130.02	45.41	156.88	154.87	54.42	12.40	38.54	82.29
95th-Percentile Queue Length [veh/ln]	0.78	9.04	8.94	3.27	10.38	10.28	3.92	0.89	2.77	5.92
95th-Percentile Queue Length [ft/ln]	19.59	226.10	223.52	81.74	259.59	256.91	97.95	22.32	69.37	148.12

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.37	18.04	18.05	55.74	17.04	17.05	25.21	25.21	23.84	34.11	26.43	26.43
Movement LOS	E	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	18.82			19.74			24.95			28.67		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.87											
Intersection LOS	C											
Intersection V/C	0.378											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	42.08	0.00	42.08
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.909	0.000	2.092
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	705	933	933
d_b, Bicycle Delay [s]	23.33	22.02	14.93	14.93
l_b,int, Bicycle LOS Score for Intersection	2.154	2.327	1.807	1.967
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	18.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.449

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	10	526	27	54	644	22	21	102	27	60	78	79
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	46	0	1	66	6	4	0	2	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]	13	572	27	55	710	28	25	102	29	60	78	79
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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	166	8	16	206	8	7	30	8	17	23	23
Total Analysis Volume [veh/h]	15	665	31	64	826	33	29	119	34	70	91	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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	11	39	0	0	54	0	0	54	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	2	30	30	5	33	33	30	30	30	30
g / C, Green / Cycle	0.03	0.39	0.39	0.07	0.43	0.43	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.19	0.04	0.24	0.24	0.12	0.02	0.16	0.06
s, saturation flow rate [veh/h]	1714	1800	1772	1714	1800	1776	1286	1530	976	1530
c, Capacity [veh/h]	46	698	687	119	775	764	554	593	445	593
d1, Uniform Delay [s]	36.97	18.00	18.00	34.81	16.51	16.51	16.20	14.82	20.35	15.42
k, delay calibration	0.11	0.11	0.11	0.11	0.17	0.17	0.11	0.11	0.11	0.11
I, 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]	4.14	0.56	0.57	3.78	1.00	1.01	0.26	0.04	0.49	0.12
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
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	0.33	0.50	0.50	0.54	0.56	0.56	0.27	0.06	0.36	0.16
d, Delay for Lane Group [s/veh]	41.11	18.56	18.57	38.59	17.51	17.53	16.46	14.86	20.84	15.54
Lane Group LOS	D	B	B	D	B	B	B	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.31	4.28	4.22	1.22	5.14	5.07	1.69	0.36	2.45	1.02
50th-Percentile Queue Length [ft/ln]	7.87	106.88	105.40	30.43	128.52	126.87	42.31	9.08	61.31	25.58
95th-Percentile Queue Length [veh/ln]	0.57	7.67	7.58	2.19	8.86	8.77	3.05	0.65	4.41	1.84
95th-Percentile Queue Length [ft/ln]	14.17	191.65	189.59	54.77	221.48	219.23	76.16	16.34	110.36	46.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.11	18.56	18.57	38.59	17.52	17.53	16.46	16.46	14.86	20.84	20.84	15.54
Movement LOS	D	B	B	D	B	B	B	B	B	C	C	B
d_A, Approach Delay [s/veh]	19.04			18.98			16.16			18.91		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.74											
Intersection LOS	B											
Intersection V/C	0.449											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.960	2.918	2.052	2.099
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]	686	667	952	952
d_b, Bicycle Delay [s]	22.67	23.33	14.40	14.40
l_b,int, Bicycle LOS Score for Intersection	2.146	2.321	1.860	1.977
Bicycle LOS	B	B	A	A

Sequence

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

OPENING YEAR (2020) WITH PROJECT

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AMOY.vistro
Report File: G:\...\AMOYp.pdf

Scenario 2 Opening Year With Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.515	12.1	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.616	29.4	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.406	22.5	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.429	15.8	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.515	19.7	B
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.003	11.0	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Thru	0.000	11.7	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	12.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	58	79	32	3	45	4	9	104	38	61	147	22
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	1	12	0	11	20	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
Total Hourly Volume [veh/h]	58	79	35	3	45	4	10	116	38	72	167	22
Peak Hour Factor	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988	0.7988
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]	18	25	11	1	14	1	3	36	12	23	52	7
Total Analysis Volume [veh/h]	73	99	44	4	56	5	13	145	48	90	209	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	571	668	564	615	706	635
Degree of Utilization, x	0.30	0.07	0.12	0.26	0.07	0.52

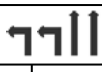
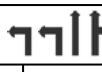
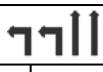
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.26	0.21	0.39	1.02	0.22	2.96
95th-Percentile Queue Length [ft]	31.54	5.27	9.71	25.46	5.46	74.01
Approach Delay [s/veh]	11.04		10.21	10.00		14.54
Approach LOS	B		B	B		B
Intersection Delay [s/veh]	12.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th 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												
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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	84	550	27	101	516	228	103	181	51	47	388	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	86	24	30	278	67	56	37	4	19	44	25
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]	101	636	51	131	794	295	159	218	55	66	432	153
Peak Hour Factor	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197	0.9197
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]	27	173	14	36	216	80	43	59	15	18	117	42
Total Analysis Volume [veh/h]	110	692	55	142	863	321	173	237	60	72	470	166
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	16	0	11	16	0	37	38	0	15	16	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105	105	105
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	57	57	7	57	57	8	19	19	6	17	17
g / C, Green / Cycle	0.06	0.54	0.54	0.07	0.54	0.54	0.07	0.18	0.18	0.06	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.15	0.04	0.34	0.35	0.05	0.07	0.04	0.02	0.14	0.11
s, saturation flow rate [veh/h]	3329	3427	1733	3329	1800	1637	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	216	1854	938	221	977	888	248	620	277	198	569	254
d1, Uniform Delay [s]	47.54	12.95	12.96	47.85	16.73	16.84	47.50	37.88	36.70	47.52	42.37	41.01
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
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
d2, Incremental Delay [s]	1.86	0.35	0.70	3.10	3.10	3.51	3.54	0.39	0.39	1.12	3.12	2.84
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	0.51	0.27	0.27	0.64	0.63	0.64	0.70	0.38	0.22	0.36	0.83	0.65
d, Delay for Lane Group [s/veh]	49.39	13.30	13.66	50.95	19.83	20.35	51.04	38.27	37.09	48.64	45.49	43.85
Lane Group LOS	D	B	B	D	B	C	D	D	D	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.43	3.06	3.21	1.87	10.20	9.53	2.28	2.65	1.31	0.92	5.97	4.11
50th-Percentile Queue Length [ft/ln]	35.79	76.45	80.16	46.73	255.03	238.37	57.08	66.31	32.87	22.96	149.23	102.81
95th-Percentile Queue Length [veh/ln]	2.58	5.50	5.77	3.36	15.44	14.60	4.11	4.77	2.37	1.65	9.98	7.40
95th-Percentile Queue Length [ft/ln]	64.43	137.60	144.29	84.11	385.98	364.97	102.74	119.36	59.16	41.33	249.40	185.06

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.39	13.40	13.66	50.95	19.98	20.35	51.04	38.27	37.09	48.64	45.49	43.85
Movement LOS	D	B	B	D	B	C	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	18.04			23.38			42.82			45.43		
Approach LOS	B			C			D			D		
d_I, Intersection Delay [s/veh]	29.38											
Intersection LOS	C											
Intersection V/C	0.616											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.902	3.039	2.856	2.813
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]	229	229	648	229
d_b, Bicycle Delay [s]	41.19	41.19	24.00	41.19
l_b,int, Bicycle LOS Score for Intersection	2.031	2.654	1.947	2.144
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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.5
Analysis Method:	HCM 6th 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												
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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	21	597	33	83	465	50	13	28	9	12	30	43
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	99	0	0	121	165	29	0	3	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]	39	696	33	83	586	215	42	28	12	12	31	43
Peak Hour Factor	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983	0.7983
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	218	10	26	184	67	13	9	4	4	10	13
Total Analysis Volume [veh/h]	49	872	41	104	734	269	53	35	15	15	39	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	5	35	35	6	37	37	32	32	32	32
g / C, Green / Cycle	0.06	0.41	0.41	0.08	0.43	0.43	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.03	0.25	0.03	0.06	0.29	0.29	0.04	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1637	1324	1709	1376	1633
c, Capacity [veh/h]	97	1406	628	131	774	704	501	636	544	608
d1, Uniform Delay [s]	38.93	19.82	15.18	38.61	19.50	19.51	20.80	17.26	19.09	17.77
k, delay calibration	0.11	0.11	0.11	0.11	0.21	0.21	0.50	0.50	0.50	0.50
I, 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]	3.98	0.45	0.04	10.36	2.05	2.27	0.42	0.24	0.09	0.53
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	0.50	0.62	0.07	0.79	0.68	0.68	0.11	0.08	0.03	0.15
d, Delay for Lane Group [s/veh]	42.91	20.27	15.23	48.97	21.55	21.79	21.22	17.50	19.18	18.30
Lane Group LOS	D	C	B	D	C	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.07	6.40	0.46	2.45	8.10	7.43	0.79	0.66	0.21	1.27
50th-Percentile Queue Length [ft/ln]	26.86	160.03	11.56	61.19	202.40	185.63	19.85	16.46	5.23	31.73
95th-Percentile Queue Length [veh/ln]	1.93	10.55	0.83	4.41	12.76	11.89	1.43	1.19	0.38	2.28
95th-Percentile Queue Length [ft/ln]	48.34	263.76	20.81	110.13	319.06	297.35	35.73	29.63	9.42	57.11

Movement, Approach, & Intersection Results

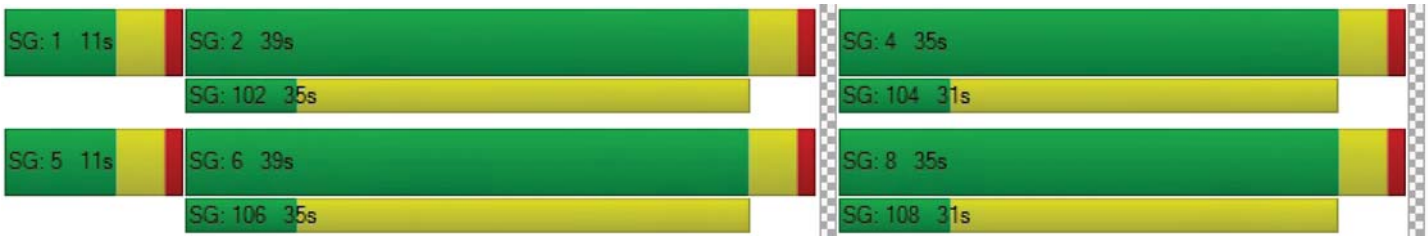
d_M, Delay for Movement [s/veh]	42.91	20.27	15.23	48.97	21.62	21.79	21.22	17.50	17.50	19.18	18.30	18.30
Movement LOS	D	C	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	21.21			24.23			19.42			18.43		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.46											
Intersection LOS	C											
Intersection V/C	0.406											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.892	2.920	2.086	2.030
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.353	2.473	1.730	1.738
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.429

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	14	593	46	46	356	13	14	80	7	16	83	52
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	109	0	0	45	3	8	0	3	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]	15	702	46	46	401	16	22	80	10	16	83	52
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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	215	14	14	123	5	7	25	3	5	25	16
Total Analysis Volume [veh/h]	18	862	56	56	492	20	27	98	12	20	102	64
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	34	0	11	34	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
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	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]	3	71	71	6	74	74	16	16	16	16
g / C, Green / Cycle	0.03	0.68	0.68	0.05	0.71	0.71	0.15	0.15	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.01	0.26	0.26	0.03	0.14	0.14	0.11	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1714	1800	1762	1714	1800	1775	1092	1530	1318	1685
c, Capacity [veh/h]	48	1221	1195	94	1269	1251	209	234	88	257
d1, Uniform Delay [s]	50.10	7.31	7.31	48.51	5.34	5.34	41.49	37.98	51.77	41.80
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.68	0.90	0.92	6.01	0.36	0.37	2.75	0.09	1.31	2.70
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	0.37	0.38	0.38	0.60	0.20	0.20	0.60	0.05	0.23	0.64
d, Delay for Lane Group [s/veh]	54.78	8.21	8.23	54.52	5.70	5.71	44.24	38.07	53.07	44.50
Lane Group LOS	D	A	A	D	A	A	D	D	D	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.51	3.93	3.85	1.55	1.64	1.62	3.31	0.27	0.56	4.21
50th-Percentile Queue Length [ft/ln]	12.85	98.19	96.26	38.67	40.93	40.53	82.87	6.75	13.93	105.32
95th-Percentile Queue Length [veh/ln]	0.93	7.07	6.93	2.78	2.95	2.92	5.97	0.49	1.00	7.58
95th-Percentile Queue Length [ft/ln]	23.13	176.74	173.27	69.61	73.67	72.95	149.16	12.15	25.07	189.48

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.78	8.22	8.23	54.52	5.70	5.71	44.24	44.24	38.07	53.07	44.50	44.50
Movement LOS	D	A	A	D	A	A	D	D	D	D	D	D
d_A, Approach Delay [s/veh]	9.12			10.52			43.70			45.42		
Approach LOS	A			B			D			D		
d_I, Intersection Delay [s/veh]	15.84											
Intersection LOS	B											
Intersection V/C	0.429											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	42.08	0.00	42.08
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.869	0.000	2.076
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	571	571	305	305
d_b, Bicycle Delay [s]	26.79	26.79	37.72	37.72
l_b,int, Bicycle LOS Score for Intersection	2.332	2.028	1.786	1.867
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.515

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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	593	45	54	352	22	18	87	7	15	100	51
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	52	0	0	32	16	57	6	25	0	2	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]	24	645	45	54	384	38	75	93	32	15	102	52
Peak Hour Factor	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148	0.8148
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]	7	198	14	17	118	12	23	29	10	5	31	16
Total Analysis Volume [veh/h]	29	792	55	66	471	47	92	114	39	18	125	64
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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	40	0	11	39	0	0	59	0	0	59	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	3	30	30	5	32	32	30	30	30	30
g / C, Green / Cycle	0.04	0.39	0.39	0.07	0.41	0.41	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.24	0.04	0.15	0.15	0.20	0.03	0.09	0.04
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1743	1037	1530	1561	1530
c, Capacity [veh/h]	75	697	682	120	745	722	469	593	657	593
d1, Uniform Delay [s]	36.02	19.06	19.06	34.82	15.57	15.58	21.55	14.90	15.86	15.16
k, delay calibration	0.11	0.17	0.17	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	3.26	1.36	1.40	3.87	0.28	0.30	0.65	0.05	0.16	0.08
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	0.39	0.61	0.61	0.55	0.35	0.35	0.44	0.07	0.22	0.11
d, Delay for Lane Group [s/veh]	39.28	20.42	20.46	38.69	15.85	15.87	22.20	14.95	16.02	15.24
Lane Group LOS	D	C	C	D	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.57	5.66	5.54	1.26	2.83	2.76	3.17	0.42	1.63	0.70
50th-Percentile Queue Length [ft/ln]	14.23	141.39	138.38	31.43	70.77	69.00	79.20	10.47	40.65	17.48
95th-Percentile Queue Length [veh/ln]	1.02	9.56	9.39	2.26	5.10	4.97	5.70	0.75	2.93	1.26
95th-Percentile Queue Length [ft/ln]	25.62	238.89	234.84	56.58	127.39	124.21	142.55	18.84	73.16	31.47

Movement, Approach, & Intersection Results

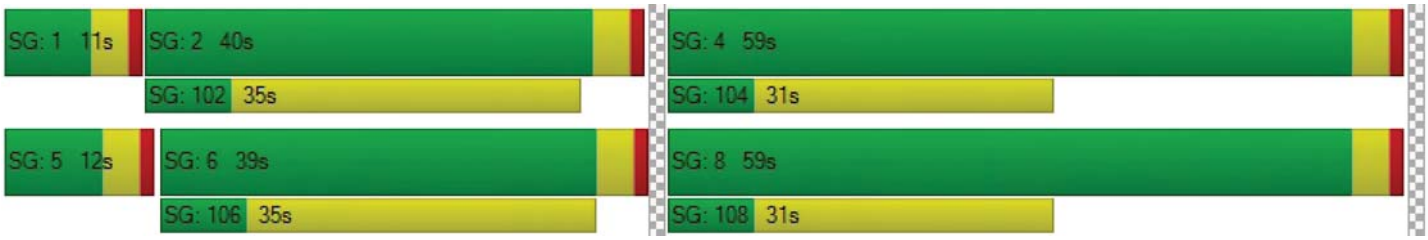
d_M, Delay for Movement [s/veh]	39.28	20.44	20.46	38.69	15.86	15.87	22.20	22.20	14.95	16.02	16.02	15.24
Movement LOS	D	C	C	D	B	B	C	C	B	B	B	B
d_A, Approach Delay [s/veh]	21.07			18.44			21.04			15.78		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	19.69											
Intersection LOS	B											
Intersection V/C	0.515											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	44.55	44.55	44.55	44.55
l_p,int, Pedestrian LOS Score for Intersection	2.830	2.967	2.095	2.093
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]	655	636	1000	1000
d_b, Bicycle Delay [s]	24.89	25.57	13.75	13.75
l_b,int, Bicycle LOS Score for Intersection	2.282	2.041	1.964	1.901
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	139	230	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	6	0	14	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	6	0	153	255	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	0	38	64	0
Total Analysis Volume [veh/h]	2	6	0	153	255	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.02	9.62	7.72	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.03	0.03	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.83	0.83	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.97		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.19					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: Apt East Access (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	112	0	0	140	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	38	41	0	9	3	10	3	11	3	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	0	38	41	0	9	3	122	3	11	143	11
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	10	11	0	2	1	33	1	3	39	3
Total Analysis Volume [veh/h]	14	0	41	45	0	10	3	133	3	12	155	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.04	0.08	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	11.18	11.48	9.23	11.55	11.66	9.58	7.53	0.00	0.00	7.49	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.22	0.28	0.28	0.28	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	5.41	5.41	5.41	7.07	7.07	7.07	0.16	0.16	0.16	0.57	0.57	0.57
d_A, Approach Delay [s/veh]	9.73			11.20			0.16			0.50		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	2.95											
Intersection LOS	B											

SD Homes/ Redlands Apartment Project

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Report File: G:\...\PMOYp.pdf

