Appendix H:
SD Homes Redlands Apartments Traffic Impact Analysis

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KUNZMAN ASSOCIATES, INC.

SD HOMES REDLANDS APARTMENTS

TRAFFIC IMPACT ANALYSIS

September 9, 2018

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

SD HOMES REDLANDS APARTMENTS

TRAFFIC IMPACT ANALYSIS

September 9, 2018

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I. EXECUTIVE SUMMARY

The purpose of this report is to provide an assessment of the traffic impacts resulting from the development of the proposed SD Homes Redlands Apartments, and to identify the traffic mitigation measures necessary to maintain the established Level of Service standard for the elements of the impacted roadway system. The traffic issues related to the proposed land uses and development have been evaluated in the context of the California Environmental Quality Act.

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 Horizon Year (2040).

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

A. Project Description

1. Location and Access

The proposed development is located adjacent to Orange Avenue between Iowa Street and Alabama Street in the City of Redlands. A vicinity map showing the project location is provided on Figure 1. The project site is proposed to provide access to Orange Avenue.

2. Project Development

The 10.9 acre portion of the project site is located north of Orange Avenue and the 8.0 acre portion of the project site is located south of Orange Avenue. The project site is proposed to be developed with a total of 412 multi-family (low-rise) attached residential dwelling units.

3. Project Trip Generation

The proposed development is projected to generate a total of approximately 2,736 daily vehicle trips of which 164 will occur during the morning peak hour and 197 will occur during the evening peak hour.

4. Phasing and Timing

The project is proposed to be constructed in one phase. For the purposes of this analysis, the project will be generating trips at its full potential in Opening Year (2020). Existing Plus Project will exemplify the existing traffic conditions with the entire site built-out.

B. Existing Traffic Conditions

The project site is occupied with the following land uses: single-family detached residential, plant nursery, and landscape contracting maintenance yard. The existing trip generation is reflected in the trip generation table as a trip credit.

C. Traffic Impacts

1. Future Intersection Level of Service

For Existing Plus Project traffic conditions, the study intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

For Opening Year (2020) Without Project traffic conditions, the study intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

For Opening Year (2020) With Project traffic conditions, the study intersections are projected to operate within acceptable Levels of Service during the peak hours, with improvements.

For Horizon Year (2040) Without Project traffic conditions, the study intersections are projected to operate within acceptable Levels of Service during the peak hours, except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

Alabama Street (NS) at:
Orange Avenue (EW) - #5

The study intersections are forecast to operate within acceptable Levels of Service consistent with Measure U during the peak hours for Horizon Year (2040) Without Project traffic conditions, with improvements.

For Horizon Year (2040) With Project traffic conditions, the study intersections are projected to operate within acceptable Levels of Service during the peak hours, except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

Alabama Street (NS) at:
Orange Avenue (EW) - #5

The study intersections are forecast to operate within acceptable Levels of Service consistent with Measure U during the peak hours for Horizon Year (2040) With Project traffic conditions, with improvements.

2. Significant Impact Evaluation

For "With Project" traffic conditions, project generated trips did result in a significant impact at one study intersection for Horizon Year (2040) With Project traffic conditions. No study intersections were reduced from the pre-project Level of Service C or better to the "With Project" of Level of Service D or worse for the Existing Plus Project, Opening Year (2020) With Project, and Horizon Year (2040) With Project traffic conditions with improvements.

D. Mitigation Measures

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Existing Plus Project, Opening Year (2030), and Horizon Year (2040) traffic conditions. The improvements were determined through the operations analysis of Section V and other traffic considerations of Section VI.

The total cost of needed and unfunded intersection improvements is $50,000.

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. The project's identified intersection costs are $50,000 (see Table 10).

The project volume contributions have been calculated for study intersections for both the morning or evening peak hour intersection turning movement volumes. Table 11 summarizes the project volume contributions for study intersections.

The dollar figures are rough order of magnitude estimates only. They are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

As mitigation for any potential traffic impacts, the proposed project shall contribute through the City of Redlands Development Impact Fee (DIF) program as well as the San Bernardino County adopted traffic impact fee program (Nexus) in addition to any fair share contributions shown within the traffic study which is not covered within this fee program.

E. Recommendations

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements.

1. On-Site Improvements

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).

Construct Alabama Street from the north project boundary to the south project boundary at its ultimate half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from southwest project boundary to Alabama Street at its ultimate full cross-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from Iowa Street to Alabama Street at its ultimate north half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

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.

2. Off-Site Improvements

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.

New and future traffic signals within the study area at buildout should specifically include a network interconnect of the traffic signals to function in a coordinated system.

II. INTRODUCTION

This section discusses the project location and proposed development, study area, analysis methodology and operational criteria.

A. Project Description

The proposed development is located adjacent to Orange Avenue between Iowa Street and Alabama Street in the City of Redlands. A vicinity map showing the project location is provided on Figure 1. The project site is proposed to provide access to Orange Avenue.

The 10.9 acre portion of the project site is located north of Orange Avenue and the 8.0 acre portion of the project site is located south of Orange Avenue. The project site is proposed to be developed with a total of 412 multi-family (low-rise) attached residential dwelling units. The project site plan is illustrated on Figure 2.

The project is proposed to be constructed in one phase. For the purposes of this analysis, the project will be generating trips at its full potential in Opening Year (2020). Existing Plus Project will exemplify the existing traffic conditions with the entire site built-out.

B. Study Area

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Redlands Boulevard, Park Avenue, Citrus Avenue, Orange Avenue, and Barton Road. The north-south roadways expected to provide local access include Iowa Street and Alabama Street.

A series of scoping discussions (see Appendix B) were conducted with the City of Redlands to define the desired analysis locations for each future analysis year. In addition, staff from the City of Redlands has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year [project Opening Year or Horizon Year (2040)] and project generated trips. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips during the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips during the morning and evening peak hours in the adjacent City of Loma Linda or unincorporated San Bernardino County. 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. Each of these agencies must also be provided with a copy of the traffic impact analysis, once the document is accepted by the City of Redlands. (Note: The purpose of this notification is to allow the affected 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).

C. Phasing and Timing

The project construction phasing has not been determined at this time. For the purposes of this report, the proposed project has been analyzed for Opening Year (2020) at which time it is anticipated that the project will be built-out and generating the full potential proposed traffic volumes.

D. Analysis Methodology

The analysis of the traffic impacts from the proposed development and the assessment of the required mitigation measures were based on an evaluation of the existing and forecast traffic conditions in the vicinity of the site with and without the project. The following analysis years are considered in this report:

- Existing Traffic Conditions (2018)
- Existing Plus Project Traffic Conditions[1]
- Opening Year (2020) Without and With Project Traffic Conditions
- Horizon Year (2040) Without and With Project Traffic Conditions

Existing intersection traffic conditions were established through morning and evening peak hour intersection turning movement counts obtained by Kunzman Associates, Inc. in November 2017 (see Appendix C). In addition, truck classification counts were conducted at the study intersections. The existing percent of trucks were used in the conversion of trucks to passenger car equivalent trips.

Project trips for all future projections were estimated using the manual approach. Trip generation has been estimated based on the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017.

The San Bernardino Transportation Analysis Model (SBTAM) has generally been used to evaluate the regional distribution of project trips. The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model Year 2012 and Year 2040 average daily traffic volume forecasts (see Appendix D). Appendix E contains the traffic model plots. This difference defines the growth in traffic volumes over the 28 year period. The incremental growth in average daily traffic volume has been factored to reflect the forecast growth between existing Year 2018 and Year 2040. For this purpose, linear growth between the Year 2012

[1] The existing plus project conditions has been analyzed to comply with the Sunnyvale West Neighborhood Association v. City of Sunnyvale CEQA court case. This scenario assumes the full development of the proposed project and full absorption of the proposed project trips on the circulation system at the present time.

base condition and the forecast Year 2040 condition was assumed. Since the increment between Year 2018 and Year 2040 is 22 years of the 28 year time frame, a factor of 0.78 (i.e., 22/28) was used.

The Horizon Year (2040) daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model Year 2012 and Year 2040 peak hour volumes. The growth increment calculation worksheets are shown in Appendix D. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing intersection turning movement volume data serves as both the starting point for the refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The Opening Year (2020) traffic volumes have been interpolated from the Horizon Year (2040) traffic volumes based upon a portion of the future growth increment.

The City of Redlands staff provided a list of cumulative developments in the study area that are within the City of Redlands. Cumulative development from the adjacent jurisdictions were also obtained. Cumulative development have been added to Opening Year (2020). In general, these projects are not included in the Horizon Year (2040) traffic conditions as the San Bernardino Transportation Analysis Model provides traffic volume growth based on the General Plan.

Project trips were then added to the San Bernardino Transportation Analysis Model traffic volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

The technique used to assess the capacity needs of an intersection is known as the intersection delay methodology (see Appendix F) based on the Highway Capacity Manual – Transportation Research Board Special Report 209. To calculate delay, the traffic volumes using the intersection is compared with the capacity of the intersection. It should be noted that the signalized intersections are considered deficient (Level of Service F) if the overall intersection critical volume to capacity ratio equals or exceeds 1.0, even if the Level of Service defined by the delay value is below the defined Level of Service standard. The volume to capacity ratio is defined as the critical volumes divided by the intersection capacity. A volume to capacity ratio greater than 1.0 implies that the traffic volume demand is greater than the capacity of the intersection and as a result traffic may begin to queue during the analyzed peak hour.

The Level of Service analysis for signalized intersections has been performed using optimized signal timing. This analysis has included an assumed lost time of two seconds per phase. Signal timing optimization has considered pedestrian safety and signal coordination requirements. Appropriate time for pedestrian crossings has also been considered in the signalized intersection analysis. The following formula has been used to calculate the pedestrian minimum times for all Highway Capacity Manual runs:

[(Curb to curb distance) / (3.5 feet/second)] + 7 seconds.

For Existing/Existing Plus Project/Opening Year (2020) traffic conditions, saturation flow rates of 1,800 vehicles per hour of green for through and right turn lanes and 1,700 vehicles per lane for single left turn lanes, 1,600 vehicles per lane for dual left turn lanes and 1,500 vehicles per lane for triple left turn lanes have been assumed for the capacity analysis.

For Horizon Year (2040) traffic conditions, saturation flow rates of 1,900 vehicles per hour of green for through and right turn lanes and 1,800 vehicles per lane for single left turn lanes, 1,700 vehicles per lane for dual left turn lanes and 1,800 vehicles per lane for double right turn lanes have been assumed for the capacity analysis.

The peak hour intersection turning movement volumes have been adjusted to peak 15 minute volumes for analysis purposes using the existing observed peak 15 minute to peak hour factors for all scenarios analyzed. Where feasible improvements in accordance with the local jurisdiction's General Plan and which result in acceptable operations cannot be identified, the Horizon Year (2040) peak hour factor has been adjusted upwards to 0.95. This is to account for the effects of congestion on peak spreading. Peak spreading refers to the tendency of traffic volumes to spread more evenly across time as congestion increases.

The traffic mitigation needs anticipated at the time of the project opening with full occupancy and for the Horizon Year (2040) were combined into a summary of mitigation requirements and costs. The mitigation cost responsibility for the proposed development was estimated based on the percent of the increase in traffic from the existing condition to the Horizon Year (2040) that was attributed to the project generated trips.

E. Definition of Deficiency and Significant Impact

The following definitions of deficiencies and significant impacts have been developed in accordance with the City of Redlands requirements.

1. Definition of Deficiency

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 intersection is listed within the Congestion Management Program:

Alabama Street (NS) at:
Redlands Boulevard (EW) - #3

2. Definition of Significant Impact

The identification of significant impacts is a requirement of the California Environmental Quality Act. 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.[2]

[2] 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.

Figure 1
Project Location Map

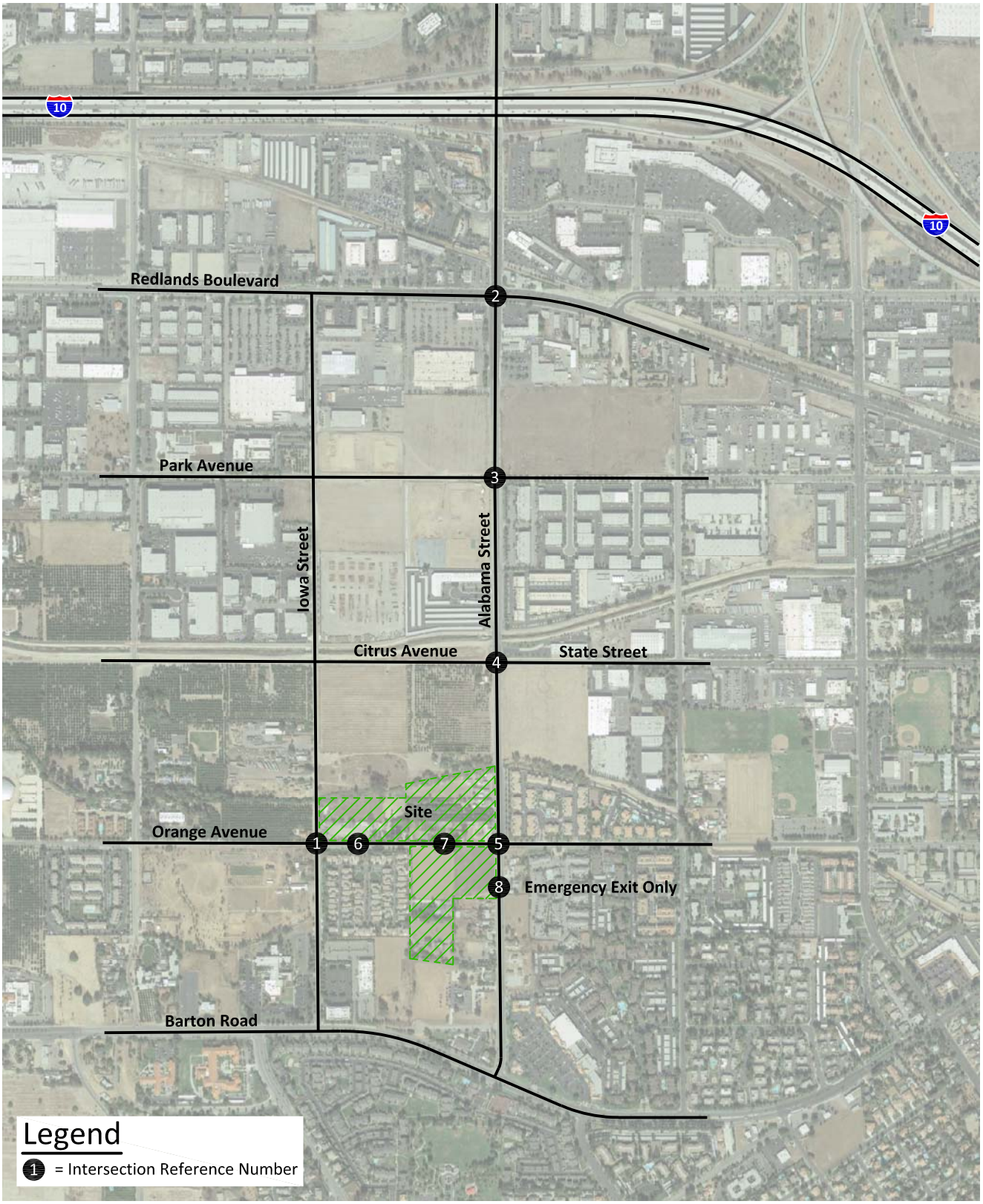

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Figure 2
Site Plan

III. EXISTING CONDITIONS

Traffic conditions as they exist today are discussed below for study roadways and intersections.

A. Existing Roadway System

Figure 3 identifies the Existing conditions for study roadways. The Existing number of through lanes for roadways and the intersection controls are identified.

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Redlands Boulevard, Park Avenue, Citrus Avenue, Orange Avenue, and Barton Road. The north-south roadways expected to provide local access include Iowa Street and Alabama Street.

Redlands Boulevard: This east-west roadway currently is four lanes divided in the study area and is classified as a major arterial roadway (64 to 78 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is a designated truck route and a proposed bike route in the City of Redlands. It currently carries approximately 18,000 to 20,600 vehicles per day in the study area.

Park Avenue: This east-west roadway currently is two lanes undivided in the study area and 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 and a proposed bike route in the City of Redlands. It currently carries approximately 2,000 to 3,600 vehicles per day in the study area.

Citrus Avenue: This east-west roadway currently is two lanes undivided in the study area and 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 and a proposed bike route in the City of Redlands. It currently carries approximately 2,500 to 4,100 vehicles per day in the study area.

Orange Avenue: This east-west roadway currently is two lanes undivided in the study area and 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 and a proposed bike route in the City of Redlands. It currently carries approximately 3,400 to 4,100 vehicles per day in the study area.

Iowa Street: This north-south roadway currently is two lanes undivided in the study area and 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: This north-south roadway currently is four lanes divided to five lanes divided in the study area and is classified as a major arterial roadway (64 to 78 feet designated roadway width) in the City of Redlands General Plan Circulation Element. This is

a designated truck route and a proposed bike route in the City of Redlands. It currently carries approximately 14,900 to 22,300 vehicles per day in the study area.

I-10 Freeway: This east-west ten lane divided freeway is classified as a State Highway on the County of San Bernardino General Plan Circulation Element. This State Highway is also a designated truck route. It currently carries approximately 176,000 to 189,000 vehicles per day in the study area.

B. Existing Volumes

Figure 4 depicts the Existing average daily traffic volumes. The Existing average daily traffic volumes were factored from peak hour intersection turning movement counts (see Appendix C) by Kunzman Associates, Inc. using the following formula for each intersection leg:

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

This is a conservative estimate and may overestimate the average daily traffic volumes.

There are two peak hours in a weekday. The morning peak hour is between 7:00 AM and 9:00 AM, and the evening peak hour is between 4:00 PM and 6:00 PM. The actual peak hour within the two hour interval is the four consecutive 15 minute periods with the highest total volume when all movements are added together. Thus, the evening 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.

Existing intersection traffic conditions were established through morning and evening peak hour intersection turning movement counts obtained by Kunzman Associates, Inc. in November 2017 (see Appendix C) and are shown with the highest peak hour on Figures 5 and 6, respectively. Explicit peak hour factors have been calculated using the data collected for this effort as well.

In addition, truck classification counts were conducted at the study intersections. The existing percent of trucks were used in the conversion of trucks to passenger car equivalent trips (see Appendix D).

C. Existing Levels of Service

The Existing delay and Level of Service for intersections in the vicinity of the project are shown in Table 1. For Existing traffic conditions, the study intersections currently operate within acceptable Levels of Service during the peak hours. Existing delay worksheets are provided in Appendix F.

D. Planned Transportation Improvements and Relationship to General Plan

The City of Redlands General Plan Circulation Element is shown on Figure 7. Existing and future roadways are included in the Circulation Element of the General Plan and are graphically depicted on Figure 7. This figure shows the nature and extent of arterial

highways that are needed to adequately serve the ultimate development depicted by the Land Use Element of the General Plan. The City of Redlands General Plan roadway cross-sections are shown on Figure 8.

E. Designated Truck Routes

The City of Redlands designated truck route map is illustrated on Figure 9.

F. Transit Service

Figure 10 depict Bus Transit System Maps in the study area. The study area is currently served by Omnitrans Route 8 along Redlands Boulevard.

G. Bicycle and Pedestrian Facilities

The City of Redlands designated bike paths are illustrated on Figure 11 and the existing pedestrian facilities adjacent to the project are shown on Figure 12.

Redlands Boulevard, Alabama Street, Park Avenue, Citrus Avenue and Orange Avenue are identified in the City of Redlands General Plan Bicycle Network as proposed bicycle routes. Currently, Alabama Street, Park Avenue, Citrus Avenue and Orange Avenue are not fully constructed as designated in the City of Redlands Circulation Element; therefore, no bicycle lanes currently exist in the project vicinity.

Table 1

Existing Intersection Delay and Levels of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour			
		Northbound			Southbound			Eastbound			Westbound			Morning		Evening	
		L	T	R	L	T	R	L	T	R	L	T	R	Delay[3]	LOS[4]	Delay[3]	LOS[4]
Iowa Street (NS) at:																	
Orange Avenue (EW) - #1	AWS	0.5	0.5	1	0	<1>	0	0.5	0.5	d	0	<1>	0	10.5	B	9.3	A
Alabama Street (NS) at:																	
Redlands Boulevard (EW) - #2	TS	2	2.5	0.5	2	1.5	0.5	2	2	1	2	2	1	28.9	C	28.2	C
Park Avenue (EW) - #3	TS	1	2	1	1	1.5	0.5	1	0.5	0.5	1	0.5	0.5	19.7	B	18.6	B
Citrus Avenue (EW) - #4	TS	1	2	d	1	1.5	0.5	0.5	0.5	d	1	0.5	0.5	19.7	B	19.7	B
Orange Avenue (EW) - #5	TS	1	1.5	0.5	1	1.5	0.5	0.5	0.5	d	0.5	0.5	d	18	B	17.6	B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; <1> = Shared Left/Through/Right Lane.

[2] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 5.00-02. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

[4] LOS = Level of Service

Figure 3
Existing Through Travel Lanes and Intersection Controls

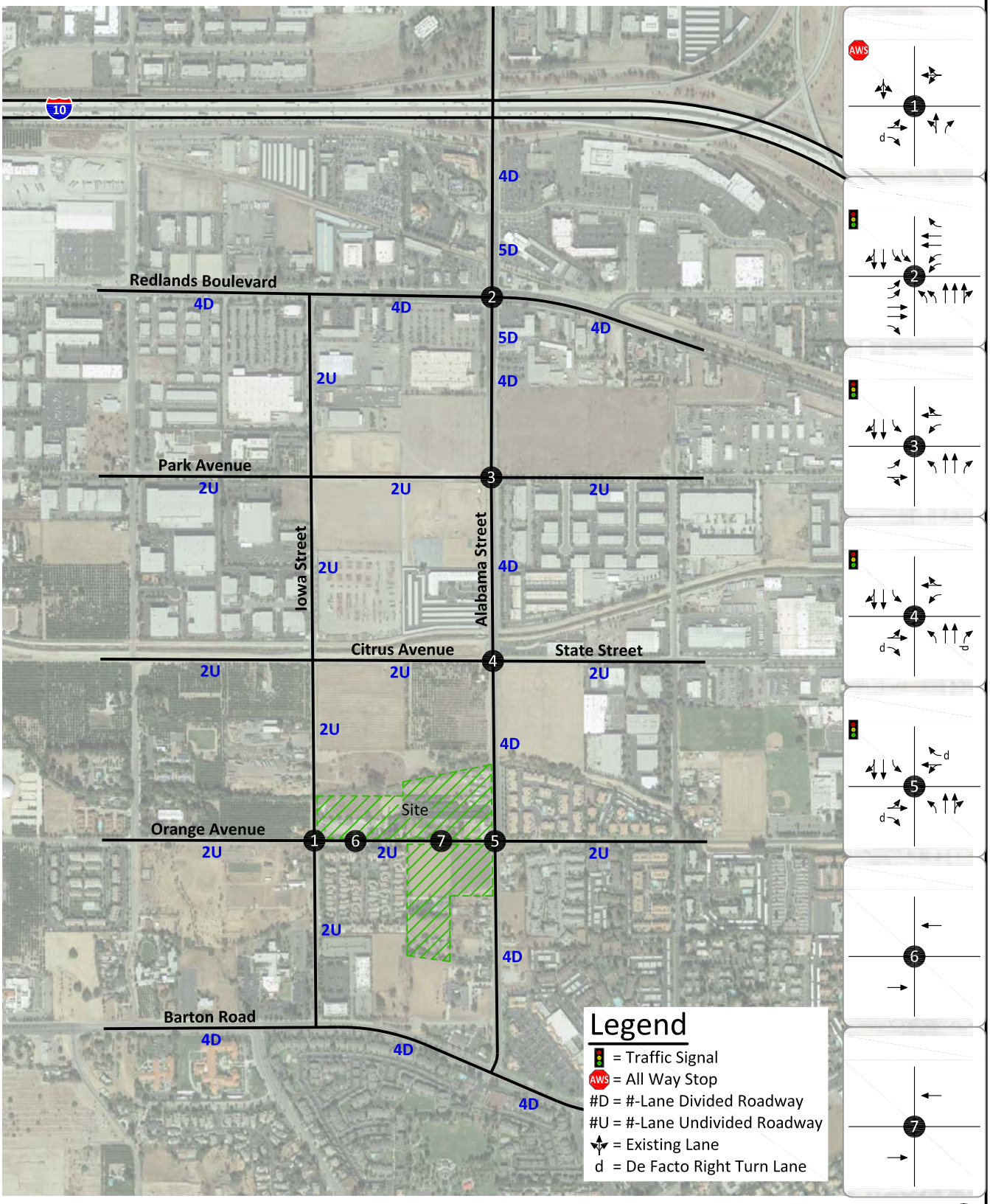


Figure 4
Existing Average Daily Traffic Volumes

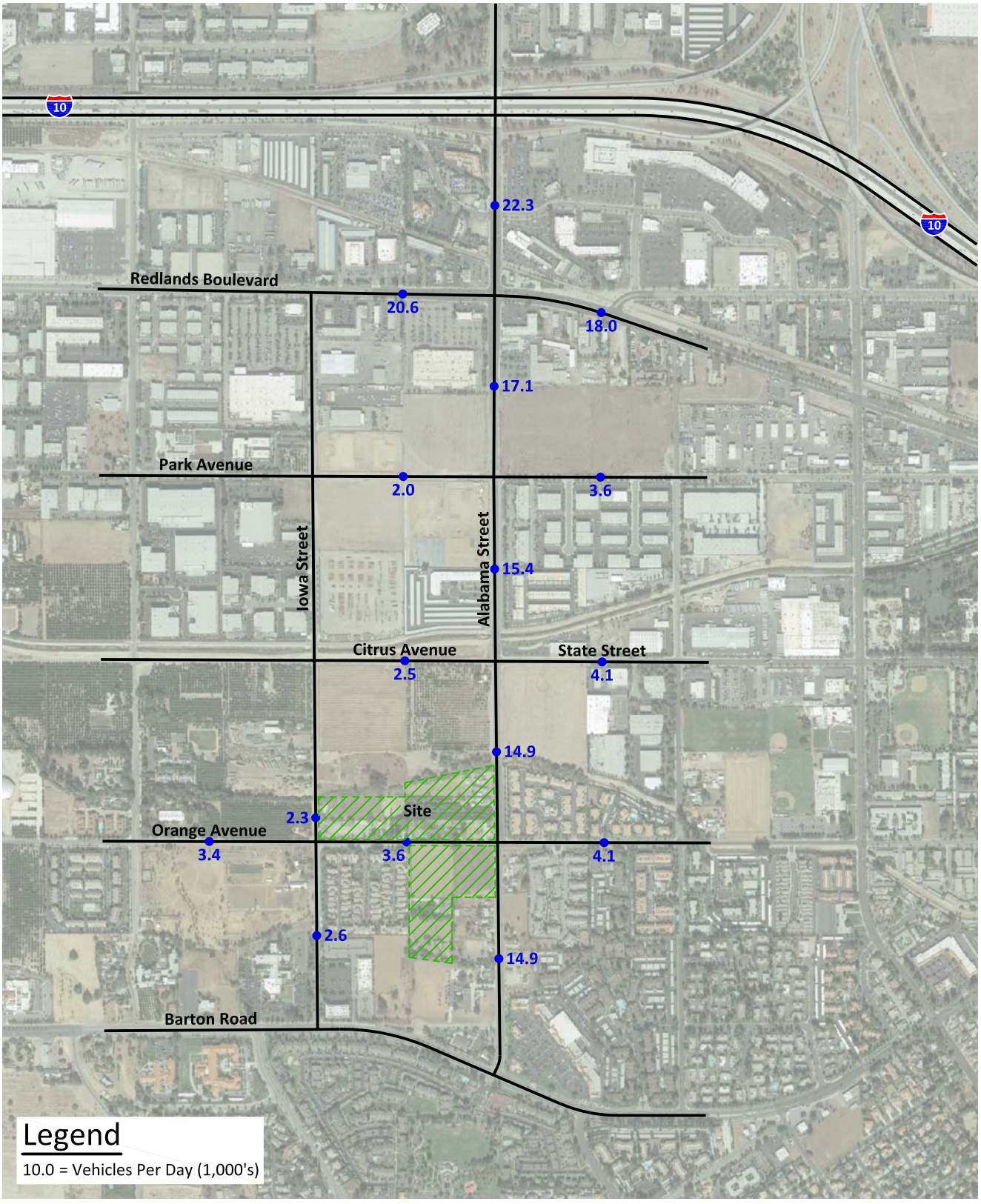


Figure 5
Existing Morning Peak Hour Intersection Turning Movement Volumes

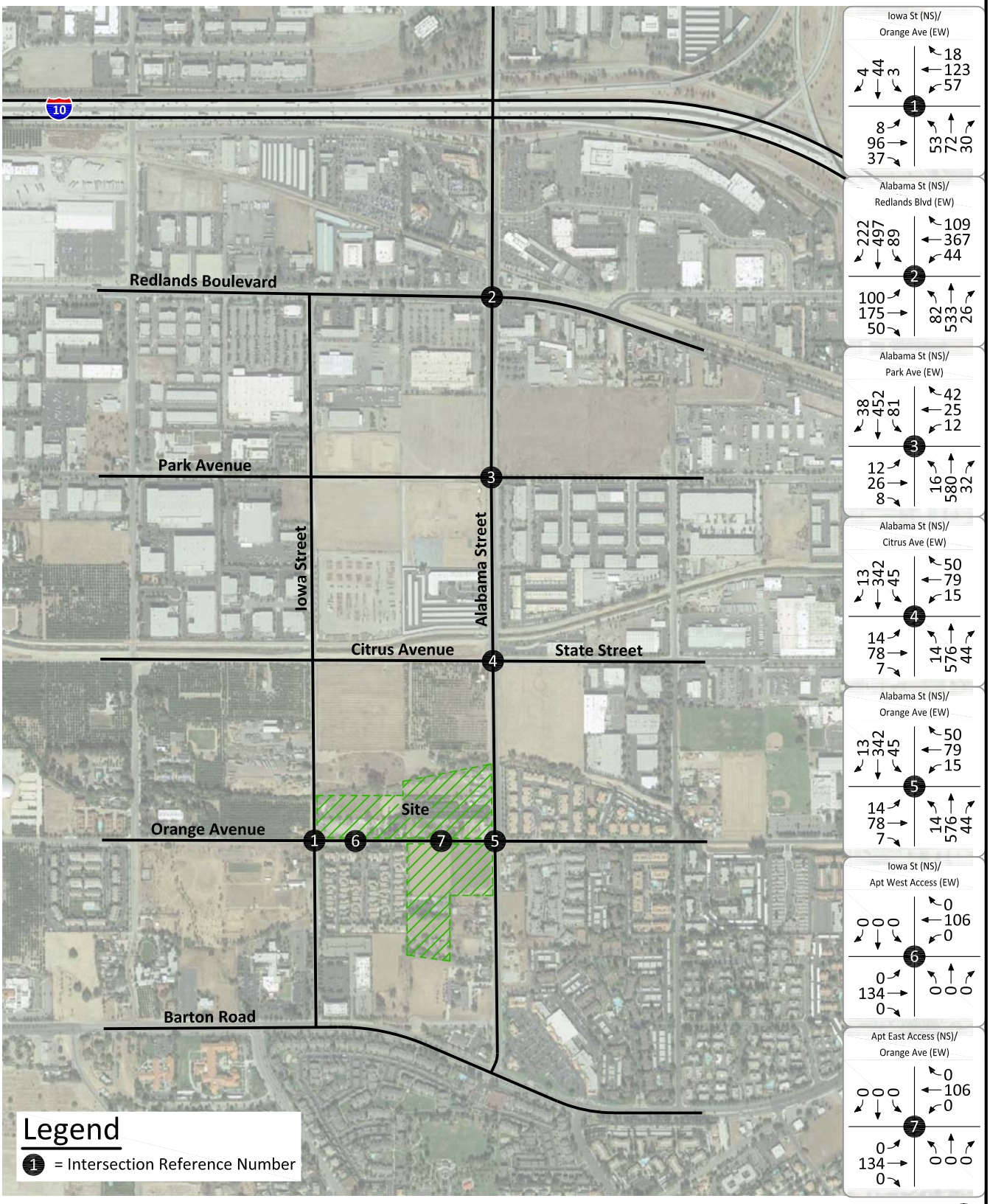


Figure 6
Existing Evening Peak Hour Intersection Turning Movement Volumes

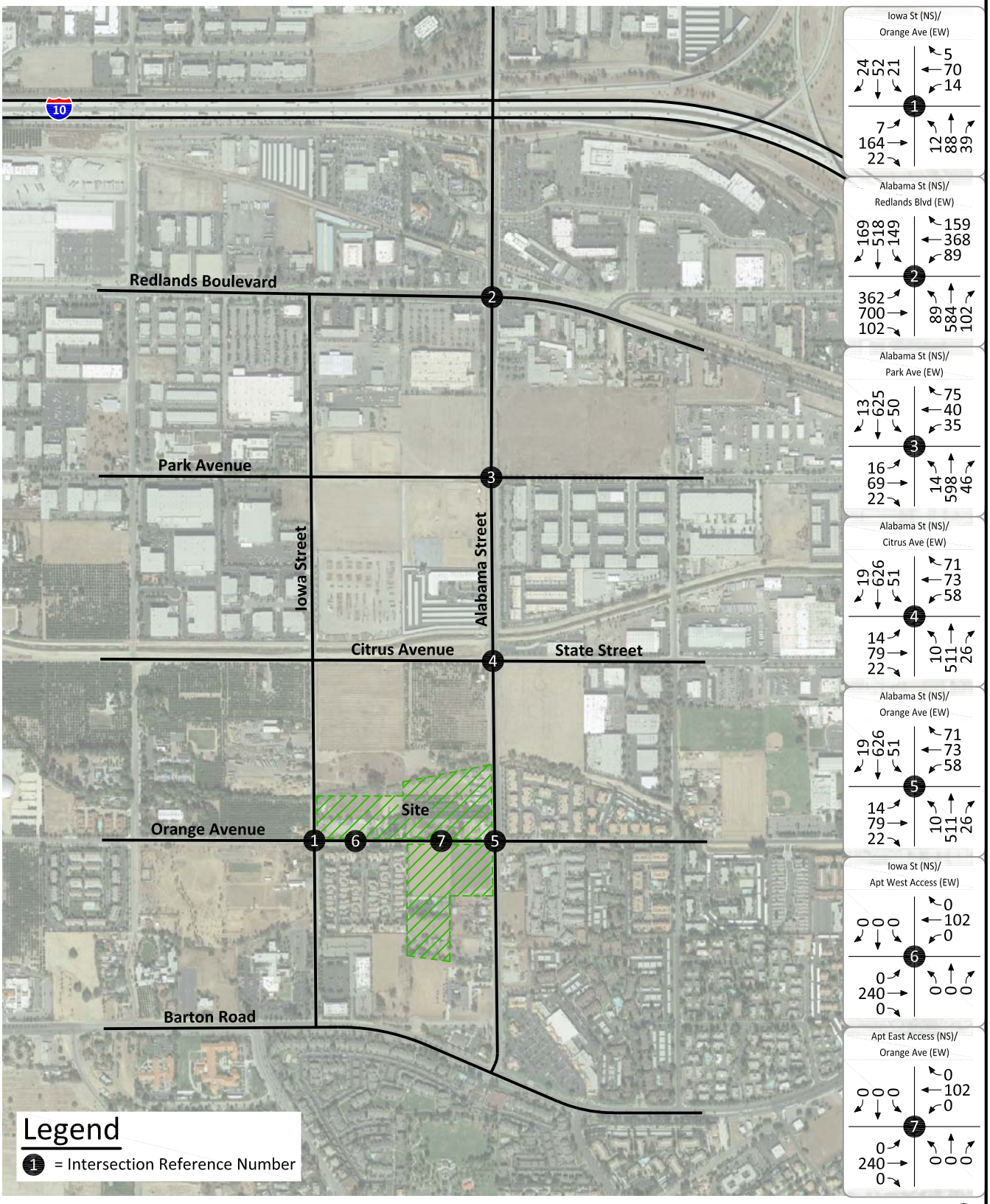
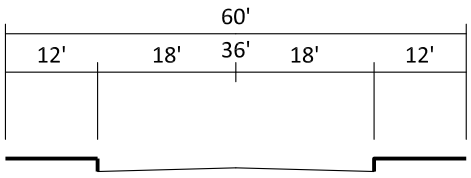


Figure 7
City of Redlands General Plan Circulation Element

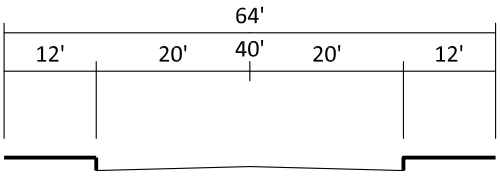
Source: City of Redlands

Figure 8
City of Redlands General Plan Roadway Cross-Sections

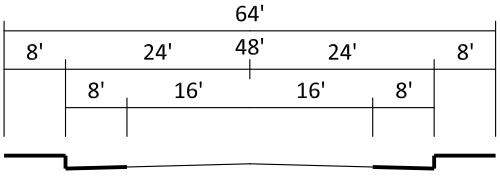
Local



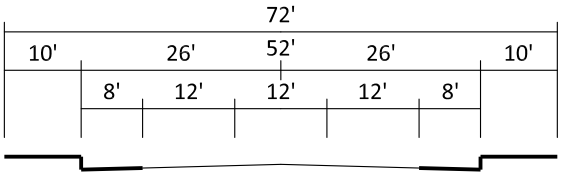
Collector - Residential



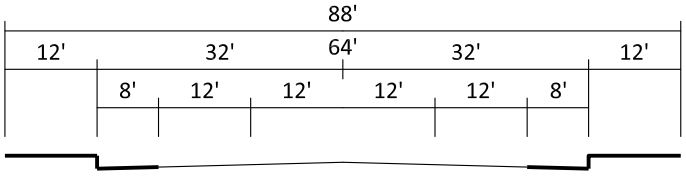
Collector - Industrial



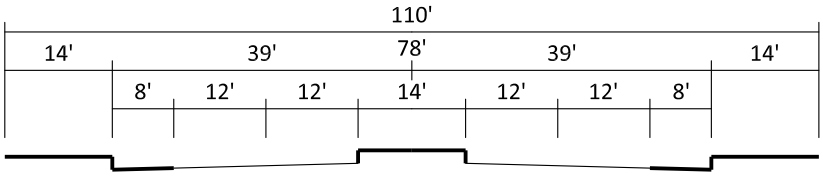
Minor Arterial - 2 Lanes + Left Turn



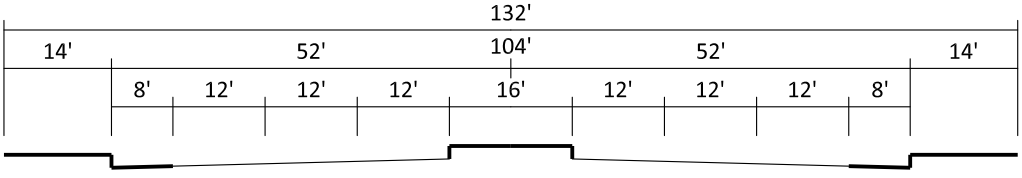
Minor Arterial - 4 Lanes Undivided



Major Arterial - 4 Lanes Divided

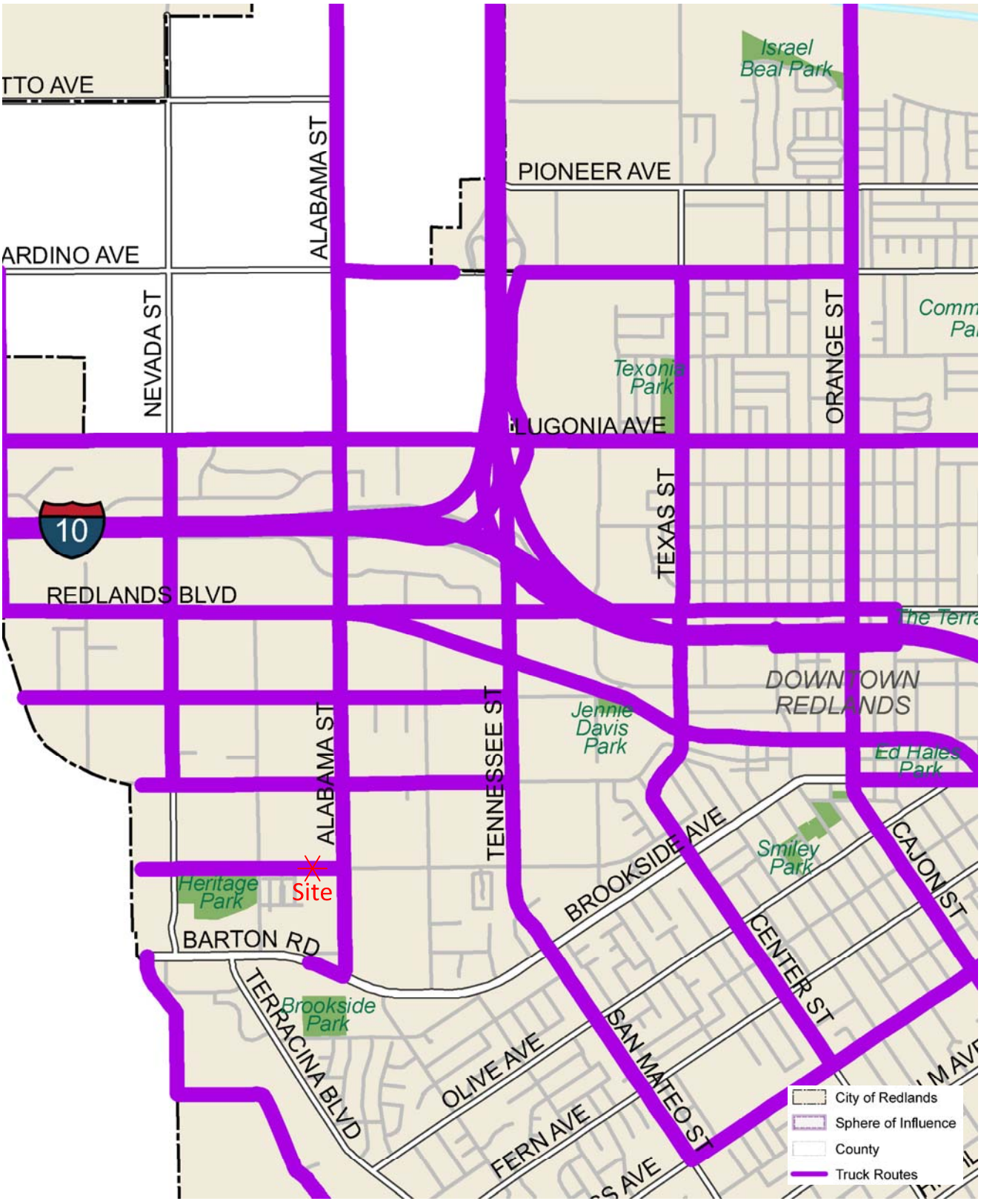


Major Arterial - 6 Lanes Divided



Source: City of Redlands

Figure 9
City of Redlands General Plan Truck Routes



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Source: City of Redlands

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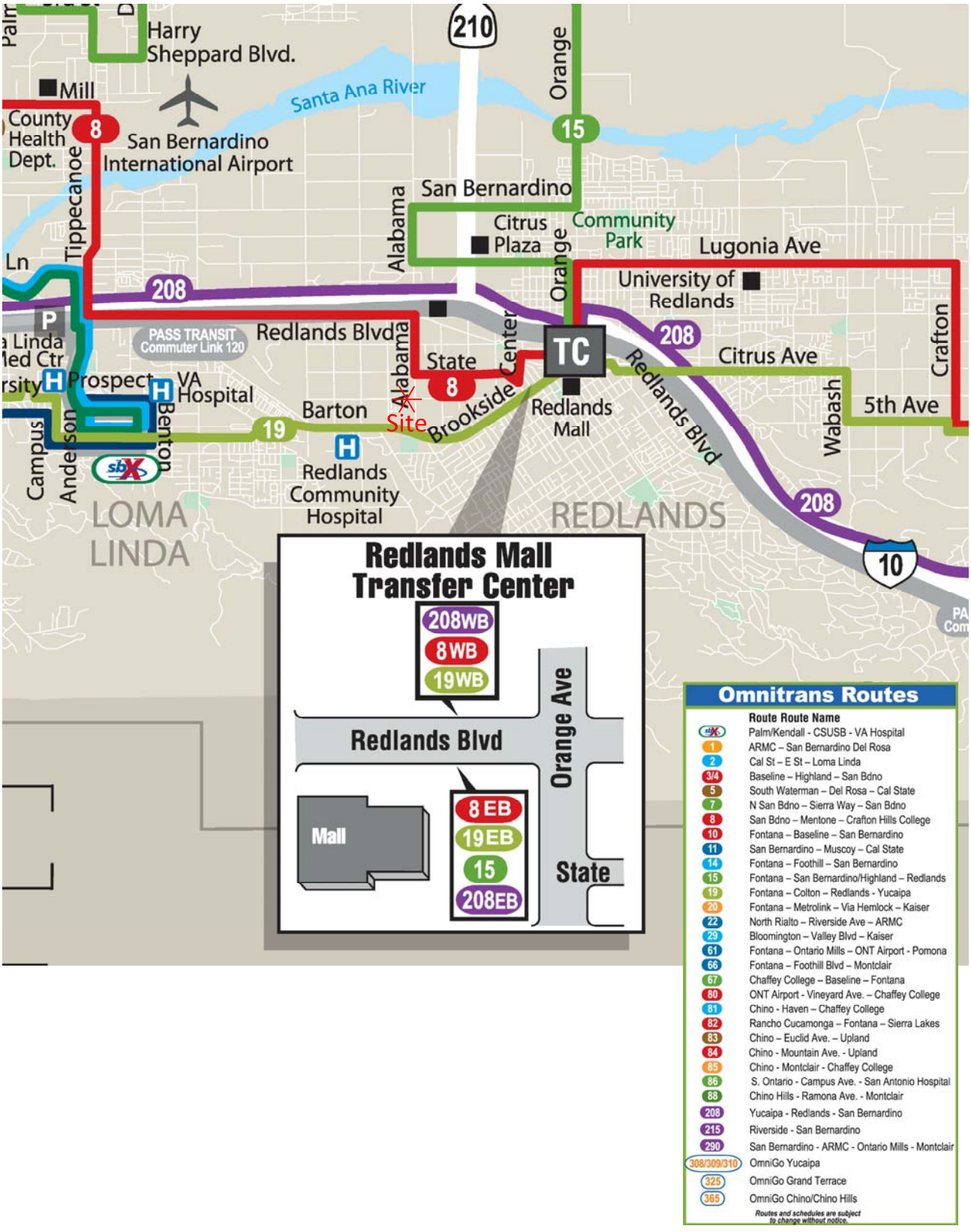
Figure 10
Existing Transit Routes

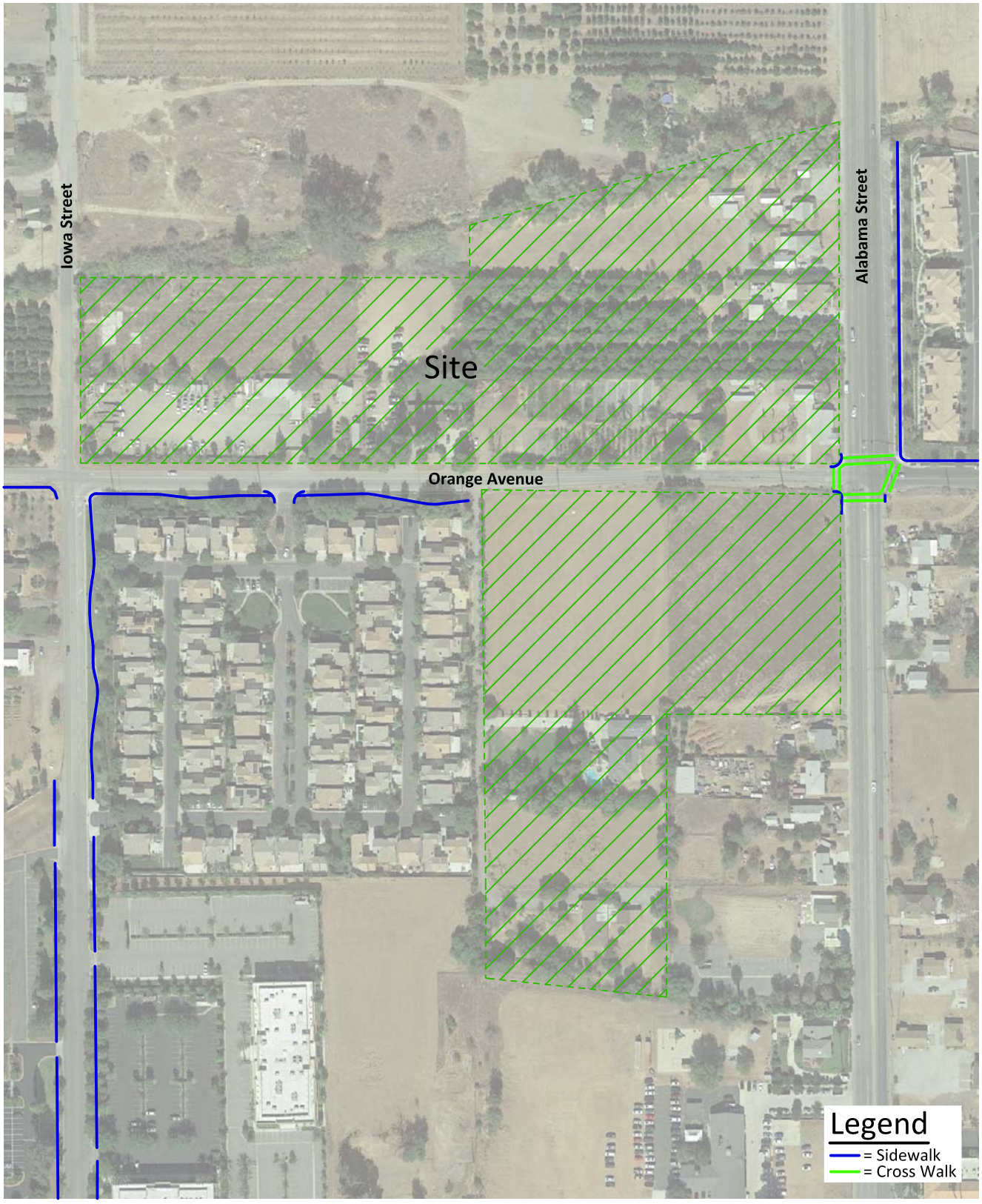


Source: Omnitrans

Figure 11
City of Redlands General Plan Bicycle Routes

Source: City of Redlands

Figure 12
Existing Pedestrian Facilities



IV. PROPOSED PROJECT

The proposed development is located adjacent to Orange Avenue between Iowa Street and Alabama Street in the City of Redlands.

A. Project Description

The 10.9 acre portion of the project site is located north of Orange Avenue and the 8.0 acre portion of the project site is located south of Orange Avenue. The project site is proposed to be developed with a total of 412 multi-family (low-rise) attached residential dwelling units.

B. Trip Generation

The trips generated by the project are determined by multiplying an appropriate trip generation rate by the quantity of land use. Trip generation rates are predicated on the assumption that energy costs, the availability of roadway capacity, the availability of vehicles to drive, and life styles remain similar to what are known today. A major change in these variables may affect trip generation rates.

Trip generation rates were determined for daily trips, morning peak hour inbound and outbound trips, and evening peak hour inbound and outbound trips for the proposed land use. By multiplying the trip generation rates by the land use quantity, the project trips are determined. Table 2 shows the project trip generation based upon rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017.

As shown in Table 2, the proposed development is projected to generate a total of approximately 2,736 daily vehicle trips of which 164 occur during the morning peak hour and 197 occur during the evening peak hour.

The project site is occupied with the following land uses: single-family detached residential, plant nursery, and landscape contracting maintenance yard. The existing trip generation is reflected in the trip generation table as a trip credit.

C. Trip Distribution

To determine the trip distributions for the proposed project, peak hour intersection turning movement volumes of the existing directional distribution of traffic volume for existing areas in the vicinity of the site, and other additional information on future development and traffic impacts in the area were reviewed. Figures 13 and 14 contain the outbound and inbound directional distributions of the project trips for the proposed land use, respectively.

D. Trip Assignment

Based on the identified trip generation and distributions, project average daily traffic volumes have been calculated and shown on Figure 15. Morning and evening peak hour

intersection turning movement volumes expected from the project are shown on Figures 16 and 17, respectively.

E. Trip Contribution Test

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (Opening Year) and project generated trips. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments are required to be included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips during the peak hours. The requirement is 100 two-way peak hour trips for freeways.

As shown on Figure 18, the project does not contribute greater than the freeway threshold volume of 100 two-way peak hour trips to the I-10 Freeway. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips during the morning and evening peak hours in the adjacent City of Loma Linda or unincorporated San Bernardino County. 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.

Table 2

Project Trip Generation

Descriptor	Land Use[1]	Quantity[2]	Units[3]	Morning Peak Hour			Evening Peak Hour			Daily
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates	Single-Family Detached Housing		DU	0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Specialty Trade Contractor		TSF	1.21	0.45	1.66	0.63	1.34	1.97	10.22
	Nursery Wholesale		AC	0.16	0.10	0.26	0.23	0.22	0.45	19.50
	Multi-Family Housing		DU	0.11	0.35	0.46	0.35	0.21	0.56	7.32
Trips Generated	Single-Family Detached Housing	-8	DU	-2	-4	-6	-5	-3	-8	-76
	Specialty Trade Contractor	-4.000	TSF	-5	-2	-7	-3	-5	-8	-41
	Nursery Wholesale	-1.2	AC	0	0	0	0	-1	-1	-23
	Existing Land Uses			-7	-6	-13	-8	-9	-17	-140
	Multi-Family Housing	412	DU	45	145	190	144	87	231	3,016
	Total			31	133	164	128	69	197	2,736

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Codes 180, 210, 220, and 818, unless otherwise noted.

[2] Source: Drawing AS-101 Site Plan for Project: SD Homes - Redlands Apartments, dated March 2, 2018.

[3] DU = Dwelling Units, TSF = Thousand Square Feet; AC = Acres.

Figure 13
Project Trip Distribution - Outbound

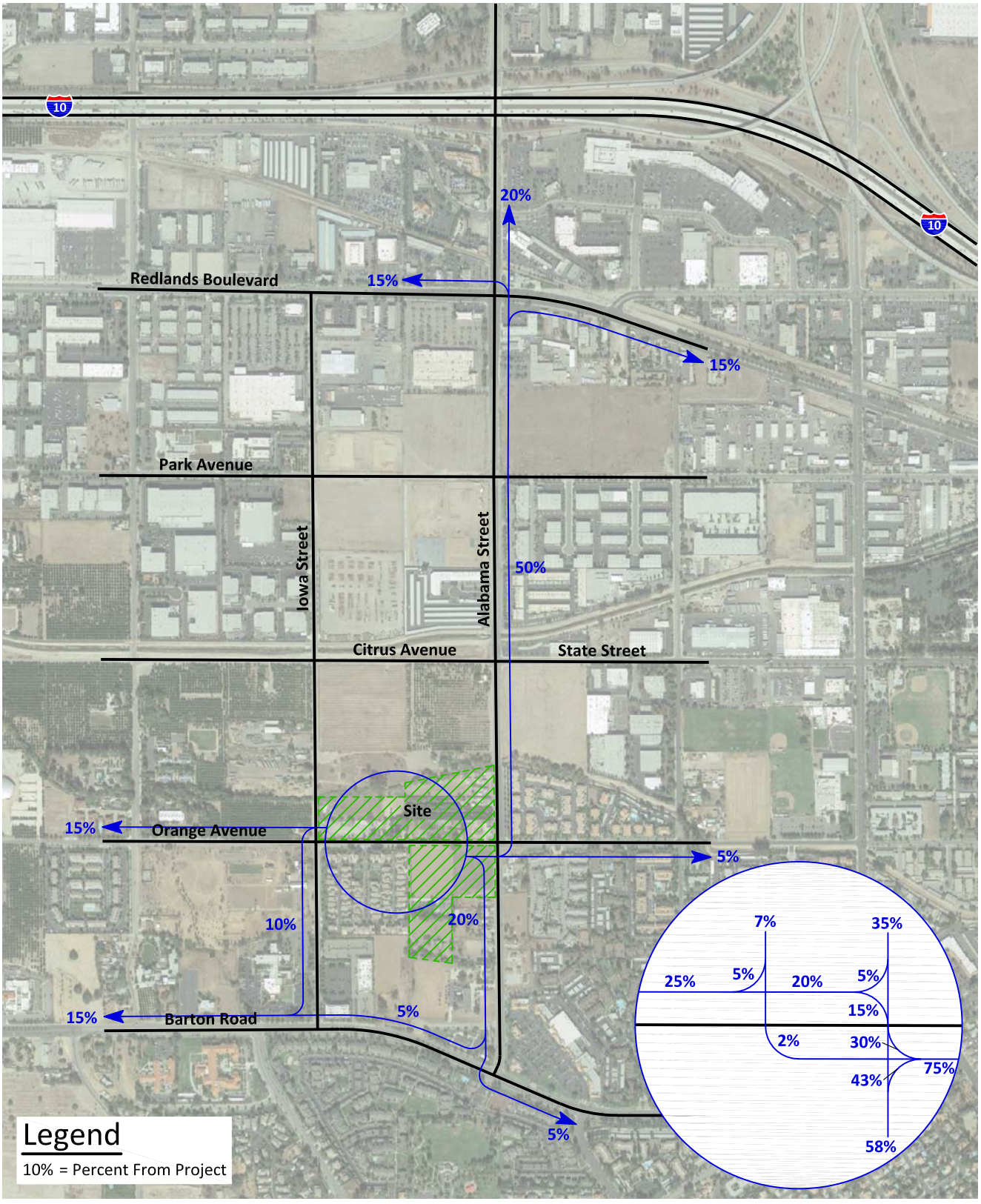


Figure 14
Project Trip Distribution - Inbound

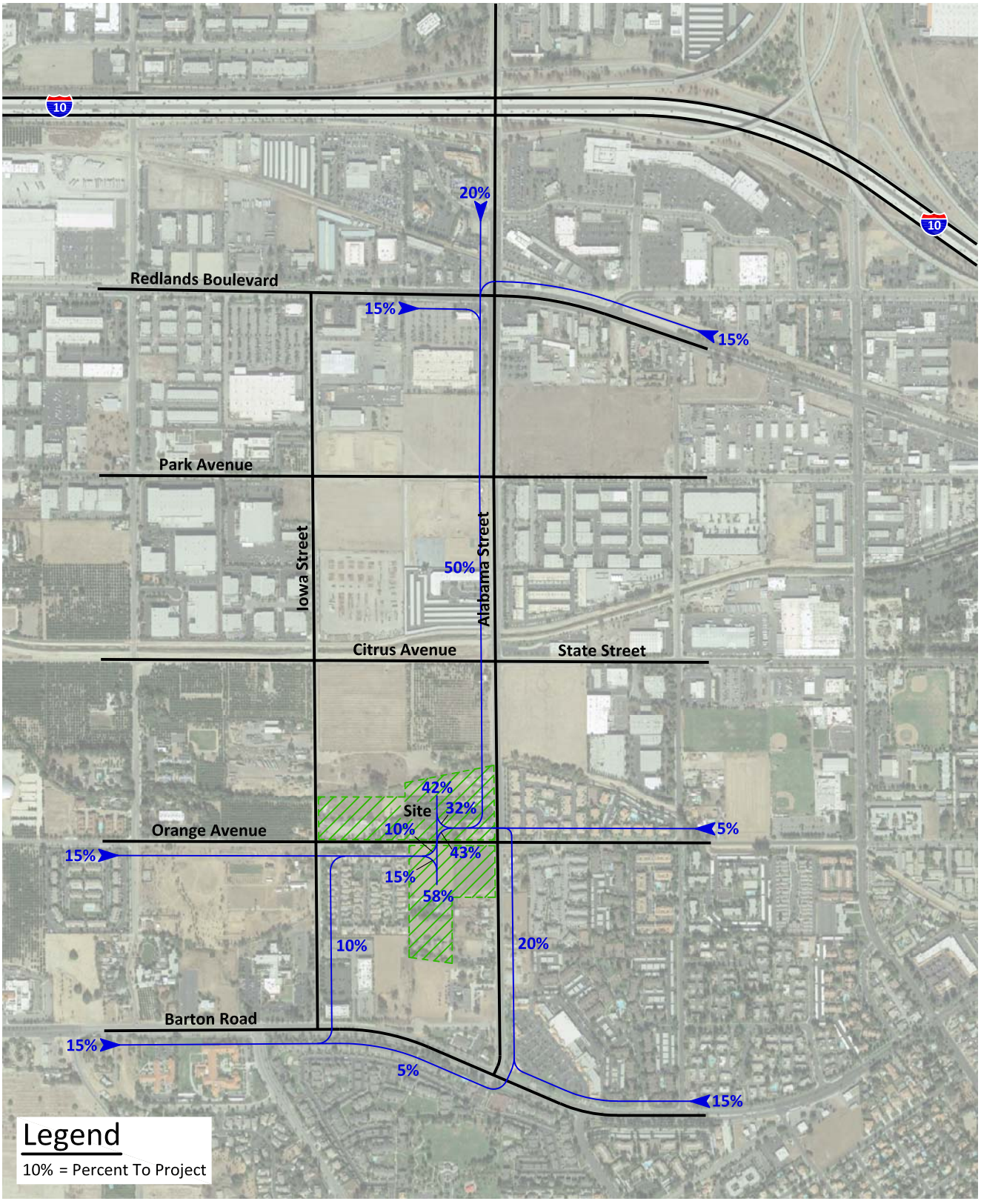


Figure 15
Project Average Daily Traffic Volumes

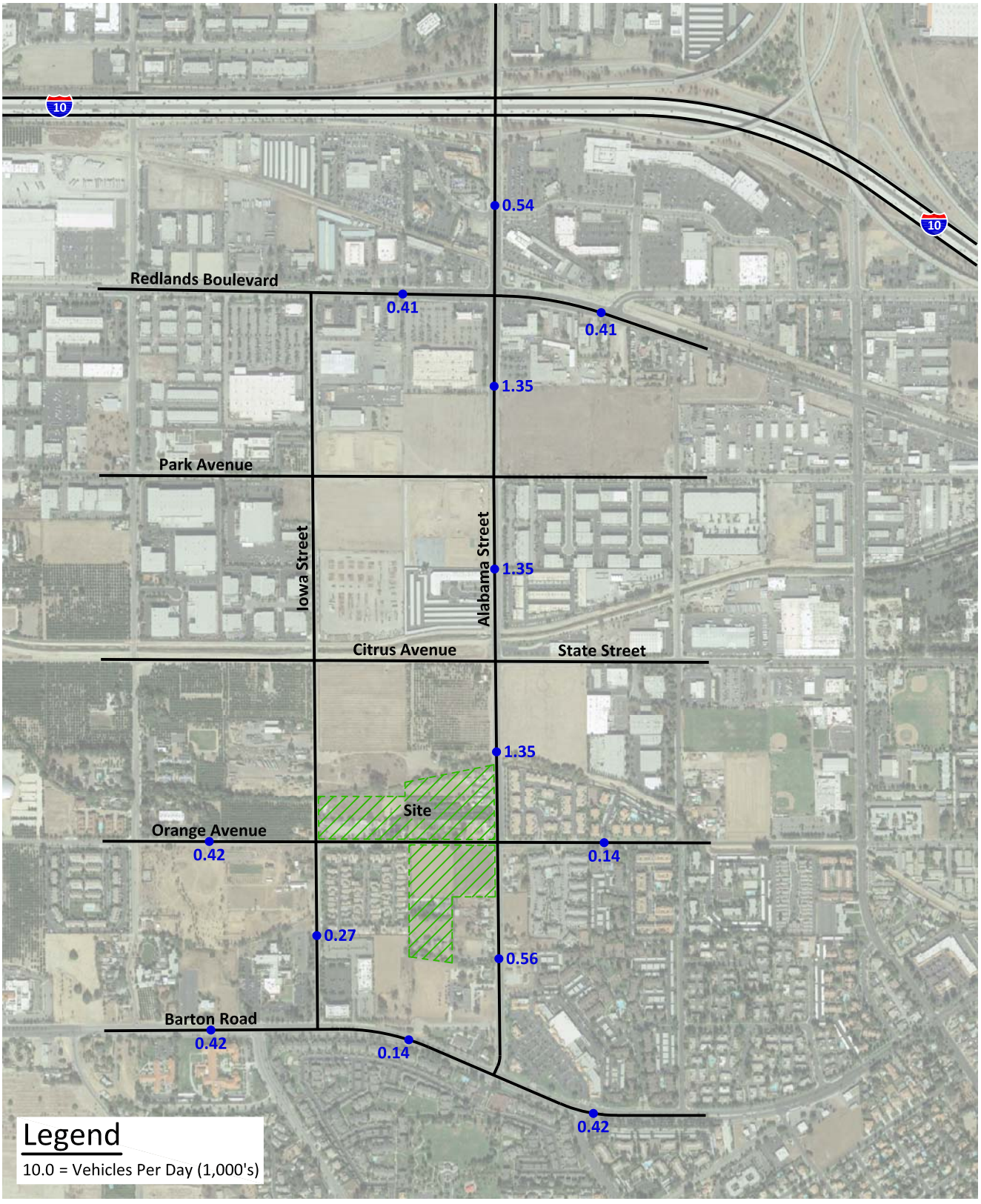


Figure 16
Project Morning Peak Hour Intersection Turning Movement Volumes

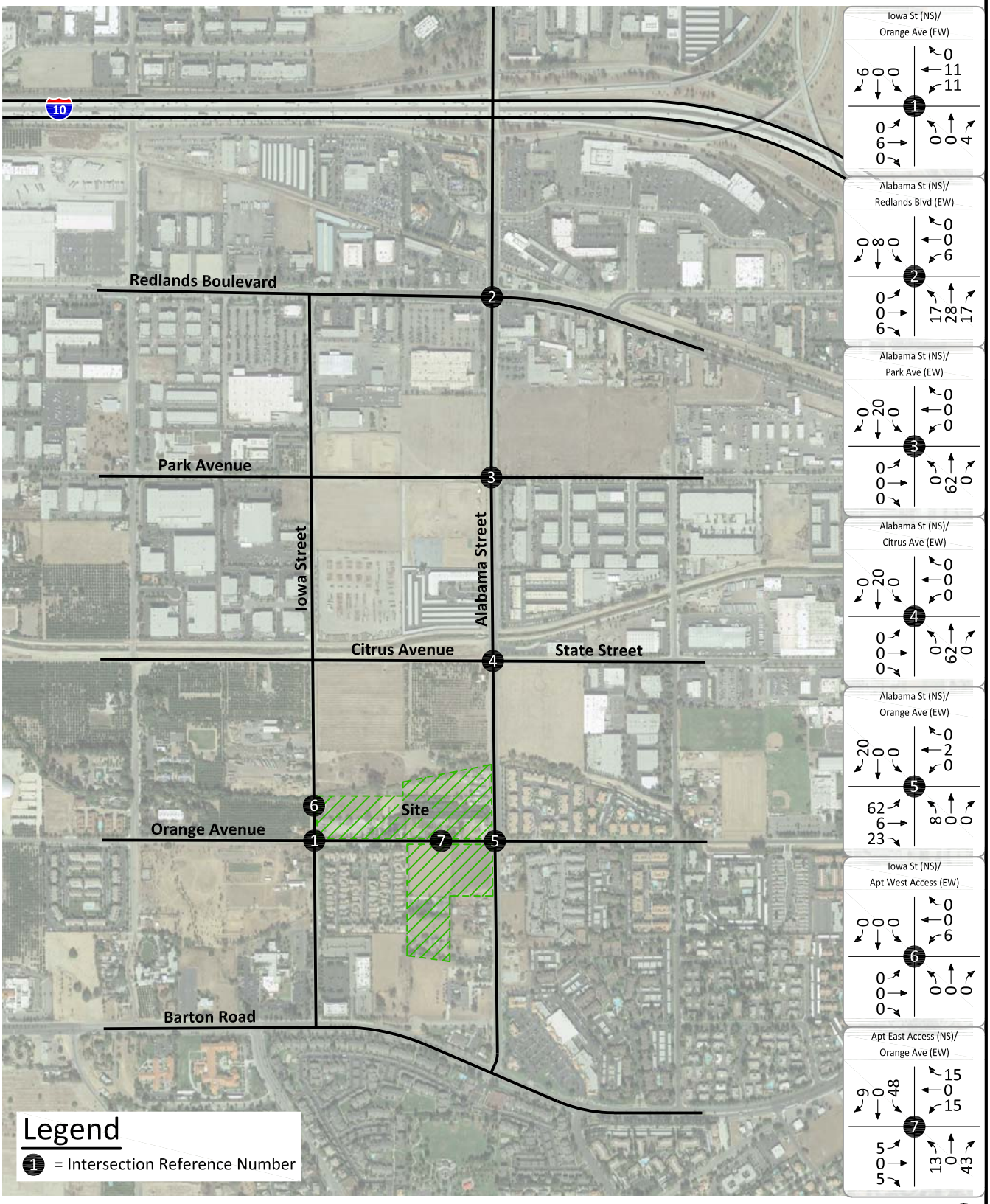


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Figure 17
Project Evening Peak Hour Intersection Turning Movement Volumes