Scenario 2 Opening Year With Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.347	10.2	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.657	28.7	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.491	20.6	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.396	21.0	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.585	21.2	C
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.003	11.3	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.000	12.9	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.347

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	13	96	41	25	66	29	8	185	27	16	78	6
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	11	0	0	1	0	23	0	6	18	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
Total Hourly Volume [veh/h]	13	96	52	25	66	30	8	208	27	22	96	6
Peak Hour Factor	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481	0.9481
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]	3	25	14	7	17	8	2	55	7	6	25	2
Total Analysis Volume [veh/h]	14	101	55	26	70	32	8	219	28	23	101	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	622	716	632	654	752	632
Degree of Utilization, x	0.18	0.08	0.20	0.35	0.04	0.21

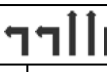
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.67	0.25	0.75	1.55	0.12	0.77
95th-Percentile Queue Length [ft]	16.84	6.22	18.84	38.79	2.90	19.22
Approach Delay [s/veh]	9.26		10.14	10.73		10.18
Approach LOS	A		B	B		B
Intersection Delay [s/veh]	10.15					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	28.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.657

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	92	609	107	170	534	176	372	723	105	92	380	179
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	9	298	27	41	113	70	89	61	17	25	48	45
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]	101	907	134	211	647	246	461	784	122	117	428	224
Peak Hour Factor	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888	0.9888
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]	26	229	34	53	164	62	117	198	31	30	108	57
Total Analysis Volume [veh/h]	102	917	136	213	654	249	466	793	123	118	433	227
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]	70
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	25	0	12	26	0	16	22	0	11	17	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	70	70	70	70	70	70	70	70	70	70	70	70
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	23	23	7	24	24	12	18	18	6	13	13
g / C, Green / Cycle	0.09	0.33	0.33	0.10	0.34	0.34	0.17	0.26	0.26	0.09	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.21	0.06	0.26	0.26	0.14	0.23	0.08	0.04	0.13	0.15
s, saturation flow rate [veh/h]	3329	3427	1684	3329	1800	1633	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	290	1117	549	330	608	552	555	878	392	302	618	276
d1, Uniform Delay [s]	30.15	20.07	20.08	30.41	20.86	20.88	28.32	25.23	21.09	30.06	26.96	27.66
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
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
d2, Incremental Delay [s]	0.73	2.72	5.49	2.13	9.48	10.44	3.51	3.79	0.45	0.82	1.45	6.07
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	0.63	0.63	0.65	0.78	0.78	0.84	0.90	0.31	0.39	0.70	0.82
d, Delay for Lane Group [s/veh]	30.87	22.79	25.57	32.54	30.34	31.32	31.83	29.02	21.54	30.88	28.42	33.73
Lane Group LOS	C	C	C	C	C	C	C	C	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.80	4.87	5.22	1.71	7.73	7.18	3.76	6.20	1.54	0.91	3.25	3.82
50th-Percentile Queue Length [ft/ln]	20.02	121.75	130.56	42.84	193.26	179.42	94.07	155.00	38.43	22.83	81.18	95.59
95th-Percentile Queue Length [veh/ln]	1.44	8.49	8.97	3.08	12.29	11.57	6.77	10.28	2.77	1.64	5.84	6.88
95th-Percentile Queue Length [ft/ln]	36.03	212.23	224.26	77.10	307.26	289.26	169.33	257.08	69.17	41.10	146.12	172.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	30.87	23.43	25.57	32.54	30.61	31.32	31.83	29.02	21.54	30.88	28.42	33.73
Movement LOS	C	C	C	C	C	C	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	24.34			31.14			29.30			30.34		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.65											
Intersection LOS	C											
Intersection V/C	0.657											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	24.86	24.86	24.86	24.86
l_p,int, Pedestrian LOS Score for Intersection	2.913	3.086	2.982	2.937
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]	600	629	514	371
d_b, Bicycle Delay [s]	17.15	16.46	19.31	23.21
l_b,int, Bicycle LOS Score for Intersection	2.195	2.480	2.700	2.201
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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.491

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	15	617	47	51	643	14	19	76	25	36	41	77
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	123	0	0	121	31	205	1	19	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	740	47	51	764	45	224	77	44	36	41	77
Peak Hour Factor	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207	0.9207
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	201	13	14	207	12	61	21	12	10	11	21
Total Analysis Volume [veh/h]	20	804	51	55	830	49	243	84	48	39	45	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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	5	37	37	33	33	33	33
g / C, Green / Cycle	0.03	0.41	0.41	0.06	0.44	0.44	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.03	0.03	0.25	0.25	0.19	0.08	0.03	0.08
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1765	1281	1691	1278	1614
c, Capacity [veh/h]	54	1405	627	104	790	774	491	657	491	627
d1, Uniform Delay [s]	40.34	19.35	15.32	38.77	17.78	17.78	24.48	17.24	20.39	17.28
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	4.11	0.37	0.05	4.15	0.67	0.68	3.54	0.69	0.32	0.74
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	0.37	0.57	0.08	0.53	0.56	0.56	0.50	0.20	0.08	0.21
d, Delay for Lane Group [s/veh]	44.45	19.72	15.37	42.92	18.45	18.46	28.03	17.93	20.70	18.02
Lane Group LOS	D	B	B	D	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.46	5.75	0.58	1.20	6.11	5.99	4.46	1.78	0.58	1.75
50th-Percentile Queue Length [ft/ln]	11.55	143.66	14.49	30.10	152.73	149.83	111.52	44.56	14.39	43.79
95th-Percentile Queue Length [veh/ln]	0.83	9.68	1.04	2.17	10.16	10.01	7.92	3.21	1.04	3.15
95th-Percentile Queue Length [ft/ln]	20.79	241.94	26.08	54.18	254.07	250.20	198.11	80.20	25.89	78.82

Movement, Approach, & Intersection Results

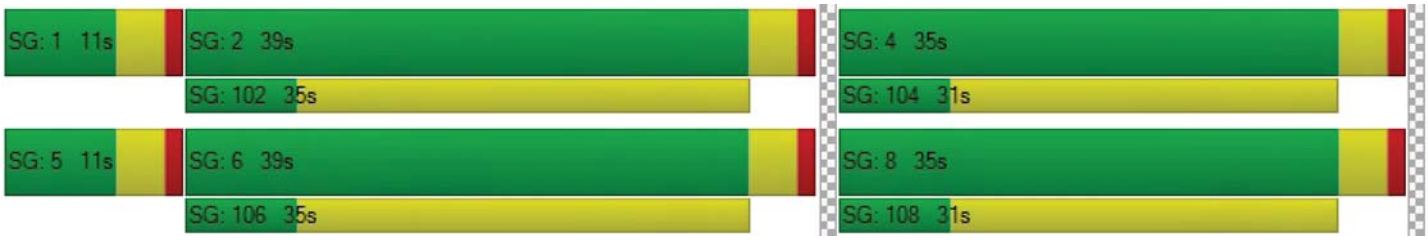
d_M, Delay for Movement [s/veh]	44.45	19.72	15.37	42.92	18.46	18.46	28.03	17.93	17.93	20.70	18.02	18.02
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.03			19.90			24.47			18.64		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.59											
Intersection LOS	C											
Intersection V/C	0.491											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.937	3.187	2.096	2.053
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.281	2.330	2.178	1.837
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.396

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	10	531	29	56	644	20	14	85	23	62	75	76
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	76	0	0	126	9	5	0	2	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]	13	607	29	56	770	29	19	85	25	62	75	76
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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	176	8	16	224	8	6	25	7	18	22	22
Total Analysis Volume [veh/h]	15	706	34	65	895	34	22	99	29	72	87	88
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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	43	0	14	46	0	0	53	0	0	53	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
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	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]	3	57	57	6	60	60	35	35	35	35
g / C, Green / Cycle	0.02	0.52	0.52	0.06	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.04	0.26	0.26	0.08	0.02	0.05	0.11
s, saturation flow rate [veh/h]	1714	1800	1771	1714	1800	1777	1594	1530	1317	1653
c, Capacity [veh/h]	42	931	916	96	987	975	546	487	335	526
d1, Uniform Delay [s]	52.80	16.18	16.18	50.96	15.15	15.15	27.43	26.06	36.81	28.59
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	5.14	1.29	1.31	8.19	1.63	1.65	0.20	0.05	0.32	0.37
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
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	0.36	0.40	0.40	0.68	0.47	0.47	0.22	0.06	0.22	0.33
d, Delay for Lane Group [s/veh]	57.94	17.46	17.49	59.15	16.77	16.80	27.63	26.11	37.13	28.96
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.46	5.59	5.51	1.93	6.90	6.82	2.36	0.54	1.66	3.57
50th-Percentile Queue Length [ft/ln]	11.42	139.73	137.76	48.16	172.47	170.40	58.97	13.43	41.53	89.16
95th-Percentile Queue Length [veh/ln]	0.82	9.47	9.36	3.47	11.21	11.10	4.25	0.97	2.99	6.42
95th-Percentile Queue Length [ft/ln]	20.56	236.65	234.00	86.69	280.16	277.44	106.15	24.18	74.75	160.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.94	17.47	17.49	59.15	16.78	16.80	27.63	27.63	26.11	37.13	28.96	28.96
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	18.28			19.56			27.34			31.34		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	21.01											
Intersection LOS	C											
Intersection V/C	0.396											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	44.55	0.00	44.55
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.935	0.000	2.094
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	709	764	891	891
d_b, Bicycle Delay [s]	22.91	21.02	16.91	16.91
l_b,int, Bicycle LOS Score for Intersection	2.182	2.380	1.807	1.967
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	21.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.585

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	10	526	27	54	644	22	21	102	27	60	78	79
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	26	46	0	1	66	61	33	3	14	0	6	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]	36	572	27	55	710	83	54	105	41	60	84	79
Peak Hour Factor	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599	0.8599
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]	10	166	8	16	206	24	16	31	12	17	24	23
Total Analysis Volume [veh/h]	42	665	31	64	826	97	63	122	48	70	98	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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	40	0	14	43	0	0	56	0	0	56	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
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	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]	4	30	30	5	31	31	30	30	30	30
g / C, Green / Cycle	0.05	0.39	0.39	0.07	0.40	0.40	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.19	0.19	0.04	0.26	0.26	0.25	0.03	0.25	0.06
s, saturation flow rate [veh/h]	1714	1800	1772	1714	1800	1734	727	1530	663	1530
c, Capacity [veh/h]	95	698	687	119	723	697	344	593	323	593
d1, Uniform Delay [s]	35.37	18.00	18.00	34.81	18.74	18.74	21.60	14.96	23.42	15.42
k, delay calibration	0.11	0.11	0.11	0.11	0.21	0.21	0.20	0.11	0.20	0.11
I, 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]	3.20	0.56	0.57	3.78	1.93	2.00	2.37	0.06	2.35	0.12
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
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	0.44	0.50	0.50	0.54	0.65	0.65	0.54	0.08	0.52	0.16
d, Delay for Lane Group [s/veh]	38.58	18.56	18.57	38.59	20.67	20.74	23.97	15.02	25.77	15.54
Lane Group LOS	D	B	B	D	C	C	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.80	4.28	4.22	1.22	6.29	6.07	3.32	0.52	3.04	1.02
50th-Percentile Queue Length [ft/ln]	20.12	106.89	105.39	30.43	157.20	151.82	83.07	12.94	75.99	25.58
95th-Percentile Queue Length [veh/ln]	1.45	7.67	7.58	2.19	10.40	10.11	5.98	0.93	5.47	1.84
95th-Percentile Queue Length [ft/ln]	36.22	191.67	189.57	54.77	260.01	252.86	149.52	23.29	136.79	46.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.58	18.56	18.57	38.59	20.70	20.74	23.97	23.97	15.02	25.77	25.77	15.54
Movement LOS	D	B	B	D	C	C	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	19.70			21.87			22.13			22.15		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	21.21											
Intersection LOS	C											
Intersection V/C	0.585											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	44.55	44.55	44.55	44.55
l_p,int, Pedestrian LOS Score for Intersection	2.972	2.992	2.103	2.105
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]	655	709	945	945
d_b, Bicycle Delay [s]	24.89	22.91	15.29	15.29
l_b,int, Bicycle LOS Score for Intersection	2.168	2.374	1.944	1.989
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	11.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.003

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	251	100	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	3	0	34	21	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	3	0	285	121	0
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	1	0	77	33	0
Total Analysis Volume [veh/h]	2	3	0	310	132	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	11.28	8.93	7.46	0.00	0.00	0.00
Movement LOS	B	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.51	0.51	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.87		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: Apt East Access (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.000

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	150	0	0	110	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	7	0	21	21	0	5	15	8	13	40	9	44
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
Total Hourly Volume [veh/h]	7	0	21	21	0	5	15	158	13	40	119	44
Peak Hour Factor	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200	0.9200
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	0	6	6	0	1	4	43	4	11	32	12
Total Analysis Volume [veh/h]	8	0	23	23	0	5	16	172	14	43	129	48
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.03	0.05	0.00	0.01	0.01	0.00	0.00	0.03	0.00	0.00
d_M, Delay for Movement [s/veh]	12.43	12.89	9.36	12.71	12.88	9.38	7.58	0.00	0.00	7.65	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.13	0.13	0.13	0.17	0.17	0.17	0.03	0.03	0.03	0.09	0.09	0.09
95th-Percentile Queue Length [ft/ln]	3.32	3.32	3.32	4.14	4.14	4.14	0.81	0.81	0.81	2.20	2.20	2.20
d_A, Approach Delay [s/veh]	10.15			12.11			0.60			1.50		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.30											
Intersection LOS	B											

GENERAL BUILDOUT (YEAR 2040) WITHOUT PROJECT

SD Homes/ Redlands Apartment Project

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Report File: G:\...\AMGB.pdf

Scenario 1 General Buildout Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.736	17.7	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.737	32.3	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.412	22.4	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.382	20.4	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.427	19.2	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.736

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	89	143	38	6	63	11	18	136	41	71	290	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	1	8	0	0	3	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
Total Hourly Volume [veh/h]	89	143	38	6	63	11	19	144	41	71	293	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	38	10	2	17	3	5	38	11	19	77	13
Total Analysis Volume [veh/h]	94	151	40	6	66	12	20	152	43	75	308	53
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	528	609	508	551	626	592
Degree of Utilization, x	0.46	0.07	0.17	0.31	0.07	0.74

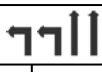
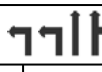
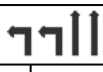
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.43	0.21	0.59	1.32	0.22	6.31
95th-Percentile Queue Length [ft]	60.78	5.26	14.71	33.07	5.52	157.85
Approach Delay [s/veh]	14.41		11.49	11.50		24.09
Approach LOS	B		B	B		C
Intersection Delay [s/veh]	17.69					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.737

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	90	630	30	177	644	246	120	203	55	69	491	270
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	68	7	30	272	67	56	37	0	15	44	25
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]	90	698	37	207	916	313	176	240	55	84	535	295
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	184	10	54	241	82	46	63	14	22	141	78
Total Analysis Volume [veh/h]	95	735	39	218	964	329	185	253	58	88	563	311
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	31	0	17	37	0	11	25	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
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	35	35	8	36	36	7	20	20	6	20	20
g / C, Green / Cycle	0.07	0.41	0.41	0.09	0.43	0.43	0.08	0.24	0.24	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	0.15	0.07	0.37	0.38	0.06	0.07	0.04	0.03	0.16	0.20
s, saturation flow rate [veh/h]	3329	3427	1754	3329	1800	1647	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	247	1404	719	302	767	702	272	819	366	242	788	352
d1, Uniform Delay [s]	37.54	17.43	17.44	37.65	22.25	22.61	37.99	26.61	25.62	37.58	30.20	31.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.14
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
d2, Incremental Delay [s]	0.98	0.73	1.44	3.26	12.80	15.97	2.97	0.21	0.20	0.92	1.23	9.30
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	0.38	0.36	0.37	0.72	0.87	0.89	0.68	0.31	0.16	0.36	0.71	0.88
d, Delay for Lane Group [s/veh]	38.52	18.16	18.88	40.91	35.06	38.58	40.95	26.82	25.82	38.50	31.43	40.97
Lane Group LOS	D	B	B	D	D	D	D	C	C	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.95	3.40	3.64	2.25	13.55	13.45	1.91	2.02	0.90	0.87	5.13	6.70
50th-Percentile Queue Length [ft/ln]	23.78	84.99	90.92	56.35	338.83	336.20	47.76	50.54	22.55	21.76	128.34	167.54
95th-Percentile Queue Length [veh/ln]	1.71	6.12	6.55	4.06	19.59	19.46	3.44	3.64	1.62	1.57	8.85	10.95
95th-Percentile Queue Length [ft/ln]	42.81	152.98	163.65	101.43	489.78	486.55	85.97	90.98	40.59	39.17	221.23	273.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.52	18.38	18.88	40.91	36.14	38.58	40.95	26.82	25.82	38.50	31.43	40.97
Movement LOS	D	B	B	D	D	D	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	20.60			37.36			31.98			35.16		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	32.32											
Intersection LOS	C											
Intersection V/C	0.737											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.912	3.100	2.866	2.864
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]	635	776	494	518
d_b, Bicycle Delay [s]	19.79	15.91	24.09	23.35
l_b,int, Bicycle LOS Score for Intersection	2.038	2.806	1.969	2.353
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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.412

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	44	648	35	89	547	108	20	37	14	13	48	46
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	47	0	0	107	165	29	0	3	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]	62	695	35	89	654	273	49	37	17	13	49	46
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	183	9	23	172	72	13	10	4	3	13	12
Total Analysis Volume [veh/h]	65	732	37	94	688	287	52	39	18	14	52	48
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	6	35	35	6	36	36	32	32	32	32
g / C, Green / Cycle	0.06	0.41	0.41	0.07	0.42	0.42	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.21	0.02	0.05	0.28	0.29	0.04	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1622	1315	1705	1368	1659
c, Capacity [veh/h]	111	1407	628	126	755	680	499	639	540	622
d1, Uniform Delay [s]	38.63	18.78	15.14	38.59	20.04	20.05	20.78	17.20	19.10	17.69
k, delay calibration	0.11	0.11	0.11	0.11	0.21	0.21	0.50	0.50	0.50	0.50
I, 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]	4.78	0.30	0.04	8.34	2.09	2.32	0.42	0.28	0.09	0.55
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	0.58	0.52	0.06	0.74	0.68	0.68	0.10	0.09	0.03	0.16
d, Delay for Lane Group [s/veh]	43.42	19.08	15.18	46.93	22.13	22.37	21.20	17.47	19.19	18.24
Lane Group LOS	D	B	B	D	C	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.43	5.08	0.42	2.16	8.02	7.29	0.78	0.75	0.20	1.36
50th-Percentile Queue Length [ft/ln]	35.74	127.06	10.40	53.98	200.62	182.16	19.47	18.76	4.89	34.03
95th-Percentile Queue Length [veh/ln]	2.57	8.78	0.75	3.89	12.67	11.71	1.40	1.35	0.35	2.45
95th-Percentile Queue Length [ft/ln]	64.34	219.49	18.72	97.16	316.76	292.83	35.04	33.77	8.79	61.26

Movement, Approach, & Intersection Results

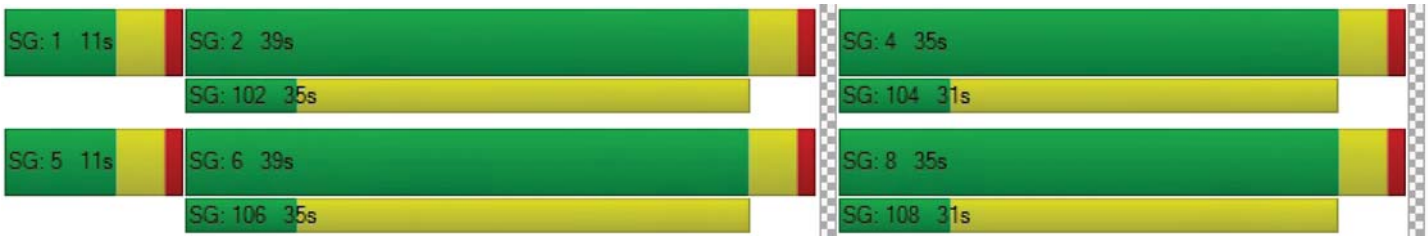
d_M, Delay for Movement [s/veh]	43.42	19.08	15.18	46.93	22.19	22.37	21.20	17.47	17.47	19.19	18.24	18.24
Movement LOS	D	B	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.81			24.42			19.25			18.36		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.41											
Intersection LOS	C											
Intersection V/C	0.412											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.863	2.884	2.103	2.029
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.248	2.442	1.739	1.748
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	643	54	50	442	14	15	86	9	29	96	73
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	57	0	0	31	3	8	0	3	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]	16	700	54	50	473	17	23	86	12	29	96	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	184	14	13	124	4	6	23	3	8	25	19
Total Analysis Volume [veh/h]	17	737	57	53	498	18	24	91	13	31	101	77
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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	42	0	11	41	0	0	52	0	0	52	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
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	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]	3	57	57	6	60	60	35	35	35	35
g / C, Green / Cycle	0.03	0.52	0.52	0.05	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.22	0.22	0.03	0.14	0.14	0.08	0.01	0.02	0.11
s, saturation flow rate [veh/h]	1714	1800	1755	1714	1800	1778	1512	1530	1326	1672
c, Capacity [veh/h]	46	938	914	89	983	971	520	487	333	532
d1, Uniform Delay [s]	52.61	16.25	16.25	51.00	13.24	13.24	27.37	25.79	35.85	28.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.93	1.43	1.47	6.24	0.65	0.66	0.21	0.02	0.12	0.37
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
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	0.37	0.43	0.43	0.60	0.26	0.26	0.22	0.03	0.09	0.33
d, Delay for Lane Group [s/veh]	57.53	17.68	17.72	57.24	13.89	13.91	27.58	25.81	35.97	28.98
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	6.10	5.96	1.54	3.30	3.27	2.24	0.24	0.69	3.63
50th-Percentile Queue Length [ft/ln]	12.81	152.39	148.94	38.60	82.40	81.65	55.89	5.96	17.33	90.74
95th-Percentile Queue Length [veh/ln]	0.92	10.14	9.96	2.78	5.93	5.88	4.02	0.43	1.25	6.53
95th-Percentile Queue Length [ft/ln]	23.05	253.61	249.02	69.48	148.33	146.98	100.60	10.72	31.20	163.33

Movement, Approach, & Intersection Results

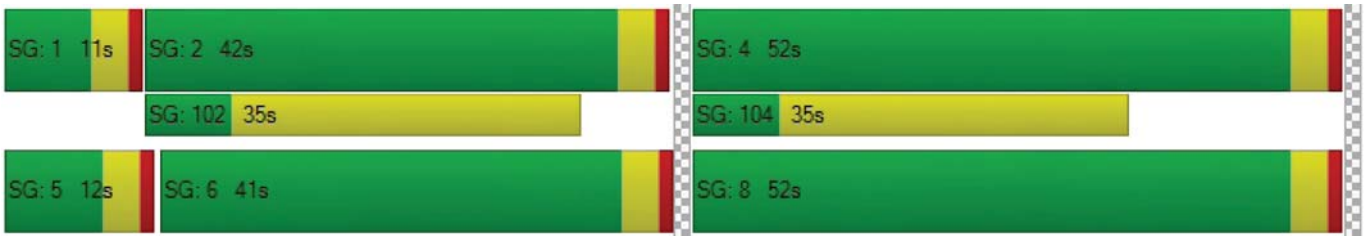
d_M, Delay for Movement [s/veh]	57.53	17.70	17.72	57.24	13.90	13.91	27.58	27.58	25.81	35.97	28.98	28.98
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	18.54			17.94			27.40			30.02		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.40											
Intersection LOS	C											
Intersection V/C	0.382											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	44.55	0.00	44.55
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.840	0.000	2.083
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	691	673	873	873
d_b, Bicycle Delay [s]	23.56	24.22	17.47	17.47
l_b,int, Bicycle LOS Score for Intersection	2.229	2.029	1.771	1.904
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.427

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	28	634	48	81	376	94	42	107	8	17	198	67
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	52	0	0	32	2	5	0	3	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]	29	686	48	81	408	96	47	107	11	17	198	68
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	181	13	21	107	25	12	28	3	4	52	18
Total Analysis Volume [veh/h]	31	722	51	85	429	101	49	113	12	18	208	72
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	16	44	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	78	78	78	78	78	78	78	78	78	78
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	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]	3	30	30	6	32	32	30	30	30	30
g / C, Green / Cycle	0.04	0.38	0.38	0.08	0.42	0.42	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.05	0.15	0.15	0.12	0.01	0.13	0.05
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1683	1368	1530	1776	1530
c, Capacity [veh/h]	78	692	676	132	749	700	586	588	733	588
d1, Uniform Delay [s]	36.19	18.87	18.87	34.96	15.67	15.70	16.47	14.89	16.89	15.50
k, delay calibration	0.11	0.13	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11
I, 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]	3.25	0.88	0.90	5.18	0.30	0.32	0.25	0.01	0.24	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	0.40	0.56	0.56	0.64	0.36	0.37	0.28	0.02	0.31	0.12
d, Delay for Lane Group [s/veh]	39.44	19.75	19.77	40.14	15.97	16.02	16.72	14.90	17.13	15.59
Lane Group LOS	D	B	B	D	B	B	B	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.61	5.04	4.93	1.66	2.98	2.82	1.90	0.13	2.74	0.80
50th-Percentile Queue Length [ft/ln]	15.27	125.97	123.29	41.49	74.42	70.43	47.47	3.21	68.62	20.09
95th-Percentile Queue Length [veh/ln]	1.10	8.72	8.57	2.99	5.36	5.07	3.42	0.23	4.94	1.45
95th-Percentile Queue Length [ft/ln]	27.49	218.00	214.33	74.68	133.96	126.78	85.44	5.78	123.52	36.15

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.44	19.76	19.77	40.14	15.99	16.02	16.72	16.72	14.90	17.13	17.13	15.59
Movement LOS	D	B	B	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.52			19.33			16.60			16.76		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	19.18											
Intersection LOS	B											
Intersection V/C	0.427											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.783	2.875	2.104	2.115
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]	824	941	729	729
d_b, Bicycle Delay [s]	14.71	11.91	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.223	2.067	1.847	2.051
Bicycle LOS	B	B	A	B

Sequence

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

SD Homes/ Redlands Apartment Project

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Scenario 1 General Buildout Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.668	16.0	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.738	32.1	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.440	20.3	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.393	22.0	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	EB Thru	1.170	53.7	D

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: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	15	133	53	47	135	49	16	341	53	32	127	11
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	15	133	53	47	135	49	16	341	53	32	127	11
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	35	14	12	36	13	4	90	14	8	33	3
Total Analysis Volume [veh/h]	16	140	56	49	142	52	17	359	56	34	134	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	513	577	531	563	636	523
Degree of Utilization, x	0.30	0.10	0.46	0.67	0.09	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.27	0.32	2.37	4.98	0.29	1.52
95th-Percentile Queue Length [ft]	31.84	8.04	59.36	124.52	7.22	37.98
Approach Delay [s/veh]	11.92		15.37	19.46		13.44
Approach LOS	B		C	C		B
Intersection Delay [s/veh]	16.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	98	733	137	321	595	210	427	882	112	98	431	301
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	167	8	0	28	0	0	0	0	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]	98	900	145	321	623	210	427	882	112	99	431	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	237	38	84	164	55	112	232	29	26	113	79
Total Analysis Volume [veh/h]	103	947	153	338	656	221	449	928	118	104	454	317
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]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	25	0	13	27	0	16	26	0	11	21	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75	75
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	21	21	9	24	24	12	23	23	6	17	17
g / C, Green / Cycle	0.08	0.28	0.28	0.12	0.32	0.32	0.16	0.30	0.30	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.10	0.25	0.26	0.13	0.27	0.08	0.03	0.13	0.21
s, saturation flow rate [veh/h]	3329	3427	1675	3329	1800	1647	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	275	966	472	400	575	526	528	1035	462	276	776	346
d1, Uniform Delay [s]	32.58	24.67	24.68	32.33	23.30	23.34	30.71	25.06	19.80	32.57	25.88	28.32
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
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
d2, Incremental Delay [s]	0.84	5.75	11.30	4.97	10.87	12.03	3.98	3.05	0.29	0.85	0.70	9.65
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	0.37	0.76	0.77	0.85	0.80	0.80	0.85	0.90	0.26	0.38	0.59	0.91
d, Delay for Lane Group [s/veh]	33.42	30.41	35.98	37.29	34.17	35.37	34.68	28.11	20.09	33.42	26.58	37.96
Lane Group LOS	C	C	D	D	C	D	C	C	C	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.88	6.36	6.96	3.10	8.38	7.88	3.98	7.56	1.47	0.88	3.42	6.03
50th-Percentile Queue Length [ft/ln]	22.07	158.92	173.89	77.42	209.60	197.10	99.40	188.94	36.69	21.98	85.39	150.80
95th-Percentile Queue Length [veh/ln]	1.59	10.49	11.28	5.57	13.13	12.49	7.16	12.07	2.64	1.58	6.15	10.06
95th-Percentile Queue Length [ft/ln]	39.73	262.29	282.03	139.36	328.32	312.23	178.92	301.65	66.04	39.57	153.70	251.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.42	31.64	35.98	37.29	34.53	35.37	34.68	28.11	20.09	33.42	26.58	37.96
Movement LOS	C	C	D	D	C	D	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	32.34			35.45			29.45			31.52		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	32.08											
Intersection LOS	C											
Intersection V/C	0.738											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	27.31	27.31	27.31	27.31
l_p,int, Pedestrian LOS Score for Intersection	2.922	3.128	3.006	3.010
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]	560	613	587	453
d_b, Bicycle Delay [s]	19.44	18.03	18.73	22.43
l_b,int, Bicycle LOS Score for Intersection	2.221	2.562	2.793	2.281
Bicycle LOS	B	B	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	22	729	51	55	688	22	40	112	46	39	56	83
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	46	0	0	13	13	124	0	9	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]	25	775	51	55	701	35	164	112	55	39	56	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	204	13	14	184	9	43	29	14	10	15	22
Total Analysis Volume [veh/h]	26	816	54	58	738	37	173	118	58	41	59	87
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	5	37	37	33	33	33	33
g / C, Green / Cycle	0.04	0.41	0.41	0.06	0.43	0.43	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.04	0.03	0.22	0.22	0.14	0.10	0.03	0.09
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1770	1262	1701	1228	1629
c, Capacity [veh/h]	66	1404	627	106	780	767	474	658	451	630
d1, Uniform Delay [s]	39.91	19.44	15.35	38.71	17.43	17.44	23.57	17.82	21.67	17.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	3.79	0.38	0.06	4.29	0.50	0.51	2.17	0.99	0.40	0.86
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	0.39	0.58	0.09	0.55	0.50	0.50	0.37	0.27	0.09	0.23
d, Delay for Lane Group [s/veh]	43.70	19.82	15.41	43.01	17.93	17.94	25.74	18.81	22.07	18.41
Lane Group LOS	D	B	B	D	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.59	5.86	0.61	1.27	5.22	5.14	2.99	2.46	0.63	2.01
50th-Percentile Queue Length [ft/ln]	14.67	146.51	15.37	31.76	130.53	128.45	74.64	61.52	15.79	50.30
95th-Percentile Queue Length [veh/ln]	1.06	9.83	1.11	2.29	8.97	8.86	5.37	4.43	1.14	3.62
95th-Percentile Queue Length [ft/ln]	26.41	245.76	27.67	57.16	224.22	221.39	134.35	110.73	28.42	90.54

Movement, Approach, & Intersection Results

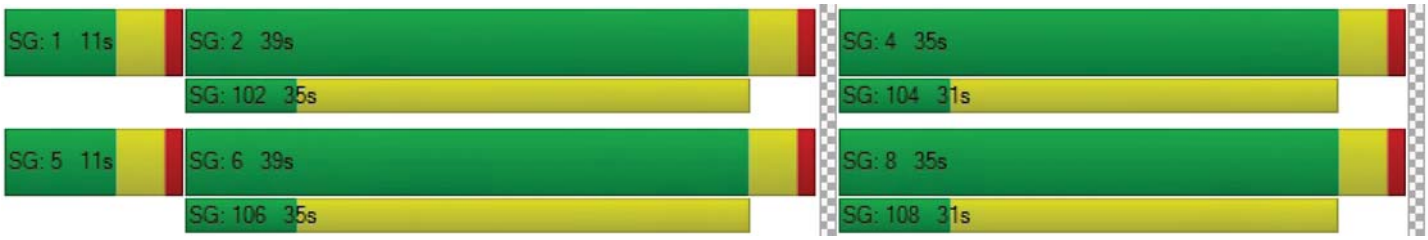
d_M, Delay for Movement [s/veh]	43.70	19.82	15.41	43.01	17.94	17.94	25.74	18.81	18.81	22.07	18.41	18.41
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.25			19.68			22.25			19.21		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.26											
Intersection LOS	C											
Intersection V/C	0.440											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.930	3.057	2.090	2.072
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.299	2.247	2.135	1.868
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	639	67	89	689	21	15	104	24	87	82	82
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	17	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]	12	643	67	89	706	21	15	104	24	87	82	82
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	169	18	23	186	6	4	27	6	23	22	22
Total Analysis Volume [veh/h]	13	677	71	94	743	22	16	109	25	92	86	86
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	13	41	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
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	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]	2	51	51	7	56	56	35	35	35	35
g / C, Green / Cycle	0.02	0.48	0.48	0.07	0.53	0.53	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.05	0.21	0.21	0.07	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1714	1800	1741	1714	1800	1782	1734	1530	1305	1654
c, Capacity [veh/h]	38	870	842	118	955	945	616	510	329	551
d1, Uniform Delay [s]	50.59	17.76	17.76	48.13	14.72	14.72	25.08	23.73	36.21	26.05
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	5.29	1.59	1.65	11.27	1.26	1.28	0.16	0.04	0.46	0.32
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
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	0.34	0.44	0.44	0.79	0.40	0.40	0.20	0.05	0.28	0.31
d, Delay for Lane Group [s/veh]	55.88	19.35	19.41	59.41	15.98	15.99	25.24	23.77	36.67	26.37
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	5.92	5.75	2.72	5.28	5.23	2.25	0.43	2.07	3.23
50th-Percentile Queue Length [ft/ln]	9.57	148.03	143.76	67.93	132.01	130.78	56.30	10.66	51.69	80.70
95th-Percentile Queue Length [veh/ln]	0.69	9.91	9.68	4.89	9.05	8.98	4.05	0.77	3.72	5.81
95th-Percentile Queue Length [ft/ln]	17.22	247.79	242.08	122.28	226.22	224.56	101.35	19.19	93.04	145.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.88	19.38	19.41	59.41	15.99	15.99	25.24	25.24	23.77	36.67	26.37	26.37
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	20.00			20.74			25.00			29.96		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.97											
Intersection LOS	C											
Intersection V/C	0.393											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	42.08	0.00	42.08
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.882	0.000	2.122
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	705	667	667
d_b, Bicycle Delay [s]	23.33	22.02	23.33	23.33
l_b,int, Bicycle LOS Score for Intersection	2.187	2.268	1.807	1.995
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	53.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.170

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	11	562	29	73	689	55	87	215	43	64	116	129
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	1	16	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]	11	566	29	74	705	55	87	215	43	64	116	129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	149	8	19	186	14	23	57	11	17	31	34
Total Analysis Volume [veh/h]	12	596	31	78	742	58	92	226	45	67	122	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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	16	0	17	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	1	20	20	5	24	24	23	23	23	23
g / C, Green / Cycle	0.02	0.33	0.33	0.09	0.40	0.40	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.18	0.18	0.05	0.23	0.23	0.82	0.03	0.65	0.09
s, saturation flow rate [veh/h]	1714	1800	1769	1714	1800	1755	387	1530	289	1530
c, Capacity [veh/h]	40	597	586	149	711	693	225	585	192	585
d1, Uniform Delay [s]	28.90	16.31	16.31	26.27	14.20	14.20	16.91	11.83	17.95	12.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, 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]	4.12	3.34	3.41	2.82	3.29	3.38	209.99	0.06	61.57	0.20
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
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	0.30	0.53	0.53	0.52	0.57	0.57	1.41	0.08	0.99	0.23
d, Delay for Lane Group [s/veh]	33.02	19.65	19.73	29.09	17.49	17.58	226.90	11.89	79.52	12.81
Lane Group LOS	C	B	B	C	B	B	F	B	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.20	3.46	3.42	1.07	4.06	3.98	15.04	0.35	4.84	1.14
50th-Percentile Queue Length [ft/ln]	5.00	86.56	85.53	26.80	101.55	99.42	375.94	8.82	121.09	28.50
95th-Percentile Queue Length [veh/ln]	0.36	6.23	6.16	1.93	7.31	7.16	25.56	0.64	8.45	2.05
95th-Percentile Queue Length [ft/ln]	8.99	155.80	153.96	48.25	182.78	178.95	638.91	15.88	211.33	51.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.02	19.69	19.73	29.09	17.53	17.58	226.90	226.90	11.89	79.52	79.52	12.81
Movement LOS	C	B	B	C	B	B	F	F	B	E	E	B
d_A, Approach Delay [s/veh]	19.94			18.56			200.25			51.61		
Approach LOS	B			B			F			D		
d_I, Intersection Delay [s/veh]	53.74											
Intersection LOS	D											
Intersection V/C	1.170											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.890	2.976	2.098	2.132
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]	400	600	767	767
d_b, Bicycle Delay [s]	19.20	14.70	11.41	11.41
l_b,int, Bicycle LOS Score for Intersection	2.087	2.284	2.159	2.096
Bicycle LOS	B	B	B	B