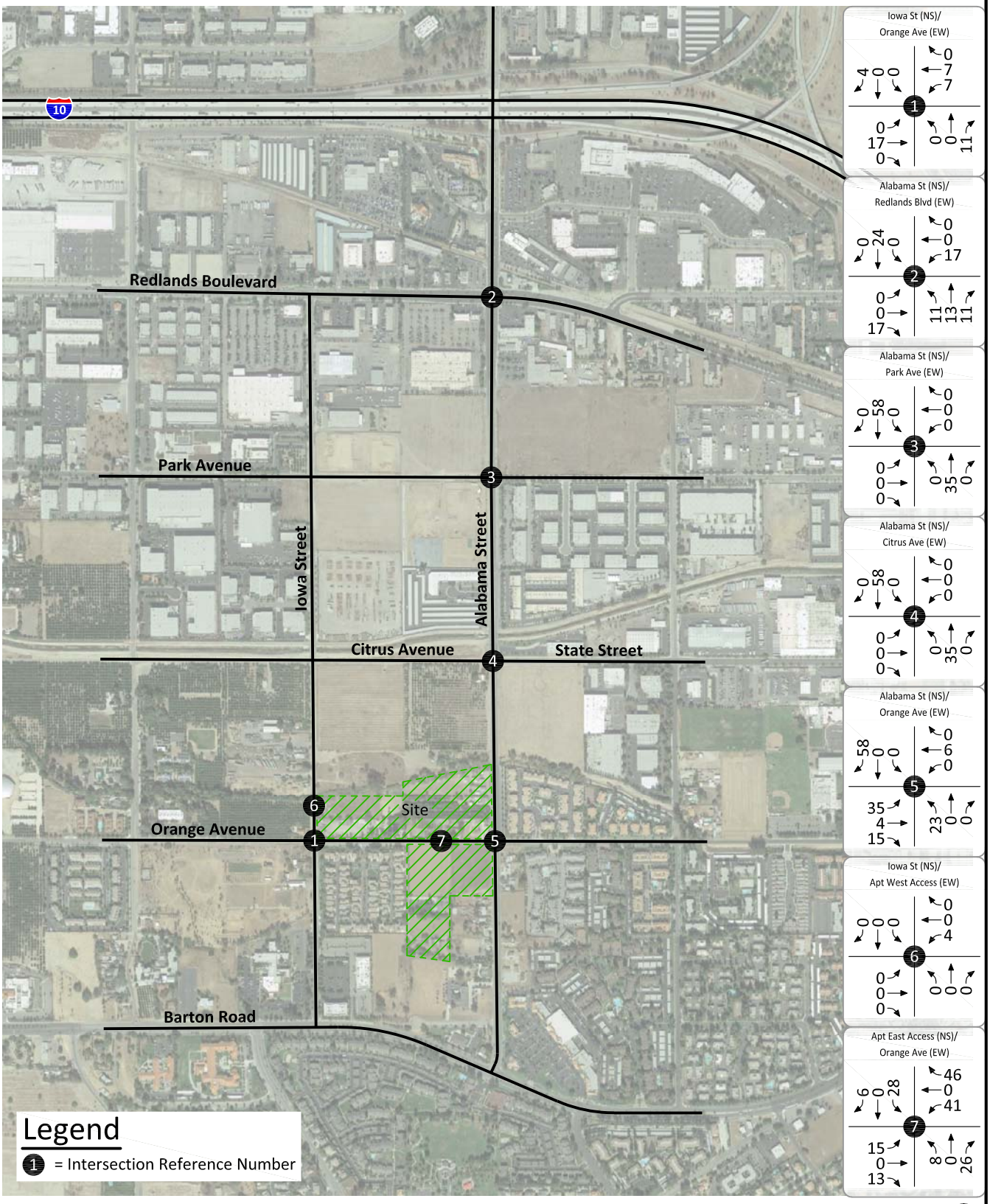

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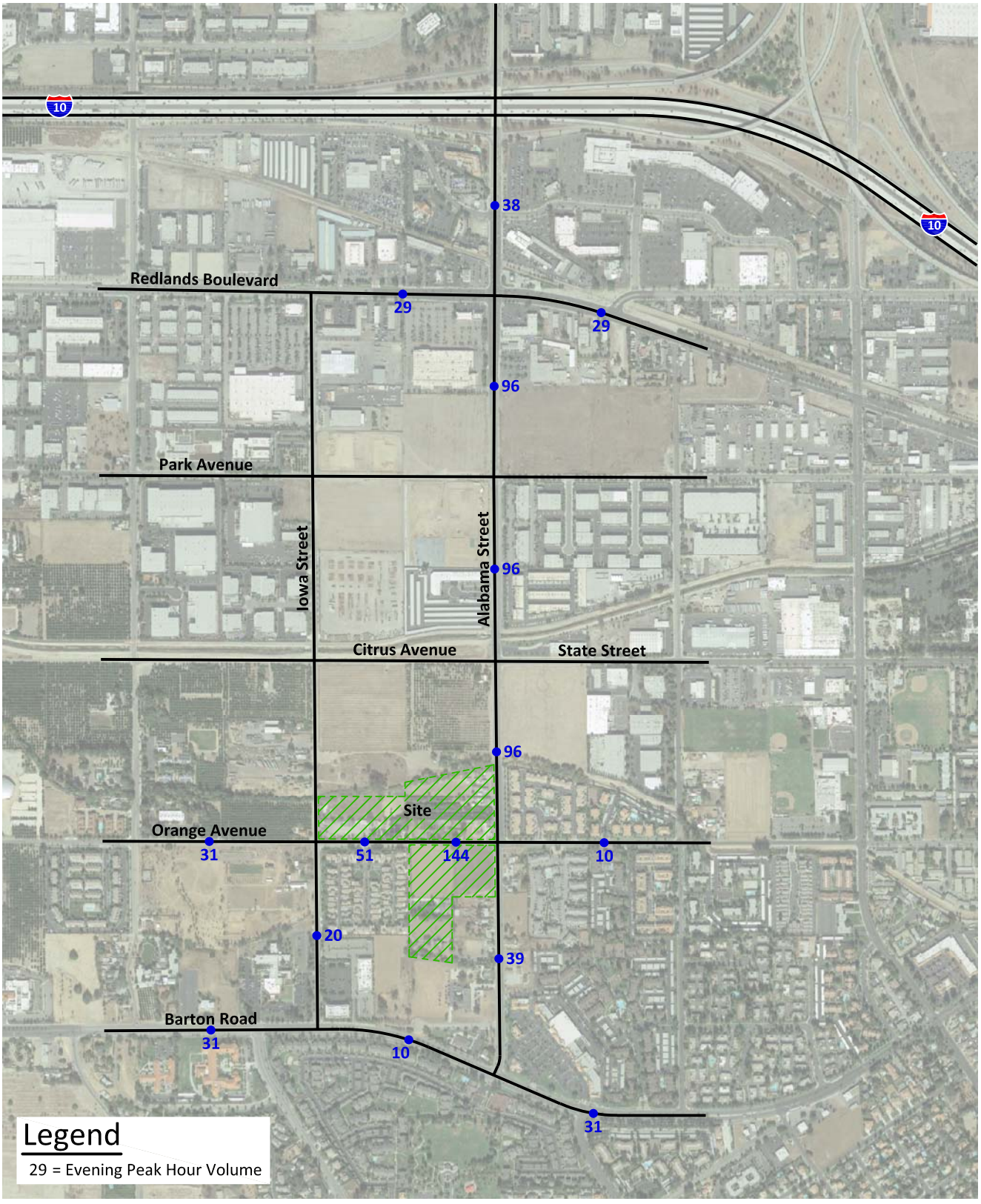
Figure 18
Project Trip Contribution Test Volumes



V. FUTURE CONDITIONS

To assess background traffic conditions, existing traffic volumes are used with San Bernardino Transportation Analysis Model data to project future Horizon Year (2040) traffic volumes and Opening Year (2020) traffic volumes. For analysis purposes in this report, the Opening Year is 2020.

A. Other Development (Near Future)

Potential developments within the study area are included in the analysis if they are not currently built, they are approved, their approval has not expired, and they would contribute trips to the study intersections which are not accounted for by the San Bernardino Transportation Analysis Model.

Tables 3 and 4 list the proposed land uses for the other development (see Figure 19) and shows the daily and peak hour vehicle trips generated by the other development in the study area. Based on the identified trip generation and distributions, other development average daily traffic volumes have been calculated and shown on Figure 20. Figures 21 and 22 shows the other development morning and evening peak hour intersection turning movement volumes, respectively.

B. Future Average Daily Traffic Volumes

As described within Section II.D., the Horizon Year (2040) average daily traffic volume forecasts with the project are developed using a growth increment process based on volumes predicted by the San Bernardino Transportation Analysis Model Year 2012 and Year 2040 traffic models. The growth increment for Horizon Year (2040) on each roadway segment is the increase in San Bernardino Transportation Analysis Model volumes from existing Year 2018 to Year 2040. The final Horizon Year (2040) roadway segment volume used for analysis purposes is then determined by adding the Horizon Year (2040) growth increment volume to the existing counted volume.

The Opening Year (2020) traffic projections have been interpolated between Horizon Year (2040) traffic volumes and existing traffic volumes utilizing a portion of the growth increment (see Section II.D). Project trips for all future projections were estimated using the manual approach.

1. Existing Plus Project

The average daily traffic volumes for Existing Plus Project traffic conditions have been determined. Existing Plus Project average daily traffic volumes are shown on Figure 23.

2. Opening Year (2020) Without Project

The average daily traffic volumes for Opening Year (2020) Without Project traffic conditions have been determined as described above using the growth interpolation

process (see Section II.D). Opening Year (2020) Without Project average daily traffic volumes are shown on Figure 24.

3. Opening Year (2020) With Project

The average daily traffic volumes for Opening Year (2020) With Project traffic conditions have been determined as described above using the volume addition process (see Section II.D). Opening Year (2020) With Project average daily traffic volumes are shown on Figure 25.

4. Horizon Year (2040) Without Project

The average daily traffic volumes for Horizon Year (2040) Without Project traffic conditions have been determined as described above using the growth increment process (see Section II.D). Horizon Year (2040) Without Project average daily traffic volumes are shown on Figure 26.

5. Horizon Year (2040) With Project

The average daily traffic volumes for Horizon Year (2040) With Project traffic conditions have been determined as described above using the volume addition process (see Section II.D). Horizon Year (2040) With Project average daily traffic volumes are shown on Figure 27.

C. Future Level of Service

Delay and Level of Service worksheets for the study intersections are provided in Appendix F for all traffic analysis scenarios.

1. Existing Plus Project

The Existing Plus Project delay and Level of Service for the study roadway network are shown in Table 5. Table 5 shows delay values based on the geometrics at the study intersections without and with improvements. Existing Plus Project morning and evening peak hour intersection turning movement volumes are shown on Figures 28 and 29, respectively.

For Existing Plus Project traffic conditions, the study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

2. Opening Year (2020) Without Project

The Opening Year (2020) Without Project delay and Level of Service for the study roadway network are shown in Table 6. Table 6 shows delay values based on the geometrics at the study intersections without and with improvements. Opening Year (2020) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 30 and 31, respectively.

For Opening Year (2020) Without Project traffic conditions, the study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

3. Opening Year (2020) With Project

The Opening Year (2020) With Project delay and Level of Service for the study roadway network are shown in Table 6. Table 6 shows delay values based on the geometrics at the study intersections without and with improvements. Opening Year (2020) With Project morning and evening peak hour intersection turning movement volumes are shown on Figures 32 and 33, respectively.

For Opening Year (2020) With Project traffic conditions, the study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

4. Horizon Year (2040) Without Project

The Horizon Year (2040) Without Project delay and Level of Service for the study roadway network are shown in Table 7. Table 7 shows delay values based on the geometrics at the study intersections without and with improvements. Horizon Year (2040) Without Project morning and evening peak hour intersection turning movement volumes are shown on Figures 34 and 35, respectively.

For Horizon Year (2040) Without Project traffic conditions, the study intersections are projected to operate at acceptable Levels of Service during the peak hours, except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

Alabama Street (NS) at:
Orange Avenue (EW) - #5

The study intersections are forecast to operate within acceptable Levels of Service during the peak hours for Horizon Year (2040) Without Project traffic conditions, with improvements.

5. Horizon Year (2040) With Project

The Horizon Year (2040) With Project delay and Level of Service for the study roadway network are shown in Table 7. Table 7 shows delay values based on the geometrics at the study intersections without and with improvements. Horizon Year (2040) With Project morning and evening peak hour intersection turning movement volumes are shown on Figures 36 and 37, respectively.

For Horizon Year (2040) With Project traffic conditions, the study intersections are projected to operate at acceptable Levels of Service during the peak hours, except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

Alabama Street (NS) at:
Orange Avenue (EW) - #5

The study intersections are forecast to operate within acceptable Levels of Service consistent with Measure U during the peak hours for Horizon Year (2040) With Project traffic conditions, with improvements.

D. Significant Impact

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.[3]

For "With Project" traffic conditions, project generated trips did result in a significant impact at one study intersection for Horizon Year (2040) With Project traffic conditions (see Table 8). No study intersections were reduced from the pre-project from Level of Service C or better to the "With Project" of Level of Service D or worse for the Existing Plus Project, Opening Year (2020) With Project, and Horizon Year (2040) With Project traffic conditions with improvements.

[3] 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.

Table 3

Cumulative Development Trip Generation (Part 1 of 2)

Traffic Analysis Zone	Project	Land Use[1]	Quantity	Units[2]	Morning Peak Hour			Evening Peak Hour			Daily
					Inbound	Outbound	Total	Inbound	Outbound	Total	
1	The Redlands [3]	Multi-Family Residential	360	DU	32	76	108	83	57	140	1,955
	California Street High-Cube Distribution [4]	Warehouse-Cars	771.840	TSF	49	18	67	25	49	74	1,031
		Warehouse-Trucks			31	13	44	15	31	46	647
	Redlands Commerce Center [5]	Warehouse-Cars	1100.451	TSF	70	26	96	35	70	105	1,471
		Warehouse-Trucks			46	18	64	22	46	68	952
	Subtotal			PCE	116	44	160	57	116	173	2,423
2	Pioneer Industrial Center Expansion [6]	Warehouse-Cars	216.050	TSF	14	5	19	7	14	21	289
		Warehouse-Trucks			10	3	13	3	10	13	189
	Redlands Distribution Center Building 10 [7]	Warehouse-Cars	542.980	TSF	33	15	47	16	36	52	726
		Warehouse-Trucks			21	9	30	11	23	34	470
	Redlands Distribution Center Building 13 [8]	Warehouse-Cars	289.327	TSF	18	7	25	9	18	27	387
		Warehouse-Trucks			13	3	16	5	13	18	252
	Perricone Industrial Center [9]	Warehouse-Cars	165.980	TSF	10	4	15	5	11	16	222
		Warehouse-Trucks			6	3	9	3	7	10	144
	Rossmore Enterprises [10]	Warehouse-Cars	593.916	TSF	34	13	47	17	34	51	713
		Warehouse-Trucks			26	10	36	15	26	41	577
	Redlands Distribution Center Building 17 [11]	Warehouse-Cars	777.620	TSF	47	21	68	23	51	74	1,040
		Warehouse-Trucks			30	13	43	16	33	49	673
	Chiming Industrial Project [12]	Warehouse-Cars	614.328	TSF	39	15	54	20	39	59	821
		Warehouse-Trucks			25	10	35	13	25	38	531
	Alabama Venture 1 [13]	Warehouse-Cars	313.470	TSF	20	7	27	10	20	30	419
		Warehouse-Trucks			13	3	16	8	13	21	270
	Subtotal Car	Warehouse-Cars		PCE	215	87	302	107	223	330	4,617
	Subtotal Truck	Warehouse-Trucks		PCE	144	54	198	74	150	224	3,106
	Subtotal			PCE	359	141	500	181	373	554	7,723
3	NE of Pioneer/ Texas	Single Family Residential	82	DU	16	45	61	51	30	81	774
	NEC Texas/Pioneer	Single Family Residential	12	DU	2	7	9	7	5	12	113
	Orange/Lugonia	Single Family Residential	39	DU	7	22	29	24	15	39	368
		Multi-Family Residential	189	DU	21	66	87	66	40	106	1,383
	SWC Lugonia/Texas	Multi-Family Residential	80	DU	9	28	37	28	17	45	586
	921 New York Street	Car Dealership	2.890	TSF	4	1	5	3	4	7	80
	Subtotal				59	169	228	179	111	290	3,304
4	Mountain Grove at Citrus Plaza [14]	Apartments	281	DU	28	115	143	112	62	174	1,888
		Hotel	168	RM	57	37	94	52	47	99	1,373
		Commercial Retail	338.060	TSF	105	63	168	391	426	817	8,639
	Redlands Crossing [15]	Mixed Commercial Retail	284.500	TSF	543	433	976	698	703	1,401	19,481
	Subtotal				733	648	1,381	1,253	1,238	2,491	31,381
5	The Crossings [16]	Apartments	340	DU	34	139	173	136	75	211	2,261
		Specialty Retail	6.377	TSF	5	3	8	8	10	18	283
	Subtotal				39	142	181	144	85	229	2,544
6	Industrial Park [17]	Hotel	77	RM	24	17	41	24	23	47	629
7	1700 Orange Tree Lane [18]	Hotel	124	RM	39	27	66	39	35	74	1,013
8	Lugonia Marriott	Hotel	88	RM	25	16	41	27	26	53	736
9	SEC Park / Iowa [19]	Warehouse-Cars	153.994	TSF	10	3	13	4	11	15	138
		Warehouse-Trucks			16	5	21	6	17	23	213
	Subtotal				26	8	34	10	28	38	351
10	Alabama @ Park [20]	Light Industrial-Cars	170.443	TSF	109	15	124	16	115	131	936
		Light Industrial-Trucks			72	7	79	11	72	83	628
	Subtotal				181	22	203	27	187	214	1,564
11	Iowa @ Park [21]	Light Industrial-Cars	78.565	TSF	50	7	57	8	52	60	431
		Light Industrial-Trucks			36	0	36	7	34	41	181
	Subtotal				86	7	93	15	86	101	612
12	614, 624, 634 Nevada	Light Industrial-Cars	16.676	TSF	11	1	12	2	11	13	91
		Light Industrial-Trucks			8	0	8	1	8	9	38
	Subtotal			PCE	19	1	20	3	19	22	129
13	1890 Orange Avenue	Student Services Building	1.952	TSF	6	4	10	1	1	2	30

Table 4

Cumulative Development Trip Generation (Part 2 of 2)

Traffic Analysis Zone	Project	Land Use[1]	Quantity	Units[2]	Morning Peak Hour			Evening Peak Hour			Daily
					Inbound	Outbound	Total	Inbound	Outbound	Total	
14	Eureka/Stuart	Shopping Center	88.075	TSF	121	75	196	237	258	495	5,515
		Pass-by Credit			0	0	0	-81	-87	-168	0
	330 3rd St	Restaurant/retail food hall	14.000	TSF	19	10	29	109	89	198	4,412
		Pass-by Credit			0	0	0	-48	-39	-87	0
	Subtotal				140	85	225	265	260	525	9,927
15	317 Brookside	Multi-Family Residential	8	DU	1	3	4	3	1	4	59
	219 Cajon Street	Dentist Office	0.363	TSF	1	0	1	0	1	1	13
	212 & 213 Brookside	Redevelopment Area	2	Demo	-	-	-	-	-	-	-
	380-400 Kansas St	Parking Lot	5.500	TSF	-	-	-	-	-	-	-
	130 Tennessee	School	1.200	TSF	3	3	6	1	0	1	19
	Subtotal				5	6	11	4	2	6	91
16	Sunnyside/Linda Vista	Single Family Residential	11	DU	2	6	8	7	4	11	104
	350 Terracina Blvd	Hospital	8.530	TSF	5	3	8	3	5	8	113
	1619 Laurel Ave	Parking Lot			-	-	-	-	-	-	-
	Subtotal				7	9	16	10	9	19	217
17	NWC Alabama-Park Warehouse	Warehouse-Cars		TSF	10	3	13	4	11	15	138
		Warehouse-Trucks			16	5	21	6	17	23	213
	Subtotal			PCE	26	8	34	10	28	38	351
18	Lane[23]	Single Family Residential	35	DU	7	20	27	22	13	35	333
19	Citrus Glen [24]	Single Family Residential	95	DU	18	53	71	60	35	95	904
20	Lewis Commercial Development [25]	Commercial Center	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
	Citrus Trails Master Plan [26]	Residential	586	DU	75	204	279	223	141	364	4,008
		Commercial Center	309.060	TSF	190	116	306	601	651	1,252	12,949
		City Park	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
	Phase Three Concept SPA-D Specific Plan [25]	Residential	481	DU	57	181	238	185	110	295	3,648
		Commercial Center	155.730	TSF	142	87	229	362	392	754	8,125
		Community Overlay	25.000	TSF	13	7	20	33	38	71	702
		City Park	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
	Subtotal				690	598	1,288	1,285	850	2,135	29,203
21	Mission Middle School[26]	Middle School	1330	STU	412	359	771	106	120	226	2,833
Total					3,017	2,384	5,401	3,722	3,645	7,367	96,298

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Codes 110, 150, 210, 220, 310, 520, 610, 720, 820, 840, and 930 (unless otherwise noted).

[2] DU = Dwelling Units; TSF = Thousand Square Feet; PCE = Passenger Car Equivalent; RM = Hotel Rooms; AC = Acres; EMP = Empolyees.

[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 Oragne 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).

Table 5

Existing Plus Project Intersection Delay and Levels of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Peak Hour							
														Existing Without Project				Existing Plus Project			
		Northbound			Southbound			Eastbound			Westbound			Morning		Evening		Morning		Evening	
		L	T	R	L	T	R	L	T	R	L	T	R	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
Iowa Street (NS) at:																					
Orange Avenue (EW) - #1	AWS	0.5	0.5	1	0	<1>	0	0.5	0.5	d	0	<1>	0	10.5	B	9.3	A	11.1	B	9.6	A
Alabama Street (NS) at:																					
Redlands Boulevard (EW) - #2	TS	2	2.5	0.5	2	**1.5**	0.5	2	2	1	2	2	1	28.9	C	28.2	C	29.3	C	32.7	C
Park Avenue (EW) - #3	TS	1	2	1	1	1.5	0.5	1	0.5	0.5	1	0.5	0.5	19.7	B	18.6	B	20.0	B	18.8	B
Citrus Avenue (EW) - #4	**TS**	1[5]	2	d	1[5]	1.5	0.5	**0.5**	0.5	**d**	1	0.5	0.5	19.7	B	19.7	B	19.8	B	19.8	B
Orange Avenue (EW) - #5	**TS**	1[5]	1.5	0.5	1[5]	1.5	0.5	**0.5**	0.5	**d**	0.5	0.5	d	18.0	B	17.6	B	19.0	B	19.8	B
Project Driveway (NS) at:																					
Orange Avenue (EW) - #6	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		10.7	B	11.9	B
Project Driveway (NS) at:																					
Orange Avenue (EW) - #7	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		11.5	B	14.3	B

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; <1> = Shared Left/Through/Right Lane; **BOLD** = Improvement.

[2] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 5.00-02. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

[4] LOS = Level of Service

[5] Existing Two-Way Left Turn Median Lane.

Table 6

Opening Year (2020) Intersection Delay and Levels of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Opening Year (2020) Peak Hour							
														Without Project				With Project			
		Northbound			Southbound			Eastbound			Westbound			Morning		Evening		Morning		Evening	
		L	T	R	L	T	R	L	T	R	L	T	R	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
Iowa Street (NS) at:																					
Orange Avenue (EW) - #1	AWS	0.5	0.5	1	0	<1>	0	0.5	0.5	d	0	<1>	0	11.4	B	9.9	A	12.3	B	10.2	B
Alabama Street (NS) at:																					
Redlands Boulevard (EW) - #2	TS	2	2.5	0.5	2	**1.5**	0.5	2	2	1	2	2	1	34.2	C	31.3	C	36.1	D	35.7	D
Park Avenue (EW) - #3	TS	1	2	1	1	1.5	0.5	1	0.5	0.5	1	0.5	0.5	22.2	C	20.4	C	22.5	C	20.6	C
Citrus Avenue (EW) - #4	**TS**	1[5]	2	d	1[5]	1.5	0.5	**0.5**	**0.5**	**d**	1	0.5	0.5	20.0	C	20.6	C	20.2	C	20.8	C
Orange Avenue (EW) - #5	**TS**	1[5]	1.5	0.5	1[5]	1.5	0.5	**0.5**	**0.5**	**d**	0.5	0.5	d	19.0	B	18.7	B	20.5	C	22.2	C
Project Driveway (NS) at:																					
Orange Avenue (EW) - #6	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		11.4	B	14.7	B
Project Driveway (NS) at:																					
Orange Avenue (EW) - #7	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		12.7	B	19.2	C

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; <1> = Shared Left/Through/Right Lane; **BOLD** = Improvement.

[2] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 5.00-02. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

[4] LOS = Level of Service

[5] Existing Two-Way Left Turn Median Lane.

Table 7

Horizon Year (2040)1500 Intersection Delay and Levels of Service

Intersection	Traffic Control[2]	Intersection Approach Lanes[1]												Horizon Year (2040)1500 Peak Hour							
														Without Project				With Project			
		Northbound			Southbound			Eastbound			Westbound			Morning		Evening		Morning		Evening	
		L	T	R	L	T	R	L	T	R	L	T	R	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]	Delay[3]	LOS[4]
Iowa Street (NS) at:																					
Orange Avenue (EW) - #1	AWS	0.5	0.5	1	0	<1>	0	0.5	0.5	d	0	<1>	0	17.4	C	16.0	C	20.0	C	17.5	C
Alabama Street (NS) at:																					
Redlands Boulevard (EW) - #2	TS	2	2.5	0.5	2	1.5	0.5	2	2	1	2	2	1	34.2	C	32.9	C	34.7	C	33.2	C
Park Avenue (EW) - #3	TS	1	2	1	1	1.5	0.5	1	0.5	0.5	1	0.5	0.5	23.0	C	20.6	C	23.3	C	20.9	C
Citrus Avenue (EW) - #4	TS	1[5]	2	d	1[5]	1.5	0.5	0.5	0.5	d	1	0.5	0.5	20.5	B	21.0	C	20.8	B	21.1	C
Orange Avenue (EW) - #5	TS	1[5]	1.5	0.5	1[5]	1.5	0.5	0.5	0.5	d	0.5	0.5	d	24.2	B	52.4	D	27.5	C	147.3	F
-With Improvements	**TS**	1	1.5	0.5	1	1.5	0.5	**1**	0.5	0.5	0.5	0.5	d	20.3	C	18.5	B	20.8	C	22.8	C
Project Driveway (NS) at:																					
Orange Avenue (EW) - #6	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		13.1	B	13.8	B
Project Driveway (NS) at:																					
Orange Avenue (EW) - #7	**CSS**	0	**<1>**	0	0	**<1>**	0	0	<1>	0	0	<1>	0	-		-		15.1	C	18.1	C

[1] When a right turn lane is designated, the lane can either be striped or unstriped. To function as a right turn lane, there must be sufficient width for right turning vehicles to travel outside the through lanes. L = Left; T = Through; R = Right; d = De Facto Right Turn Lane; <1> = Shared Left/Through/Right Lane; **BOLD** = Improvement.

[2] AWS = All Way Stop; TS = Traffic Signal; CSS = Cross Street Stop

[3] Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 5.00-02. Per the Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

[4] LOS = Level of Service

[5] Existing Two-Way Left Turn Median Lane.

Table 8

Project Significant Impact Evaluation

Intersection	Peak Hour	Existing						Opening Year (2020)						Horizon Year (2040)					
		Without Project		With Project				Without Project		With Project				Without Project		With Project			
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Project Impact	Significant Impact[3]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Project Impact	Significant Impact[3]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Project Impact	Significant Impact[3]
Iowa Street (NS) at:	Morning	10.5	B	11.1	B	+0.6	NO	11.4	B	12.3	B	+0.9	NO	17.4	C	20.0	C	+2.6	NO
Orange Avenue (EW) - #1	Evening	9.3	A	9.6	A	+0.3	NO	9.9	A	10.2	B	+0.3	NO	16.0	C	17.5	C	+1.5	NO
Alabama Street (NS) at:	Morning	28.9	C	29.3	C	+0.4	NO	34.2	C	36.1	D	+1.9	NO	34.2	C	34.7	C	+0.5	NO
Redlands Boulevard (EW) - #2	Evening	28.2	C	32.7	C	+4.5	NO	31.3	C	35.7	D	+4.4	NO	32.9	C	33.2	C	+0.3	NO
Alabama Street (NS) at:	Morning	19.7	B	20.0	B	+0.3	NO	22.2	C	22.5	C	+0.3	NO	23.0	C	23.3	C	+0.3	NO
Park Avenue (EW) - #3	Evening	18.6	B	18.8	B	+0.2	NO	20.4	C	20.6	C	+0.2	NO	20.6	C	20.9	C	+0.3	NO
Alabama Street (NS) at:	Morning	19.7	B	19.8	B	+0.1	NO	20.0	C	20.2	C	+0.2	NO	20.5	B	20.8	B	+0.3	NO
Citrus Avenue (EW) - #4	Evening	19.7	B	19.8	B	+0.1	NO	20.6	C	20.8	C	+0.2	NO	21.0	C	21.1	C	+0.1	NO
Alabama Street (NS) at:	Morning	18.0	B	19.0	B	+1.0	NO	19.0	B	20.5	C	+1.5	NO	24.2	B	27.5	C	+3.3	NO
Orange Avenue (EW) - #5	Evening	17.6	B	19.8	B	+2.2	NO	18.7	B	22.2	C	+3.5	NO	52.4	D	147.3	F	+94.9	YES
Project Driveway (NS) at:	Morning	-		10.7	B	-	NO	-		11.4	B	-	NO	-		13.1	B	-	NO
Orange Avenue (EW) - #6	Evening	-		11.9	B	-	NO	-		14.7	B	-	NO	-		13.8	B	-	NO
Project Driveway (NS) at:	Morning	-		11.5	B	-	NO	-		12.7	B	-	NO	-		15.1	C	-	NO
Orange Avenue (EW) - #7	Evening	-		14.3	B	-	NO	-		19.2	C	-	NO	-		18.1	C	-	NO

[1] Delay and Level of Service have been calculated using the following analysis software: Vistro, Version 5.00-00. Per the 2010 Highway Capacity Manual, overall average intersection delay and Level of Service are shown for intersections with traffic signal or all way stop control. For intersections with cross street stop control, the delay and Level of Service for the worst individual movement (or movements sharing a single lane) are shown.

[2] LOS = Level of Service

[3] In the City of Redlands, a "project" impact is considered significant at a study intersection if the project contributes 50 or more peak hour trips and the Level of Service reduces the pre-project Level of Service of C or better to Level of Service D or worse. If the pre-project Level of Service is D or worse and the project reduces the Level of Service, the project will at a minimum mitigate to the pre-project Level of Service.

[4] Project contributes to the San Bernardino County Nexus as mitigation for any project impact to the Caltrans ramp terminals and future traffic signal at Lugonia Avenue and Nevada Street.

[5] Project contributes less than 50 trips during the peak hours.

[6] Project contributes just over 50 trips during peak hours, and mitigates to the pre-project Level of Service for Opening Year With Project traffic conditions.

[7] Project contributes fair share as mitigation for Horizon Year Level of service below the pre-project Level of Service.