Sequence

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

GENERAL BUILDOUT (YEAR 2040) WITH PROJECT

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AMGB.vistro
Report File: G:\...\AMGBp.pdf

Scenario 2 General Buildout With Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	WB Thru	0.793	20.0	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.745	32.8	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.417	22.6	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.398	20.5	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.602	20.7	C
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.005	13.5	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.102	14.6	B

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

Intersection Level Of Service Report
Intersection 1: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	89	143	38	6	63	11	18	136	41	71	290	50
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	3	0	0	0	1	12	0	11	20	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
Total Hourly Volume [veh/h]	89	143	41	6	63	11	19	148	41	82	310	50
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	38	11	2	17	3	5	39	11	22	82	13
Total Analysis Volume [veh/h]	94	151	43	6	66	12	20	156	43	86	326	53
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	517	594	495	542	613	586
Degree of Utilization, x	0.47	0.07	0.17	0.32	0.07	0.79

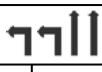
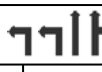
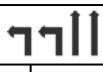
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.52	0.23	0.61	1.40	0.23	7.65
95th-Percentile Queue Length [ft]	62.94	5.83	15.16	35.01	5.64	191.33
Approach Delay [s/veh]	14.81		11.76	11.82		28.65
Approach LOS	B		B	B		D
Intersection Delay [s/veh]	20.04					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.745

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	90	630	30	177	644	246	120	203	55	69	491	270
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	17	86	24	30	278	67	56	37	4	19	44	25
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]	107	716	54	207	922	313	176	240	59	88	535	295
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	188	14	54	243	82	46	63	16	23	141	78
Total Analysis Volume [veh/h]	113	754	57	218	971	329	185	253	62	93	563	311
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	31	0	17	37	0	11	25	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85	85	85
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	35	35	8	36	36	7	20	20	6	20	20
g / C, Green / Cycle	0.08	0.41	0.41	0.09	0.42	0.42	0.08	0.24	0.24	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.16	0.16	0.07	0.37	0.38	0.06	0.07	0.04	0.03	0.16	0.20
s, saturation flow rate [veh/h]	3329	3427	1736	3329	1800	1648	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	257	1404	711	302	762	697	272	815	364	246	788	352
d1, Uniform Delay [s]	37.51	17.59	17.60	37.65	22.55	22.92	37.99	26.69	25.76	37.55	30.20	31.68
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.14
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
d2, Incremental Delay [s]	1.18	0.79	1.57	3.26	13.76	17.28	2.97	0.21	0.22	0.96	1.23	9.30
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	0.44	0.38	0.38	0.72	0.88	0.90	0.68	0.31	0.17	0.38	0.71	0.88
d, Delay for Lane Group [s/veh]	38.69	18.38	19.17	40.91	36.31	40.20	40.95	26.91	25.98	38.51	31.43	40.97
Lane Group LOS	D	B	B	D	D	D	D	C	C	D	C	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	3.61	3.83	2.25	13.90	13.85	1.91	2.03	0.97	0.92	5.13	6.70
50th-Percentile Queue Length [ft/ln]	28.39	90.23	95.77	56.35	347.43	346.23	47.76	50.64	24.23	23.00	128.34	167.54
95th-Percentile Queue Length [veh/ln]	2.04	6.50	6.90	4.06	20.01	19.95	3.44	3.65	1.74	1.66	8.85	10.95
95th-Percentile Queue Length [ft/ln]	51.10	162.41	172.38	101.43	500.28	498.81	85.97	91.15	43.61	41.41	221.23	273.68

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.69	18.61	19.17	40.91	37.52	40.20	40.95	26.91	25.98	38.51	31.43	40.97
Movement LOS	D	B	B	D	D	D	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	21.10			38.58			31.99			35.18		
Approach LOS	C			D			C			D		
d_I, Intersection Delay [s/veh]	32.76											
Intersection LOS	C											
Intersection V/C	0.745											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.924	3.105	2.870	2.868
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]	635	776	494	518
d_b, Bicycle Delay [s]	19.79	15.91	24.09	23.35
l_b,int, Bicycle LOS Score for Intersection	2.068	2.812	1.972	2.357
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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.417

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	44	648	35	89	547	108	20	37	14	13	48	46
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	18	99	0	0	121	165	29	0	3	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]	62	747	35	89	668	273	49	37	17	13	49	46
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	197	9	23	176	72	13	10	4	3	13	12
Total Analysis Volume [veh/h]	65	786	37	94	703	287	52	39	18	14	52	48
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	6	35	35	6	36	36	32	32	32	32
g / C, Green / Cycle	0.06	0.41	0.41	0.07	0.42	0.42	0.37	0.37	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.04	0.23	0.02	0.05	0.29	0.29	0.04	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1625	1315	1705	1368	1659
c, Capacity [veh/h]	111	1407	628	126	755	681	499	639	540	622
d1, Uniform Delay [s]	38.63	19.17	15.14	38.59	20.16	20.17	20.78	17.20	19.10	17.69
k, delay calibration	0.11	0.11	0.11	0.11	0.22	0.22	0.50	0.50	0.50	0.50
I, 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]	4.78	0.35	0.04	8.34	2.25	2.51	0.42	0.28	0.09	0.55
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	0.58	0.56	0.06	0.74	0.69	0.69	0.10	0.09	0.03	0.16
d, Delay for Lane Group [s/veh]	43.42	19.52	15.18	46.93	22.41	22.68	21.20	17.47	19.19	18.24
Lane Group LOS	D	B	B	D	C	C	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.43	5.57	0.42	2.16	8.21	7.48	0.78	0.75	0.20	1.36
50th-Percentile Queue Length [ft/ln]	35.74	139.32	10.40	53.98	205.35	186.90	19.47	18.76	4.89	34.03
95th-Percentile Queue Length [veh/ln]	2.57	9.44	0.75	3.89	12.91	11.96	1.40	1.35	0.35	2.45
95th-Percentile Queue Length [ft/ln]	64.34	236.11	18.72	97.16	322.86	299.00	35.04	33.77	8.79	61.26

Movement, Approach, & Intersection Results

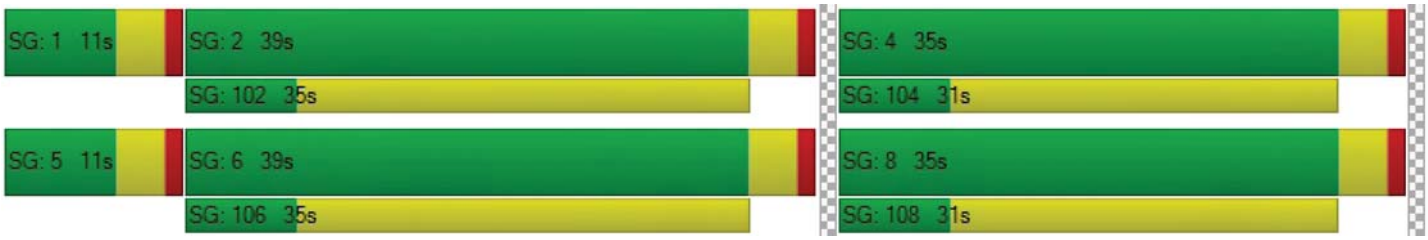
d_M, Delay for Movement [s/veh]	43.42	19.52	15.18	46.93	22.48	22.68	21.20	17.47	17.47	19.19	18.24	18.24
Movement LOS	D	B	B	D	C	C	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	21.09			24.66			19.25			18.36		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.62											
Intersection LOS	C											
Intersection V/C	0.417											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
I_p,int, Pedestrian LOS Score for Intersection	2.874	2.897	2.103	2.029
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
I_b,int, Bicycle LOS Score for Intersection	2.292	2.454	1.739	1.748
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.398

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	15	643	54	50	442	14	15	86	9	29	96	73
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	109	0	0	45	3	8	0	3	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]	16	752	54	50	487	17	23	86	12	29	96	73
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	198	14	13	128	4	6	23	3	8	25	19
Total Analysis Volume [veh/h]	17	792	57	53	513	18	24	91	13	31	101	77
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]	110
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	45	0	11	44	0	0	54	0	0	54	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	110	110	110	110	110	110	110	110	110	110
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	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]	3	57	57	6	60	60	35	35	35	35
g / C, Green / Cycle	0.03	0.52	0.52	0.05	0.55	0.55	0.32	0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.24	0.03	0.15	0.15	0.08	0.01	0.02	0.11
s, saturation flow rate [veh/h]	1714	1800	1758	1714	1800	1779	1512	1530	1326	1672
c, Capacity [veh/h]	46	938	916	89	983	971	521	487	334	532
d1, Uniform Delay [s]	52.61	16.58	16.58	51.00	13.30	13.31	27.37	25.79	35.83	28.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.93	1.61	1.65	6.24	0.68	0.69	0.21	0.02	0.12	0.37
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
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	0.37	0.46	0.46	0.60	0.27	0.27	0.22	0.03	0.09	0.33
d, Delay for Lane Group [s/veh]	57.53	18.19	18.23	57.24	13.98	14.00	27.58	25.81	35.95	28.98
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	6.66	6.51	1.54	3.41	3.38	2.24	0.24	0.69	3.63
50th-Percentile Queue Length [ft/ln]	12.81	166.45	162.86	38.60	85.23	84.47	55.89	5.96	17.33	90.74
95th-Percentile Queue Length [veh/ln]	0.92	10.89	10.70	2.78	6.14	6.08	4.02	0.43	1.25	6.53
95th-Percentile Queue Length [ft/ln]	23.05	272.24	267.50	69.48	153.42	152.04	100.59	10.72	31.19	163.33

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.53	18.21	18.23	57.24	13.99	14.00	27.58	27.58	25.81	35.95	28.98	28.98
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	18.98			17.91			27.40			30.01		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.53											
Intersection LOS	C											
Intersection V/C	0.398											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	44.55	0.00	44.55
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.857	0.000	2.083
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	745	727	909	909
d_b, Bicycle Delay [s]	21.64	22.27	16.36	16.36
l_b,int, Bicycle LOS Score for Intersection	2.274	2.041	1.771	1.904
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th 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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	28	634	48	81	376	94	42	107	8	17	198	67
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	52	0	0	32	16	57	6	25	0	2	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]	34	686	48	81	408	110	99	113	33	17	200	68
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	181	13	21	107	29	26	30	9	4	53	18
Total Analysis Volume [veh/h]	36	722	51	85	429	116	104	119	35	18	211	72
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]	125
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	16	44	0	0	70	0	0	70	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
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	C	R	C	R
C, Cycle Length [s]	78	78	78	78	78	78	78	78	78	78
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	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]	4	30	30	6	32	32	30	30	30	30
g / C, Green / Cycle	0.05	0.38	0.38	0.08	0.41	0.41	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.05	0.16	0.16	0.29	0.02	0.15	0.05
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1670	771	1530	1530	1530
c, Capacity [veh/h]	86	692	676	132	740	687	364	588	638	588
d1, Uniform Delay [s]	35.94	18.87	18.87	34.96	16.02	16.05	25.79	15.12	17.06	15.50
k, delay calibration	0.11	0.13	0.13	0.11	0.11	0.11	0.27	0.11	0.11	0.11
I, 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]	3.20	0.88	0.90	5.16	0.32	0.35	4.10	0.04	0.34	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	0.42	0.56	0.57	0.64	0.38	0.38	0.61	0.06	0.36	0.12
d, Delay for Lane Group [s/veh]	39.14	19.75	19.78	40.12	16.34	16.40	29.89	15.16	17.40	15.59
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.70	5.04	4.93	1.66	3.13	2.94	4.19	0.38	2.80	0.80
50th-Percentile Queue Length [ft/ln]	17.56	125.98	123.30	41.48	78.16	73.43	104.85	9.52	69.96	20.09
95th-Percentile Queue Length [veh/ln]	1.26	8.72	8.57	2.99	5.63	5.29	7.55	0.69	5.04	1.45
95th-Percentile Queue Length [ft/ln]	31.61	218.02	214.35	74.66	140.69	132.18	188.72	17.13	125.92	36.16

Movement, Approach, & Intersection Results

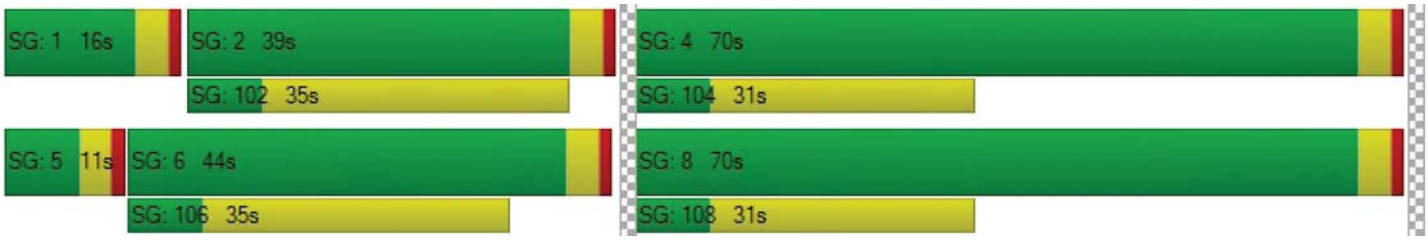
d_M, Delay for Movement [s/veh]	39.14	19.76	19.78	40.12	16.36	16.40	29.89	29.89	15.16	17.40	17.40	15.59
Movement LOS	D	B	B	D	B	B	C	C	B	B	B	B
d_A, Approach Delay [s/veh]	20.63			19.57			27.89			16.97		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.68											
Intersection LOS	C											
Intersection V/C	0.602											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	51.98	51.98	51.98	51.98
l_p,int, Pedestrian LOS Score for Intersection	2.809	2.989	2.158	2.137
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]	560	640	1056	1056
d_b, Bicycle Delay [s]	32.40	28.90	13.92	13.92
l_b,int, Bicycle LOS Score for Intersection	2.227	2.079	1.985	2.056
Bicycle LOS	B	B	A	B

Sequence

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



Intersection Level Of Service Report
Intersection 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

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

Volumes

Name						
Base Volume Input [veh/h]	0	0	0	180	411	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 Rate	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	2	6	0	14	25	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	6	0	194	436	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	0	51	115	0
Total Analysis Volume [veh/h]	2	6	0	204	459	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	13.48	11.03	8.24	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.11	1.11	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	11.65		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.14					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: Apt East Access (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	14.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.102

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 Pocket	0	0	0	0	0	0	0	0	0	0	0	0
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
Speed [mph]	25.00			25.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	0	0	0	0	157	0	0	320	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
Growth Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	38	41	0	9	3	10	3	11	3	11
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	0	38	41	0	9	3	167	3	11	323	11
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	0	10	11	0	2	1	44	1	3	85	3
Total Analysis Volume [veh/h]	14	0	40	43	0	9	3	176	3	12	340	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.05	0.10	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	13.75	13.73	9.58	14.57	14.27	11.16	7.96	0.00	0.00	7.58	0.00	0.00
Movement LOS	B	B	A	B	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.25	0.25	0.25	0.39	0.39	0.39	0.01	0.01	0.01	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	6.35	6.35	6.35	9.65	9.65	9.65	0.19	0.19	0.19	0.59	0.59	0.59
d_A, Approach Delay [s/veh]	10.66			13.98			0.13			0.25		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.17											
Intersection LOS	B											

SD Homes/ Redlands Apartment Project

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Scenario 1 General Buildout Without Project
3/5/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
1	Iowa St (NS) at Orange Ave (EW)	All-way stop	HCM 6th Edition	EB Thru	0.668	16.0	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Right	0.738	32.1	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.440	20.3	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.393	22.0	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	EB Thru	1.170	53.7	D

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: Iowa St (NS) at Orange Ave (EW)

Control Type:	All-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

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 Pocket	0	0	1	0	0	0	0	0	0	0	0	0
Pocket Length [ft]	100.00	100.00	180.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Speed [mph]	30.00			30.00			25.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	15	133	53	47	135	49	16	341	53	32	127	11
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Total Hourly Volume [veh/h]	15	133	53	47	135	49	16	341	53	32	127	11
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	35	14	12	36	13	4	90	14	8	33	3
Total Analysis Volume [veh/h]	16	140	56	49	142	52	17	359	56	34	134	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	513	577	531	563	636	523
Degree of Utilization, x	0.30	0.10	0.46	0.67	0.09	0.34

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.27	0.32	2.37	4.98	0.29	1.52
95th-Percentile Queue Length [ft]	31.84	8.04	59.36	124.52	7.22	37.98
Approach Delay [s/veh]	11.92		15.37	19.46		13.44
Approach LOS	B		C	C		B
Intersection Delay [s/veh]	16.02					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 2: Alabama St (NS) at Redlands Blvd (EW)

Control Type:	Signalized	Delay (sec / veh):	32.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.738

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 Pocket	2	0	0	2	0	0	2	0	0	2	0	0
Pocket Length [ft]	230.00	100.00	100.00	125.00	100.00	100.00	340.00	100.00	100.00	310.00	100.00	100.00
Speed [mph]	35.00			40.00			40.00			40.00		
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]	98	733	137	321	595	210	427	882	112	98	431	301
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	167	8	0	28	0	0	0	0	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]	98	900	145	321	623	210	427	882	112	99	431	301
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	237	38	84	164	55	112	232	29	26	113	79
Total Analysis Volume [veh/h]	103	947	153	338	656	221	449	928	118	104	454	317
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]	75
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal group	5	2	0	1	6	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	7	7	0	7	7	0	7	7	0	7	7	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	25	0	13	27	0	16	26	0	11	21	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	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	R	L	C	R
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75	75	75
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	21	21	9	24	24	12	23	23	6	17	17
g / C, Green / Cycle	0.08	0.28	0.28	0.12	0.32	0.32	0.16	0.30	0.30	0.08	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.22	0.22	0.10	0.25	0.26	0.13	0.27	0.08	0.03	0.13	0.21
s, saturation flow rate [veh/h]	3329	3427	1675	3329	1800	1647	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	275	966	472	400	575	526	528	1035	462	276	776	346
d1, Uniform Delay [s]	32.58	24.67	24.68	32.33	23.30	23.34	30.71	25.06	19.80	32.57	25.88	28.32
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
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
d2, Incremental Delay [s]	0.84	5.75	11.30	4.97	10.87	12.03	3.98	3.05	0.29	0.85	0.70	9.65
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	0.37	0.76	0.77	0.85	0.80	0.80	0.85	0.90	0.26	0.38	0.59	0.91
d, Delay for Lane Group [s/veh]	33.42	30.41	35.98	37.29	34.17	35.37	34.68	28.11	20.09	33.42	26.58	37.96
Lane Group LOS	C	C	D	D	C	D	C	C	C	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.88	6.36	6.96	3.10	8.38	7.88	3.98	7.56	1.47	0.88	3.42	6.03
50th-Percentile Queue Length [ft/ln]	22.07	158.92	173.89	77.42	209.60	197.10	99.40	188.94	36.69	21.98	85.39	150.80
95th-Percentile Queue Length [veh/ln]	1.59	10.49	11.28	5.57	13.13	12.49	7.16	12.07	2.64	1.58	6.15	10.06
95th-Percentile Queue Length [ft/ln]	39.73	262.29	282.03	139.36	328.32	312.23	178.92	301.65	66.04	39.57	153.70	251.50

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.42	31.64	35.98	37.29	34.53	35.37	34.68	28.11	20.09	33.42	26.58	37.96
Movement LOS	C	C	D	D	C	D	C	C	C	C	C	D
d_A, Approach Delay [s/veh]	32.34			35.45			29.45			31.52		
Approach LOS	C			D			C			C		
d_I, Intersection Delay [s/veh]	32.08											
Intersection LOS	C											
Intersection V/C	0.738											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	27.31	27.31	27.31	27.31
l_p,int, Pedestrian LOS Score for Intersection	2.922	3.128	3.006	3.010
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]	560	613	587	453
d_b, Bicycle Delay [s]	19.44	18.03	18.73	22.43
l_b,int, Bicycle LOS Score for Intersection	2.221	2.562	2.793	2.281
Bicycle LOS	B	B	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 3: Alabama St (NS) at Park Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.440

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	160.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00	160.00	100.00	100.00
Speed [mph]	35.00			35.00			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]	22	729	51	55	688	22	40	112	46	39	56	83
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	3	46	0	0	13	13	124	0	9	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]	25	775	51	55	701	35	164	112	55	39	56	83
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	204	13	14	184	9	43	29	14	10	15	22
Total Analysis Volume [veh/h]	26	816	54	58	738	37	173	118	58	41	59	87
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]	85
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	11	39	0	0	35	0	0	35	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	24	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0
Minimum Recall	No	No		No	No			No			No	
Maximum Recall	No	No		No	No			No			No	
Pedestrian Recall	No	Yes		No	Yes			Yes			Yes	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	R	L	C	C	L	C	L	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
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	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]	3	35	35	5	37	37	33	33	33	33
g / C, Green / Cycle	0.04	0.41	0.41	0.06	0.43	0.43	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.24	0.04	0.03	0.22	0.22	0.14	0.10	0.03	0.09
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1770	1262	1701	1228	1629
c, Capacity [veh/h]	66	1404	627	106	780	767	474	658	451	630
d1, Uniform Delay [s]	39.91	19.44	15.35	38.71	17.43	17.44	23.57	17.82	21.67	17.55
k, delay calibration	0.11	0.11	0.11	0.11	0.11	0.11	0.50	0.50	0.50	0.50
I, 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]	3.79	0.38	0.06	4.29	0.50	0.51	2.17	0.99	0.40	0.86
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	0.39	0.58	0.09	0.55	0.50	0.50	0.37	0.27	0.09	0.23
d, Delay for Lane Group [s/veh]	43.70	19.82	15.41	43.01	17.93	17.94	25.74	18.81	22.07	18.41
Lane Group LOS	D	B	B	D	B	B	C	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.59	5.86	0.61	1.27	5.22	5.14	2.99	2.46	0.63	2.01
50th-Percentile Queue Length [ft/ln]	14.67	146.51	15.37	31.76	130.53	128.45	74.64	61.52	15.79	50.30
95th-Percentile Queue Length [veh/ln]	1.06	9.83	1.11	2.29	8.97	8.86	5.37	4.43	1.14	3.62
95th-Percentile Queue Length [ft/ln]	26.41	245.76	27.67	57.16	224.22	221.39	134.35	110.73	28.42	90.54

Movement, Approach, & Intersection Results

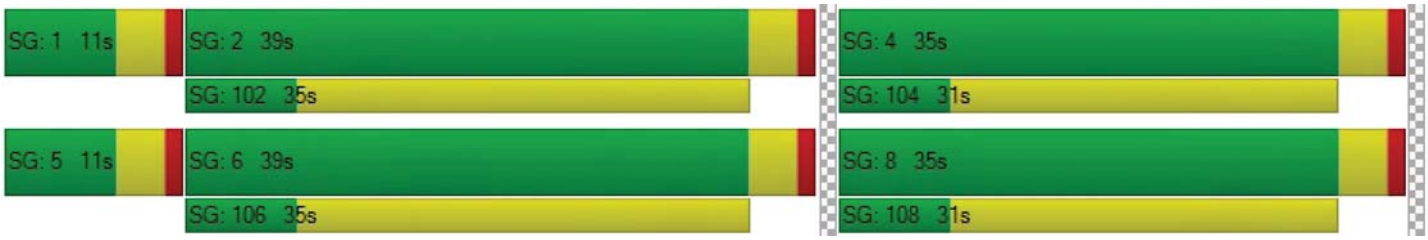
d_M, Delay for Movement [s/veh]	43.70	19.82	15.41	43.01	17.94	17.94	25.74	18.81	18.81	22.07	18.41	18.41
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	20.25			19.68			22.25			19.21		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.26											
Intersection LOS	C											
Intersection V/C	0.440											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	32.21	32.21	32.21	32.21
l_p,int, Pedestrian LOS Score for Intersection	2.930	3.057	2.090	2.072
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]	824	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.299	2.247	2.135	1.868
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Alabama St (NS) at Citrus Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.393

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 Pocket	1	0	0	1	0	0	0	0	0	1	0	0
Pocket Length [ft]	121.00	100.00	100.00	125.00	100.00	100.00	100.00	100.00	100.00	121.00	100.00	100.00
Speed [mph]	45.00			45.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	No			Yes			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	12	639	67	89	689	21	15	104	24	87	82	82
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	0	17	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]	12	643	67	89	706	21	15	104	24	87	82	82
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	169	18	23	186	6	4	27	6	23	22	22
Total Analysis Volume [veh/h]	13	677	71	94	743	22	16	109	25	92	86	86
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]	105
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	39	0	13	41	0	0	39	0	0	39	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	28	0	0	28	0	0	24	0	0	28	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	Yes			No			Yes	
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	C	R	L	C
C, Cycle Length [s]	105	105	105	105	105	105	105	105	105	105
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	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]	2	51	51	7	56	56	35	35	35	35
g / C, Green / Cycle	0.02	0.48	0.48	0.07	0.53	0.53	0.33	0.33	0.33	0.33
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.21	0.05	0.21	0.21	0.07	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1714	1800	1741	1714	1800	1782	1734	1530	1305	1654
c, Capacity [veh/h]	38	870	842	118	955	945	616	510	329	551
d1, Uniform Delay [s]	50.59	17.76	17.76	48.13	14.72	14.72	25.08	23.73	36.21	26.05
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	5.29	1.59	1.65	11.27	1.26	1.28	0.16	0.04	0.46	0.32
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
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	0.34	0.44	0.44	0.79	0.40	0.40	0.20	0.05	0.28	0.31
d, Delay for Lane Group [s/veh]	55.88	19.35	19.41	59.41	15.98	15.99	25.24	23.77	36.67	26.37
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.38	5.92	5.75	2.72	5.28	5.23	2.25	0.43	2.07	3.23
50th-Percentile Queue Length [ft/ln]	9.57	148.03	143.76	67.93	132.01	130.78	56.30	10.66	51.69	80.70
95th-Percentile Queue Length [veh/ln]	0.69	9.91	9.68	4.89	9.05	8.98	4.05	0.77	3.72	5.81
95th-Percentile Queue Length [ft/ln]	17.22	247.79	242.08	122.28	226.22	224.56	101.35	19.19	93.04	145.26

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.88	19.38	19.41	59.41	15.99	15.99	25.24	25.24	23.77	36.67	26.37	26.37
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	20.00			20.74			25.00			29.96		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	21.97											
Intersection LOS	C											
Intersection V/C	0.393											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	0.0	11.0
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	42.08	0.00	42.08
l_p,int, Pedestrian LOS Score for Intersection	0.000	2.882	0.000	2.122
Crosswalk LOS	F	C	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	705	667	667
d_b, Bicycle Delay [s]	23.33	22.02	23.33	23.33
l_b,int, Bicycle LOS Score for Intersection	2.187	2.268	1.807	1.995
Bicycle LOS	B	B	A	A

Sequence

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	53.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.170

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	11	562	29	73	689	55	87	215	43	64	116	129
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	1	16	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]	11	566	29	74	705	55	87	215	43	64	116	129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	149	8	19	186	14	23	57	11	17	31	34
Total Analysis Volume [veh/h]	12	596	31	78	742	58	92	226	45	67	122	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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	11	16	0	17	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	C	R	C	R
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	1	20	20	5	24	24	23	23	23	23
g / C, Green / Cycle	0.02	0.33	0.33	0.09	0.40	0.40	0.38	0.38	0.38	0.38
(v / s)_i Volume / Saturation Flow Rate	0.01	0.18	0.18	0.05	0.23	0.23	0.82	0.03	0.65	0.09
s, saturation flow rate [veh/h]	1714	1800	1769	1714	1800	1755	387	1530	289	1530
c, Capacity [veh/h]	40	597	586	149	711	693	225	585	192	585
d1, Uniform Delay [s]	28.90	16.31	16.31	26.27	14.20	14.20	16.91	11.83	17.95	12.61
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.50	0.11	0.50	0.11
I, 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]	4.12	3.34	3.41	2.82	3.29	3.38	209.99	0.06	61.57	0.20
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
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	0.30	0.53	0.53	0.52	0.57	0.57	1.41	0.08	0.99	0.23
d, Delay for Lane Group [s/veh]	33.02	19.65	19.73	29.09	17.49	17.58	226.90	11.89	79.52	12.81
Lane Group LOS	C	B	B	C	B	B	F	B	E	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	0.20	3.46	3.42	1.07	4.06	3.98	15.04	0.35	4.84	1.14
50th-Percentile Queue Length [ft/ln]	5.00	86.56	85.53	26.80	101.55	99.42	375.94	8.82	121.09	28.50
95th-Percentile Queue Length [veh/ln]	0.36	6.23	6.16	1.93	7.31	7.16	25.56	0.64	8.45	2.05
95th-Percentile Queue Length [ft/ln]	8.99	155.80	153.96	48.25	182.78	178.95	638.91	15.88	211.33	51.30

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	33.02	19.69	19.73	29.09	17.53	17.58	226.90	226.90	11.89	79.52	79.52	12.81
Movement LOS	C	B	B	C	B	B	F	F	B	E	E	B
d_A, Approach Delay [s/veh]	19.94			18.56			200.25			51.61		
Approach LOS	B			B			F			D		
d_I, Intersection Delay [s/veh]	53.74											
Intersection LOS	D											
Intersection V/C	1.170											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.890	2.976	2.098	2.132
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]	400	600	767	767
d_b, Bicycle Delay [s]	19.20	14.70	11.41	11.41
l_b,int, Bicycle LOS Score for Intersection	2.087	2.284	2.159	2.096
Bicycle LOS	B	B	B	B

Sequence

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

GENERAL BUILDOUT (YEAR 2040) WITHOUT PROJECT

WITH IMPROVEMENTS

SD Homes/ Redlands Apartment Project

Vistro File: G:\...\AMGB_Improvements.vistro
Report File: G:\...\AMGB_IMPV.pdf

Scenario 1 General Buildout Without Project
3/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.477	15.1	B

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.477

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	28	634	48	81	376	94	42	107	8	17	198	67
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	1	52	0	0	32	2	5	0	3	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]	29	686	48	81	408	96	47	107	11	17	198	68
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	181	13	21	107	25	12	28	3	4	52	18
Total Analysis Volume [veh/h]	31	722	51	85	429	101	49	113	12	18	208	72
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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	27	0	12	21	0	0	21	0	0	21	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	3	28	28	5	31	31	14	14	14	14
g / C, Green / Cycle	0.05	0.47	0.47	0.09	0.51	0.51	0.24	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.05	0.15	0.15	0.04	0.07	0.01	0.16
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1683	1117	1770	1286	1722
c, Capacity [veh/h]	85	848	828	155	922	862	189	423	316	412
d1, Uniform Delay [s]	27.69	10.76	10.76	26.18	8.44	8.46	27.66	18.74	21.89	20.79
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	2.63	1.80	1.85	3.00	0.82	0.89	0.72	0.38	0.07	1.98
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	0.37	0.46	0.46	0.55	0.30	0.30	0.26	0.30	0.06	0.68
d, Delay for Lane Group [s/veh]	30.32	12.56	12.61	29.18	9.26	9.34	28.38	19.12	21.97	22.77
Lane Group LOS	C	B	B	C	A	A	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.45	3.05	3.00	1.17	1.68	1.60	0.69	1.36	0.21	3.50
50th-Percentile Queue Length [ft/ln]	11.27	76.37	74.93	29.23	42.05	40.09	17.28	34.08	5.29	87.57
95th-Percentile Queue Length [veh/ln]	0.81	5.50	5.39	2.10	3.03	2.89	1.24	2.45	0.38	6.30
95th-Percentile Queue Length [ft/ln]	20.28	137.47	134.87	52.62	75.68	72.15	31.11	61.34	9.53	157.62

Movement, Approach, & Intersection Results

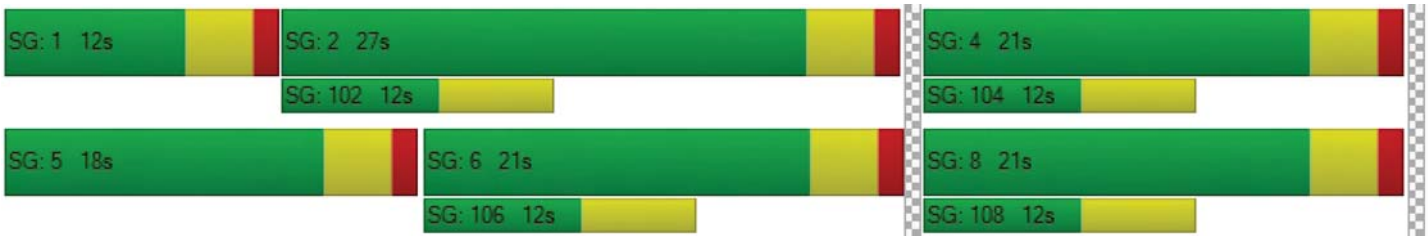
d_M, Delay for Movement [s/veh]	30.32	12.58	12.61	29.18	9.29	9.34	28.38	19.12	19.12	21.97	22.77	22.77
Movement LOS	C	B	B	C	A	A	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	13.27			12.05			21.73			22.72		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.14											
Intersection LOS	B											
Intersection V/C	0.477											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.764	2.855	2.085	2.095
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]	767	567	567	567
d_b, Bicycle Delay [s]	11.41	15.41	15.41	15.41
l_b,int, Bicycle LOS Score for Intersection	2.223	2.067	1.847	2.051
Bicycle LOS	B	B	A	B

Sequence

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



SD Homes/ Redlands Apartment Project

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Scenario 1 General Buildout Without Project
3/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.432	15.8	B

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	15.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.432

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	11	562	29	73	689	55	87	215	43	64	116	129
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	4	0	1	16	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]	11	566	29	74	705	55	87	215	43	64	116	129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	149	8	19	186	14	23	57	11	17	31	34
Total Analysis Volume [veh/h]	12	596	31	78	742	58	92	226	45	67	122	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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	22	0	17	22	0	0	27	0	0	27	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	1	26	26	5	29	29	17	17	17	17
g / C, Green / Cycle	0.02	0.43	0.43	0.09	0.49	0.49	0.29	0.29	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.01	0.18	0.18	0.05	0.23	0.23	0.08	0.15	0.06	0.16
s, saturation flow rate [veh/h]	1714	1800	1769	1714	1800	1755	1139	1749	1126	1647
c, Capacity [veh/h]	40	766	753	149	881	859	260	503	260	474
d1, Uniform Delay [s]	28.90	12.04	12.04	26.27	10.12	10.12	25.14	18.05	24.48	18.09
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	4.12	1.64	1.67	2.82	1.73	1.77	0.81	0.90	0.52	0.97
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	0.30	0.41	0.41	0.52	0.46	0.46	0.35	0.54	0.26	0.54
d, Delay for Lane Group [s/veh]	33.01	13.67	13.71	29.09	11.85	11.90	25.96	18.95	25.00	19.06
Lane Group LOS	C	B	B	C	B	B	C	B	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.20	2.65	2.61	1.07	3.00	2.94	1.24	3.01	0.87	2.88
50th-Percentile Queue Length [ft/ln]	5.00	66.19	65.37	26.80	75.08	73.47	30.89	75.36	21.82	72.11
95th-Percentile Queue Length [veh/ln]	0.36	4.77	4.71	1.93	5.41	5.29	2.22	5.43	1.57	5.19
95th-Percentile Queue Length [ft/ln]	8.99	119.15	117.66	48.24	135.14	132.24	55.60	135.65	39.28	129.80