Figure 19
Cumulative Development Traffic Analysis Zone Map

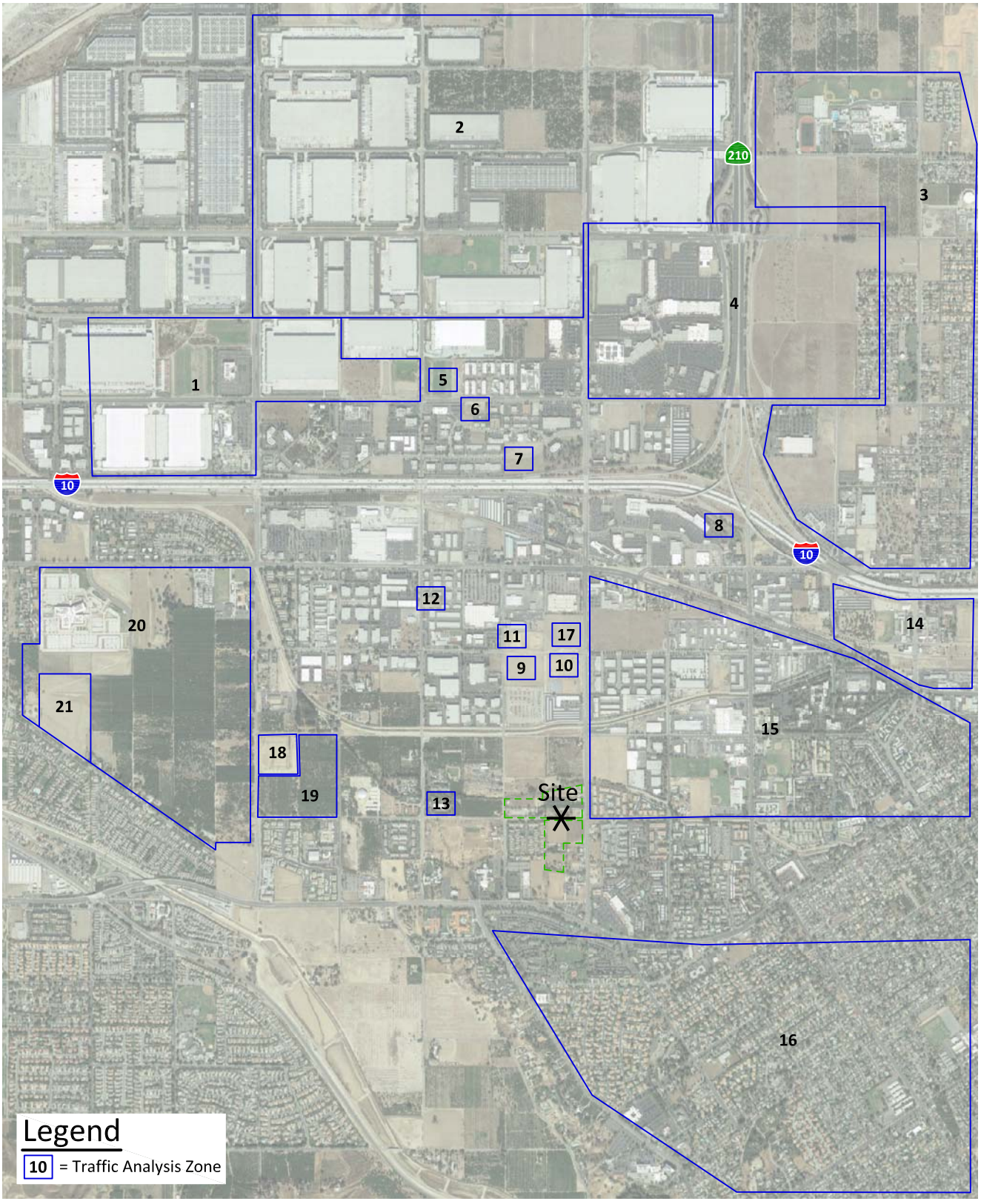


Figure 20
Cumulative Development Average Daily Traffic Volumes

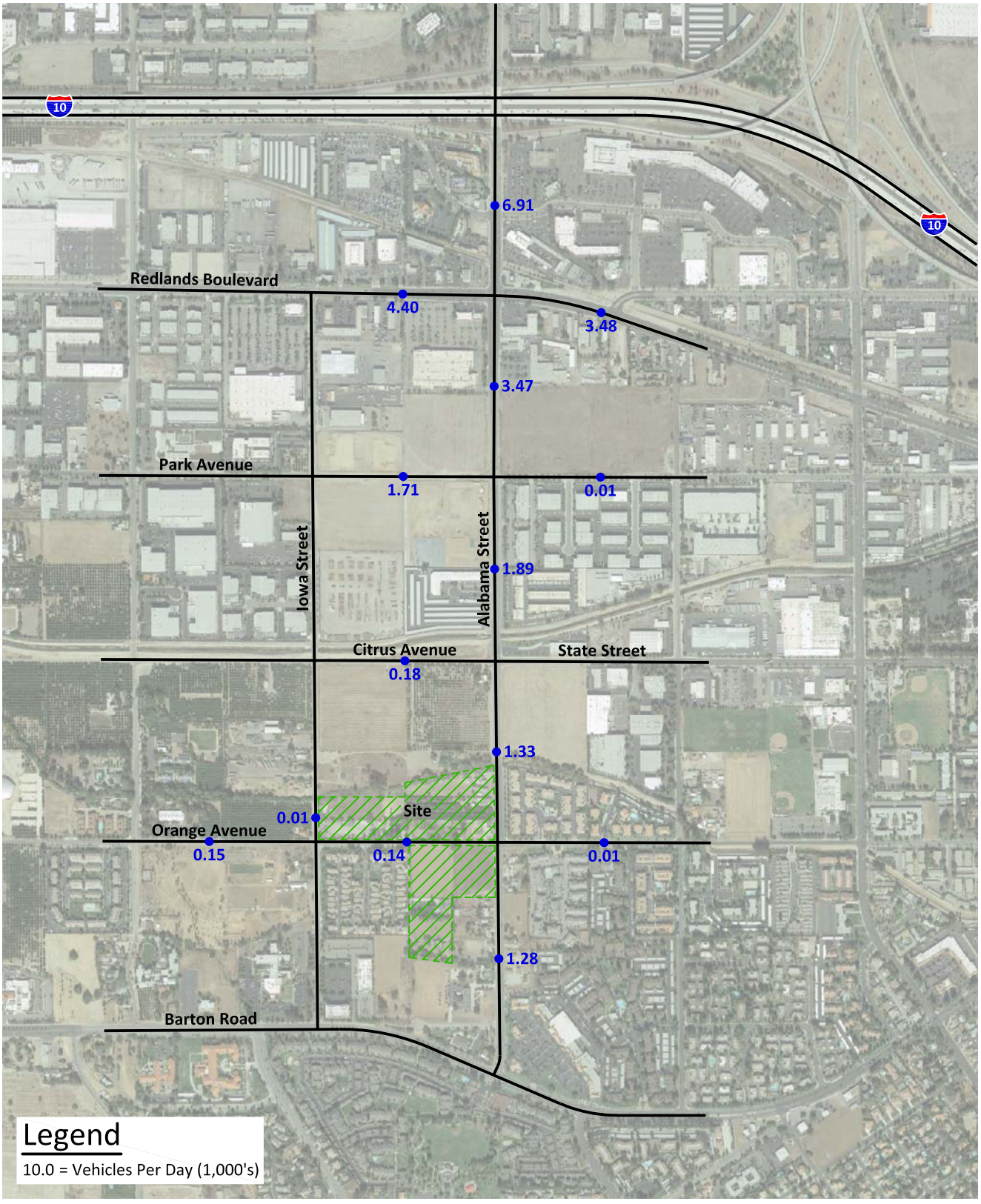
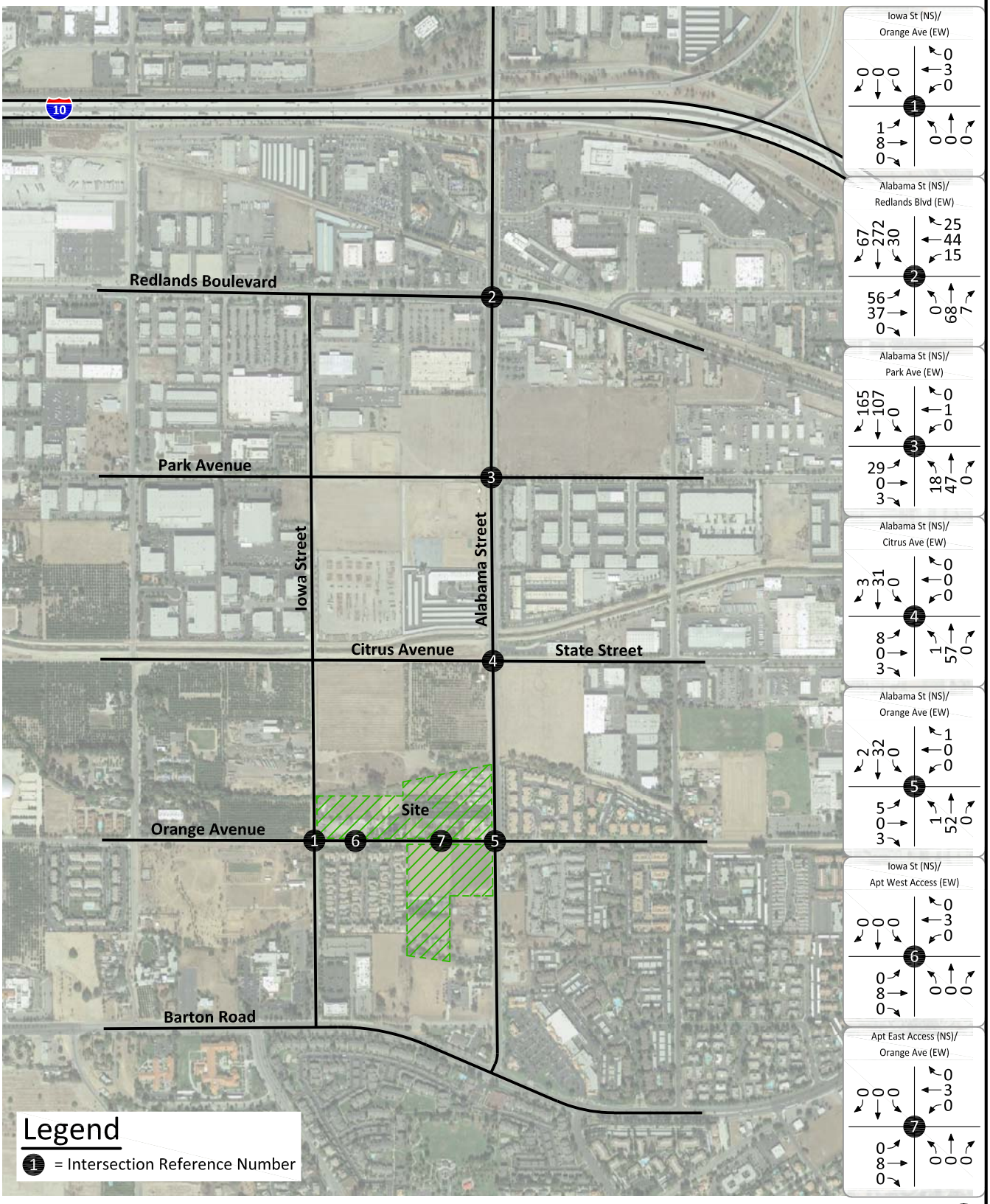


Figure 21
Cumulative Development
Morning Peak Hour Intersection Turning Movement Volumes



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OVER 40 YEARS OF EXCELLENT SERVICE

JN 7221

Figure 22
Cumulative Development
Evening Peak Hour Intersection Turning Movement Volumes

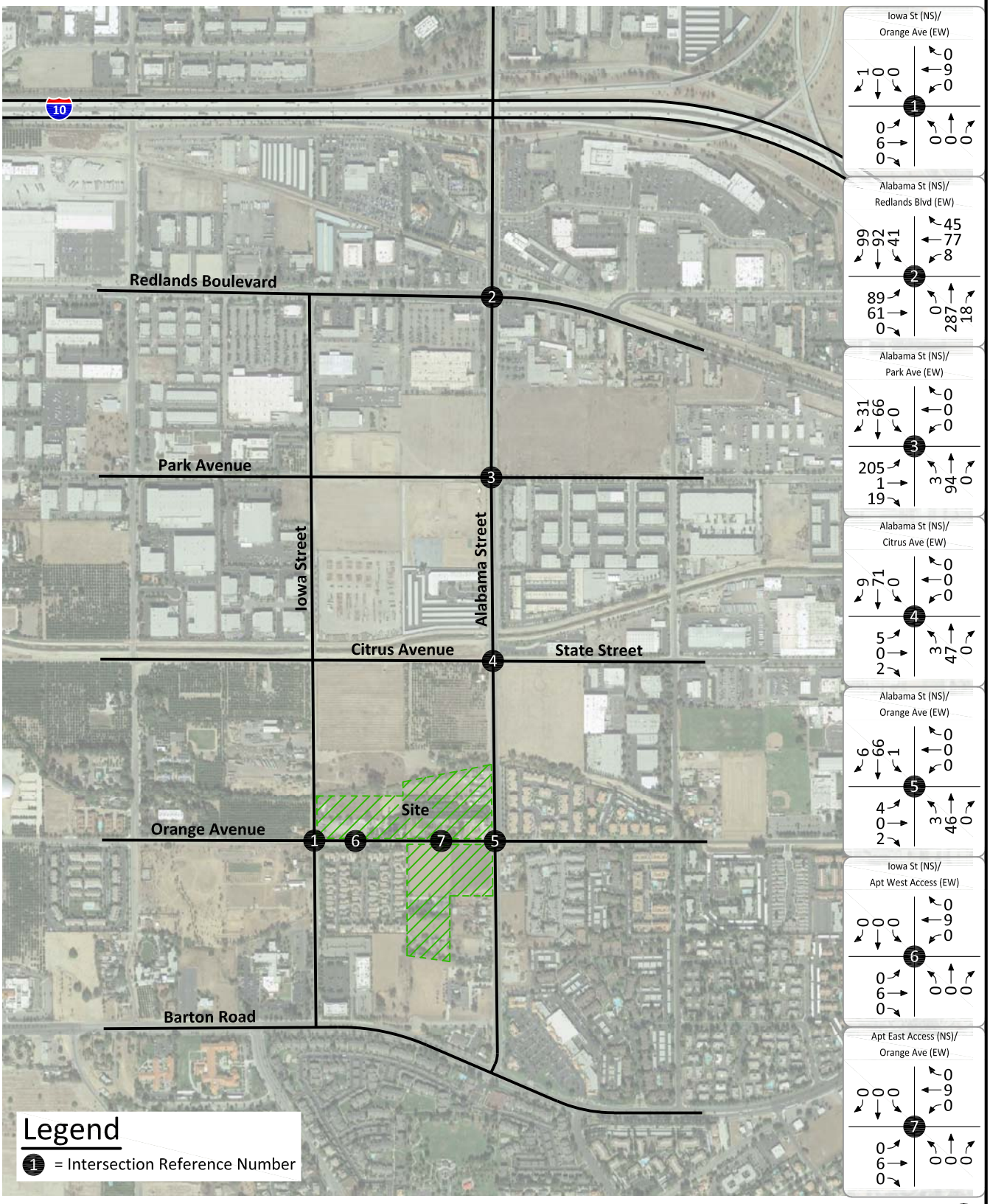

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Figure 23
Existing Plus Project Average Daily Traffic Volumes

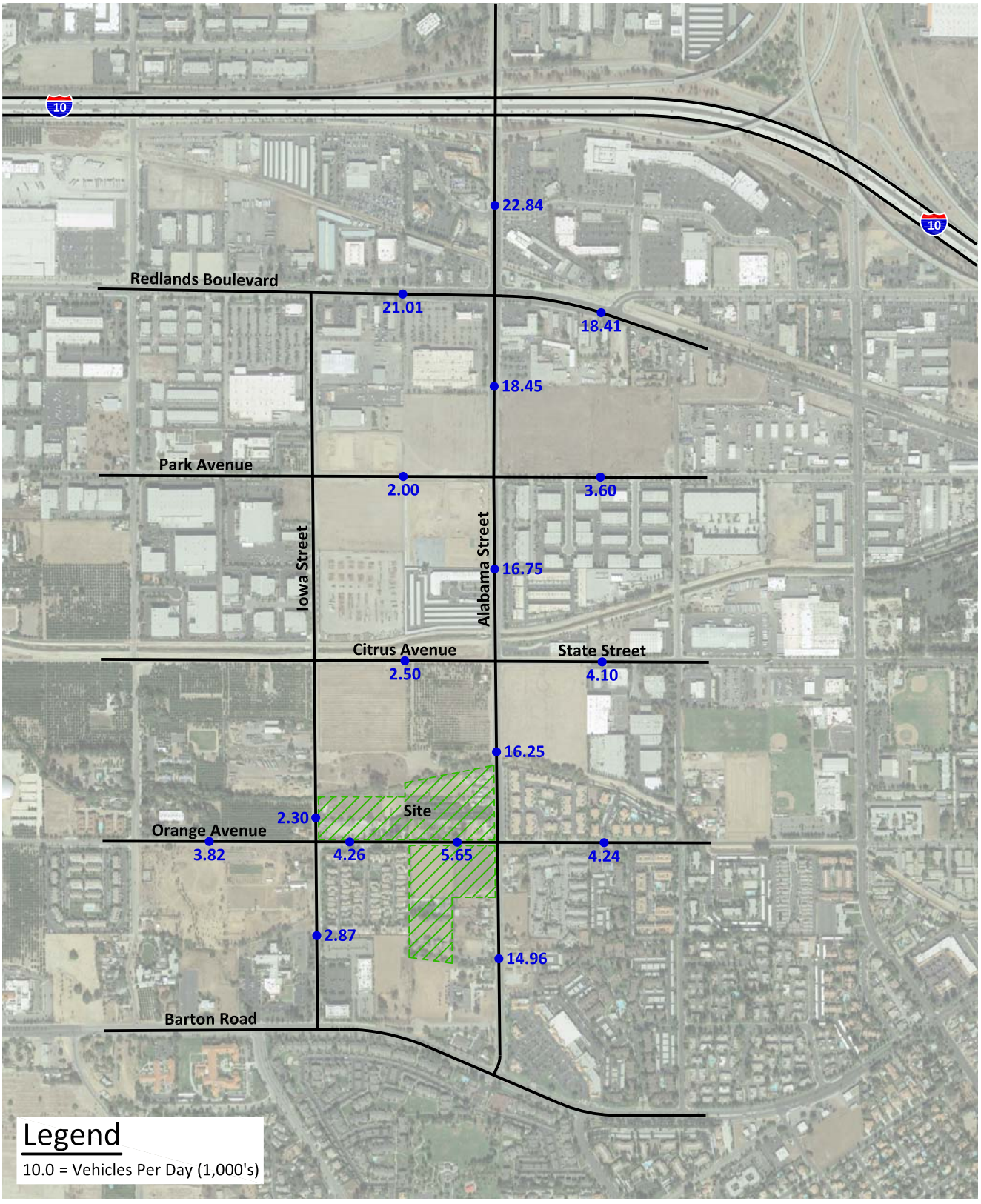

Figure 24
Opening Year (2020) Without Project Average Daily Traffic Volumes

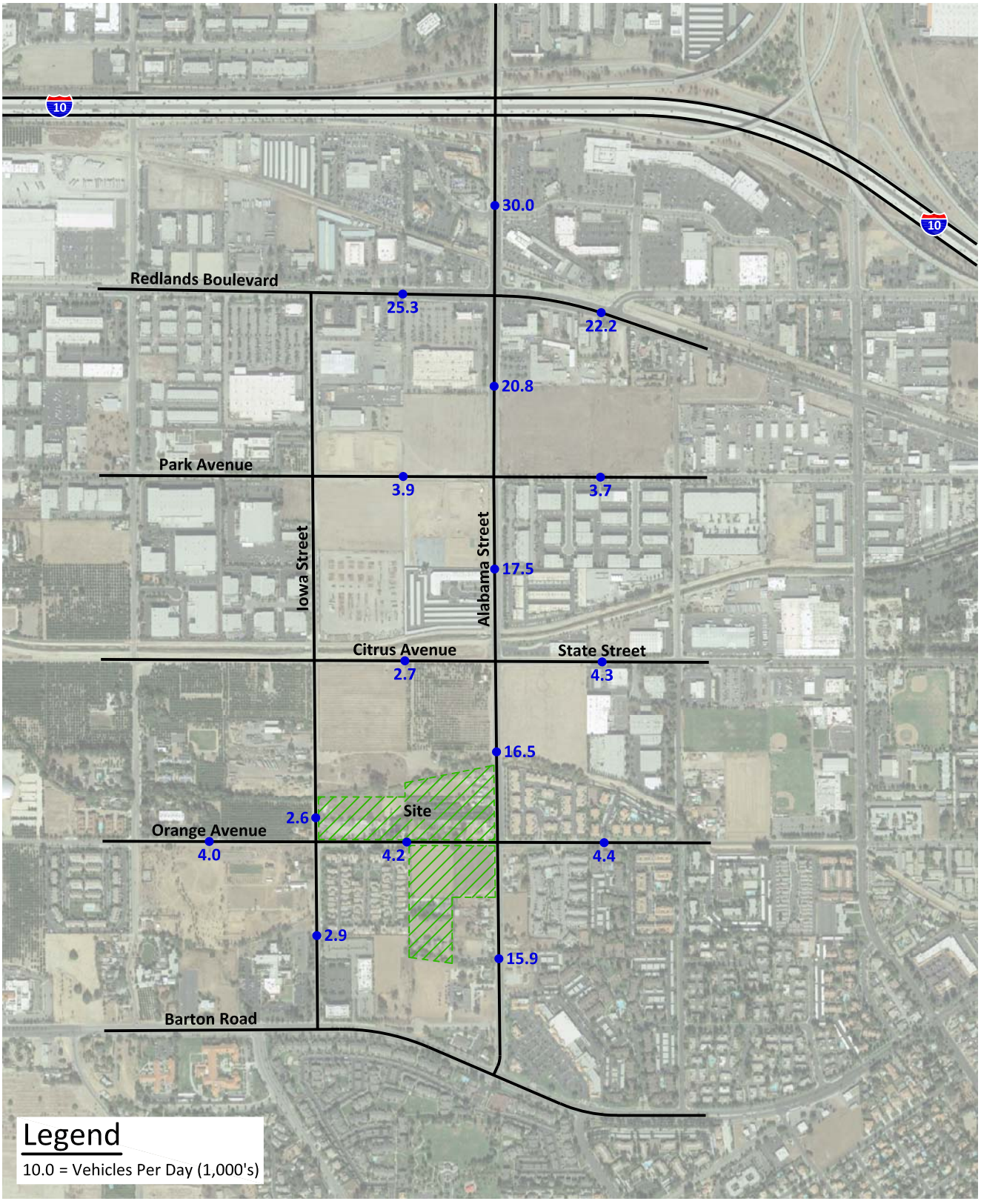

Figure 25
Opening Year (2020) With Project Average Daily Traffic Volumes

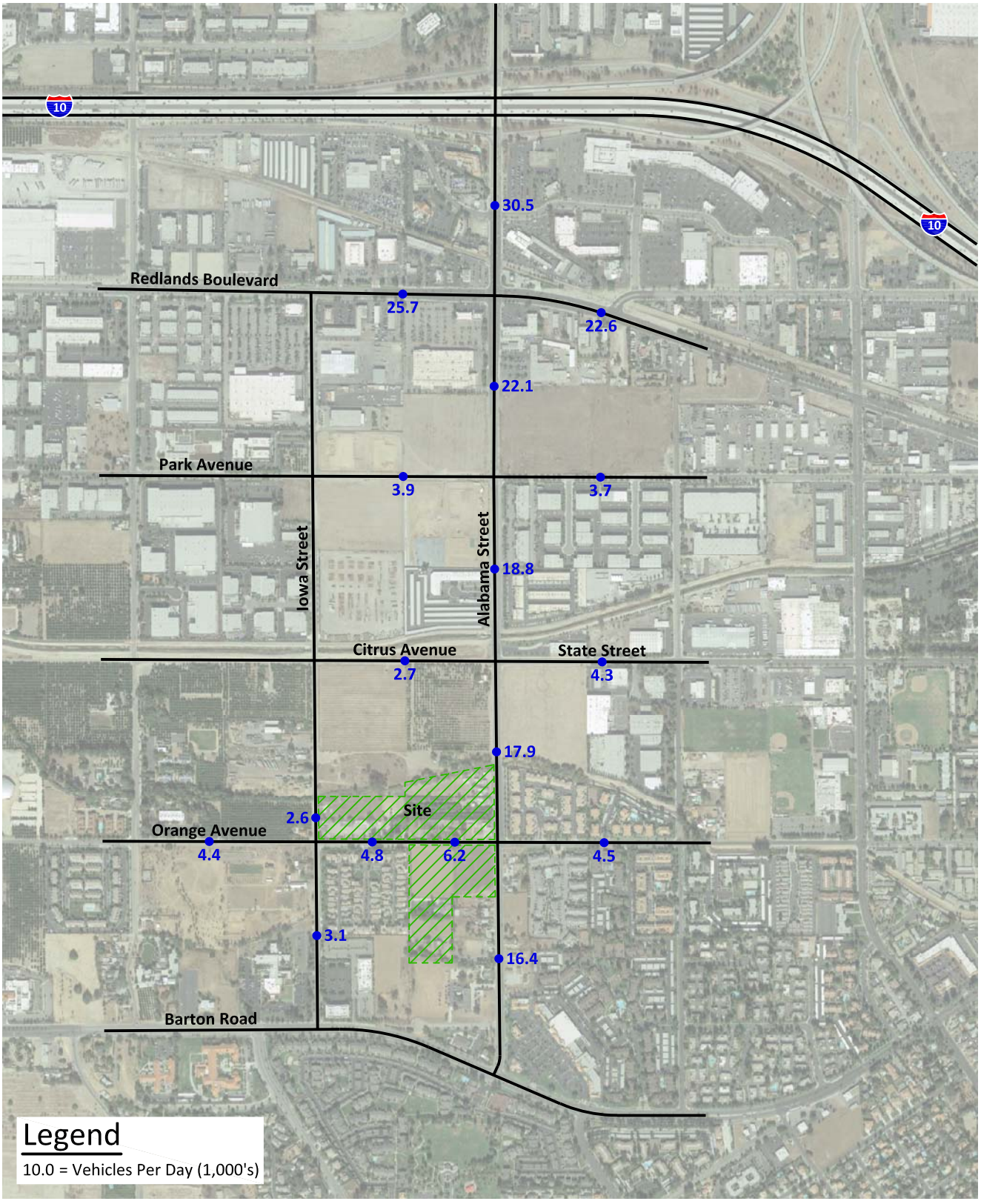

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Figure 26
Horizon Year (2040) Without Project Average Daily Traffic Volumes

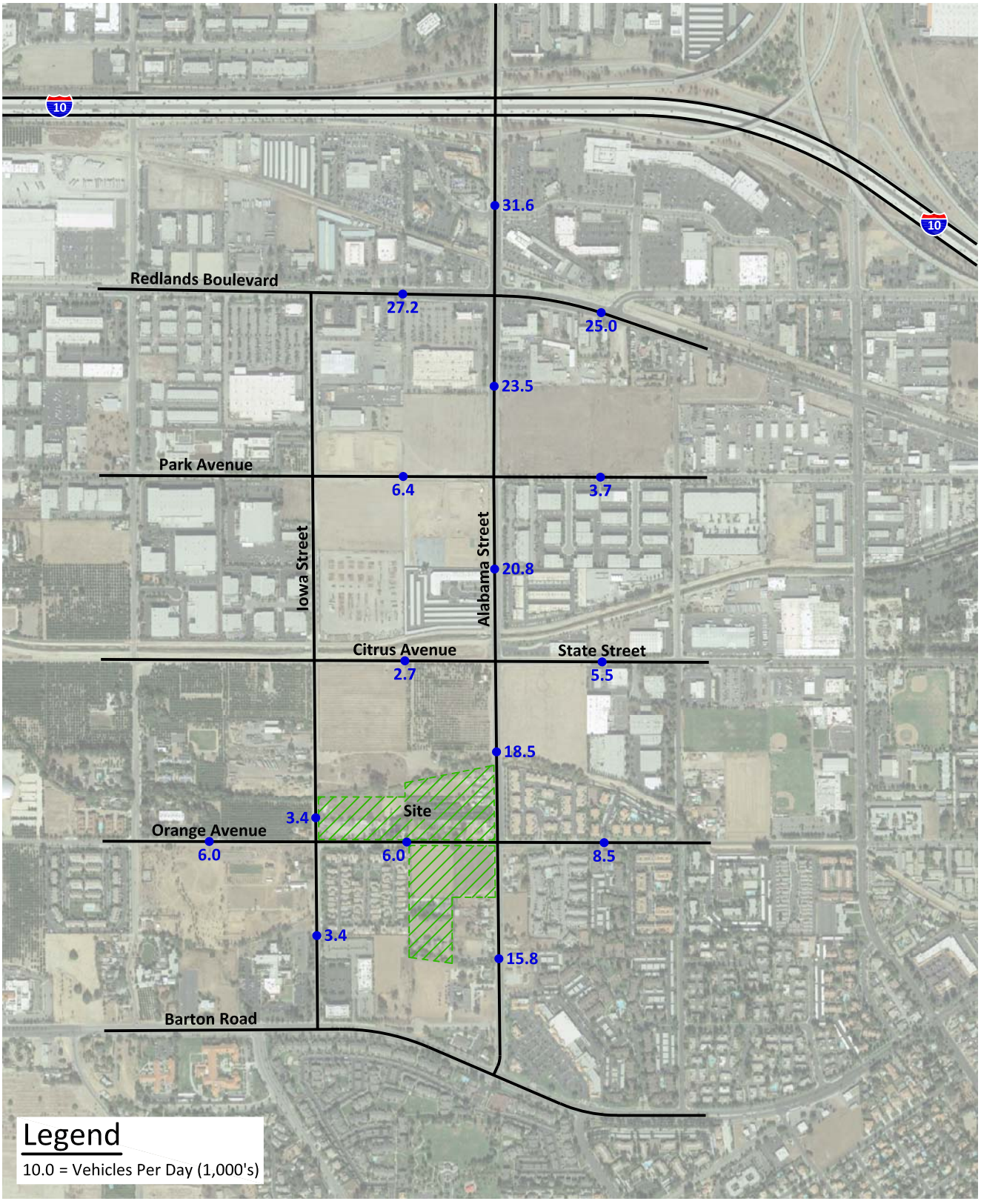


Figure 27
Horizon Year (2040) With Project Average Daily Traffic Volumes

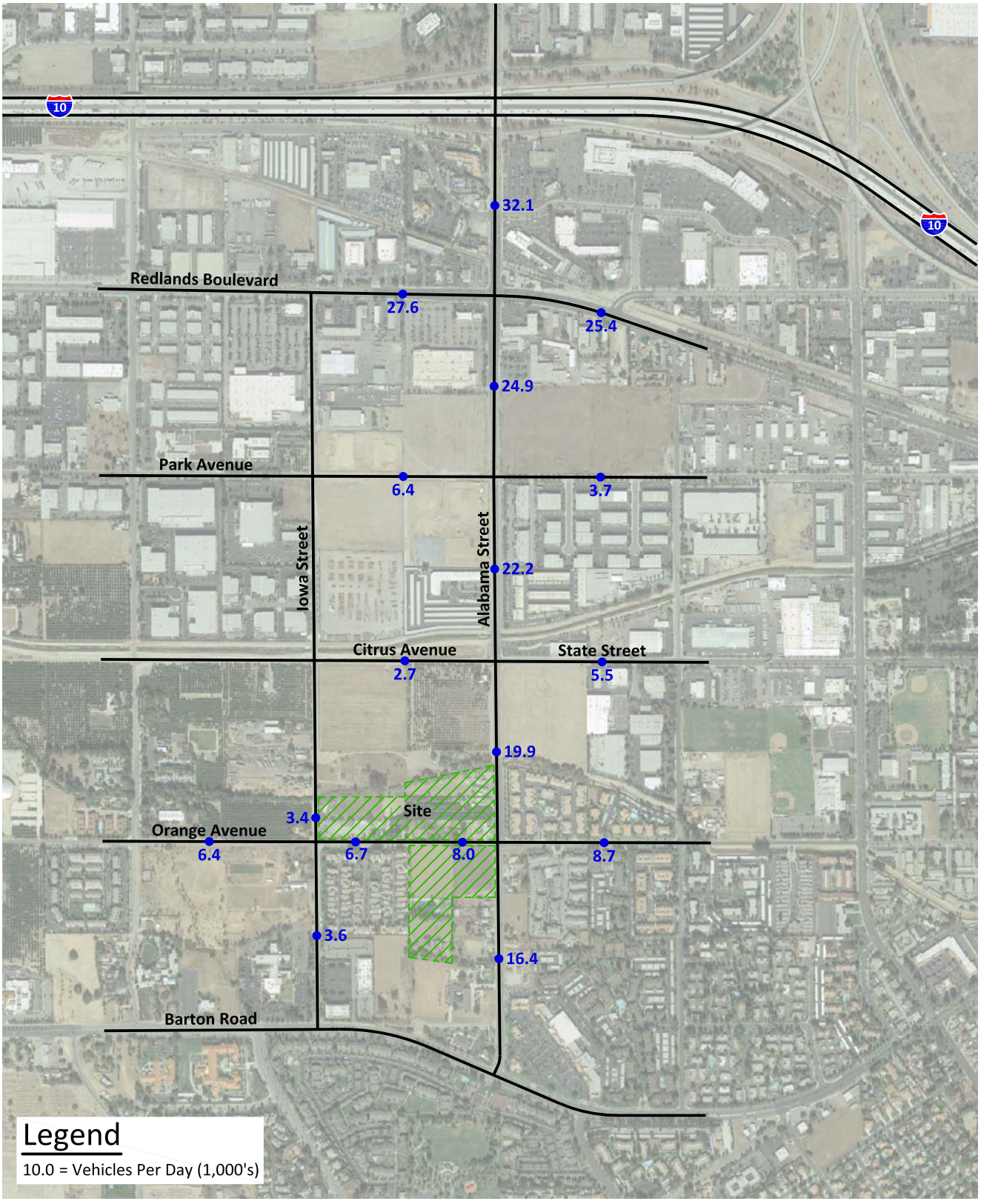


Figure 28
Existing Plus Project
Morning Peak Hour Intersection Turning Movement Volumes

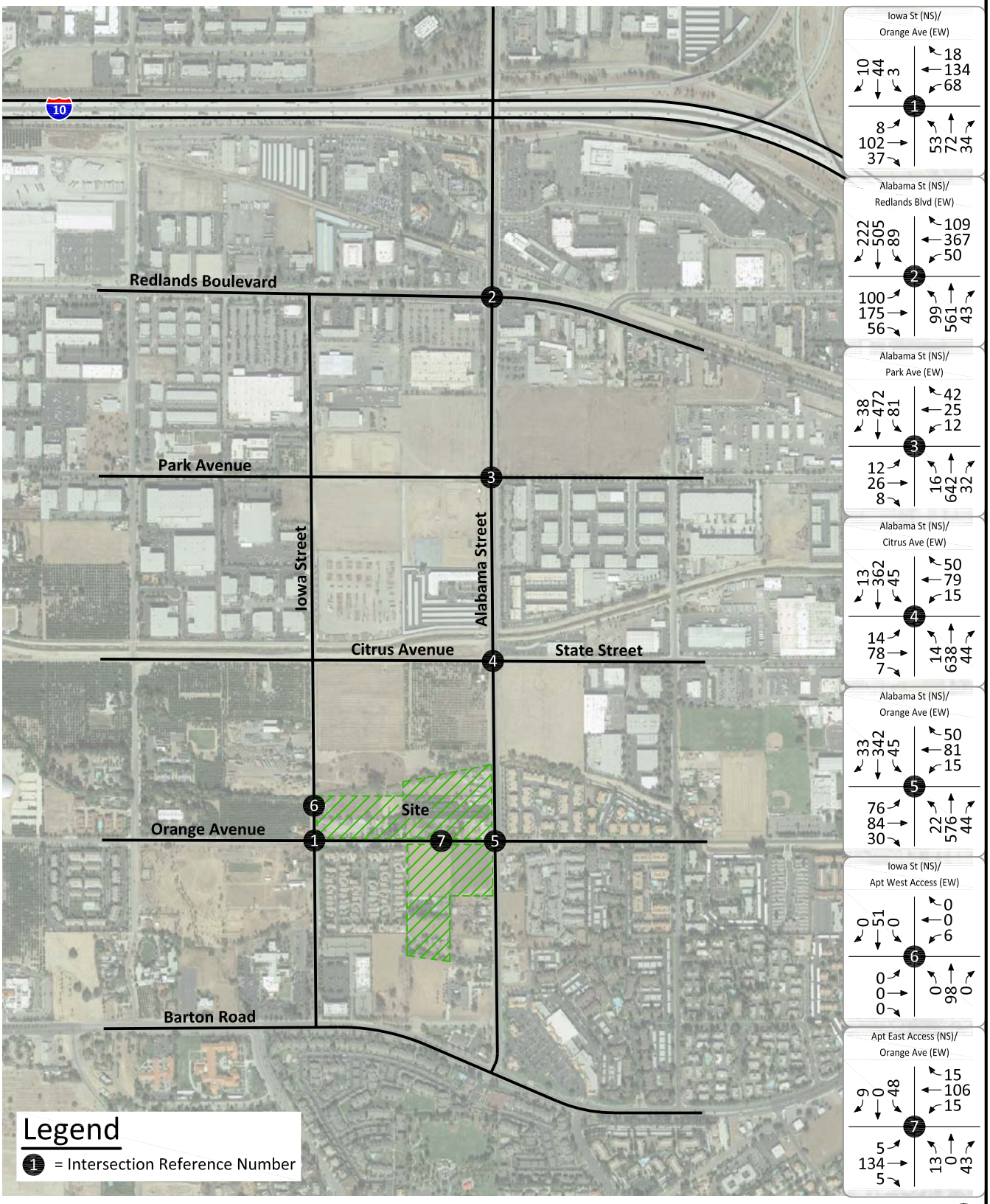
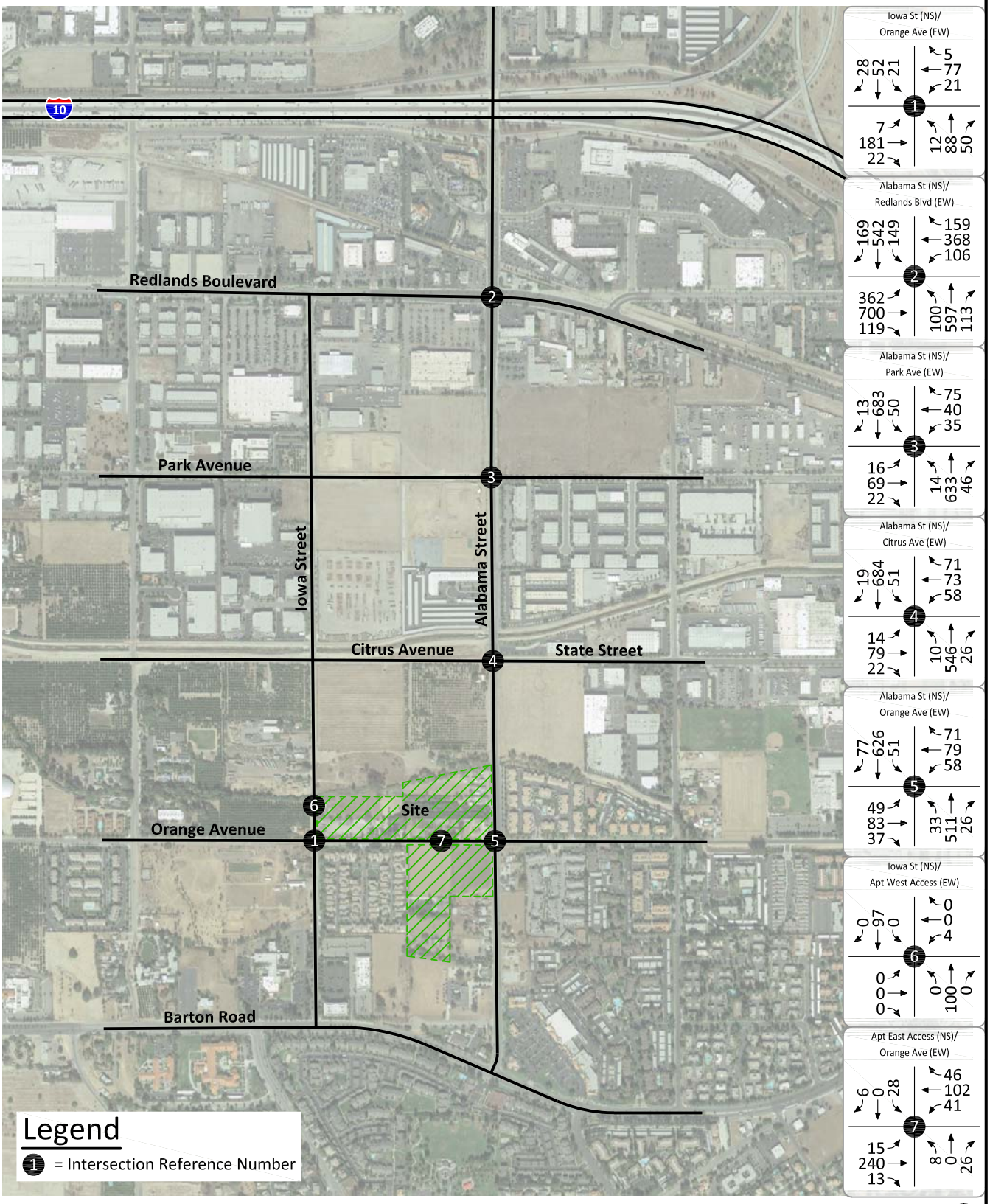


Figure 29
Existing Plus Project
Evening Peak Hour Intersection Turning Movement Volumes



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OVER 40 YEARS OF EXCELLENT SERVICE

JN 7221

Figure 30
Opening Year (2020) Without Project
Morning Peak Hour Intersection Turning Movement Volumes

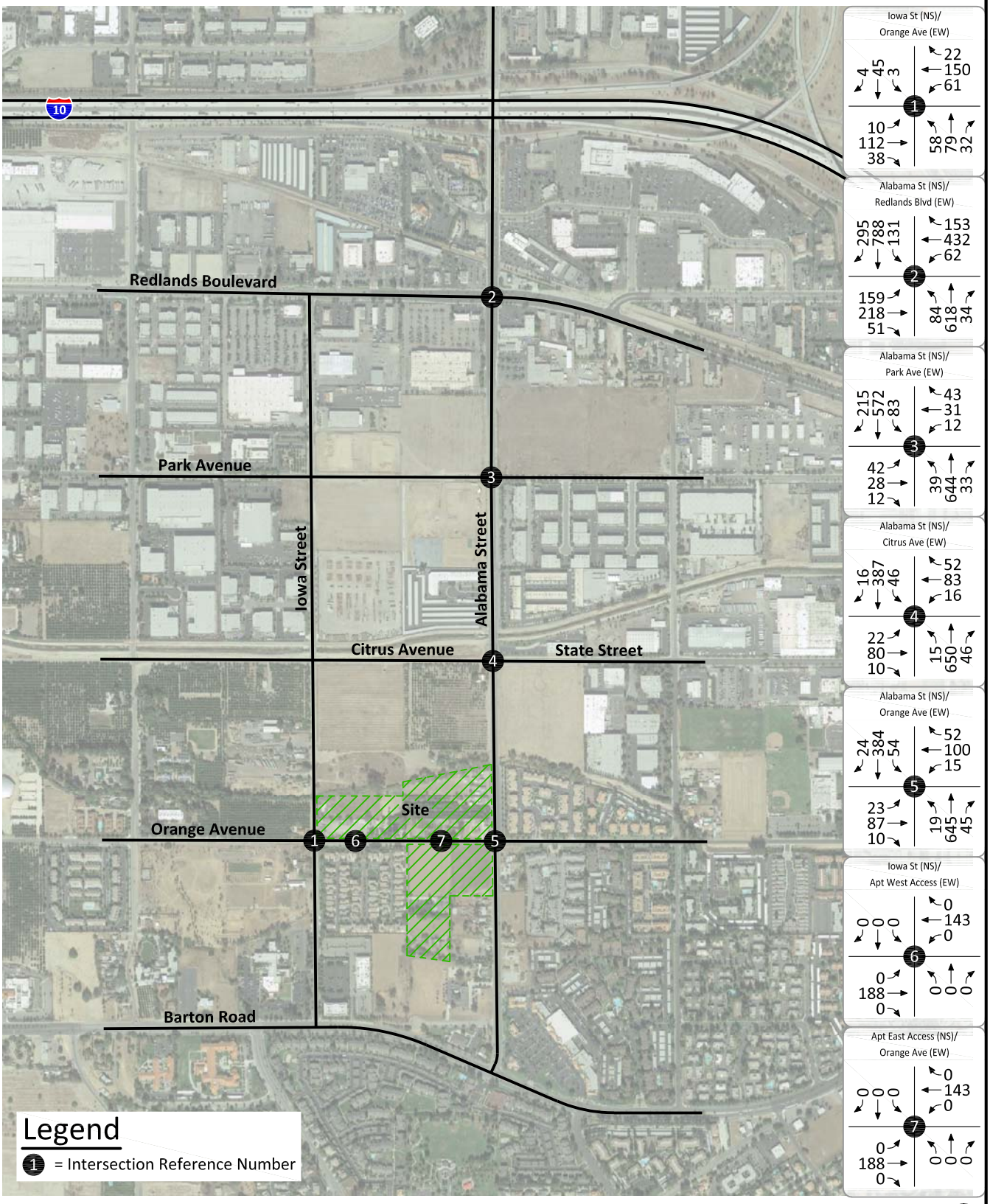


Figure 31
Opening Year (2020) Without Project
Evening Peak Hour Intersection Turning Movement Volumes

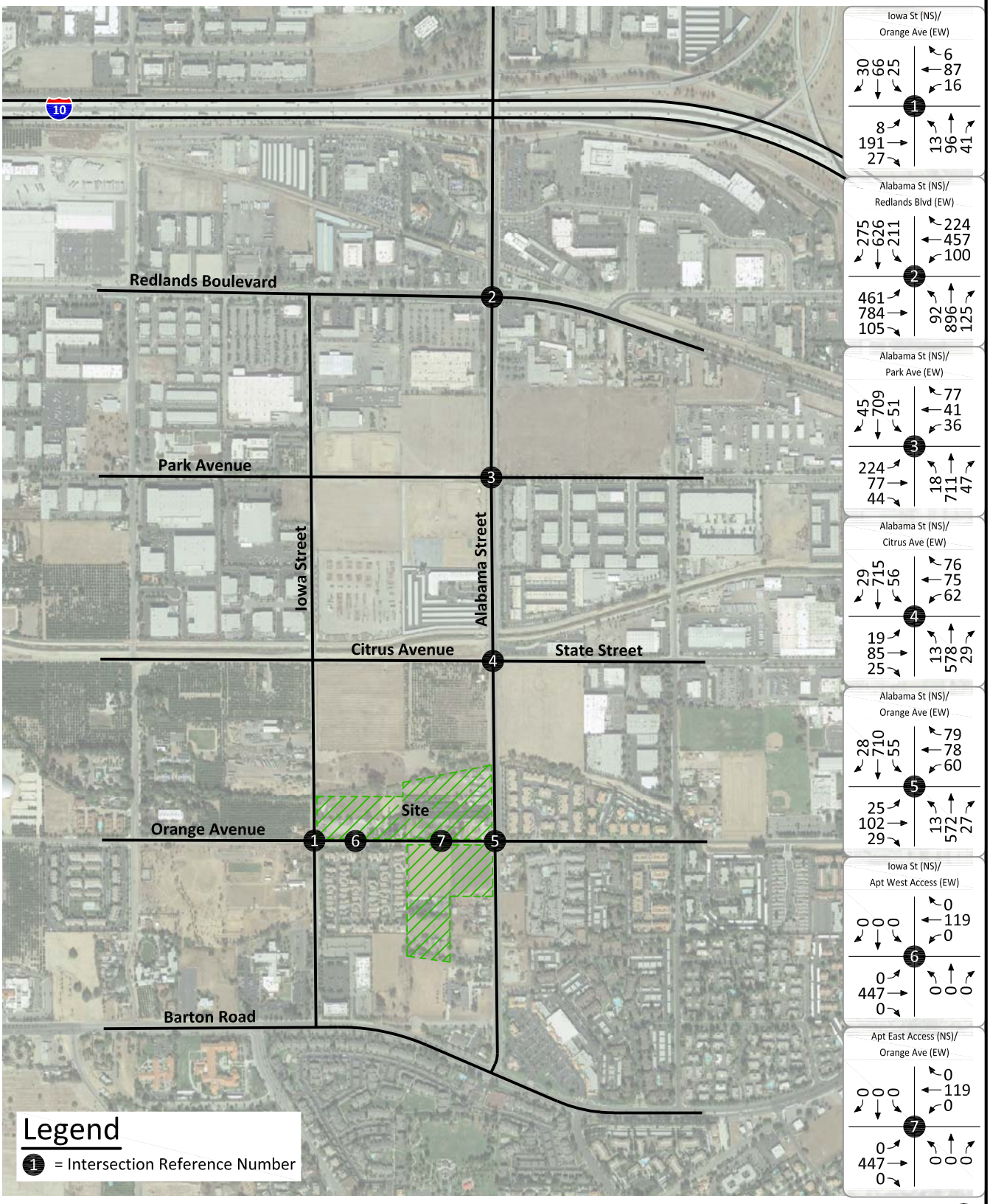
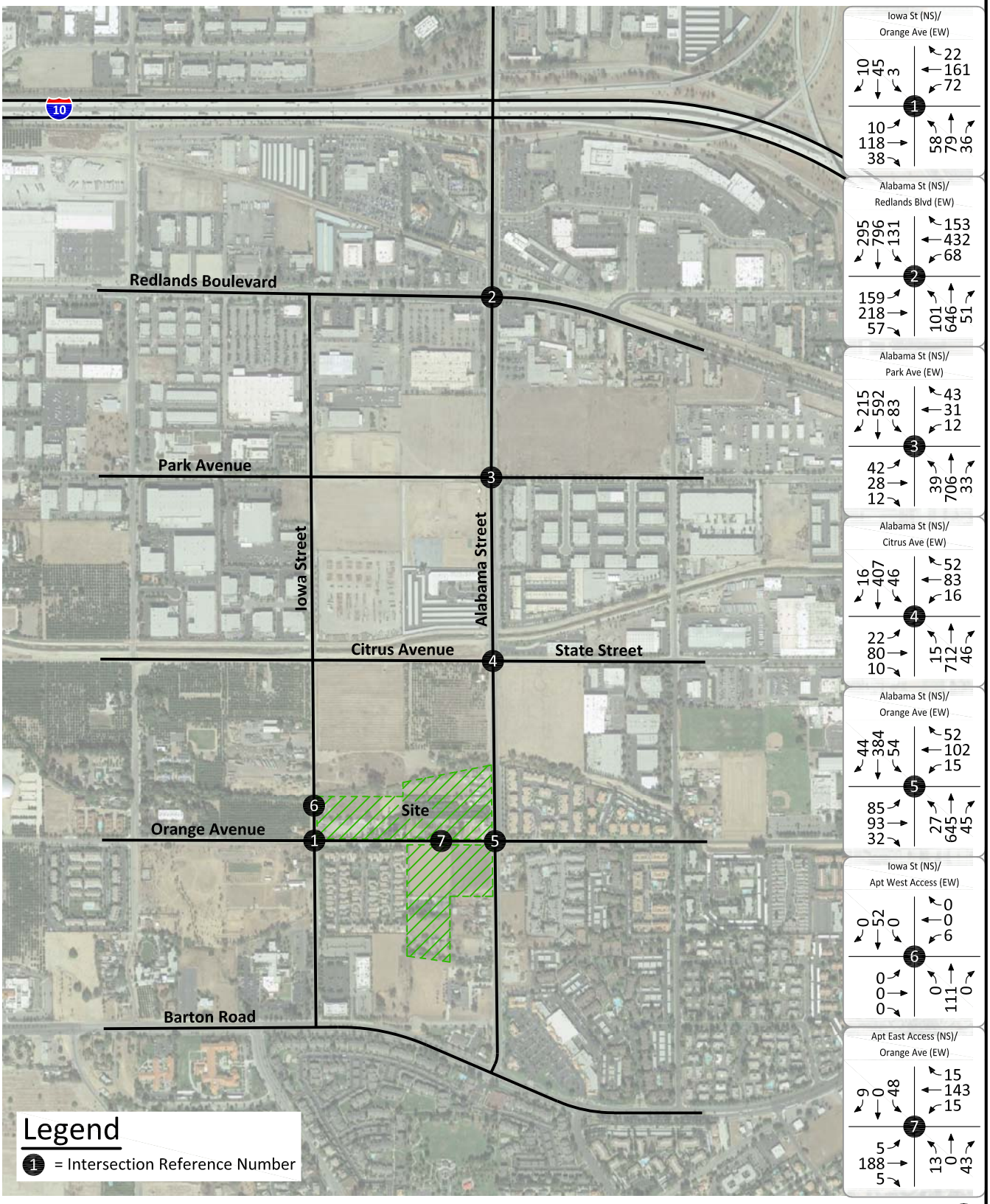


Figure 32
Opening Year (2020) With Project
Morning Peak Hour Intersection Turning Movement Volumes



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OVER 40 YEARS OF EXCELLENT SERVICE

JN 7221

Figure 33
Opening Year (2020) With Project
Evening Peak Hour Intersection Turning Movement Volumes

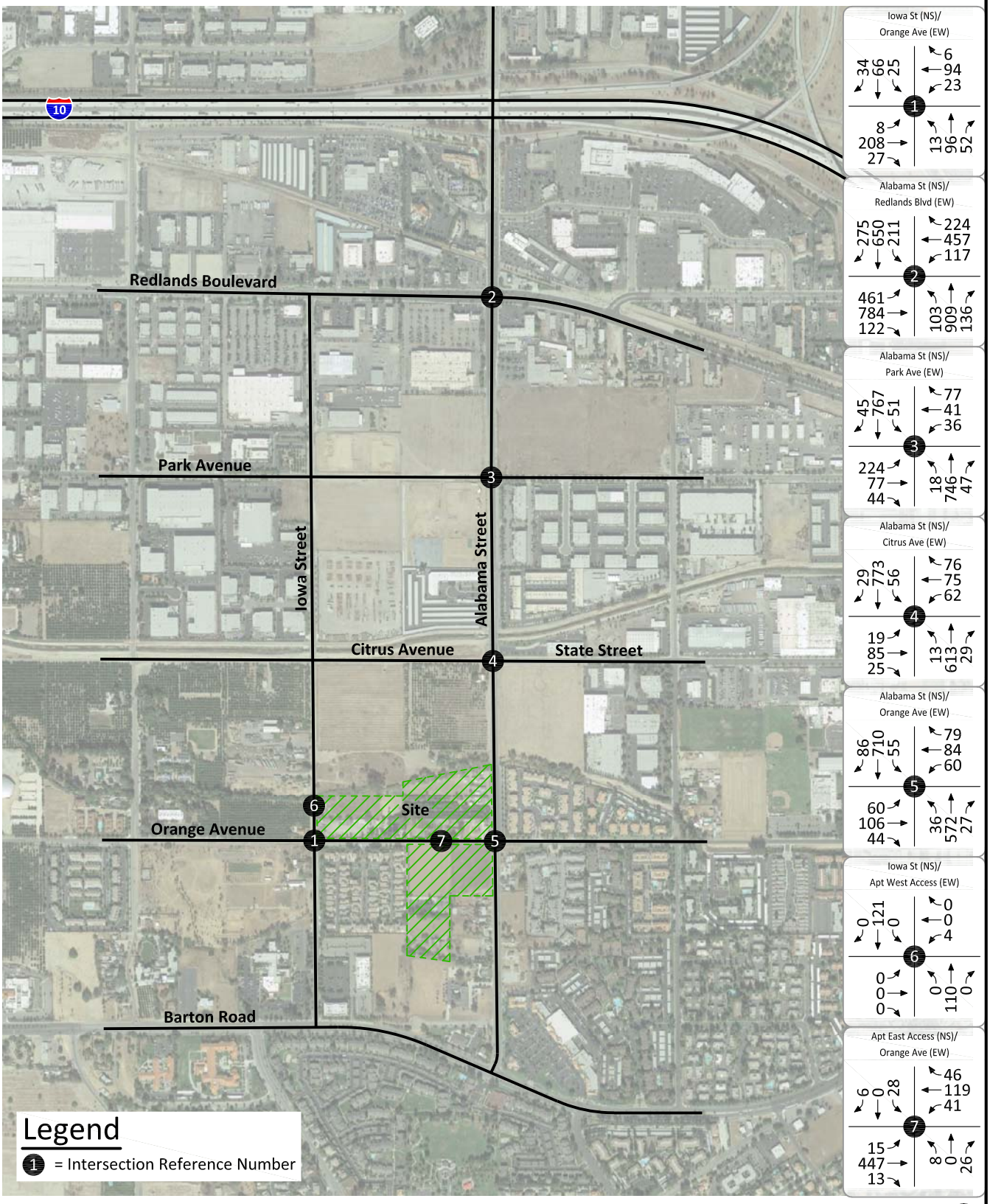

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Figure 34
Horizon Year (2040) Without Project
Morning Peak Hour Intersection Turning Movement Volumes

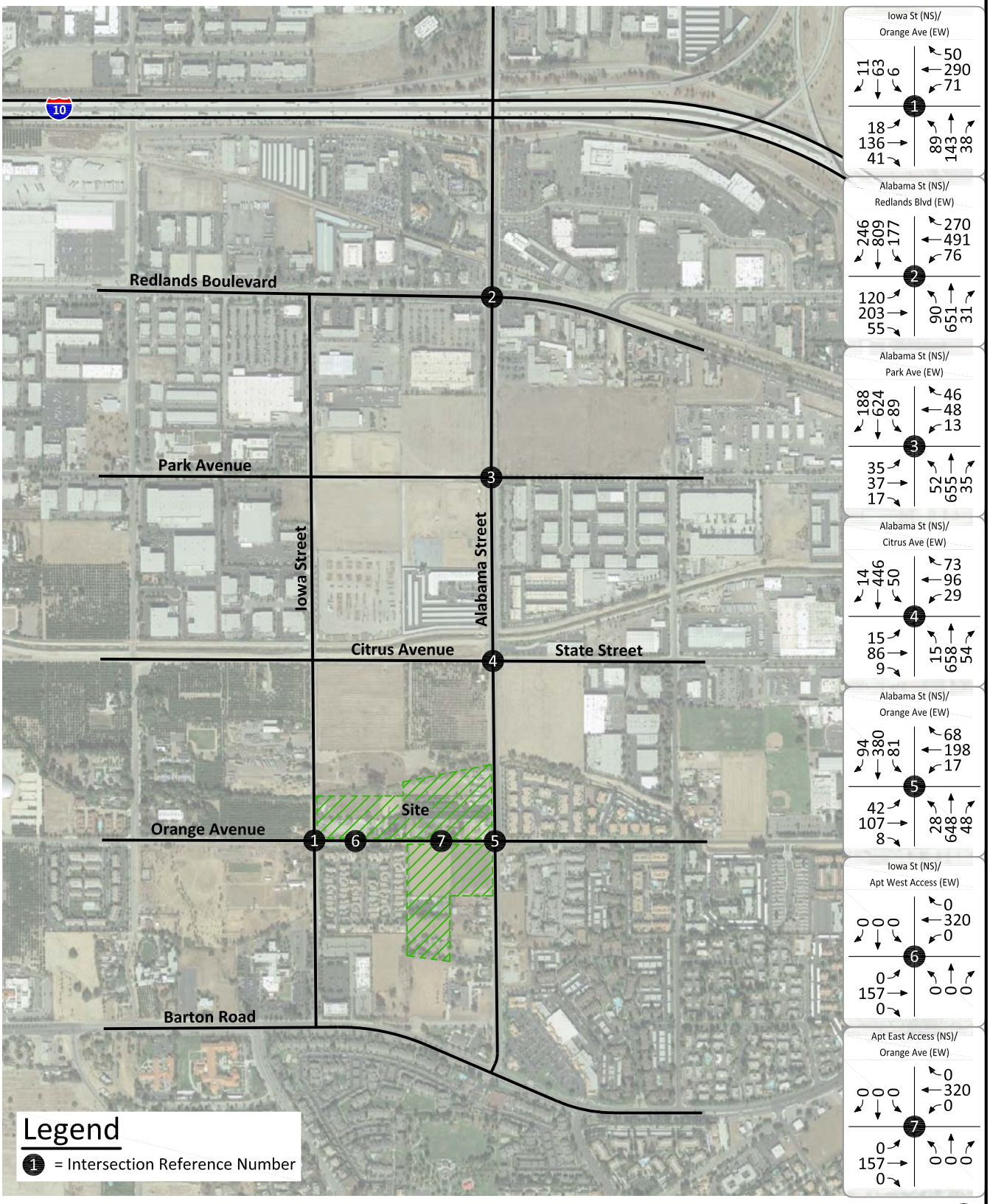

Figure 35
Horizon Year (2040) Without Project
Evening Peak Hour Intersection Turning Movement Volumes

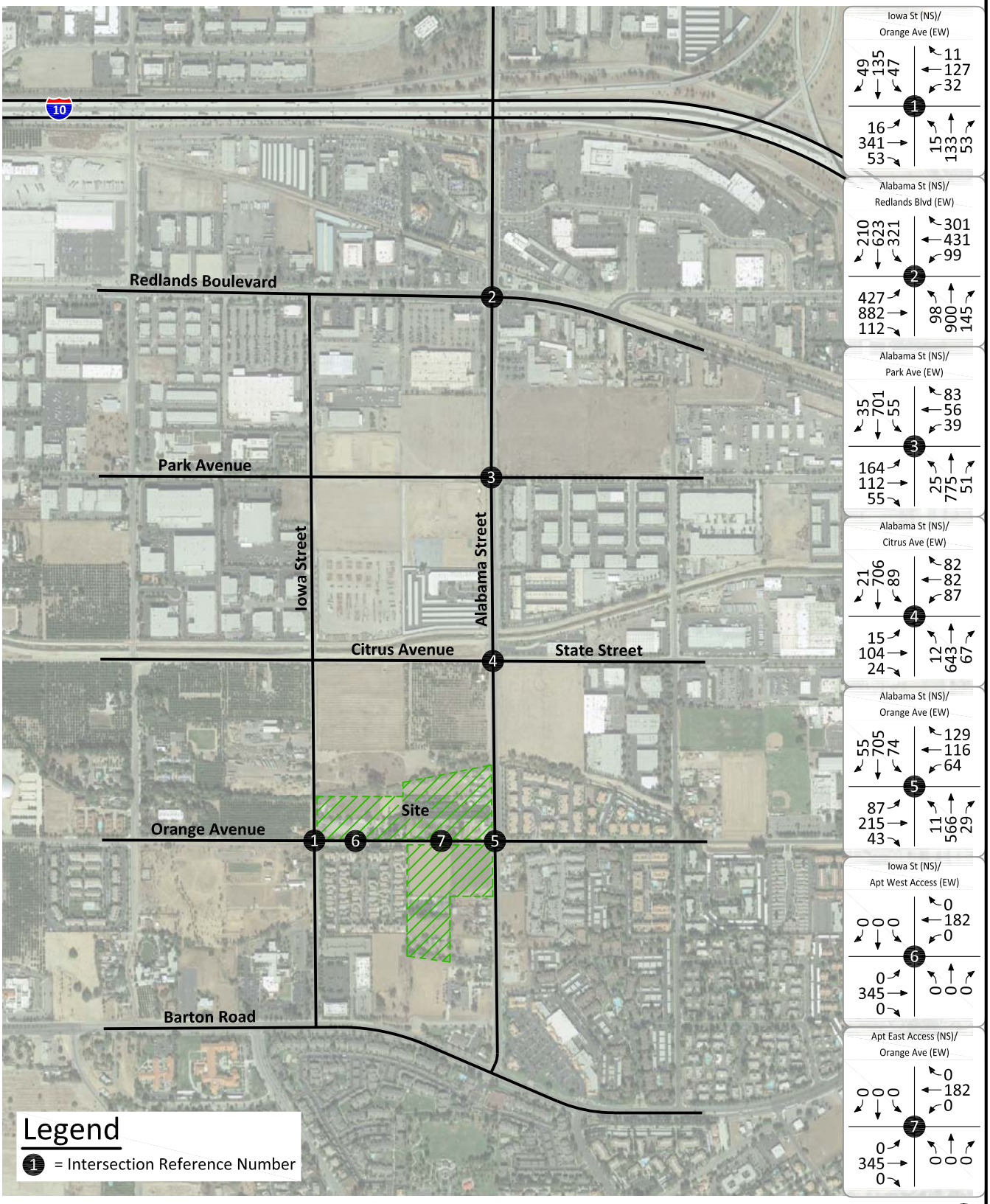

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Figure 36
Horizon Year (2040) With Project
Morning Peak Hour Intersection Turning Movement Volumes

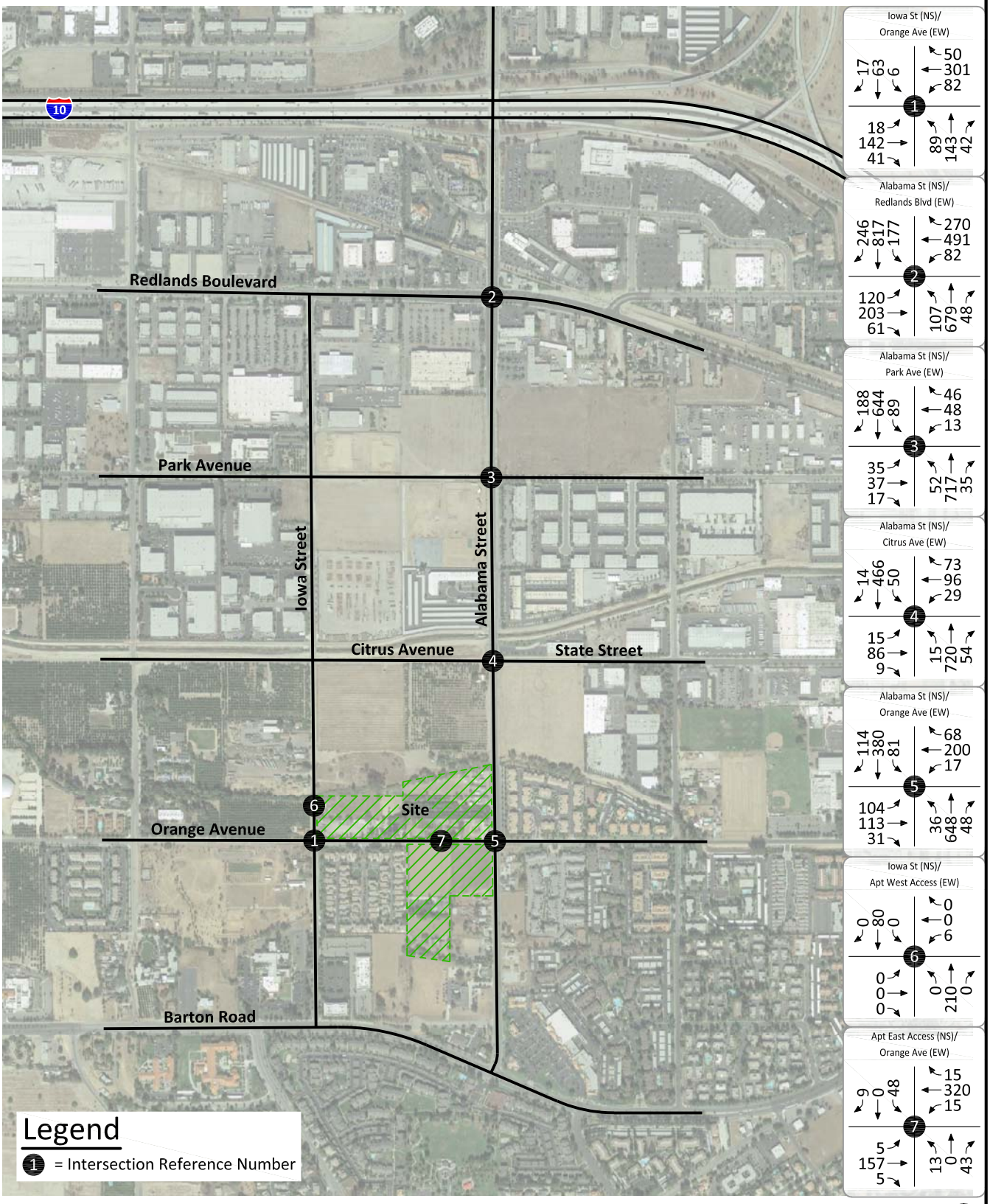

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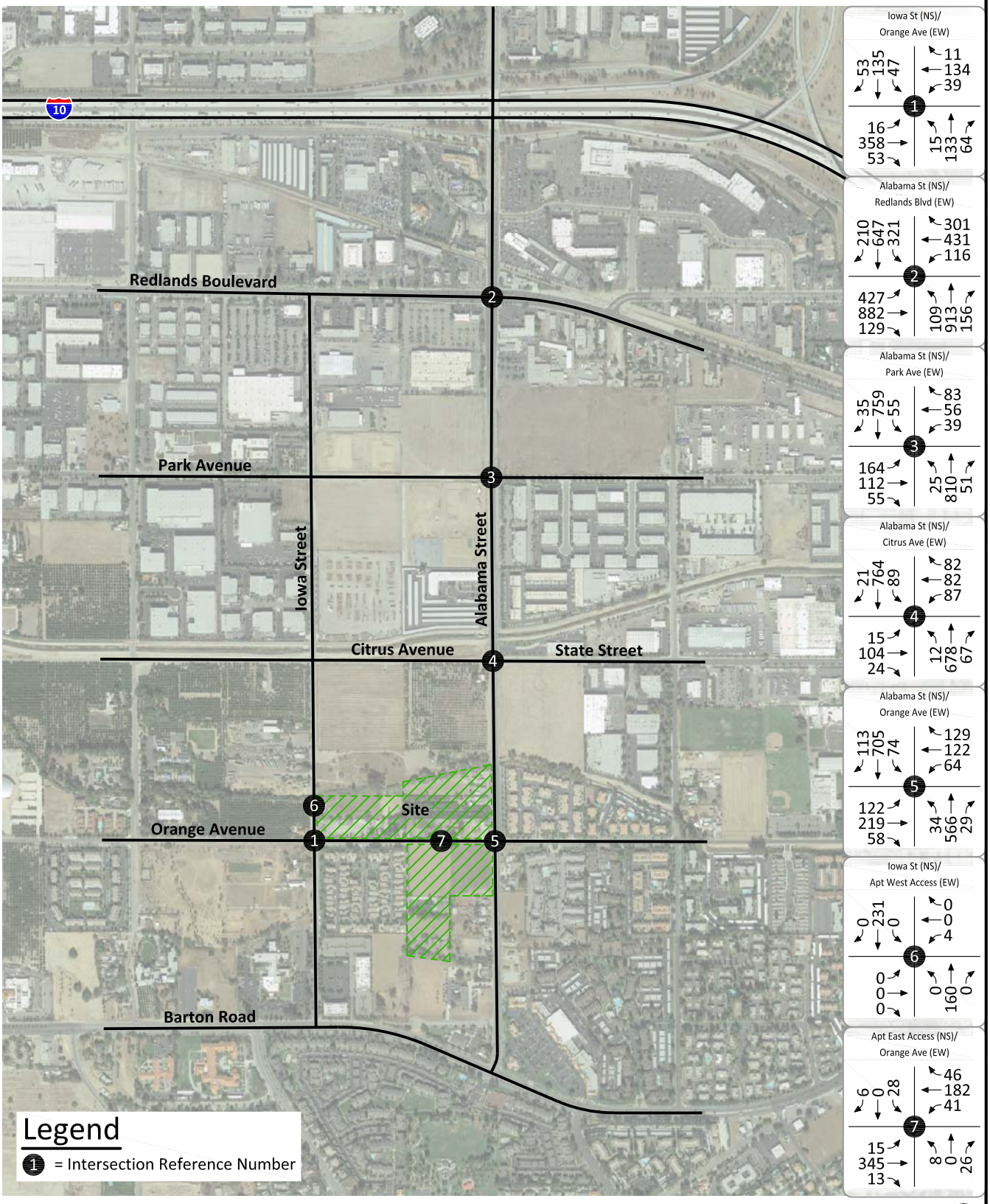
Figure 37
Horizon Year (2040) With Project
Evening Peak Hour Intersection Turning Movement Volumes



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VI. OTHER TRAFFIC CONDITIONS

Additional traffic concerns which may affect the operational characteristics of the study roadway facilities or which may require mitigation are discussed below.

A. Site Access

The proposed project primary access on Orange Avenue will be gated and provide full access. The proposed primary access on Orange Avenue is located approximately 890 feet from Iowa Street and approximately 345 feet from Alabama Street.

The proposed project secondary access on Orange Avenue will be gated and provide residential egress and emergency vehicle access. The proposed secondary access on Orange Avenue is located approximately 195 feet from Iowa Street and approximately 1025 feet from Alabama Street.

The proposed project access on Alabama Street will also be gated and provide a secondary access for emergency vehicle only. The proposed Alabama Street access is located approximately 260 feet south of Orange Avenue.

B. Traffic Signal Warrant Analysis

The unsignalized intersections have been evaluated for traffic signals using the California Department of Transportation Warrant 3 Peak Hour traffic signal warrant analysis, as specified in the California Manual of Uniform Traffic Control Devices (2014). Based on peak hour intersection turning movement volumes, a traffic signal is not projected to be warranted at the proposed project accesses on Orange Avenue (see Appendix G).

C. Sight Distance Analysis

Sight distance at the proposed project accesses shall comply with standard California Department of Transportation and City of Redlands sight distance standards. 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 access: (1) stopping sight distance, (2) corner sight distance, and (3) restricted use area. Appendix H contains the sight distance standards.

The stopping sight distance, for a driver approaching on the major roadway to see a vehicle exiting from the minor roadway and come to a stop. This distance is based on the prevailing mainline speed, and is per Table 201.1 in the Highway Design Manual. The corner sight distance minimum requirement, for the driver to exit from the minor approach onto the major approach without causing the mainline driver to stop or alter direction. This distance, also, is based on the prevailing mainline speed, and is per Table 405.1A in the Highway Design Manual. The restricted use area is defined as the area between the line of sight and the centerline of the nearest approaching lane is defined as the limited use area. The California Department of Transportation Highway Design Manual, Section 405.1 states, “at unsignalized intersections a substantially clear line of sight should be maintained”.

Substantially clear line of sight should minimize obstructions over including foliage, which grows over 18 inches in height (902.2(1). Common practice is to allow for regulatory signposts, street light poles and trees, as long as the foliage of the trees is higher than 5 or 6 feet, and the trunks of the trees allow for substantially clear line of sight. This typically will be the area where landscaping, hardscaping or parking restrictions should be enforced to insure a clear light of sight.

Currently, Orange Avenue and Alabama Street, near the project driveways, do not appear to have any sight distance issues given the horizontal or vertical geometry conditions. The proposed site landscape plan should avoid placing obstructions (such as dense trees or monument signs) within the limited-use sight distance area on either side of the proposed project accesses. It is recommended that trees should not be placed within 45 feet of proposed project accesses unless they are out of the restricted use area, and that trees further than 45 feet from the proposed project accesses be placed as far back from the curb as reasonably possible with placement that does not create a cluster or picket fence effect which could create visual problems in the future as the trees grow.

D. Queuing Analysis

Table 9 summarizes the results of a queue analysis for left-turn; right-turn, or combination through-turn movements at the proposed project accesses based on the forecast 95-percentile queue lengths shown in the intersection delay calculation worksheets (see Appendix F). Additionally, the recommended storage length is provided for turn lanes, which are forecast to exceed the existing storage.

When an exclusive left turn lane is required, a minimum of 2 passenger cars should be provided at 25 feet per vehicle (50 feet minimum storage length). Where possible, the recommended minimum turn pocket length used on roadways should be 100 feet where the speed is 30 miles per hour and 150 feet for arterials with speeds of 40 miles per hour or more. The recommended maximum single turn storage length shall be 300 feet; therefore, dual left turn lanes should be used when over 300 feet of storage is required or when necessary to provide acceptable Levels of Service at the intersection. For local streets and driveways, smaller storage lengths are permitted when volumes permit.