Movement, Approach, & Intersection Results

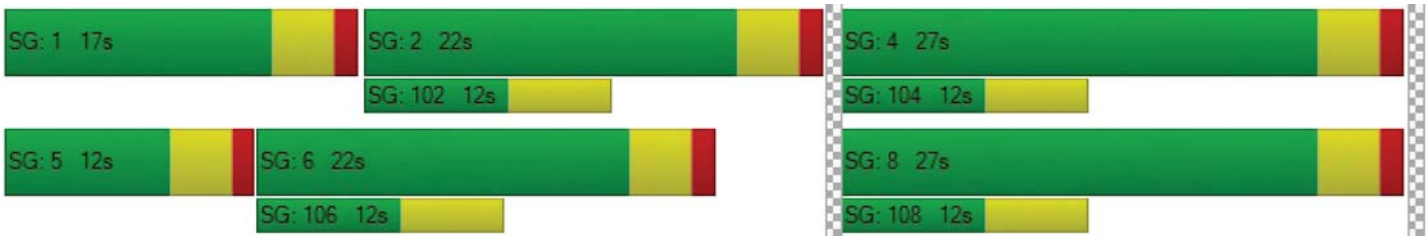
d_M, Delay for Movement [s/veh]	33.01	13.69	13.71	29.09	11.87	11.90	25.96	18.95	18.95	25.00	19.06	19.06
Movement LOS	C	B	B	C	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	14.06			13.40			20.73			20.29		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	15.81											
Intersection LOS	B											
Intersection V/C	0.432											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.890	2.976	2.098	2.132
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]	600	600	767	767
d_b, Bicycle Delay [s]	14.70	14.70	11.41	11.41
l_b,int, Bicycle LOS Score for Intersection	2.087	2.284	2.159	2.096
Bicycle LOS	B	B	B	B

Sequence

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



GENERAL BUILDOUT (YEAR 2040) WITH PROJECT

WITH IMPROVEMENTS

SD Homes/ Redlands Apartment Project

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Scenario 2 General Buildout With Project
3/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.479	16.2	B

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.479

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	28	634	48	81	376	94	42	107	8	17	198	67
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	6	52	0	0	32	16	57	6	25	0	2	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]	34	686	48	81	408	110	99	113	33	17	200	68
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	181	13	21	107	29	26	30	9	4	53	18
Total Analysis Volume [veh/h]	36	722	51	85	429	116	104	119	35	18	211	72
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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	18	26	0	14	22	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	3	27	27	5	29	29	16	16	16	16
g / C, Green / Cycle	0.05	0.44	0.44	0.09	0.48	0.48	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.22	0.22	0.05	0.16	0.16	0.09	0.09	0.01	0.16
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1670	1114	1731	1252	1723
c, Capacity [veh/h]	94	798	779	155	862	800	220	462	325	460
d1, Uniform Delay [s]	27.44	11.91	11.91	26.18	9.69	9.70	27.46	17.75	21.35	19.35
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	2.53	2.15	2.20	3.00	1.01	1.10	1.57	0.42	0.07	1.34
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	0.38	0.49	0.49	0.55	0.33	0.33	0.47	0.33	0.06	0.62
d, Delay for Lane Group [s/veh]	29.97	14.06	14.11	29.18	10.70	10.81	29.04	18.17	21.42	20.69
Lane Group LOS	C	B	B	C	B	B	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.52	3.33	3.27	1.17	1.95	1.85	1.51	1.64	0.21	3.34
50th-Percentile Queue Length [ft/ln]	12.89	83.21	81.64	29.23	48.74	46.17	37.70	40.88	5.22	83.47
95th-Percentile Queue Length [veh/ln]	0.93	5.99	5.88	2.10	3.51	3.32	2.71	2.94	0.38	6.01
95th-Percentile Queue Length [ft/ln]	23.21	149.78	146.95	52.62	87.73	83.10	67.85	73.58	9.39	150.25

Movement, Approach, & Intersection Results

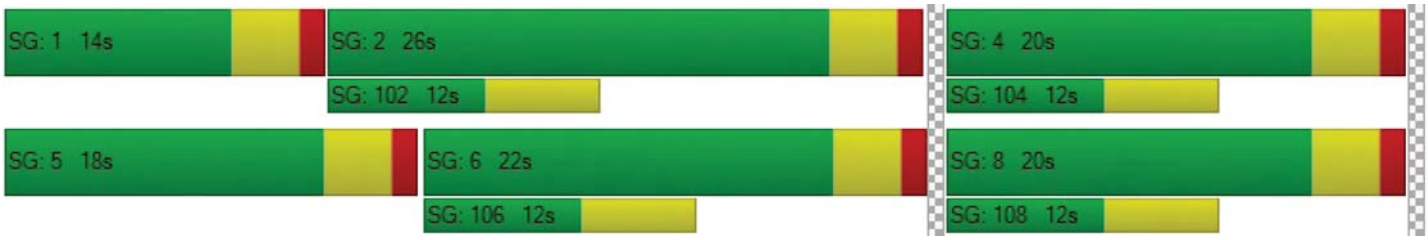
d_M, Delay for Movement [s/veh]	29.97	14.08	14.11	29.18	10.74	10.81	29.04	18.17	18.17	21.42	20.69	20.69
Movement LOS	C	B	B	C	B	B	C	B	B	C	C	C
d_A, Approach Delay [s/veh]	14.79			13.24			22.55			20.74		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.20											
Intersection LOS	B											
Intersection V/C	0.479											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.771	2.951	2.119	2.098
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]	733	600	533	533
d_b, Bicycle Delay [s]	12.03	14.70	16.13	16.13
l_b,int, Bicycle LOS Score for Intersection	2.227	2.079	1.985	2.056
Bicycle LOS	B	B	A	B

Sequence

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



SD Homes/ Redlands Apartment Project

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Report File: G:\...\PMGBp_IMPV.pdf

Scenario 2 General Buildout With Project
3/2/2019

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.478	16.8	B

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.478

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 Pocket	1	0	0	1	0	0	0	0	0	0	0	0
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
Speed [mph]	45.00			45.00			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]	11	562	29	73	689	55	87	215	43	64	116	129
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 Rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	4	0	1	16	55	29	3	12	0	6	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]	34	566	29	74	705	110	116	218	55	64	122	129
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	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	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	149	8	19	186	29	31	57	14	17	32	34
Total Analysis Volume [veh/h]	36	596	31	78	742	116	122	229	58	67	128	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]	60
Coordination Type	Time of Day Pattern Isolated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	LeadGreen
Permissive Mode	SingleBand
Lost time [s]	6.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss
Signal group	5	2	0	1	6	0	0	8	0	0	4	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-
Minimum Green [s]	7	7	0	7	7	0	0	7	0	0	7	0
Maximum Green [s]	30	30	0	30	30	0	0	30	0	0	30	0
Amber [s]	3.0	3.0	0.0	3.0	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	1.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0
Split [s]	12	22	0	18	28	0	0	20	0	0	20	0
Vehicle Extension [s]	3.0	3.0	0.0	3.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0
Walk [s]	0	7	0	0	7	0	0	7	0	0	7	0
Pedestrian Clearance [s]	0	5	0	0	5	0	0	5	0	0	5	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	0.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0	0.0	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	L	C	C	L	C	C	L	C	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60	60	60
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	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]	3	27	27	5	29	29	16	16	16	16
g / C, Green / Cycle	0.05	0.45	0.45	0.09	0.48	0.48	0.27	0.27	0.27	0.27
(v / s)_i Volume / Saturation Flow Rate	0.02	0.18	0.18	0.05	0.24	0.24	0.11	0.17	0.06	0.16
s, saturation flow rate [veh/h]	1714	1800	1769	1714	1800	1716	1133	1738	1109	1650
c, Capacity [veh/h]	94	804	790	149	862	822	227	464	219	440
d1, Uniform Delay [s]	27.44	11.17	11.17	26.27	10.81	10.81	27.57	19.37	26.56	19.25
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11
I, 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]	2.53	1.44	1.47	2.82	2.15	2.25	1.97	1.35	0.78	1.31
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	0.38	0.39	0.39	0.52	0.51	0.51	0.54	0.62	0.31	0.60
d, Delay for Lane Group [s/veh]	29.97	12.61	12.65	29.09	12.96	13.07	29.54	20.72	27.34	20.56
Lane Group LOS	C	B	B	C	B	B	C	C	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	0.52	2.49	2.46	1.07	3.49	3.35	1.80	3.39	0.93	3.10
50th-Percentile Queue Length [ft/ln]	12.89	62.23	61.43	26.80	87.22	83.76	44.91	84.73	23.15	77.50
95th-Percentile Queue Length [veh/ln]	0.93	4.48	4.42	1.93	6.28	6.03	3.23	6.10	1.67	5.58
95th-Percentile Queue Length [ft/ln]	23.21	112.02	110.58	48.25	157.00	150.76	80.83	152.52	41.68	139.51

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	29.97	12.63	12.65	29.09	13.00	13.07	29.54	20.72	20.72	27.34	20.56	20.56
Movement LOS	C	B	B	C	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	13.57			14.35			23.35			21.93		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	16.78											
Intersection LOS	B											
Intersection V/C	0.478											

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	11.0	11.0	11.0
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]	20.01	20.01	20.01	20.01
l_p,int, Pedestrian LOS Score for Intersection	2.899	3.040	2.142	2.135
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]	600	800	533	533
d_b, Bicycle Delay [s]	14.70	10.80	16.13	16.13
l_b,int, Bicycle LOS Score for Intersection	2.107	2.332	2.234	2.106
Bicycle LOS	B	B	B	B

Sequence

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

APPENDIX G

TRAFFIC SIGNAL WARRANT WORKSHEETS

PEAK HOUR VOLUME WARRANT
(Rural Areas)

General Plan Buildout With Project

Major Street Name = Orange Avenue

Total of Both Approaches (VPH) = 623

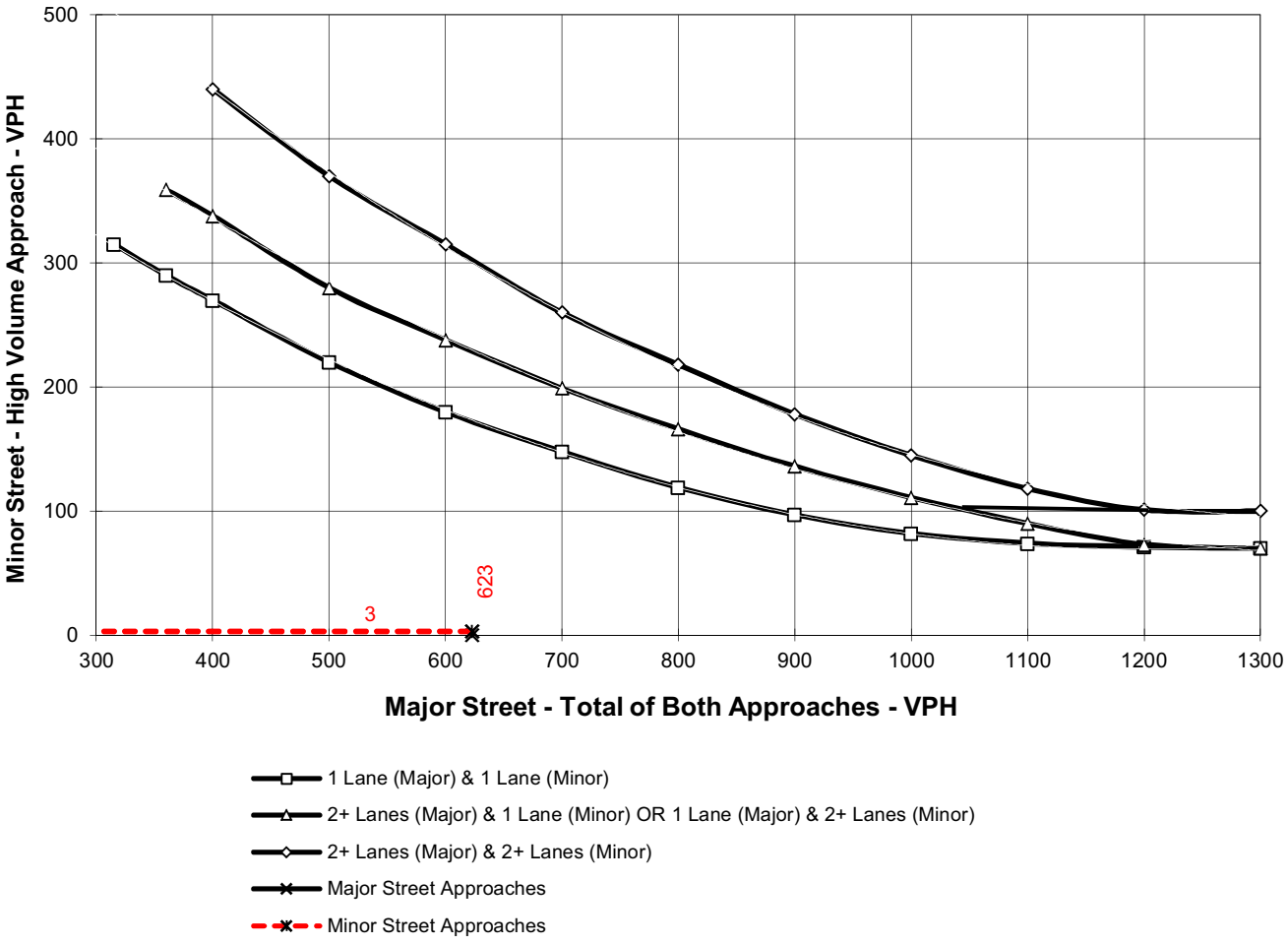
Number of Approach Lanes Major Street = 1

Minor Street Name = West Project Driveway

High Volume Approach (VPH) = 3

Number of Approach Lanes Minor Street = 2

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

General Plan Buildout With Project

Major Street Name = Orange Avenue

Total of Both Approaches (VPH) = 643

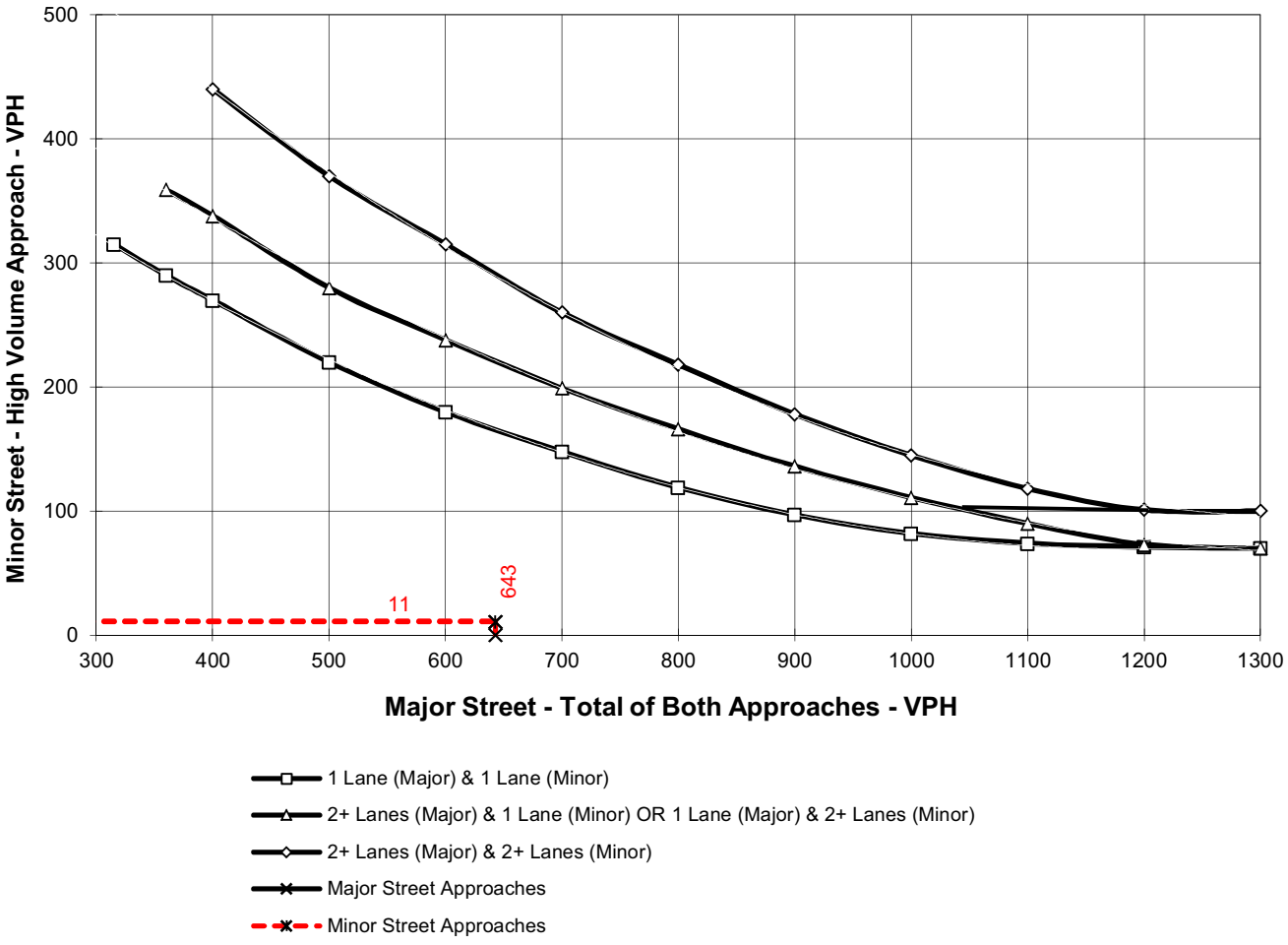
Number of Approach Lanes Major Street = 1