E. Emergency Vehicle Access

The project has multiple accesses to allow for emergency vehicles. The project access designs (width, grade, slope, vertical clearance, gate type, gate width and gate entry feature) shall be provided to the City and/or Fire Authority for review and approval. For emergency access roadways with a cross-section of less than 36 feet in width, the local Fire Authority should be consulted for minimum width and parking restrictions. Additionally, the proposed project access on Alabama Street will also be gated and provide a secondary access for emergency vehicle only.

F. Project Accesses

The project accesses shall provide adequate storage lengths in accordance with the City standards. The maximum outbound volume for any one of the proposed project primary

access is 76 to 39 vehicles per hour (morning and evening peak hour respectively), and the minimum access length should adequately accommodate this volume per City standards. For unsignalized intersections, the "rule of thumb" storage length is to be one foot for each vehicle per hour turning left during the peak hour. The primary access is approximately 200 (north of Orange Avenue) and 235 feet (south of Orange Avenue) and is projected to provide adequate storage for outbound vehicles.

G. Gated Residential Access

The proposed project primary access on Orange Avenue will be gated and provide full access. The proposed secondary access on Orange Avenue will be gated and provide residential egress and emergency vehicle access only.

1. Gate Access Issues

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.

2. Gate Queuing 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 through traffic of the nearest intersection. Secondly, a vehicle turnaround, which provides an easy and safe turnaround for a vehicle that, is not granted access, so that vehicles, which do not gain entry, do not have to backup or block residential traffic at the gate. 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 effects of queues can be undertaken. A queue is formed when arrivals wait at a service area, gate, to use a 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 residential lanes reduces the storage length required for the queuing visitor traffic volumes.

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 based upon previous traffic studies. 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 the 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 evening or morning peak hour inbound trips were used for the calculations.
- 100% of inbound trips were used to generate the queue length as there is only one entry used for non-emergency entrance.
- 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 amount of storage space needed at the primary gated entry for the north side of Orange Avenue is one (1) vehicle length for the morning and evening peak hour, which is less than the two (2) vehicle length minimum requirement (44 feet). The amount of storage space needed at the primary gated entry for the south side of Orange Avenue is one (1) vehicle length for the morning peak hour and two (2) vehicle length (44 feet) for the evening peak hour. The available queue space shown on the proposed plan for the primary access is approximately 200 (north of Orange Avenue) and 235 feet (south of Orange Avenue). The entry location meets the minimum requirements for gate stacking. These queue lengths have been calculated based on the trip generation/distribution for the currently proposed development. These queue lengths assume the presence of two lanes (residential and visitor). The vehicle stacking area is measured from the gate to the edge of sidewalk or travel way of the adjacent street.

H. Construction Trips

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. All construction related trips should be restricted to off-peak hours, whenever possible.

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

Queue Analysis Summary

Intersection	Movement	Direction[1]	Existing Storage Length (feet)	95th-Percentile Queue Length (Feet)								Recommended Storage Length (feet)[2]
				Existing		Existing Plus Project		Opening Year (2020) With Project		Horizon Year (2040) With Project		
				Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	
Alabama Street (NS) at:	Northbound	Left	140	<25[3]	<25	<25	32.8	28.9	36.2	46.3	51.1	-
Orange Avenue (EW) - #5	Southbound	Left	130	46.8	50.3	46.8	50.3	56.6	54.8	108.8	117.0	-
	Eastbound	Combined	345	55.9	53.6	137.3	111.9	170.5	173.5	266.0	1401.1	1400.0
		Right	345	<25	<25	<25	<25	<25	<25	-	-	-
	Westbound	Combined	330	57.0	83.2	58.3	116.7	73.4	149.1	171.0	595.8	595.0
		Right	216	<25	41.1	29.6	41.1	31.5	46.1	49.0	114.9	-
Project Driveway (NS) at:	Southbound	Combined	50	-	-	<25	<25	<25	<25	<25	<25	-
	Eastbound	Combined	570	-	-	<25	<25	<25	<25	<25	<25	-
Orange Avenue (EW) - #6		Right	NA	-	-	<25	<25	<25	<25	<25	<25	-
	Westbound	Combined	320	-	-	<25	<25	<25	<25	<25	<25	-
		Right	NA	-	-	<25	<25	<25	<25	<25	<25	-
Project Driveway (NS) at:	Northbound	Combined	190	-	-	<25	<25	<25	<25	<25	<25	-
Orange Avenue (EW) - #7	Southbound	Combined	190	-	-	<25	<25	<25	<25	<25	<25	-
	Eastbound	Combined	890	-	-	<25	<25	<25	42.7	<25	30.9	-
	Westbound	Combined	345	-	-	<25	<25	<25	<25	<25	26.1	-
Alabama Street (NS) at:	Northbound	Left	140	-	-	-	-	-	-	35.5	36.5	-
Orange Avenue (EW) - #5	Southbound	Left	130	-	-	-	-	-	-	82.4	75.0	-
With Improvements[4]	Eastbound	Left	345	-	-	-	-	-	-	86.8	118.0	-
		Thru-Right	345	-	-	-	-	-	-	94.7	190.7	-
	Westbound	Combined	330	-	-	-	-	-	-	136.1	147.5	-
		Right	216	-	-	-	-	-	-	39.4	82.4	-

[1] Lane configuration for with project and/or with improvement conditions except for the existing scenario which has combined or shared lane configurations.

[2] Source: California Department of Transportation, Highway Design Manual, Section 405.2.

[3] Standard 25 feet of queue per vehicle, calculated lengths of less than 25 feet rounded to one vehicle.

[4] Lane configuration for with project and/or with improvement conditions.

VII. CALIFORNIA DEPARTMENT OF TRANSPORTATION FREEWAY REVIEW

This section discusses the prescribed methodology assess whether Freeway mainline or ramp analyses are required, and the definition of deficiency and significant traffic impact are discussed.

A. Definition of Deficiency and Significant Impact

The California Department of Transportation Guide for the Preparation of Traffic Impact Studies (December 2002) states that an endeavor is made to maintain a target Level of Service of between "D" or better on State highway facilities; however, the California Department of Transportation acknowledges that this may not always be feasible. If an existing State Highway facility is operating at less than the appropriate Level of Service, the existing Measures of Effectiveness for Level of Service should be maintained.

B. Project Threshold Evaluation

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. The proposed project trips that would be contributed during the peak hour to the closest freeway segments are shown on Figure 18.

As the proposed project is within the County of San Bernardino, the San Bernardino Congestion Management Program (2016 Update) has been reviewed for the definition of feasible Level of Service for 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).

C. California Department of Transportation Freeway Review

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 Congestion Management Program, the freeway mainline currently operates at Levels of Service B to D. The project trip contribution to the freeway system is below the threshold for further analysis. The proposed development is not projected to contribute 1% or more of the mainline capacity trips to the study area freeway mainline or ramps during the peak hours.

The project trip distributions depict the project trip contribution during the peak hours to the closest freeway segments as shown on Figure 18. The project trip contribution to the freeway system is below the threshold for further analysis. The project site is projected to contribute less than 50-100, at Level of Service D, or less than 1% of the mainline capacity trips to the study freeway mainline or ramps during peak hours.

VIII. PROJECT MITIGATION

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.

A. Required Improvements

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Existing Plus Project, Opening Year (2030), and Horizon Year (2040) traffic conditions. The improvements were determined through the operations analysis of Section V and other traffic considerations of Section VI.

The approximate costs for the Horizon Year (2040) improvements have generally been estimated using cost guidelines in the Congestion Management Program Handbook. A unit cost of $600,000 for installation of a traffic signal has been substituted for the somewhat lower value cited in the Congestion Management Program materials. For adding a through lane, a unit cost of $290,000 has been assumed. For adding a turn lane, a unit cost of $50,000 has been assumed. The needed improvements and resulting costs are summarized in Table 10 for study intersections.

The total cost of needed and unfunded intersection improvements is $50,000.

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. The project's identified intersection costs are $50,000 (see Table 10).

B. Project Contribution

The project trip contributions have been calculated for the study intersections for the proportion of project peak hour intersection turning movement volumes contributed to the study intersections relative to the total new peak hour Horizon Year (2040) intersection turning movement volume. The project percentages are based on the highest of the morning or evening peak hour percentage. Table 11 summarizes the project trip contributions for study intersections.

The dollar figures are rough order of magnitude estimates only. They are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

As mitigation for any potential traffic impacts, the proposed project shall contribute through the City of Redlands Development Impact Fee (DIF) program as well as the San Bernardino County adopted traffic impact fee program (Nexus) in addition to any fair share contributions shown within the traffic study which is not covered within this fee program.

Table 10

Summary of intersection Improvements and Costs

Intersection	Jurisdiction	Improvement	Funding Mechanism[1]	Service Year	Cost Estimate[2]
Alabama Street (NS) at: Orange Avenue (EW) - #5	Redlands	Construct EB Left Turn Lane	Project Improvement	Horizon Year (2040)	$ 50,000
Subtotal		Project Design Feature			$ 50,000
Subtotal		Fair Share			$ -
Total Improvement Costs					$ 50,000

[1] As mitigation for the potential traffic impacts, the proposed project shall contribute through City and or County adopted traffic impact fee program(s), as well as, fair share costs and project related improvements.

[2] 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.

[3] Project related improvement to mitigate direct impacts and improve Level of Service. Improvements to Alabama Street, Iowa Street and Orange Avenue at project access intersections adjacent to the project will be funded and/or constructed by the applicant.

Table 11

Project Intersection Trip Contribution

Intersection	Peak Hour	Intersection Turning Movement Volumes				Project % of New	Project % at Intersection[1,2]
		Existing	Horizon Year (2040) With Project	Project	Total New		
Iowa Street (NS) at:	Morning	545	997	38	452	8.4%	8.4%
Orange Avenue (EW) - #1	Evening	518	1,063	46	545	8.4%	
Alabama Street (NS) at:	Morning	2,294	3,300	82	1,006	8.2%	8.2%
Redlands Boulevard (EW) - #2	Evening	3,391	4,645	93	1,254	7.4%	
Alabama Street (NS) at:	Morning	1,324	1,920	82	596	13.8%	100.0%
Park Avenue (EW) - #3	Evening	1,603	2,247	93	93	100.0%	
Alabama Street (NS) at:	Morning	1,277	1,626	82	349	23.5%	100.0%
Citrus Avenue (EW) - #4	Evening	1,560	2,028	93	93	100.0%	
Alabama Street (NS) at:	Morning	1,277	1,843	121	566	21.4%	21.4%
Orange Avenue (EW) - #5	Evening	1,560	2,238	141	678	20.8%	
Project Driveway (NS) at:	Morning	149	522	6	373	1.6%	1.6%
Orange Avenue (EW) - #6	Evening	197	580	4	383	1.0%	
Project Driveway (NS) at:	Morning	240	636	153	396	38.6%	48.5%
Orange Avenue (EW) - #7	Evening	342	719	183	377	48.5%	

[1] The project cost share is the highest amount for either the morning or evening peak hour.

[2] Project new trip volume percentage shown for informational purposes only.

[3] Project related improvement to mitigate direct impacts and improve Level of Service. Improvements to Alabama Street and Orange Avenue at project access intersections adjacent to the project will be funded and/or constructed by the applicant.

IX. SUMMARY AND RECOMMENDATIONS

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 IV and other traffic considerations of Section V. Table 12 summarizes the operational analysis for analysis scenarios.

A. Summary

The traffic issues related to the proposed land use and development have been evaluated in the context of the California Environmental Quality Act.

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 in Year 2020, at which time it will be generating trips at its full potential, and for the Horizon Year (2040).

A series of scoping discussions were conducted with the City of Redlands to define the desired analysis locations for each future analysis year. In addition, staff from the City of Redlands has also been contacted to discuss the project and its associated travel patterns.

No analysis is required further than 5 miles from the project site. The roadway elements that must be analyzed are dependent on both the analysis year (project Opening Year or Horizon Year (2040) and project generated traffic volumes. The identification of the study area, and the intersections and highway segments requiring analysis, was based on an estimate of the two-way traffic volumes on the roadway segments near the project site. All arterial segments have been included in the analysis when the anticipated project volume equals or exceeds 50 two-way trips during the peak hours. The requirement is 100 two-way peak hour trips for freeways.

The project does not contribute trips greater than the freeway threshold volume of 100 two-way peak hour trips. The project does not contribute trips greater than the arterial link threshold volume of 50 two-way trips in the morning and evening peak hours in the adjacent City of Loma Linda or unincorporated San Bernardino County. 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. (Note: The purpose of this notification is to allow the affected 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).

The average daily traffic volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model Year 2012 and Year 2040 average daily traffic volume forecasts (see Appendix D). Appendix E contains the traffic model plots. This difference defines the growth in traffic over the 28 year period. The incremental growth in average daily traffic volume has been factored to reflect the

forecast growth between 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 existing Year 2018 and Year 2040 is 22 years of the 28 year time frame, a factor of 0.78 (i.e., 22/28) was used.

The Horizon Year (2040) daily and peak hour directional roadway segment volume forecasts have been determined using the growth increment approach on the San Bernardino Transportation Analysis Model Year 2012 and Year 2040 peak hour volumes. The growth increment calculation worksheets are shown in Appendix D. Current peak hour intersection approach/departure data is a necessary input to this approach. The existing intersection turning movement volume data serves as both the starting point for the refinement process, and also provides important insight into current travel patterns and the relationship between peak hour and daily traffic conditions. The initial turning movement proportions are estimated based upon the relationship of each approach leg's forecast traffic volume to the other legs forecast volumes at the intersection. The initial estimate of turning movement proportions is then entered into a spreadsheet program consistent with the National Cooperative Highway Research Program Report 255. A linear programming algorithm is used to calculate individual turning movements that match the known directional roadway segment volumes computed in the previous step. This program computes a likely set of intersection turning movements from intersection approach counts and the initial turning proportions from each approach leg.

The Opening Year (2020) traffic volumes have been interpolated from the Horizon Year (2040) traffic volumes based upon a portion of the future growth increment.

The City of Redlands staff provided a list of cumulative developments in the study area that are within the City of Redlands. Cumulative development from the adjacent jurisdictions was also obtained. Cumulative development trips have been added to Opening Year (2020) and Horizon Year (2040) traffic conditions.

Project trips were then added to the San Bernardino Transportation Analysis Model traffic volumes. Quality control checks and forecast adjustments were performed as necessary to ensure that all future traffic volume forecasts reflect a minimum of 10% growth over existing traffic volumes. The result of this traffic forecasting procedure is a series of traffic volumes suitable for traffic operations analysis.

B. Existing Conditions

Regional access to the project site is provided by the I-10 Freeway. Local access is provided by various roadways in the vicinity of the site. The east-west roadways expected to provide local access include Redlands Boulevard, Park Avenue, Citrus Avenue, Orange Avenue, and Barton Road. The north-south roadways expected to provide local access include Iowa Street and Alabama Street.

For Existing traffic conditions, the study intersections currently operate within acceptable Levels of Service during the peak hours.

C. Project Trips

Trip generation rates were determined for daily traffic and morning peak hour inbound and outbound traffic, and evening peak hour inbound and outbound traffic for the proposed land use. By multiplying the trip generation rates by the land use quantity, the traffic volumes are determined. The project trip generation is based upon rates obtained from the Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017.

The proposed development is projected to generate approximately 2,736 daily vehicle trips of which 164 occur during the morning peak hour and 197 occur during the evening peak hour.

D. Future Conditions

An Existing Plus Project, Opening Year (2020) analysis, and Horizon Year (2040) analyses are included in this report. The traffic operations analyses are summarized in Table 12.

1. Existing Plus Project

   For Existing Plus Project traffic conditions, study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

2. Opening Year (2020) Without Project

   For Opening Year (2020) Without Project traffic conditions, study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

3. Opening Year (2020) With Project

   For Opening Year (2020) With Project traffic conditions, study intersections are projected to operate at acceptable Levels of Service during the peak hours, with improvements.

4. Horizon Year (2040) Without Project

   For Horizon Year (2040) Without Project traffic conditions, study intersections are projected to operate at acceptable Levels of Service during the peak hours; except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

   Alabama Street (NS) at:
   Orange Avenue (EW) - #5

   The study intersections are forecast to operate within acceptable Levels of Service consistent with Measure U during the peak hours for Horizon Year (2040) Without Project traffic conditions, with improvements.

5. Horizon Year (2040) With Project

For Horizon Year (2040) With Project traffic conditions, study intersections are projected to operate at acceptable Levels of Service during the peak hours; except for the following study intersection that is forecast to operate at an unacceptable Level of Service during the evening peak hour, without improvements:

Alabama Street (NS) at:
Orange Avenue (EW) - #5

The study intersections are forecast to operate within acceptable Levels of Service consistent with Measure U during the peak hours for Horizon Year (2040) With Project traffic conditions, with improvements.

6. Significant Impact Evaluation

For "With Project" traffic conditions, project generated trips did result in a significant impact at one study intersection for Horizon Year (2040) With Project traffic conditions (see Table 8). No study intersections were reduced from the pre-project from Level of Service C or better to the "With Project" of Level of Service D or worse for the Existing Plus Project, Opening Year (2020) With Project, and Horizon Year (2040) With Project traffic conditions with improvements.

E. Mitigation Measures

Improvements that will eliminate all anticipated roadway operational deficiencies throughout the study area have been identified for Existing Plus Project, Opening Year (2030), and Horizon Year (2040) traffic conditions. The improvements were determined through the operations analysis of Section V and other traffic considerations of Section VI.

The total cost of needed and unfunded intersection improvements is $50,000.

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. The project's identified intersection costs are $50,000 (see Table 10).

The project trip contributions have been calculated for study intersections for both the morning or evening peak hour volumes. Table 11 summarizes the project trip contributions for study intersections.

The dollar figures are rough order of magnitude estimates only. They are intended only for the discussion purposes of this traffic impact analysis, and do not imply any legal responsibility or formula for contributions or mitigation.

As mitigation for any potential traffic impacts, the proposed project shall contribute through the City of Redlands Development Impact Fee (DIF) program as well as the San Bernardino County adopted traffic impact fee program (Nexus) in addition to any fair share contributions shown within the traffic study which is not covered within this fee program.

F. Recommendations

The recommendations in this section address on-site improvements, off-site improvements and the phasing of all necessary study area transportation improvements.

1. On-Site Improvements

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).

Construct Alabama Street from the north project boundary to the south project boundary at its ultimate half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from southwest project boundary to Alabama Street at its ultimate full cross-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from Iowa Street to Alabama Street at its ultimate north half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

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.

2. Off-Site Improvements

The necessary off-site improvement recommendations were described in previous sections of this report. The project should contribute towards the cost of necessary study area improvements on a fair share or “pro-rata” basis.

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.

New and future traffic signals within the study area at buildout should specifically include a network interconnect of the traffic signals to function in a coordinated system.

Table 12

Summary of Intersection Delay and Levels of Service for Scenarios

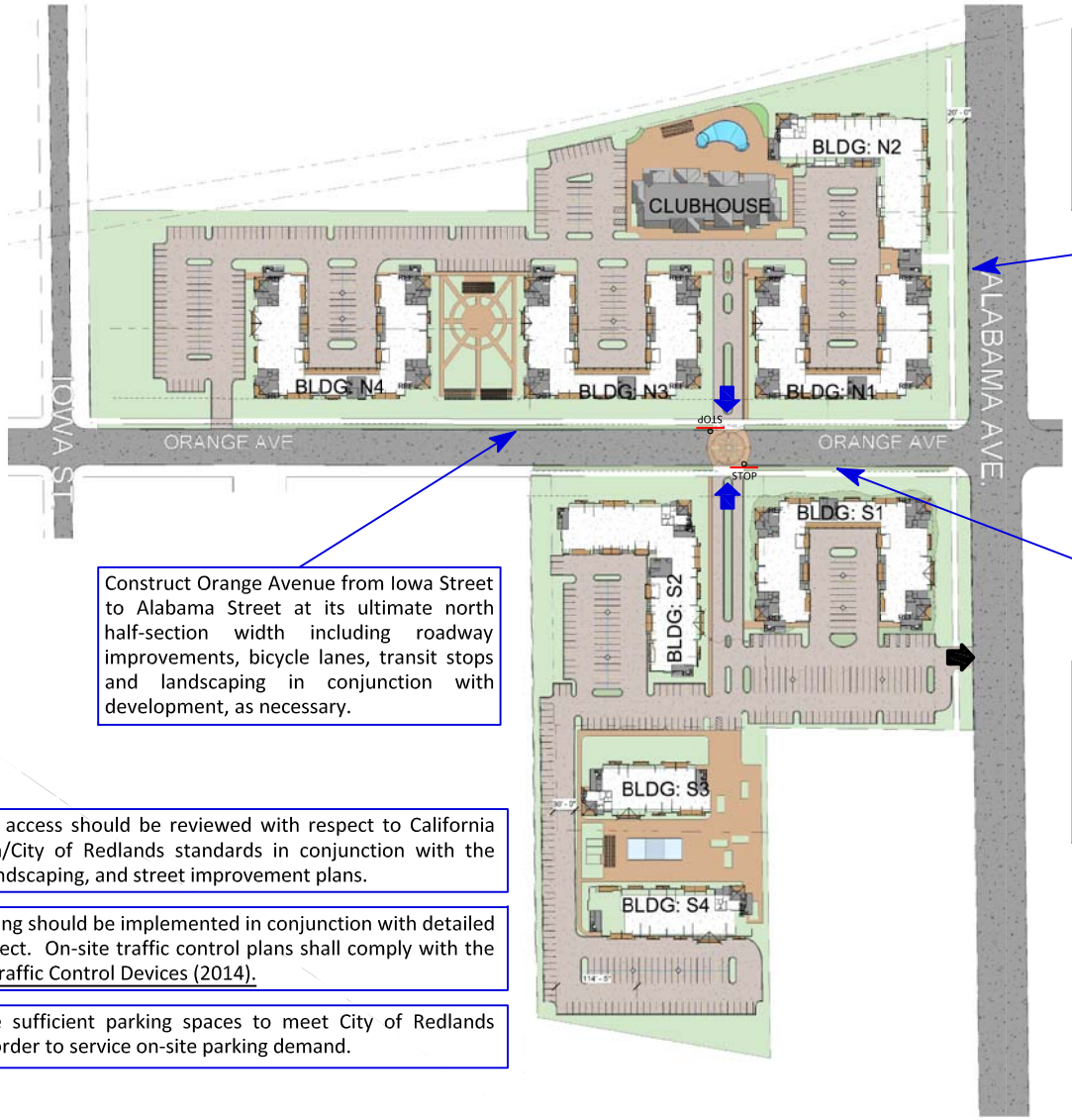
Intersection	Peak Hour Delay and Levels of Service											
	Existing				Opening Year (2020)				Horizon Year (2040)			
	Without Project[1]		With Project[1]		Without Project[2]		With Project[2]		Without Project[3]		With Project[3]	
	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening	Morning	Evening
Iowa Street (NS) at:												
Orange Avenue (EW) - #1	10.5 B	9.3 A	11.1 B	9.6 A	11.4 B	9.9 A	12.3 B	10.2 B	17.4 C	16.0 C	20.0 C	17.5 C
Alabama Street (NS) at:												
Redlands Boulevard (EW) - #2	28.9 C	28.2 C	29.3 C	32.7 C	34.2 C	31.3 C	36.1 D	35.7 D	34.2 C	32.9 C	34.7 C	33.2 C
Park Avenue (EW) - #3	19.7 B	18.6 B	20.0 B	18.8 B	22.2 C	20.4 C	22.5 C	20.6 C	23.0 C	20.6 C	23.3 C	20.9 C
Citrus Avenue (EW) - #4	19.7 B	19.7 B	19.8 B	19.8 B	20.0 C	20.6 C	20.2 C	20.8 C	20.5 B	21.0 C	20.8 B	21.1 C
Orange Avenue (EW) - #5	18.0 B	17.6 B	19.0 B	19.8 B	19.0 B	18.7 B	20.5 C	22.2 C	24.2 B	52.4 D	27.5 C	147.3 F
-With Improvements	-	-	-	-	-	-	-	-	20.3 C	18.5 B	20.8 C	22.8 C
Project Driveway (NS) at:												
Orange Avenue (EW) - #6	-	-	10.7 B	11.9 B	-	-	11.4 B	14.7 B	-	-	13.1 B	13.8 B
Project Driveway (NS) at:												
Orange Avenue (EW) - #7	-	-	11.5 B	14.3 B	-	-	12.7 B	19.2 C	-	-	15.1 C	18.1 C

[1] See Table 5.

[2] See Table 6.

[3] See Table 7.

Figure 38
Circulation Recommendations



Construct Alabama Street from the north project boundary to the south project boundary at its ultimate half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from Iowa Street to Alabama Street at its ultimate north half-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

Construct Orange Avenue from southwest project boundary to Alabama Street at its ultimate full cross-section width including roadway improvements, bicycle lanes, transit stops and landscaping in conjunction with development, as necessary.

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.

Legend

- STOP = Stop Sign
- = Full Access Driveway
- = Restricted Exit Only Driveway
- = Emergency Only

APPENDICES

Appendix A – Glossary of Transportation Terms

Appendix B – Scoping Agreement

Appendix C – Intersection Turning Movement Count Worksheets

Appendix D – Future Growth Increment Calculation Worksheets

Appendix E – Traffic Model Plots

Appendix F – Explanation and Calculation of Intersection Delay

Appendix G – Traffic Signal Warrant Worksheets

Appendix H – Sight Distance Standards

Appendix I – Gate Analysis

APPENDIX A

Glossary of Transportation Terms

GLOSSARY OF TRANSPORTATION TERMS

COMMON ABBREVIATIONS

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 total volume during a year divided by the number of days in a year. Usually only weekdays are included.

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

BOTTLENECK: A constriction along a travelway 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.

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

CYCLE LENGTH: The time period in seconds required for one complete signal cycle.

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

DAILY CAPACITY: The daily traffic volume that will result in a volume during the peak hour 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.

ORIGIN-DESTINATION SURVEY: A survey to determine the point of origin and the point of destination for a given vehicle trip.

PASSENGER CAR EQUIVALENTS (PCE): One car is one Passenger Car Equivalent. A truck is equal to 2 or 3 passenger car equivalent in that a truck requires longer to start, goes slower, and accelerates slower. Loaded trucks have a higher Passenger Car Equivalent than empty trucks.

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.

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

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.

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

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.

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

Subject: FW: SD Homes/Redlands Apartments Traffic Scoping Agreement

From: Don Young [mailto:dyoung@cityofredlands.org]
Sent: Wednesday, March 14, 2018 5:12 PM
To: 'Perrie Ilercil' <perrie@traffic-engineer.com>
Subject: RE: SD Homes/Redlands Apartments Traffic Scoping Agreement

I saw the new scoping agreement.

Your email did not ask for a response.

I was satisfied with the new scoping agreement. Hence, I did not respond

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

From: Perrie Ilercil [mailto:perrie@traffic-engineer.com]
Sent: Wednesday, March 14, 2018 3:28 PM
To: Don Young
Subject: RE: SD Homes/Redlands Apartments Traffic Scoping Agreement

Hi Don,
You are generally, really quick to get a response back, so I wanted to be sure that you saw the UPDATED scoping agreement for the Orange & Alabama Apartment complex in the City of Redlands sent to you last week. Thank you for your assistance.
New plan (March 2, 2018) calls for 382 apartments, previous plan (October 2017) called for 344.

Sincerely,
Perrie Ilercil, P.E. | Senior Associate
Kunzman Associates, Inc.
p. 714-973-8383 x 207
c. 949-257-3126
e. perrie@traffic-engineer.com

From: Perrie Ilercil [mailto:perrie@traffic-engineer.com]
Sent: Friday, March 09, 2018 9:04 AM
To: 'Don Young' <dyoung@cityofredlands.org>
Subject: RE: SD Homes/Redlands Apartments Traffic Scoping Agreement

Hi Don,
The SD Homes Redlands Apartments project has a revised site plan. See the attached revised scoping agreement which reflects the change in dwelling units for the apartment complex. In addition to this revision, the existing land-uses has been updated to reflect the coverage of the complex. Loma Linda was contacted previously and I will verify the City of Loma Linda planning listing for any additional projects in their jurisdiction.

Thank you,

Sincerely,

Perrie Ilercil, P.E. | Senior Associate
Kunzman Associates, Inc.
p. 714-973-8383 x 207
c. 949-257-3126
e. perrie@traffic-engineer.com

From: Don Young [mailto:dyoung@cityofredlands.org]
Sent: Wednesday, October 25, 2017 10:27 AM
To: 'Perrie Ilercil' <perrie@traffic-engineer.com>
Subject: RE: SD Homes/Redlands Apartments Traffic Scoping Agreement

Please use the following as acceptance:

Municipal Utilities and Engineering accepts the conceptual traffic study scoping analysis for the apartment project on Alabama/Orange in the City of Redlands that was submitted to the City on 10/25/17.

This acceptance does not preclude City staff from requesting slight modifications at the time of review of the projects Traffic Study.

Please be aware the City of Loma Linda may have additional concerns.

Mr. Foote, Development Services, will provide the cumulative project information.

Please contact me if you have any additional questions.

Donald Young
Engineering Manager
City of Redlands
909-798-7585 x6
dyoung@cityofredlands.org

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: **382 multi-family (low-rise) dwelling units and a site which currently has 8 homes, a nursery and a landscape maintenance yard.**

	Consultant	Developer
Name:	**Kunzman Associates, Inc.**	LUXVIEW Properties
Address:	**1111 Town & Country, Suite 34**	2358 University Ave. STE. 33
	Orange, CA 92868	San Diego, CA 92104
Telephone:	**714-973-8383 ext 207/ 949-257-3126**	619-291-2229
Contact:	**Perrie Ilercil, perrie@traffic-engineer.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)	7	6	13	42	134	176
PM Trips(in PCE)	8	9	17	134	80	214
Daily Trips(in PCE)	70	70	140	1398	1398	2796

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 **2019** 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:

October 25, 2017
Name: Perrie Ilercil, P.E. **March 8, 2018**
Consultant's Representative Date

Approved Scoping Agreement:

City of Redlands, Engineering Department Date JN7221

Table 1

Project Trip Generation

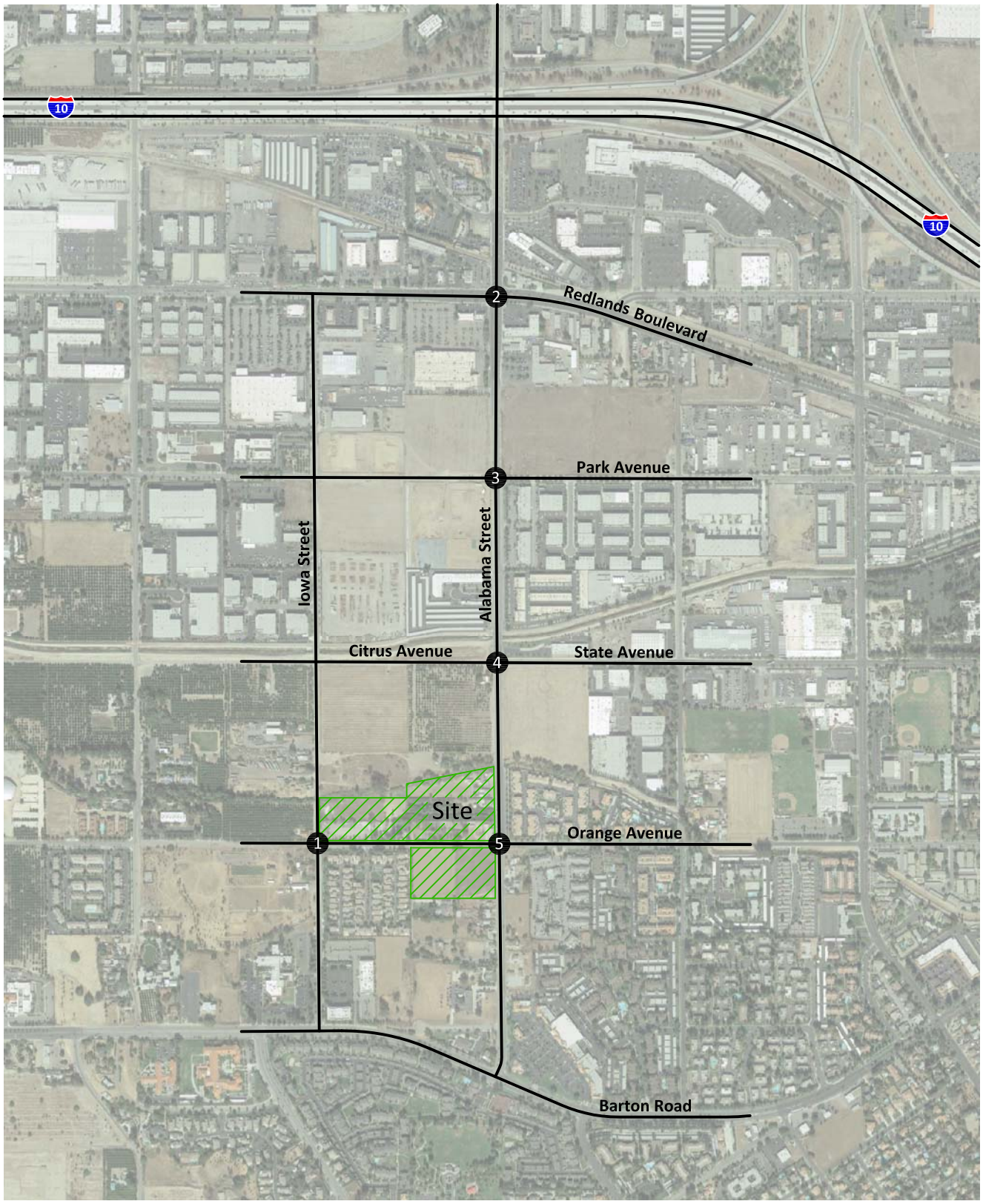
Descriptor	Land Use[1]	Quantity[2]	Units[3]	Morning Peak Hour			Evening Peak Hour			Daily
				Inbound	Outbound	Total	Inbound	Outbound	Total	
Trip Generation Rates	Single-Family Detached Housing		DU	0.19	0.55	0.74	0.62	0.37	0.99	9.44
	Specialty Trade Contractor		TSF	1.21	0.45	1.66	0.63	1.34	1.97	10.22
	Nursery Wholesale		AC	0.16	0.10	0.26	0.23	0.22	0.45	19.50
	Multi-Family Housing		DU	0.11	0.35	0.46	0.35	0.21	0.56	7.32
Trips Generated	Single-Family Detached Housing	-8	DU	-2	-4	-6	-5	-3	-8	-76
	Specialty Trade Contractor	-4.000	TSF	-5	-2	-7	-3	-5	-8	-41
	Nursery Wholesale	-1.2	AC	0	0	0	0	-1	-1	-23
	Existing Land Uses			-7	-6	-13	-8	-9	-17	-140
	Multi-Family Housing	382	DU	42	134	176	134	80	214	2,796
	Total			28	122	150	118	62	180	2,516

[1] Source: Institute of Transportation Engineers, Trip Generation Manual, 10th Edition, 2017, Land Use Codes 180, 210, 220 and 818, unless otherwise noted.

[2] Source: Drawing AS-101 Site Plan for Project: SD Homes - Redlands Apartments, dated March 2, 2018.

[3] DU = Dwelling Units, TSF = Thousand Square Feet; AC = Acres.