Minor Street Name = West Project Driveway

High Volume Approach (VPH) = 11

Number of Approach Lanes Minor Street = 2

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

General Plan Buildout With Project

Major Street Name = Orange Avenue

Total of Both Approaches (VPH) = 621

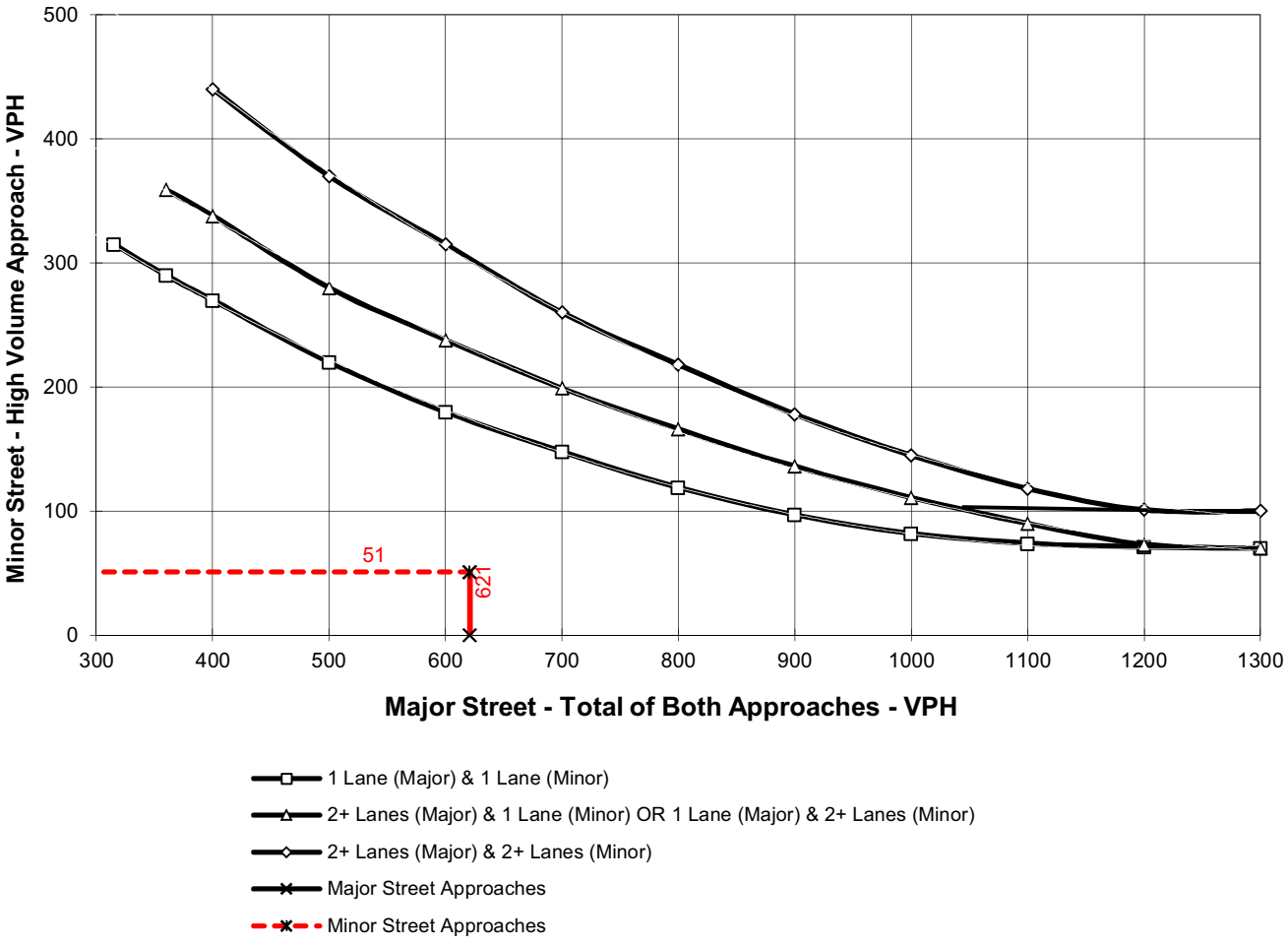
Number of Approach Lanes Major Street = 1

Minor Street Name = East Project Driveway

High Volume Approach (VPH) = 51

Number of Approach Lanes Minor Street = 1

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

PEAK HOUR VOLUME WARRANT
(Rural Areas)

General Plan Buildout With Project

Major Street Name = Orange Avenue

Total of Both Approaches (VPH) = 641

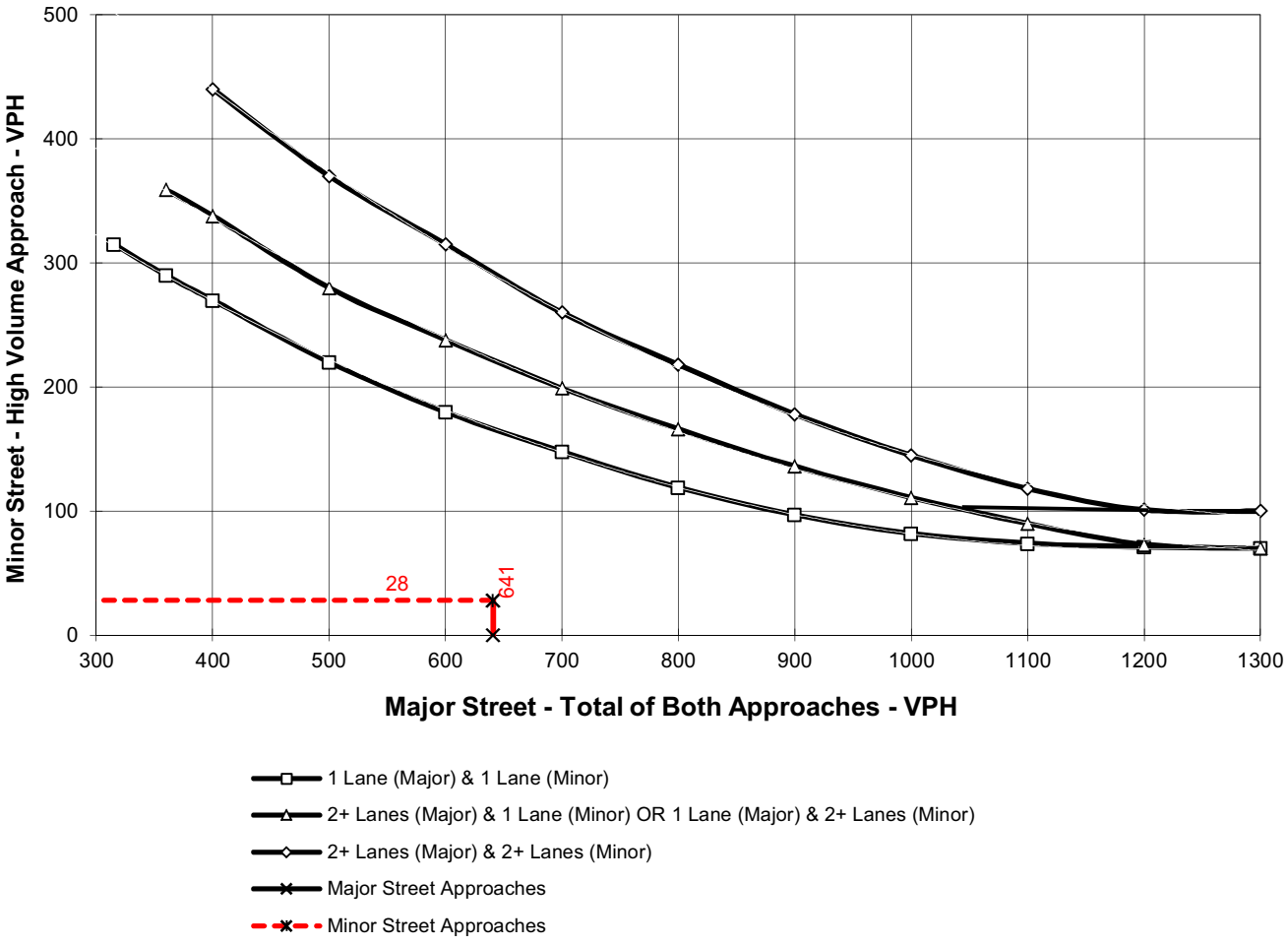
Number of Approach Lanes Major Street = 1

Minor Street Name = East Project Driveway

High Volume Approach (VPH) = 28

Number of Approach Lanes Minor Street = 1

SIGNAL WARRANT NOT SATISFIED



** NOTE:
100 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 75 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

APPENDIX H

HIGHWAY DESIGN MANUAL SIGHT DISTRANCE STANDARDS

CHAPTER 200
GEOMETRIC DESIGN AND STRUCTURE STANDARDS

Topic 201 - Sight Distance

Index 201.1 - General

Sight distance is the continuous length of highway ahead, visible to the highway user. Four types of sight distance are considered herein: passing, stopping, decision, and corner. Passing sight distance is used where use of an opposing lane can provide passing opportunities (see Index 201.2). Stopping sight distance is the minimum sight distance for a given design speed to be provided on multilane highways and on 2-lane roads when passing sight distance is not economically obtainable. Stopping sight distance also is to be provided for all users, including motorists and bicyclists, at all elements of interchanges and intersections at grade, including private road connections (see Topic 504, Index 405.1, & Figure 405.7). Decision sight distance is used at major decision points (see Indexes 201.7 and 504.2). Corner sight distance is used at intersections (see Index 405.1, Figure 405.7, and Figure 504.3I).

Table 201.1 shows the minimum standards for stopping sight distance related to design speed for motorists. Stopping sight distances given in the table are suitable for Class II and Class III bikeways. The stopping sight distances are also applicable to roundabout design on the approach roadway, within the circulatory roadway, and on the exits prior to the pedestrian crossings. Also shown in Table 201.1 are the values for use in providing passing sight distance.

See Chapter 1000 for Class I bikeway sight distance guidance.

Chapter 3 of "A Policy on Geometric Design of Highways and Streets," AASHTO, contains a thorough discussion of the derivation of stopping sight distance.

201.2 Passing Sight Distance

Passing sight distance is the minimum sight distance required for the driver of one vehicle to pass another vehicle safely and comfortably. Passing must be accomplished assuming an oncoming vehicle comes into view and maintains the design speed, without reduction, after the overtaking maneuver is started.

Table 201.1
Sight Distance Standards

Design Speed[1] (mph)	Stopping[2] (ft)	Passing (ft)
10	50	---
15	100	---
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

(1) See Topic 101 for selection of design speed.
(2) For sustained downgrades, refer to underlined standard in Index 201.3

The sight distance available for passing at any place is the longest distance at which a driver whose eyes are 3 ½ feet above the pavement surface can see the top of an object 4 ¼ feet high on the road. See Table 201.1 for the calculated values that are associated with various design speeds.

In general, 2-lane highways should be designed to provide for passing where possible, especially those routes with high volumes of trucks or recreational vehicles. Passing should be done on tangent horizontal alignments with constant grades or a slight sag vertical curve. Not only are drivers reluctant to pass on a long crest vertical curve, but it is impracticable to design crest vertical curves to provide for passing sight distance because of high cost where crest cuts are involved. Passing sight

distance for crest vertical curves is 7 to 17 times longer than the stopping sight distance.

Ordinarily, passing sight distance is provided at locations where combinations of alignment and profile do not require the use of crest vertical curves.

Passing sight distance is considered only on 2-lane roads. At critical locations, a stretch of 3- or 4-lane passing section with stopping sight distance is sometimes more economical than two lanes with passing sight distance.

Passing on sag vertical curves can be accomplished both day and night because headlights can be seen through the entire curve.

See Part 3 of the California Manual on Uniform Traffic Control Devices (California MUTCD) for criteria relating to the placement of barrier striping for no-passing zones. Note, that the passing sight distances shown in the California MUTCD are based on traffic operational criteria. Traffic operational criteria are different from the design characteristics used to develop the values provided in Table 201.1 and Chapter 3 of AASHTO, A Policy on Geometric Design of Highways and Streets. The aforementioned table and AASHTO reference are also used to design the vertical profile and horizontal alignment of the highway. Consult the District Traffic Engineer or designee when using the California MUTCD criteria for traffic operating-control needs.

Other means for providing passing opportunities, such as climbing lanes or turnouts, are discussed in Index 204.5. Chapter 3 of AASHTO, A Policy on Geometric Design of Highways and Streets, contains a thorough discussion of the derivation of passing sight distance.

201.3 Stopping Sight Distance

The minimum stopping sight distance is the distance required by the user, traveling at a given speed, to bring the vehicle or bicycle to a stop after an object ½-foot high on the road becomes visible. Stopping sight distance for motorists is measured from the driver's eyes, which are assumed to be 3 ½ feet above the pavement surface, to an object ½-foot high on the road. See Index 1003.1(10) for Class I bikeway stopping sight distance guidance.

The stopping sight distances in Table 201.1 should be increased by 20 percent on sustained downgrades steeper than 3 percent and longer than one mile.

201.4 Stopping Sight Distance at Grade Crests

Figure 201.4 shows graphically the relationships between length of highway crest vertical curve, design speed, and algebraic difference in grades. Any one factor can be determined when the other two are known.

201.5 Stopping Sight Distance at Grade Sags

From the curves in Figure 201.5, the minimum length of vertical curve which provides headlight sight distance in grade sags for a given design speed can be obtained.

If headlight sight distance is not obtainable at grade sags, lighting may be considered. The District approval authority or Project Delivery Coordinator, depending upon the current District Design Delegation Agreement, and the District Traffic Engineer or designee shall be contacted to review proposed grade sag lighting to determine if such use is appropriate.

201.6 Stopping Sight Distance on Horizontal Curves

Where an object off the pavement such as a bridge pier, building, cut slope, or natural growth restricts sight distance, the minimum radius of curvature is determined by the stopping sight distance.

Available stopping sight distance on horizontal curves is obtained from Figure 201.6. It is assumed that the driver's eye is 3 ½ feet above the center of the inside lane (inside with respect to curve) and the object is ½-foot high. The line of sight is assumed to intercept the view obstruction at the midpoint of the sight line and 2 feet above the center of the inside lane when the road profile is flat (i.e. no vertical curve). Crest vertical curves can cause additional reductions in sight distance. The clear distance (m) is measured from the center of the inside lane to the obstruction.

The design objective is to determine the required clear distance from centerline of inside lane to a retaining wall, bridge pier, abutment, cut slope, or other obstruction for a given design speed. Using

radius of curvature and minimum sight distance for that design speed, Figure 201.6 gives the clear distance (*m*) from centerline of inside lane to the obstruction.

See Index 1003.1(13) for bikeway stopping sight distance on horizontal curve guidance.

When the radius of curvature and the clear distance to a fixed obstruction are known, Figure 201.6 also gives the sight distance for these conditions.

See Index 101.1 for technical reductions in design speed caused by partial or momentary horizontal sight distance restrictions. See Index 203.2 for additional comments on glare screens.

Cuts may be widened where vegetation restricting horizontal sight distance is expected to grow on finished slopes. Widening is an economic trade-off that must be evaluated along with other options. See Index 902.2 for sight distance requirements on landscape projects.

201.7 Decision Sight Distance

At certain locations, sight distance greater than stopping sight distance is desirable to allow drivers time for decisions without making last minute erratic maneuvers (see Chapter III of AASHTO, A Policy on Geometric Design of Highways and Streets, for a thorough discussion of the derivation of decision sight distance.)

On freeways and expressways the decision sight distance values in Table 201.7 should be used at lane drops and at off-ramp noses to interchanges, branch connections, roadside rests, vista points, and inspection stations. When determining decision sight distance on horizontal and vertical curves, Figures 201.4, 201.5, and 201.6 can be used. Figure 201.7 is an expanded version of Figure 201.4 and gives the relationship among length of crest vertical curve, design speed, and algebraic difference in grades for much longer vertical curves than Figure 201.4.

Decision sight distance is measured using the 3 ½-foot eye height and ½-foot object height. See Index 504.2 for sight distance at secondary exits on a collector-distributor road.

Table 201.7
Decision Sight Distance

Design Speed (mph)	Decision Sight Distance (ft)
30	450
35	525
40	600
45	675
50	750
55	865
60	990
65	1,050
70	1,105
75	1,180
80	1,260

Topic 202 - Superelevation

202.1 Basic Criteria

When a vehicle moves in a circular path, it undergoes a centripetal acceleration that acts toward the center of curvature. This force is countered by the perceived centrifugal force experienced by the motorist.

On a superelevated highway, this force is resisted by the vehicle weight component parallel to the superelevated surface and by the side friction developed between the tires and pavement. It is impractical to balance centrifugal force by superelevation alone, because for any given curve radius a certain superelevation rate is exactly correct for only one driving speed. At all other speeds there will be a side thrust either outward or inward, relative to the curve center, which must be offset by side friction.

If the vehicle is not skidding, these forces are in equilibrium as represented by the following simplified curve equation, which is used to design a curve for a comfortable operation at a particular speed:

(4) Trailer Track – Semitrailer axle width, measured from outside face of tires.

(5) Lock To Lock Time - The time in seconds that an average driver would take under normal driving conditions to turn the steering wheel of a vehicle from the lock position on one side to the lock position on the other side. The default in AutoTurn software is 6 seconds.

(6) Steering Lock Angle - The maximum angle that the steering wheels can be turned. It is further defined as the average of the maximum angles made by the left and right steering wheels with the longitudinal axis of the vehicle.

(7) Articulating Angle - The maximum angle between the tractor and semitrailer.

Topic 405 - Intersection Design Standards

405.1 Sight Distance

(1) Stopping Sight Distance. See Index 201.1 for minimum stopping sight distance requirements.

(2) *Corner Sight Distance*.

(a) General--At unsignalized intersections a substantially clear line of sight should be maintained between the driver of a vehicle, bicyclist or pedestrian stopped on the minor road and the driver of an approaching vehicle on the major road that has no stop. Line of sight for all users should be included in right of way, in order to preserve sight lines.

Adequate time should be provided for the stopped vehicle on the minor road to either cross all lanes of through traffic, cross the near lanes and turn left, or turn right, without requiring through traffic to radically alter their speed. The visibility required for these maneuvers form a clear sight triangle with the corner sight distance b and the crossing distance a_1 or a_2 (see Figure 405.1 as an example of corner sight distance at a two-lane, two-way highway). Dimensions a_1 and a_2 are measured from the decision point to the center of the lane. The actual number of lanes will vary on the major and minor roads. There should be no sight obstruction within the clear sight triangle.

The methodology used for the driver on the minor road that is stopped to complete the necessary maneuver while the approaching vehicle travels at the design speed of the major road is based on gap-acceptance behavior. A 7-1/2 second criterion is applied to a passenger car (including pickup trucks) for a left turn from a stop on the minor road. However, this time gap does not account for a single-unit truck (no semitrailer), a combination truck (see Index 404.4 for truck tractor-semitrailer guidance), a right-turn from a stop, or for a crossing maneuver. See Table 405.1A for the time gap that addresses these situations for the assumed design vehicle making these maneuvers from the minor road.

In determining corner sight distance, a set back distance for the vehicle waiting on the minor road must be assumed as measured from the edge of traveled way of the major road. Set back for the driver of the vehicle on the minor road should be a minimum of 10 feet plus the shoulder width of the major road but not less than 15 feet. The location of the driver's eye for the set back is the decision point per Figure 405.1. Corner sight distance and the driver's eye set back are also illustrated in Figures 405.7 and 504.3I. Line of sight for corner sight distance for passenger cars is to be determined from a 3 and 1/2-foot height at the location of the driver of the vehicle in the center of the minor road lane to a 3 and 1/2-foot object height in the center of the approaching outside lane of the major road. This provides for reciprocal sight by both vehicles. The passenger car driver's eye height should be applied to all minor roads. In addition, a truck driver's eye height of 7.6 feet should be applied to the minor road where applicable. Additionally, if the major road has a median barrier, a 2-foot object height should be used to determine the median barrier set back. A median that is wide enough to accommodate a stopped vehicle should also provide a clear sight triangle.

The minimum corner sight distance (feet) should be determined by the equation: $1.47V_mT_g$, where V_m is the design speed (mph) of the major road and T_g is the time gap (seconds) for the minor road vehicle to enter the major road. The values given in Table 405.1A should be used to determine T_g based on the design vehicle, the type of maneuver, and whether the stopped vehicle's rear wheels are on an upgrade exceeding 3 percent. The distance from the edge of traveled way to the rear wheels at the minor road stop location should be assumed as: 20 feet for a passenger car, 30 feet for a single-unit truck, and 72 feet for a combination truck.

(b) Public Road Intersections (Refer to Topic 205)--At unsignalized public road intersections (see Index 405.7) corner sight distance applies.

At signalized intersections the corner sight distances should also be applied whenever possible. Even though traffic flows are designed to move at separate times, unanticipated conflicts can occur due to violation of signal, right turns on red, malfunction of the signal, or use of flashing red/yellow mode.

The minimum value for corner sight distance at signalized intersections should be equal to the stopping sight distance as given in Table 201.1, measured as previously described. This includes an urban driveway that forms a leg of the signalized intersection.

(c) Private Road Intersections (Refer to Index 205.2) and Rural Driveways (Refer to Index 205.4)--The minimum corner sight distance should be equal to the stopping sight distance as given in Table 201.1, measured as previously described.

(d) Urban Driveways (Refer to Index 205.3)--Corner sight distance requirements as described above are not applied to urban driveways. If parking is allowed on the major road, parking should be prohibited on both sides of the driveway per the California MUTCD, 3B.19.

(3) Decision Sight Distance. At intersections where the State route turns or crosses another State route, the decision sight distance values given in Table 201.7 should be used. In computing and measuring decision sight distance, the 3.5-foot eye height and the 0.5-foot object height should be used, the object being located on the side of the intersection nearest the approaching driver.

The application of the various sight distance requirements for the different types of intersections is summarized in Table 405.1B.

Table 405.1B
Application of Sight Distance Requirements

Intersection Types	Sight Distance		
	Stopping	Corner	Decision
Private Roads	X	X(1)	
Public Streets and Roads	X	X	
Signalized Intersections	X	X(2)	
State Route Intersections & Route Direction Changes, with or without Signals	X	X	X

NOTES:
(1) Per Index 405.1(2)(c), the minimum corner sight distance shall be equal to the stopping sight distance as given in Table 201.1. See Index 405.1(2)(a) for setback requirements.
(2) Apply corner sight distance requirements at signalized intersections whenever possible due to unanticipated violations of the signals or malfunctions of the signals. See Index 405.1(2)(b).

(4) Acceleration Lanes for Turning Moves onto State Highways. At rural intersections, with "STOP" control on the local cross road, acceleration lanes for left and right turns onto the State facility should be considered. At a minimum, the following features should be

Figure 405.1
Corner Sight Distance

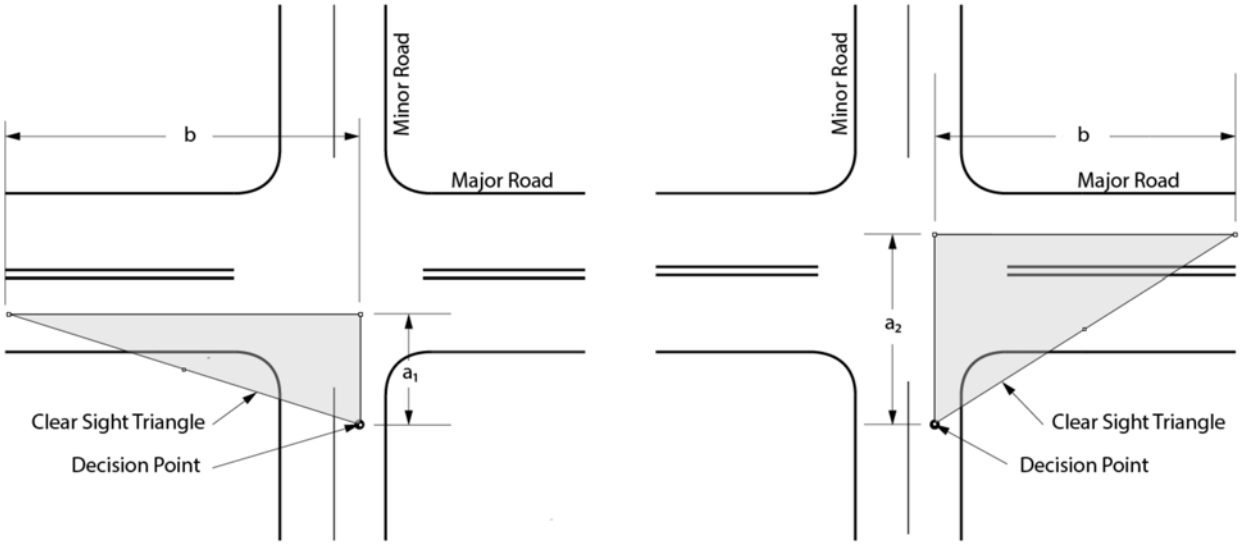


Table 405.1A
Corner Sight Distance Time Gap (T_g) for Unsignalized Intersections

Design Vehicle	Left-turn from Stop (s)	Right-turn from Stop and Crossing Maneuver (s)
Passenger Car	7½	6½
Private Road Intersection		
Rural Driveway		
Single-Unit Truck	9½	8½
Public Road Intersection		
Combination Truck	11½	10½
Major and Minor Roads on Routes:		
National Network		
Terminal or Service Access		
California Legal		
KPRA Advisory		

Notes: Time gaps are for a stopped vehicle to turn left, right or cross a two-lane highway with no median and with minor road grades of 3 percent or less. The table values should be adjusted as follows:
(1) For multilane highways—When crossing or making a left-turn onto a two-way major road with more than two lanes, add 0.5 s for passenger cars or 0.7 s for trucks for each additional lane to be crossed. Median widths should be converted to an equivalent number of lanes in applying the 0.5 s and 0.7 s criteria. For example, an 18-foot wide median is equivalent to 1.5 lanes; this requires an additional 0.75 s for a passenger car to cross or an additional 1.05 s for a truck to cross.
(2) For minor road approach grades—If the minor road approach grade is an upgrade that exceeds 3 percent and the rear wheels of the design vehicle are on the grade exceeding 3 percent, add 0.2 s for each percent grade for left-turns; or add 0.1 s for each percent grade for right-turns and crossing maneuvers. For example, a passenger car is turning right from a minor road and at the stop location its rear wheels are on a 4 percent upgrade; this requires an additional 0.4 s for the right-turn.
(3) Unique situations may necessitate a different design vehicle for a particular minor road than those listed here (e.g., predominant combination trucks out of a rural driveway). Additionally, for intersections at skewed angles less than 60 degrees, a further adjustment is needed. See the AASHTO "A Policy on Geometric Design of Highways and Streets" for guidance.

APPENDIX I

GATE STACKING/MINIMUM QUEUE REQUIREMENTS

APPENDIX I

GATE STACKING QUEUE ANALYSIS[1]

PROJECT:	SD Homes		DATE:	March 1, 2019
LOCATION:	Orange Ave/Alabama St (North)		JN:	18-0085

GATE LOCATION	AM		PM	
DEMAND RATE (q) (Vehicles/ hour)	14		59	
SERVICE RATE (Q) per channel	180.00		180.00	
NO. OF SERVICE POSITIONS (N)	1		1	
NO. OF STORAGE LANES (N1)	1		1	
		P'		P'
PROBABILITY OF NOT EXCEEDING (P)	0.05	95%	0.05	95%
UTILIZATION FACTOR (q/(N*Q))	0.08		0.33	
LENGTH OF VEHICLE (L) FEET	25.00		25.00	
Q(M) VALUE	0.08		0.33	
NO. OF VEHICLES BEING SERVED (N)	1.00	ROUND VALUE TO	1.00	ROUND VALUE TO
NO. OF VEHICLES IN QUEUE (M)	-0.83	0	0.69	1
TOTAL NUMBER OF VEHICLES (N+M)	1.00	1	1.69	2
NO. OF VEHICLES IN EACH LANE PER LANE ((N+M)/N1)	1.00	1	1.69	2
LENGTH OF QUEUE (L) FEET		25		50

NO. OF VEHICLES IN THE QUEUE (NOT INCLUDING THOSE BEING SERVED) = M = ((LN(P) - LN(Q(M))/LN(p)) - 1

Q(M) = TABLED VALUES BASED UPON NUMBER OF SERVICE CHANNELS (N) AND UTILIZATION FACTOR (q/NQ) AS SHOWN ON TABLE 8-11, PG.231, TRANSPORTATION AND LAND DEVELOPMENT, INSTITUTE OF TRANSPORTATION ENGINEERS (ITE), 1988.

P' = CONFIDENCE INTERVAL, (IE. 95% OF THE TIME THE QUEUE WILL BE EQUAL TO OR LESS THAN THE MAXIMUM VEHICLE QUE.)

APPENDIX I

GATE STACKING QUEUE ANALYSIS[1]

PROJECT:	SD Homes		DATE:	March 1, 2019
LOCATION:	Orange Ave/Alabama St (South)		JN:	18-0085
GATE LOCATION	AM		PM	
DEMAND RATE (q) (Vehicles/ hour)	14		53	
SERVICE RATE (Q) per channel	180.00		180.00	
NO. OF SERVICE POSITIONS (N)	1		1	
NO. OF STORAGE LANES (N1)	1		1	
PROBABILITY OF NOT EXCEEDING (P)	0.05	P' 95%	0.05	P' 95%
UTILIZATION FACTOR (q/(N*Q))	0.08		0.29	
LENGTH OF VEHICLE (L) FEET	25.00		25.00	
Q(M) VALUE	0.08		0.29	
NO. OF VEHICLES BEING SERVED (N)	1.00	ROUND VALUE TO	1.00	ROUND VALUE TO
NO. OF VEHICLES IN QUEUE (M)	-0.83	0	0.45	1
TOTAL NUMBER OF VEHICLES (N+M)	1.00	1	1.45	2
NO. OF VEHICLES IN EACH LANE PER LANE ((N+M)/N1)	1.00	1	1.45	2
LENGTH OF QUEUE (L) FEET		25		50

NO. OF VEHICLES IN THE QUEUE (NOT INCLUDING THOSE BEING SERVED) = M = ((LN(P) - LN(Q(M))/LN(p)) - 1

Q(M) = TABLED VALUES BASED UPON NUMBER OF SERVICE CHANNELS (N) AND UTILIZATION FACTOR (q/NQ) AS SHOWN ON TABLE 8-11, PG.231, TRANSPORTATION AND LAND DEVELOPMENT, INSTITUTE OF TRANSPORTATION ENGINEERS (ITE), 1988.

P' = CONFIDENCE INTERVAL, (IE. 95% OF THE TIME THE QUEUE WILL BE EQUAL TO OR LESS THAN THE MAXIMUM VEHICLE QUE.)

APPENDIX J

CROSSWALKS AT UNCONTROLLED LOCATIONS RECOMMENDED GUIDELINES (FHWA)

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*[1]

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000-15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N
Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

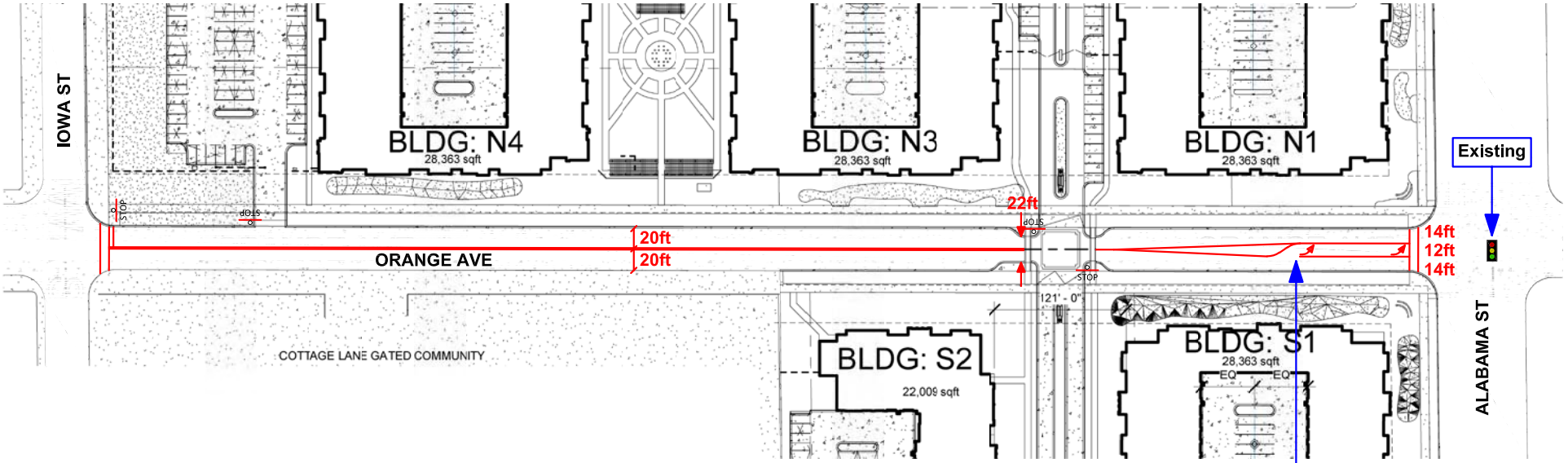
N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

In some situations (e.g., low-speed, two-lane streets in downtown areas), installing a marked crosswalk may help consolidate multiple crossing points. Engineering judgment should be used to install crosswalks at preferred crossing locations (e.g., at a crossing location at a streetlight as opposed to an unlit crossing point nearby). While overuse of marked crossings at uncontrolled locations should be avoided, higher priority should be placed on providing crosswalk markings where pedestrian volume exceeds about 20 per peak hour (or 15 or more elderly pedestrians and/or children per peak hour). Marked crosswalks and other pedestrian facilities (or lack of facilities) should be routinely monitored to determine what improvements are needed.

[1] Source: Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines. (Publication Number: FHWA-HRT-04-100), US Department of Transportation Federal Highway Administration, dated September 2005.

APPENDIX K

CONCEPTUAL STRIPING PLAN FOR ORANGE AVENUE

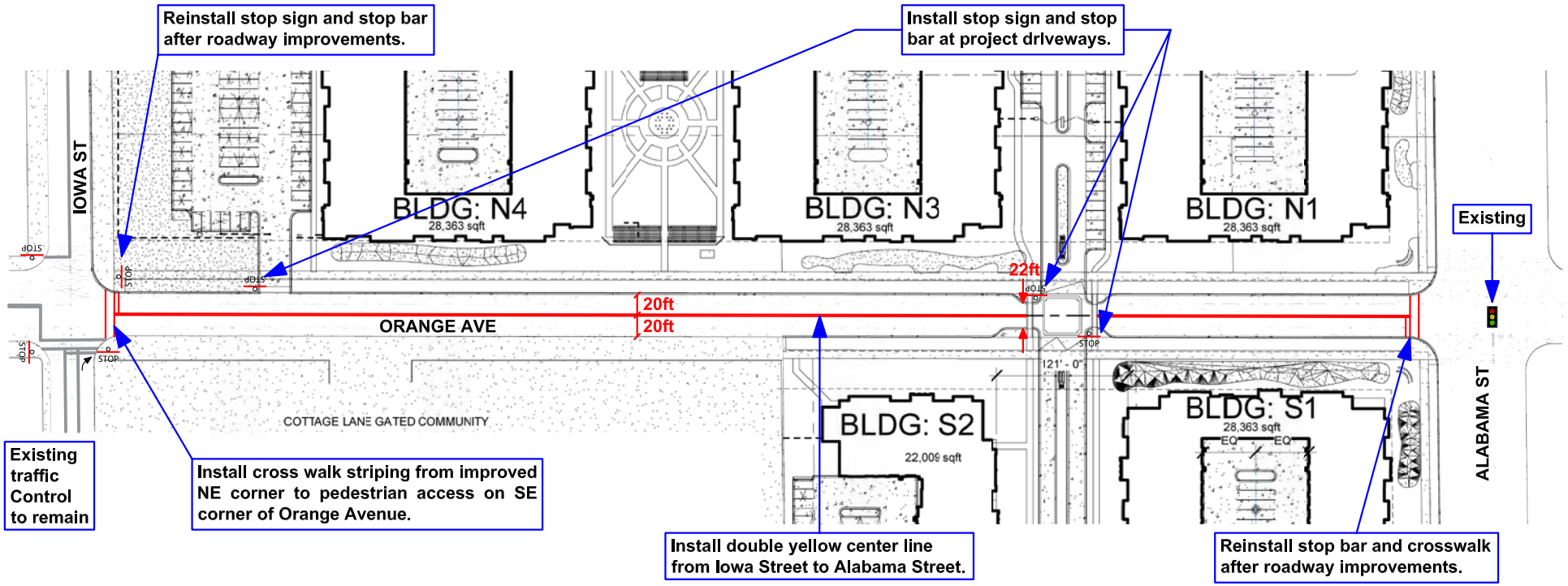


Legend

Traffic Signal

Stop Sign

Appendix K2
Orange Avenue Striping Concept General Plan Buildout (Year 2040)



N

Legend
Traffic Signal
Stop Sign

Appendix K1
Orange Avenue Striping Concept Opening Year (2020)

GANDDINI GROUP, INC.
550 Parkcenter Drive, Suite 202, Santa Ana, CA 92705
714.795.3100 | www.ganddini.com