Figure 1
Project Location Map



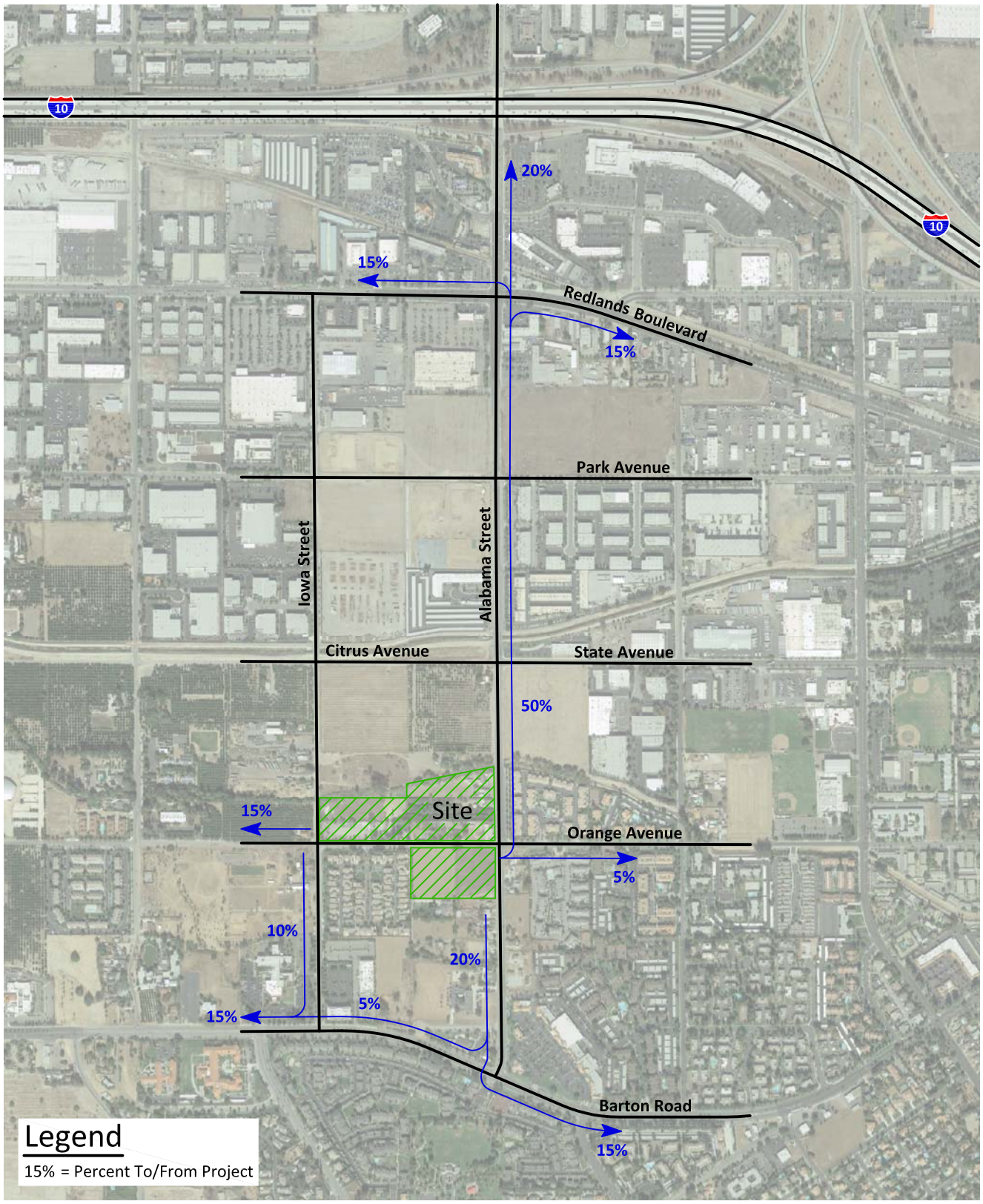
KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 7221

Figure 2
Site Plan

Figure 3
Project Trip Distribution



KUNZMAN ASSOCIATES, INC.

OVER 40 YEARS OF EXCELLENT SERVICE

JN 7221

APPENDIX C

Intersection Turning Movement 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

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
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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
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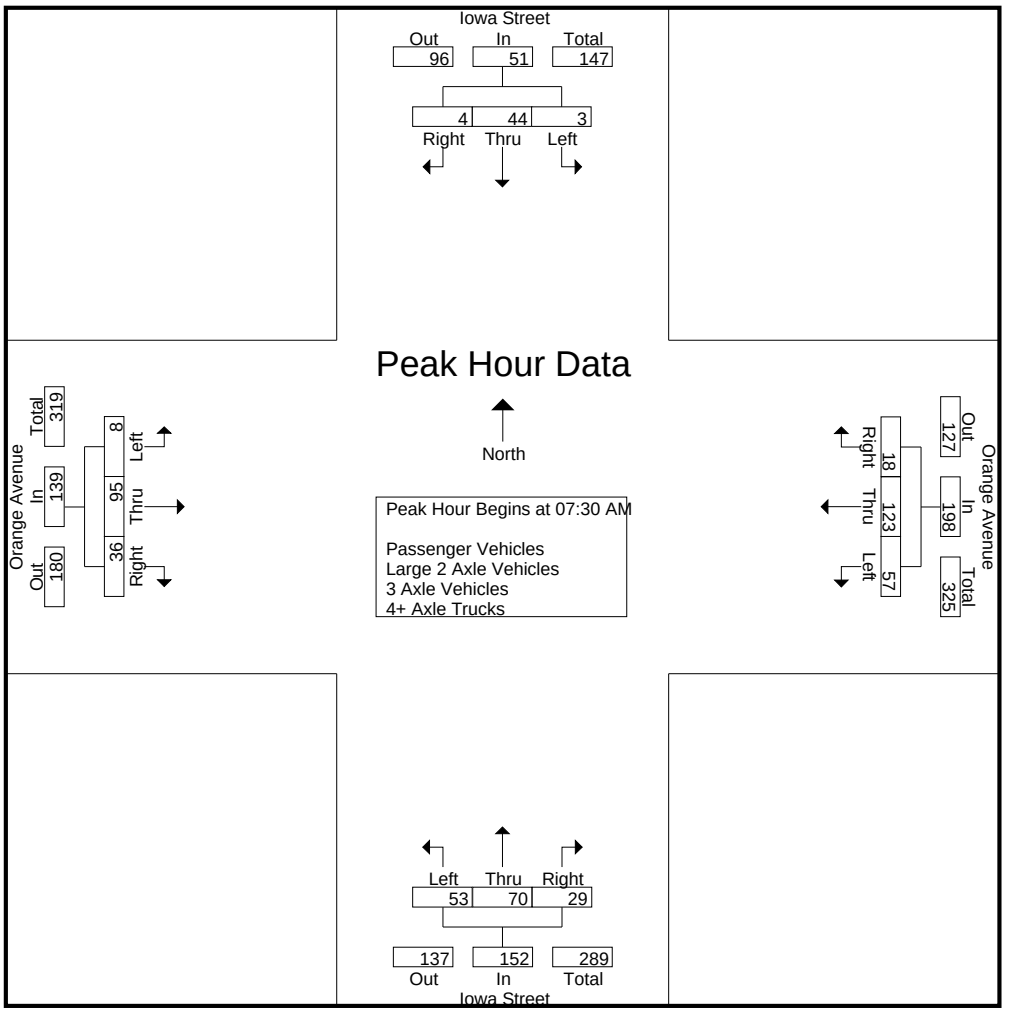

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 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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Weather: Clear

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

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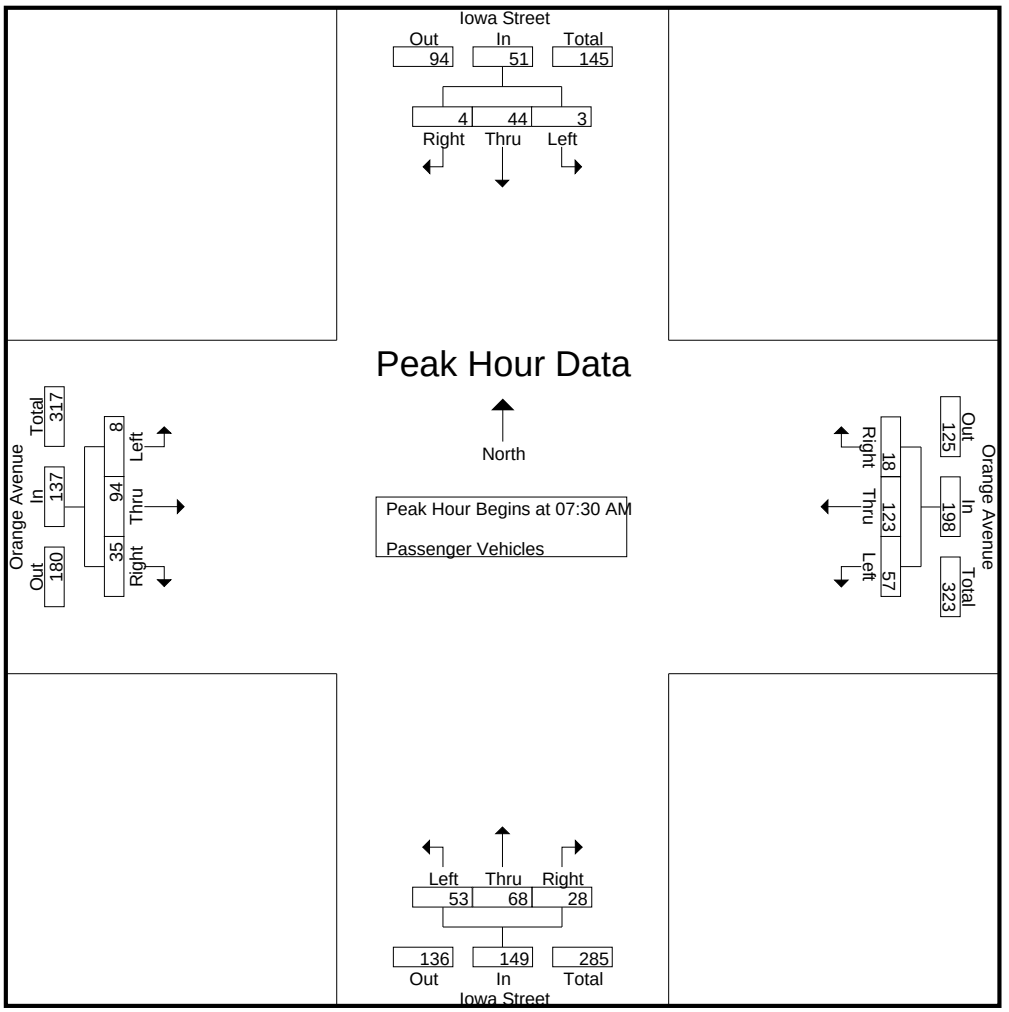

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	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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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
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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
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
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E/W: Orange Avenue
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File Name : 04_RED IO OR AM
Site Code : 07517744
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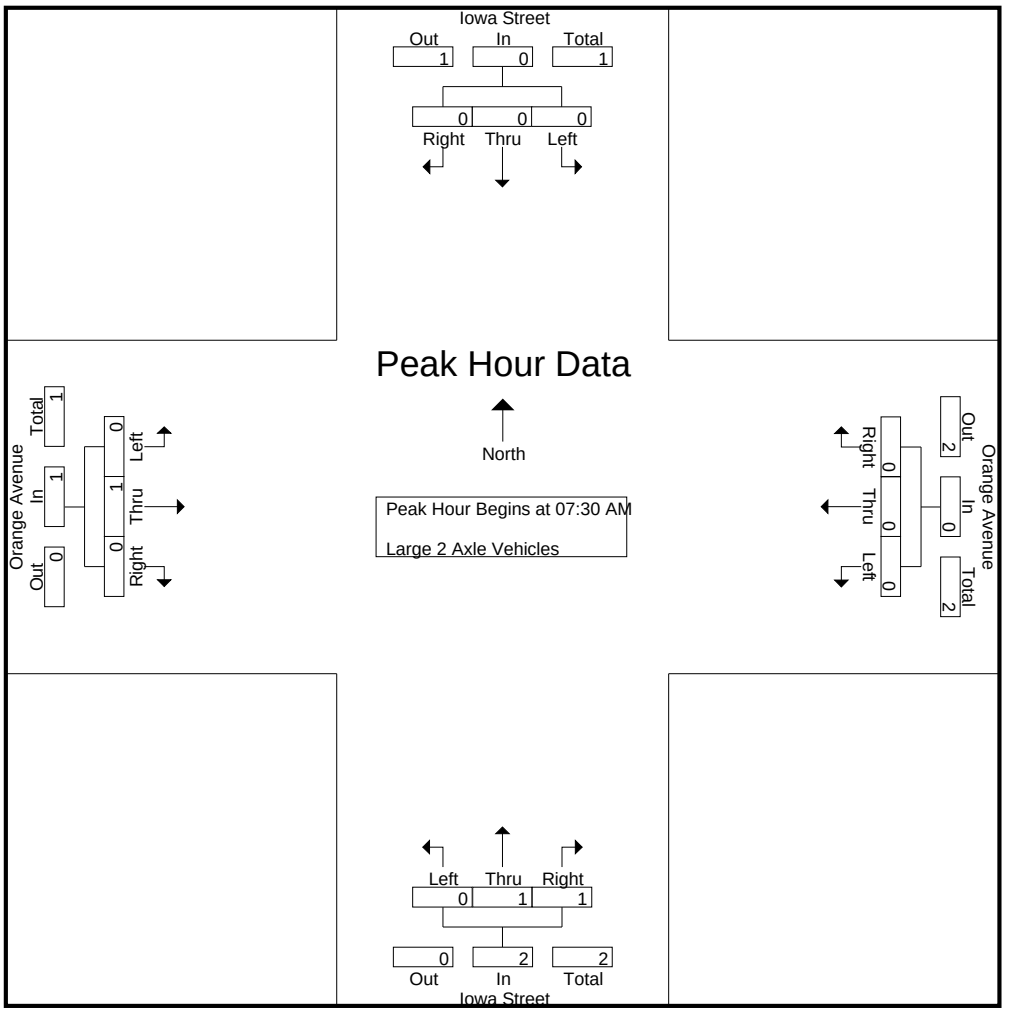

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	**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

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City of Redlands
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Weather: Clear

File Name : 04_RED IO OR AM
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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
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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Weather: Clear

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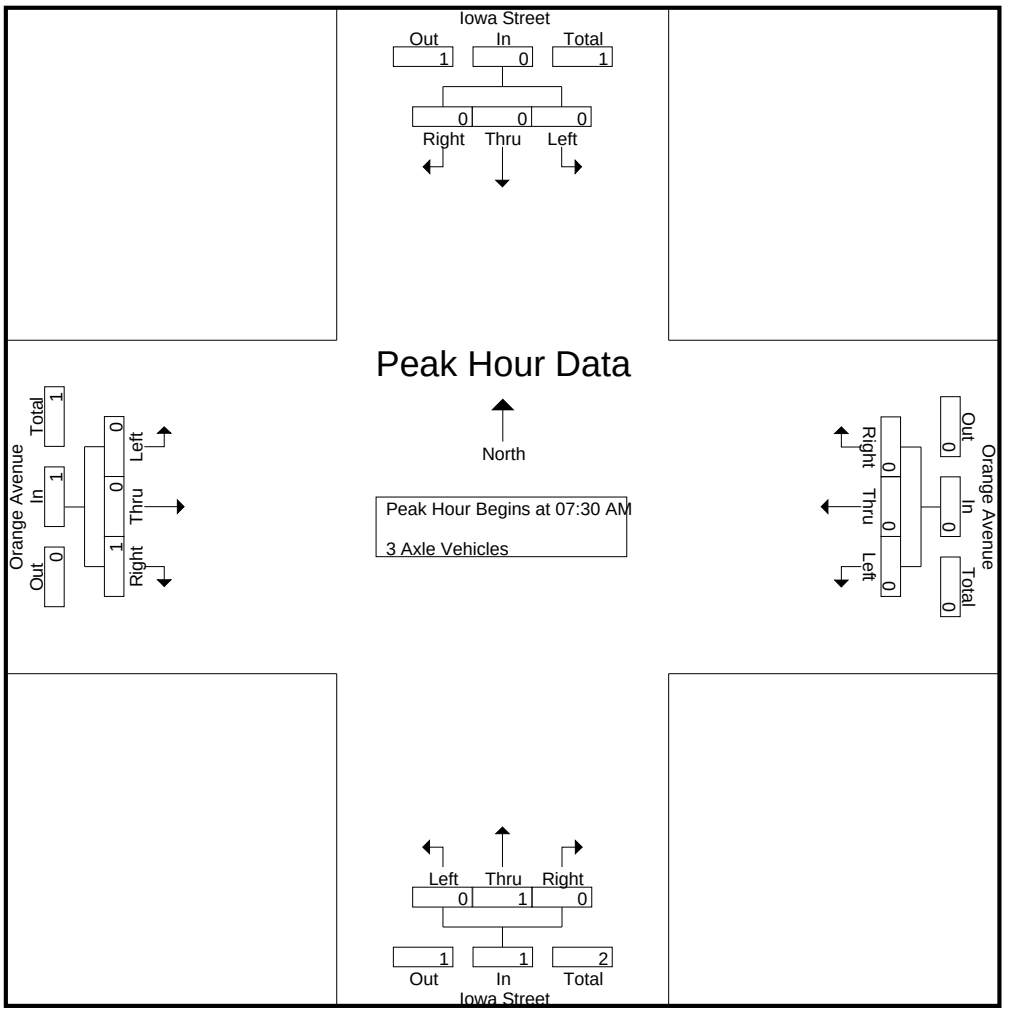

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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
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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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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
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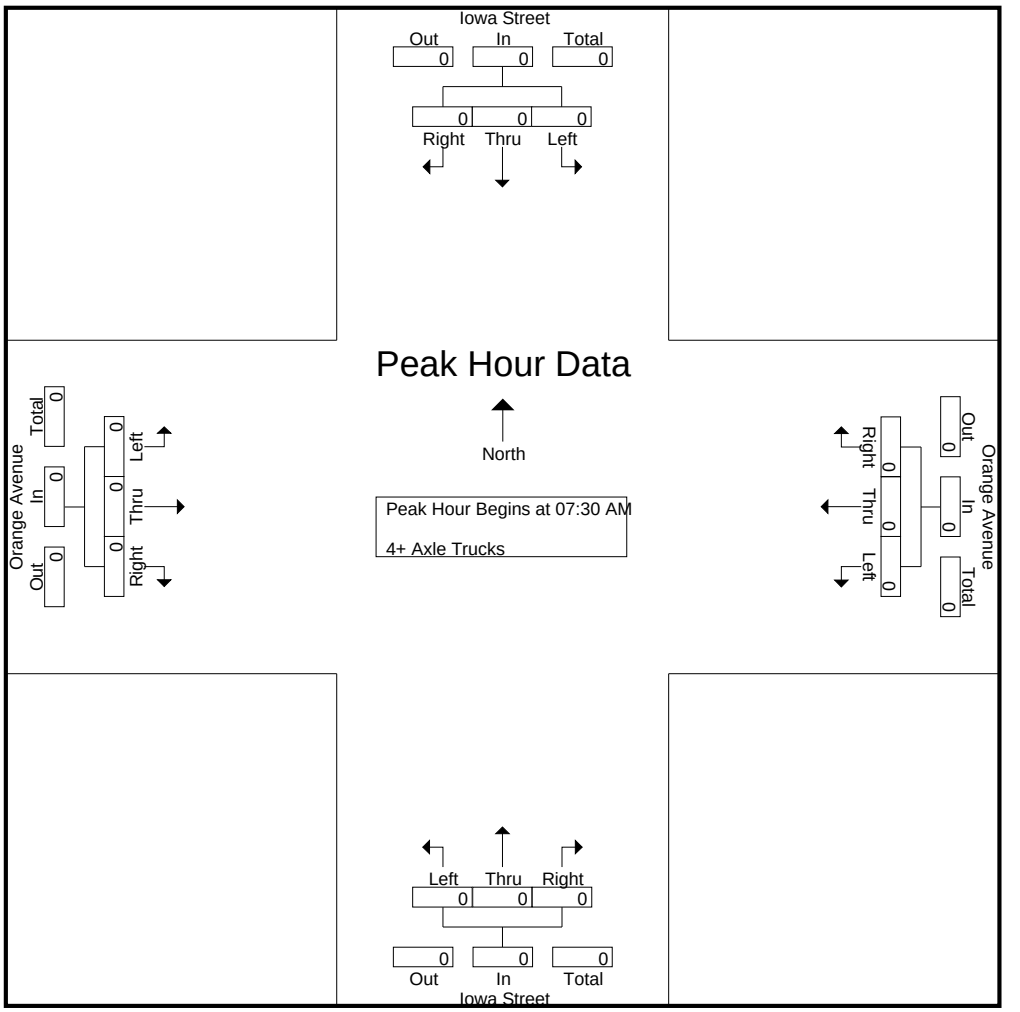

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

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

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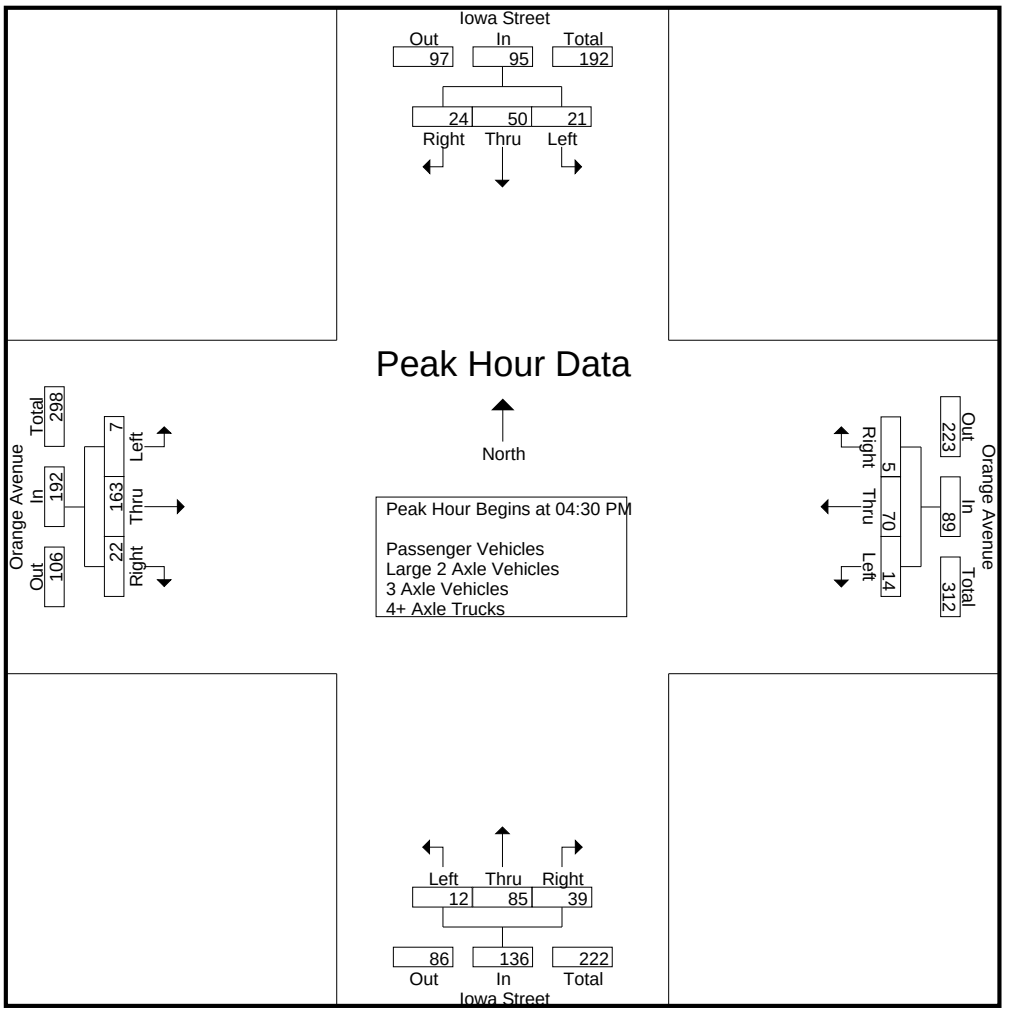
City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

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



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

	04:30 PM				04:00 PM				04:30 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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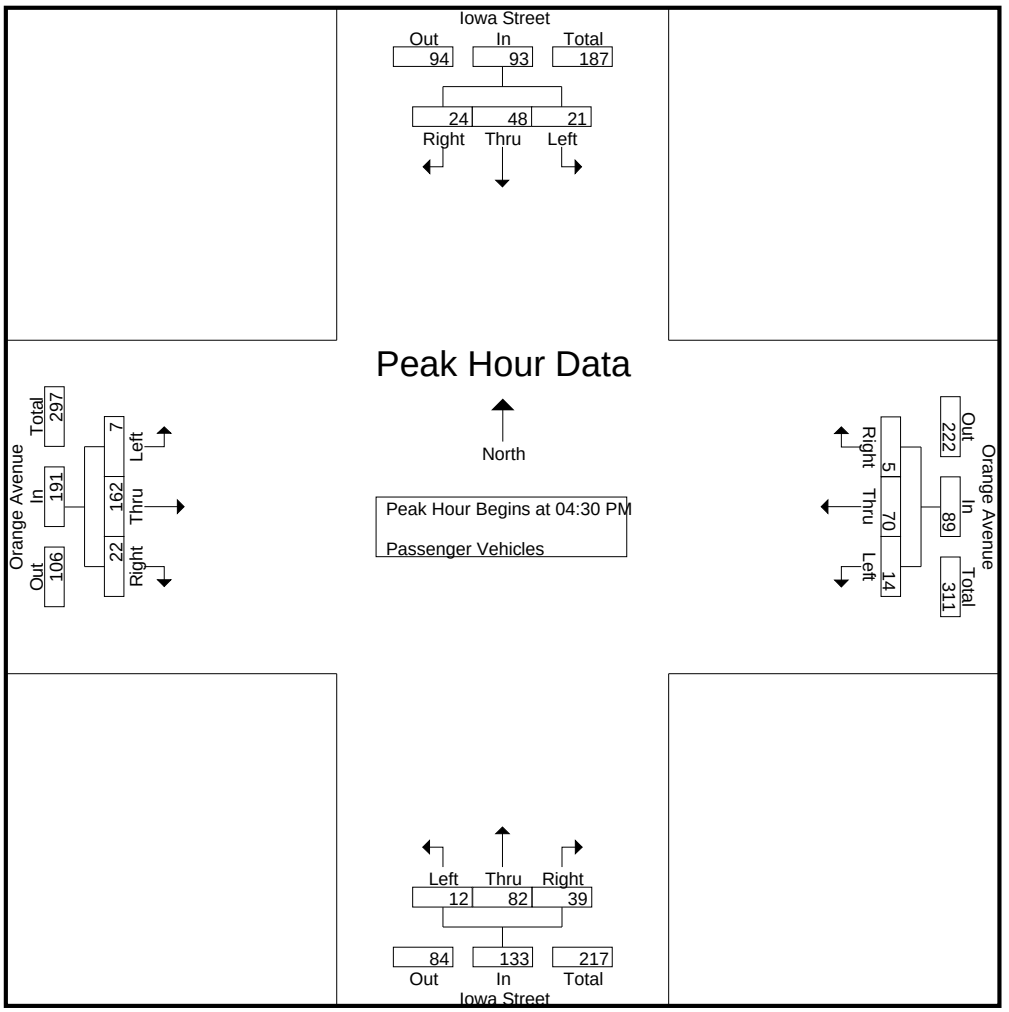
City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

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

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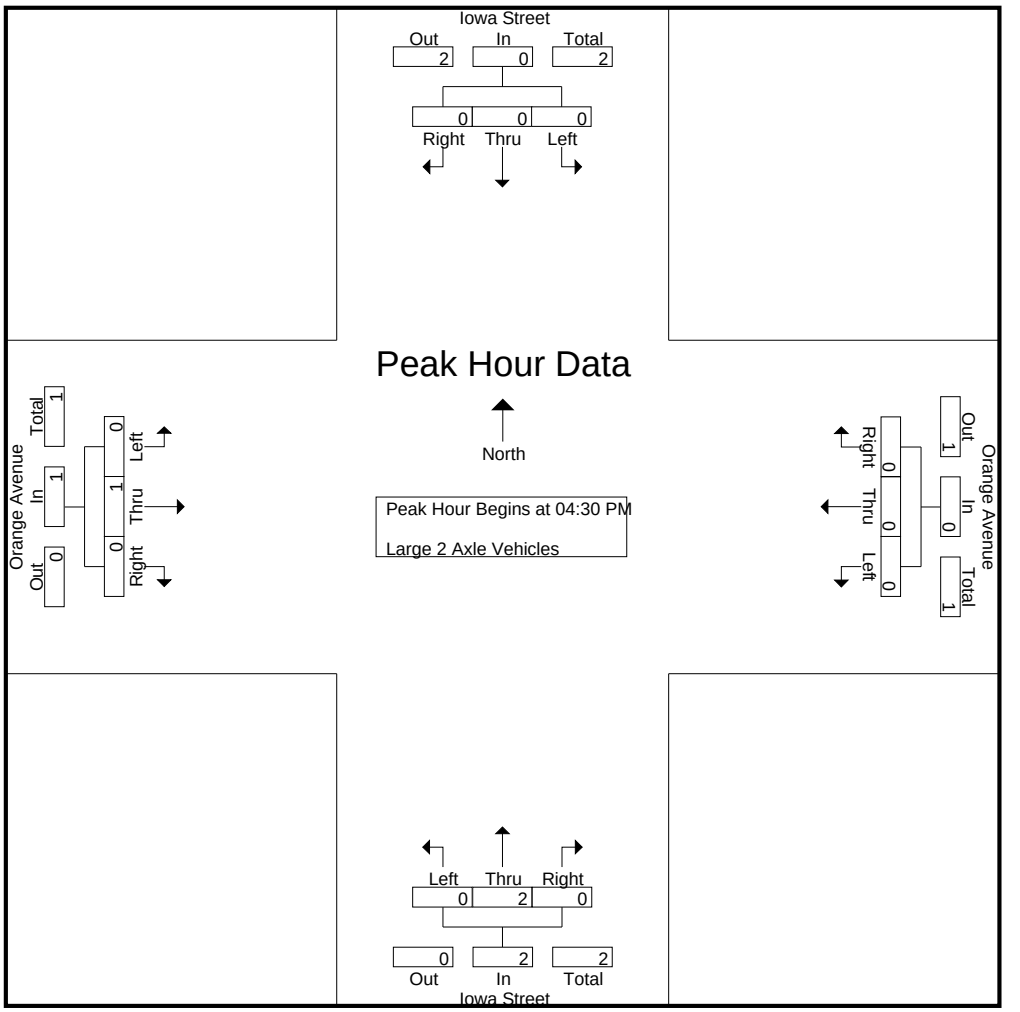
City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

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

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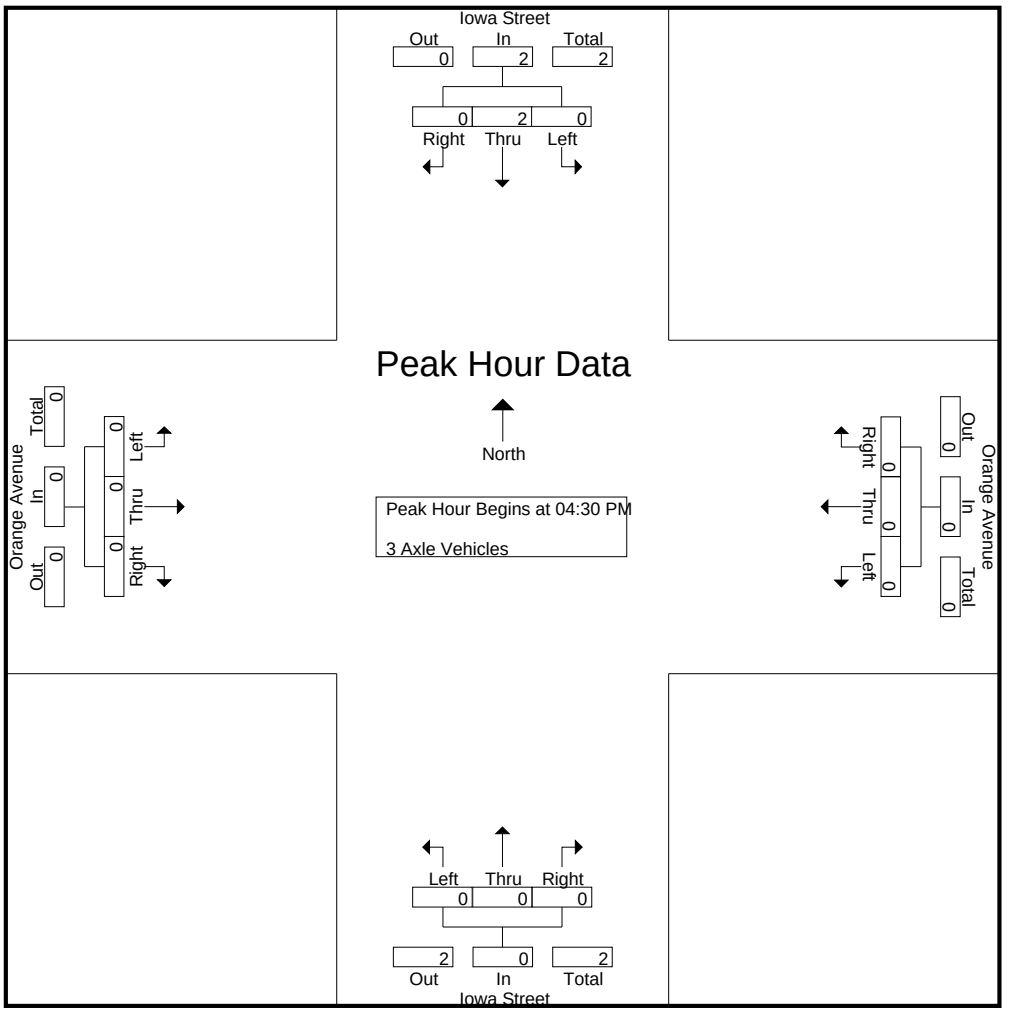
City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

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

File Name : 04_RED IO OR PM
Site Code : 07517744
Start Date : 11/1/2017
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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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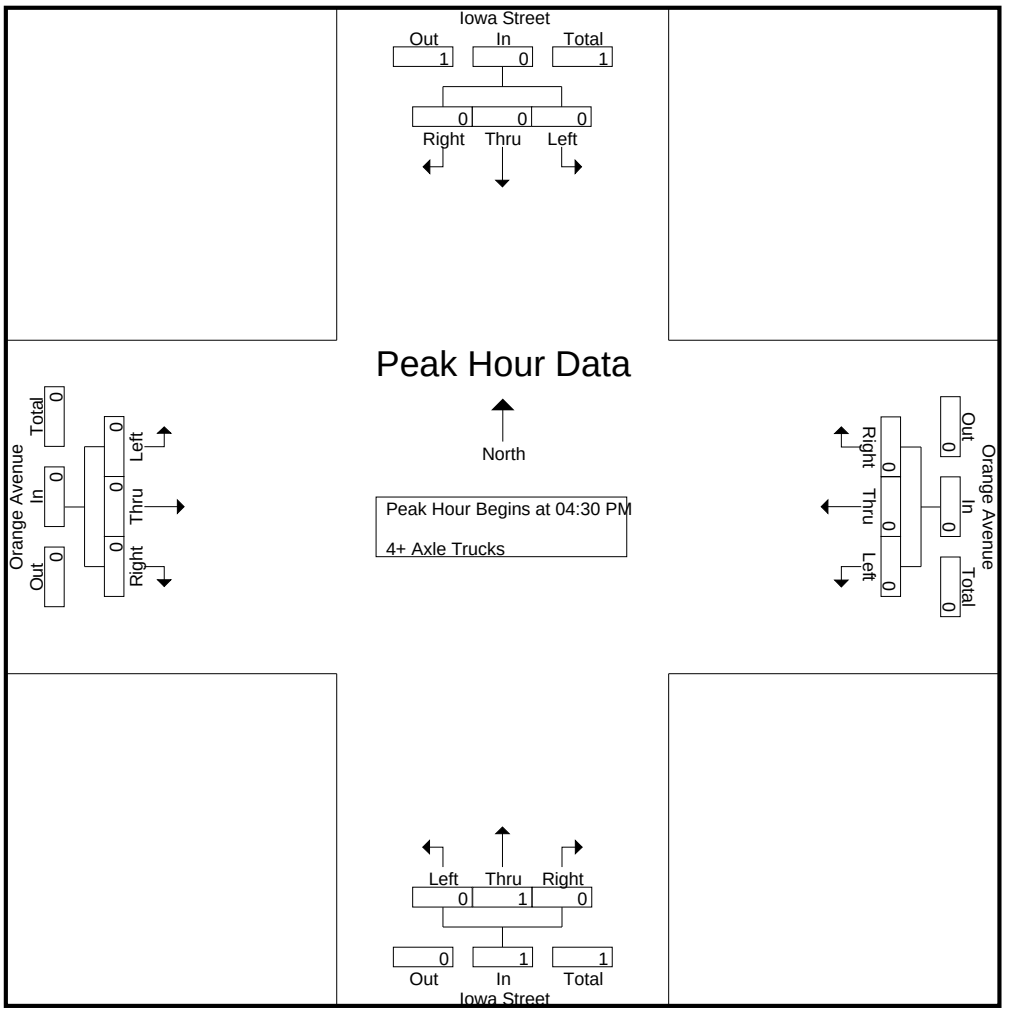
City of Redlands
N/S: Iowa Street
E/W: Orange Avenue
Weather: Clear

File Name : 04_RED IO OR 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	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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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO 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

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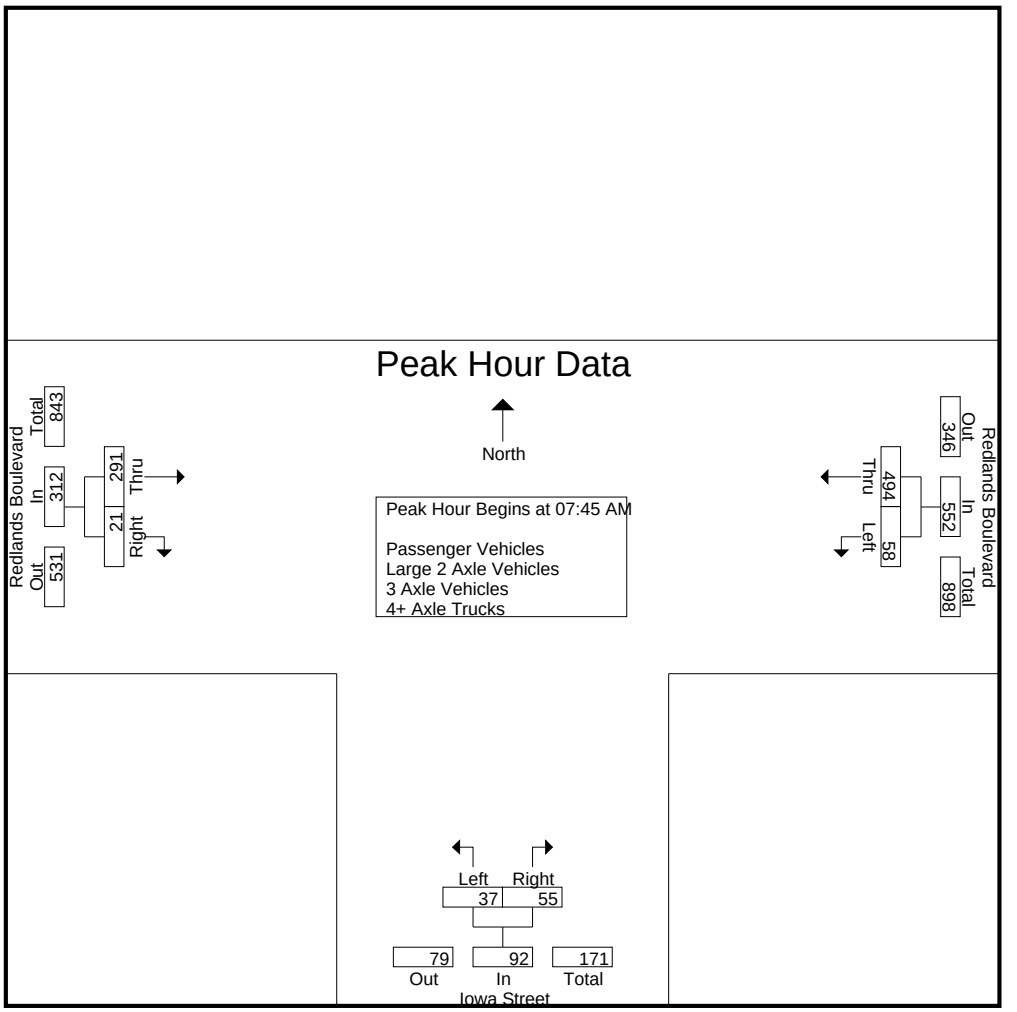
City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE 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:

	07:30 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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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE AM
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
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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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE AM
Site Code : 07517744
Start Date : 11/1/2017
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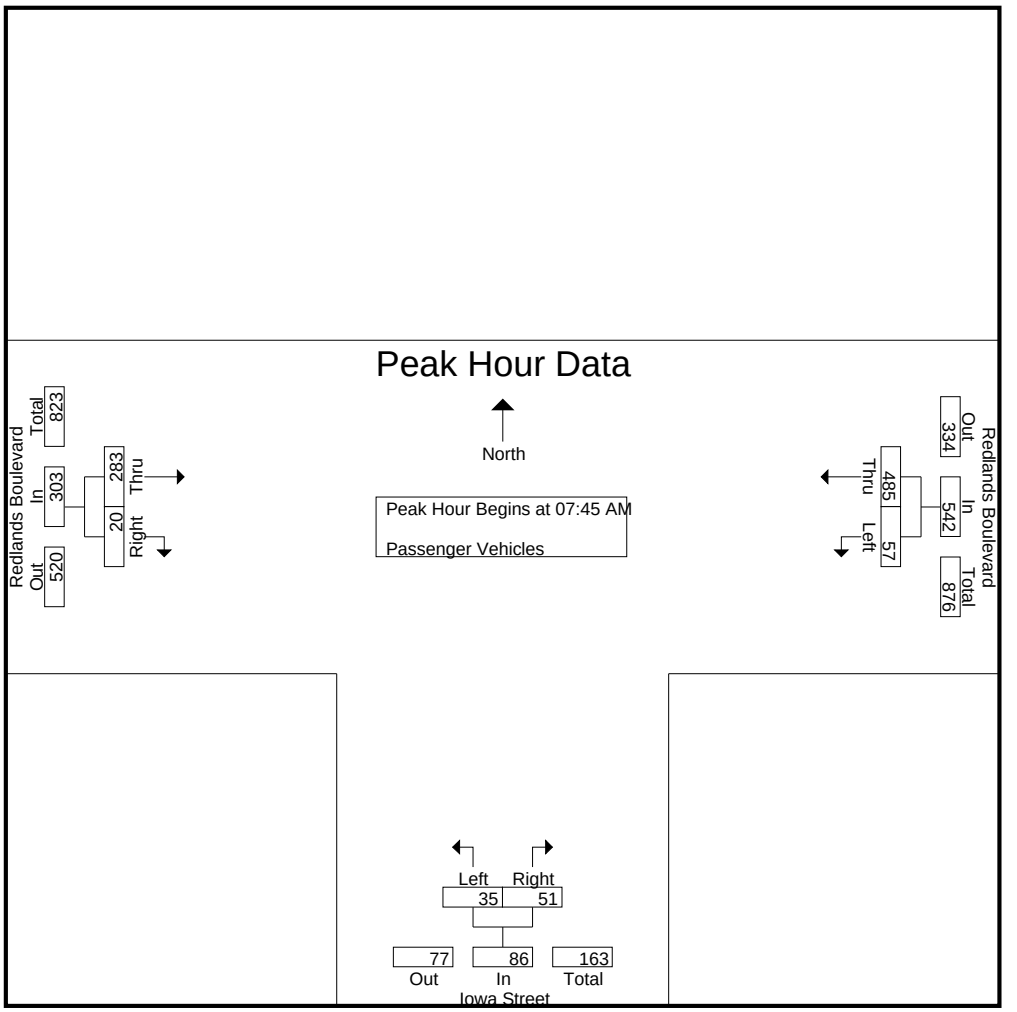

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+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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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

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

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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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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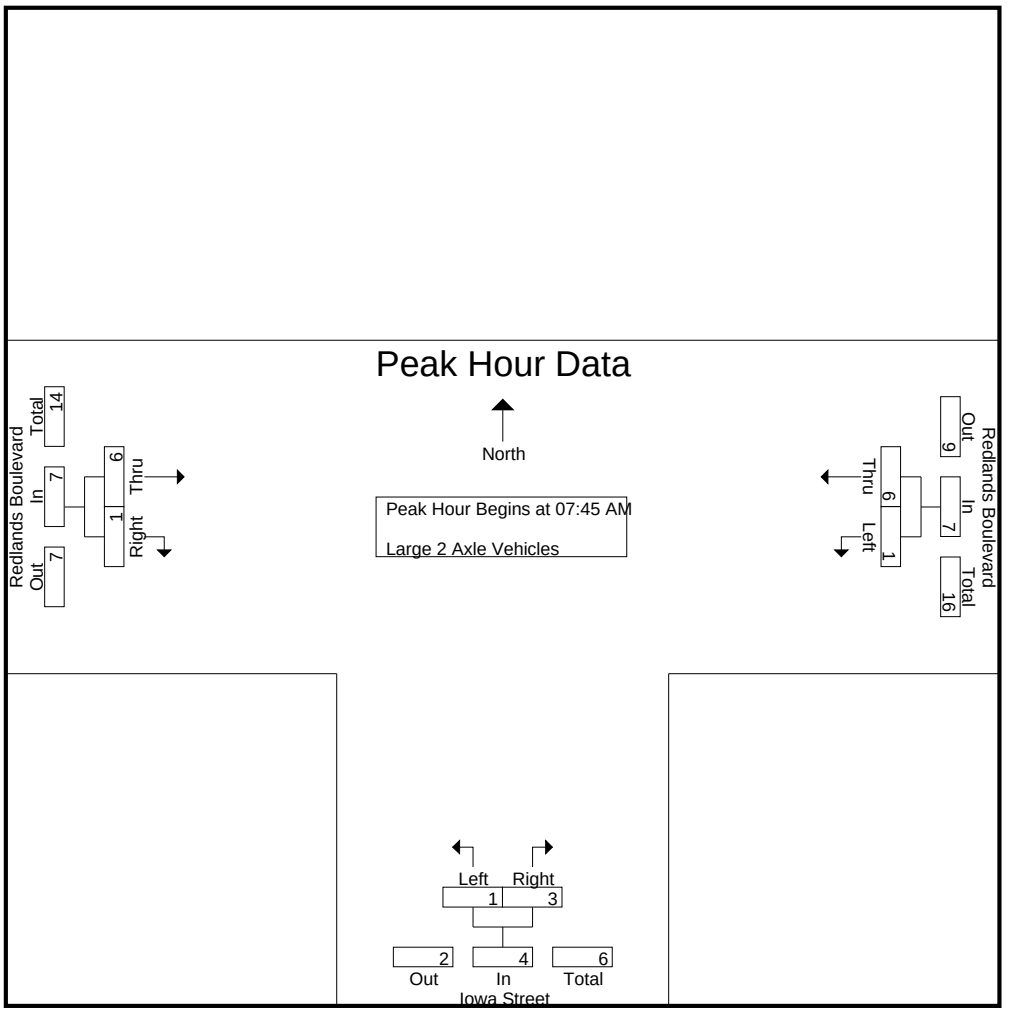

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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
Start Date : 11/1/2017
Page No : 1

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
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE AM
Site Code : 07517744
Start Date : 11/1/2017
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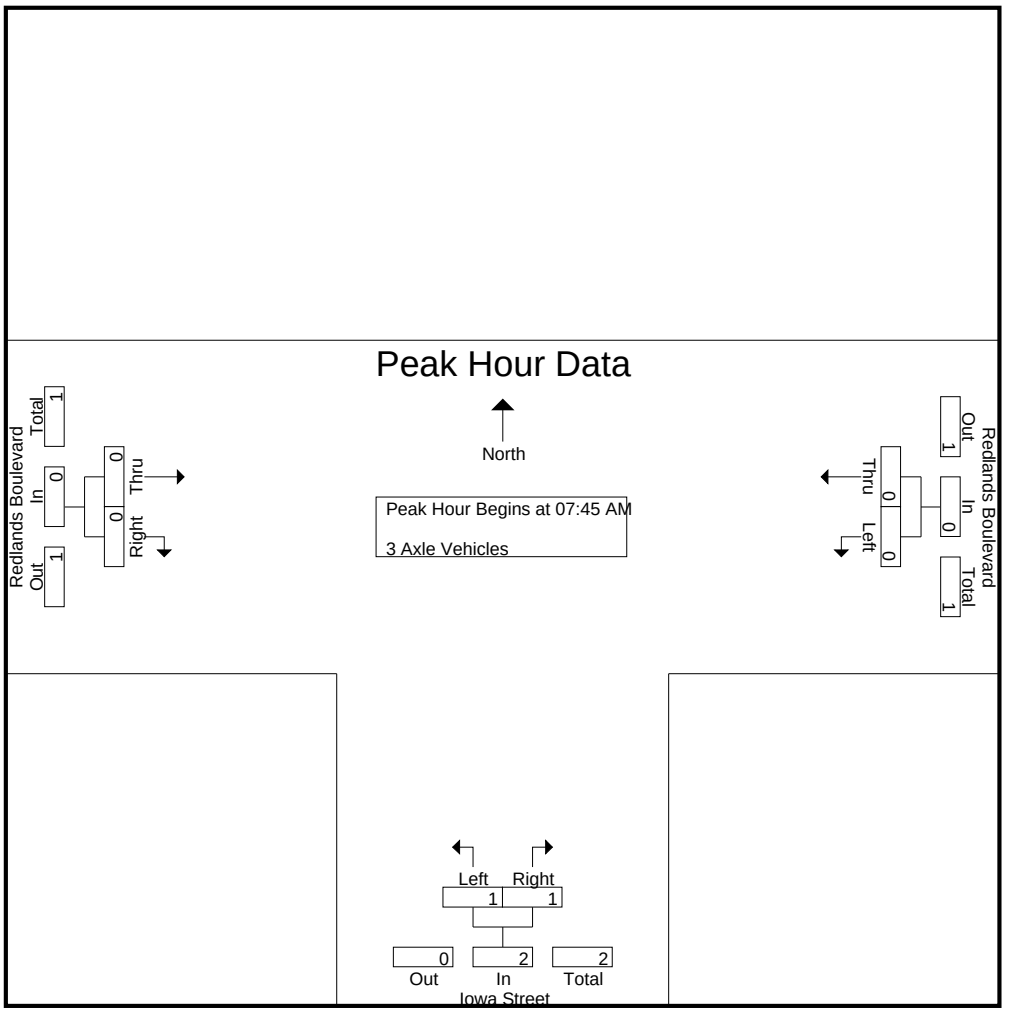

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:45 AM			07:45 AM		
+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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City of Redlands
N/S: Iowa Street
E/W: Redlands Boulevard
Weather: Clear

File Name : 01_RED IO RE AM
Site Code : 07517744
Start Date : 11/1/2017

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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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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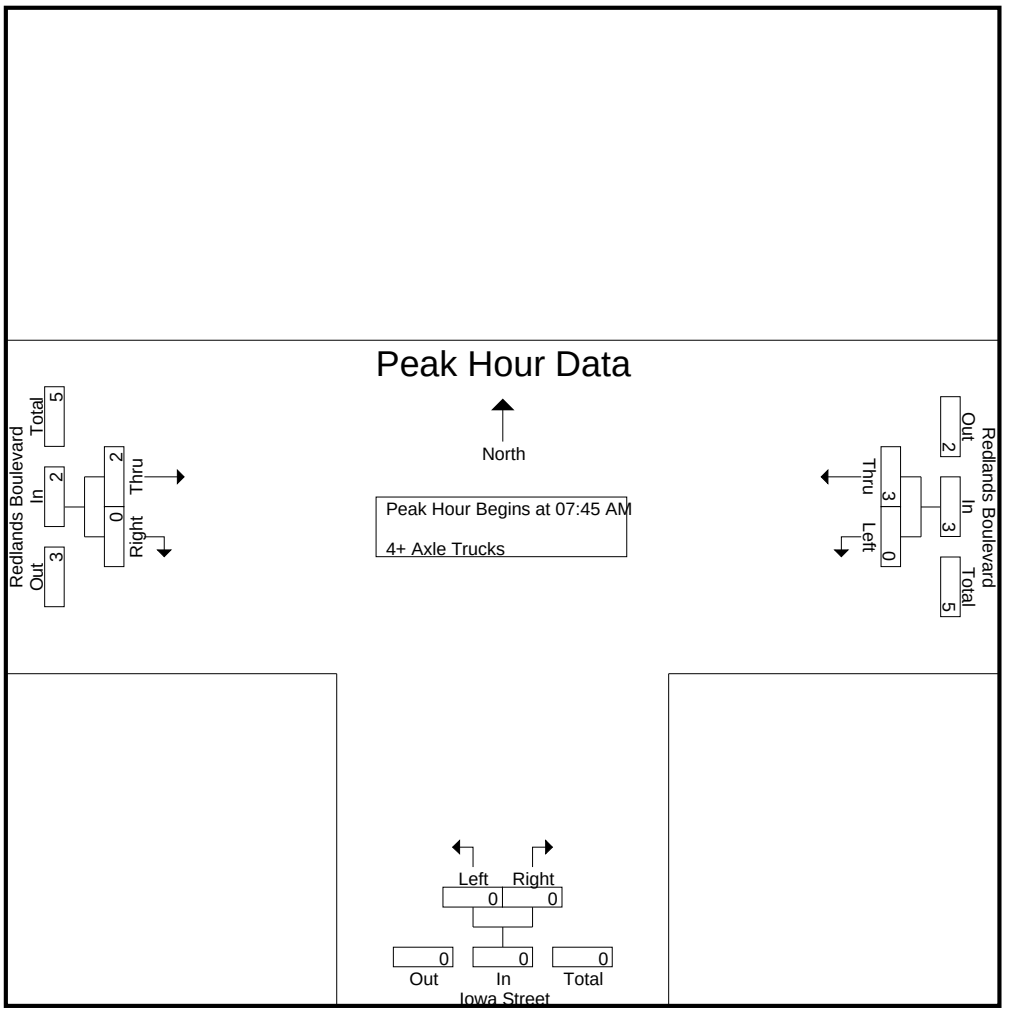

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

File Name : 01_RED IO RE PM
Site Code : 07517744
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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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City of Redlands
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E/W: Redlands Boulevard
Weather: Clear

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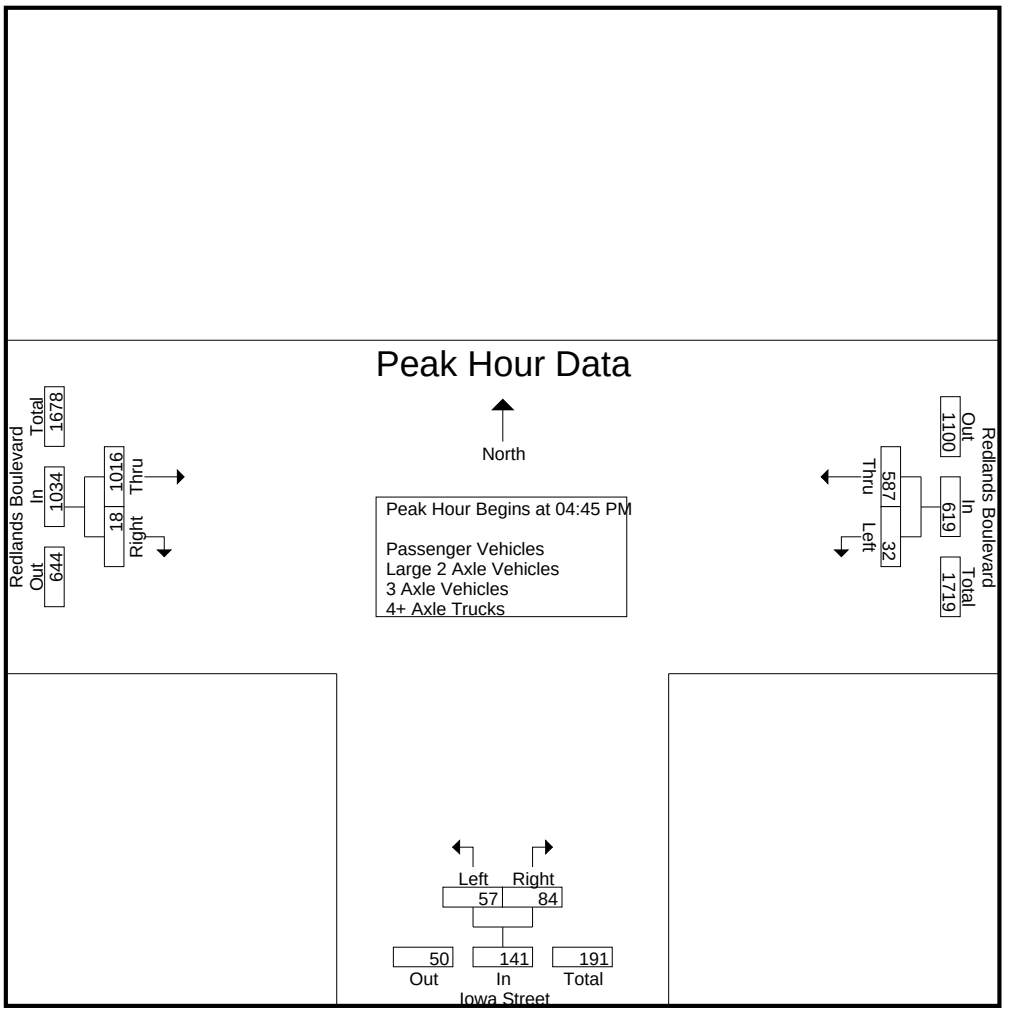

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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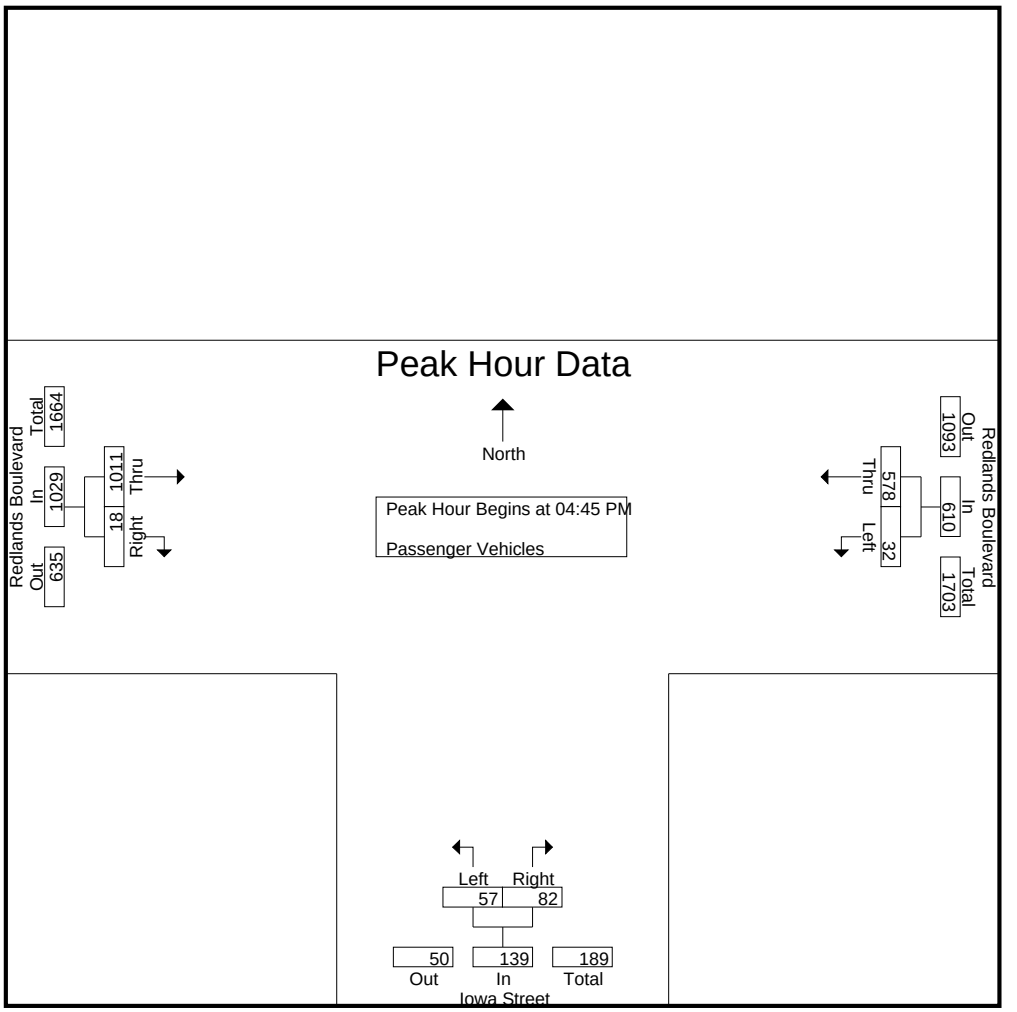

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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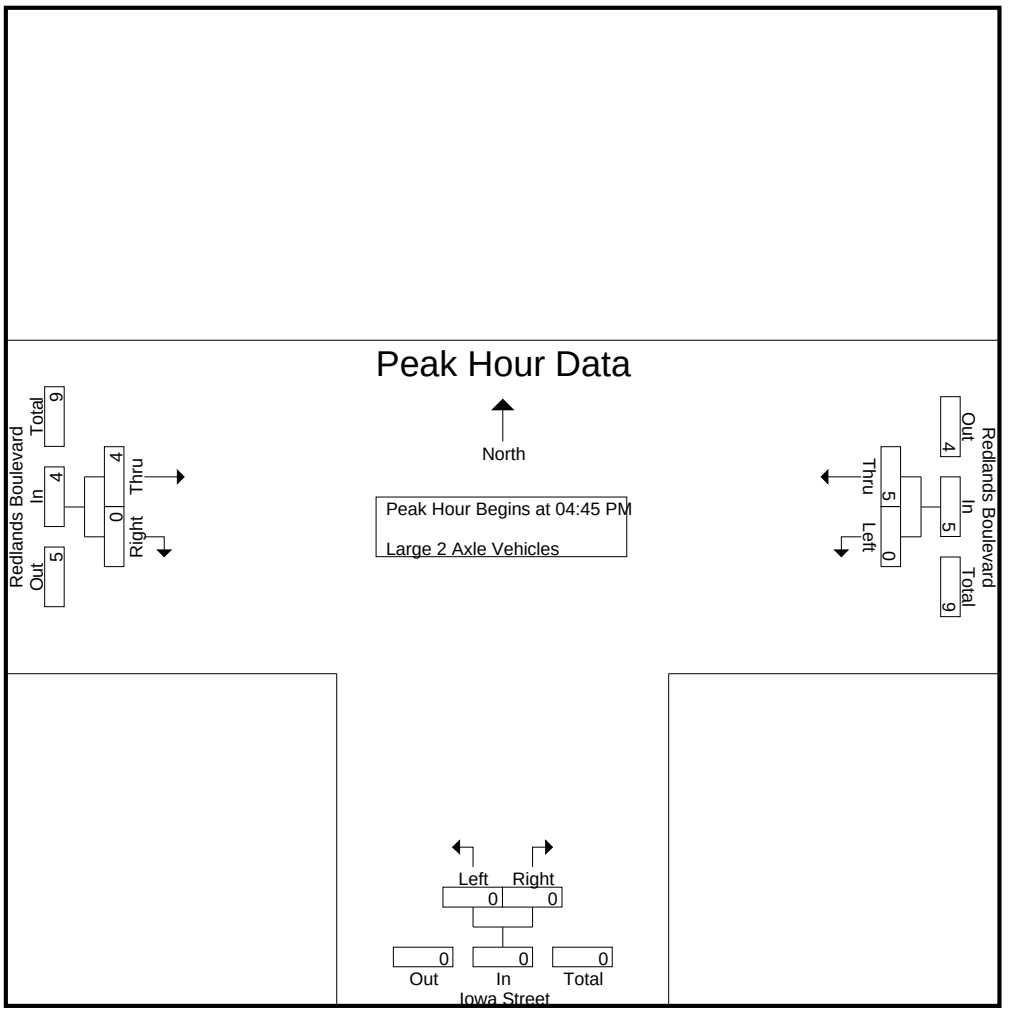

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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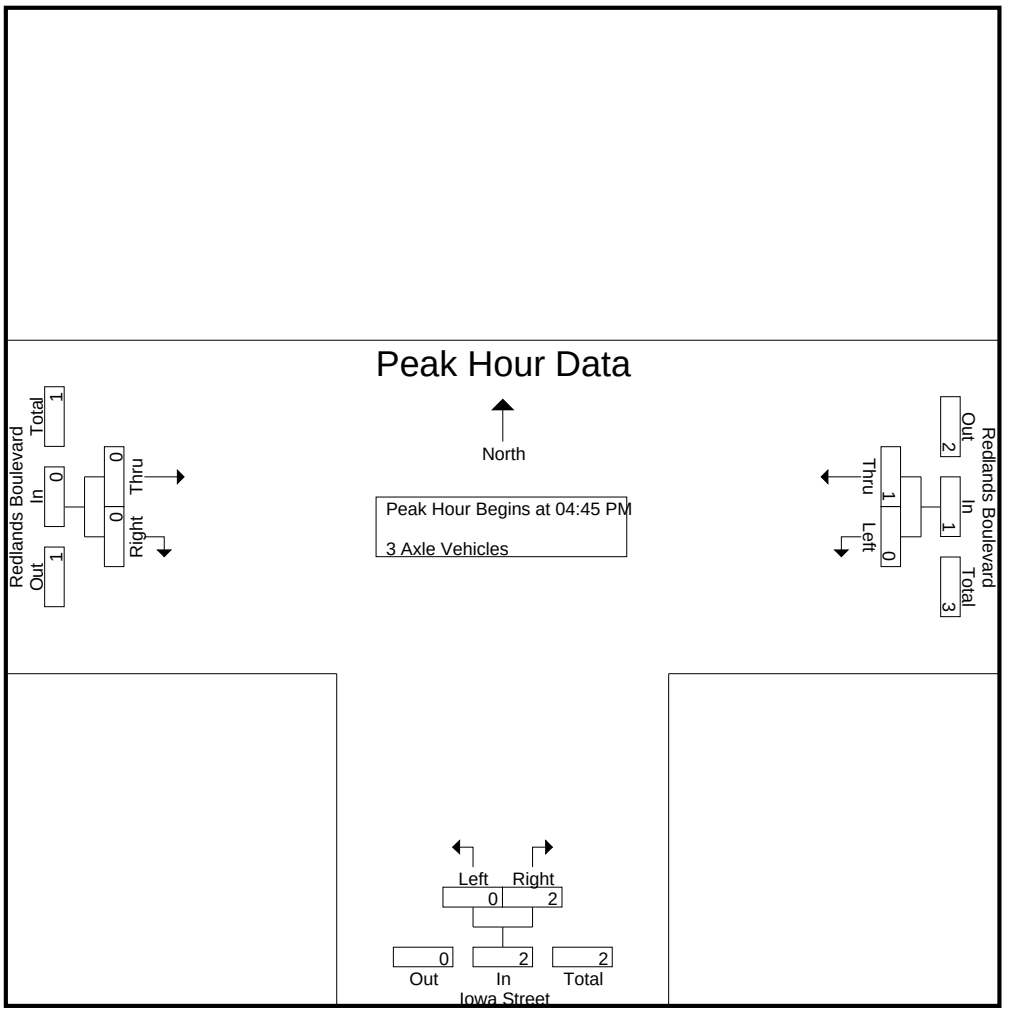

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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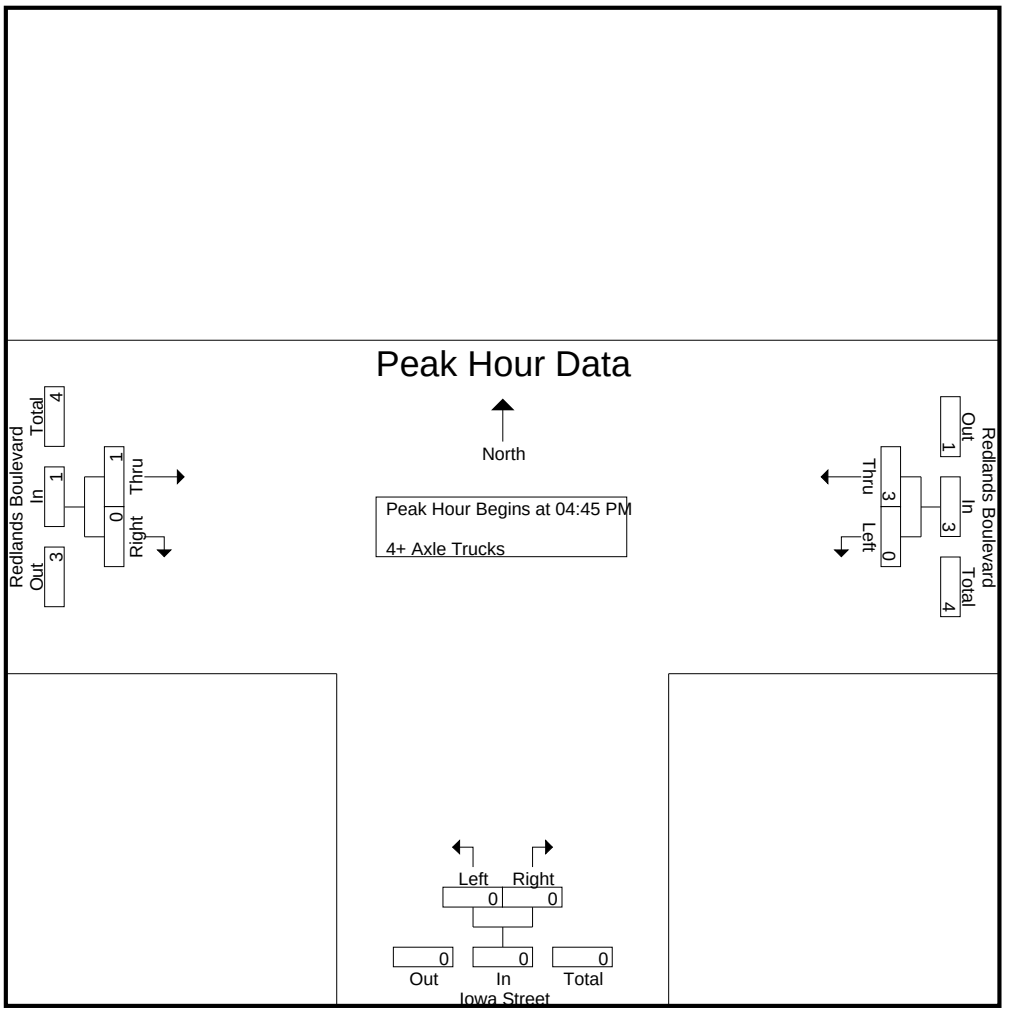

Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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

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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
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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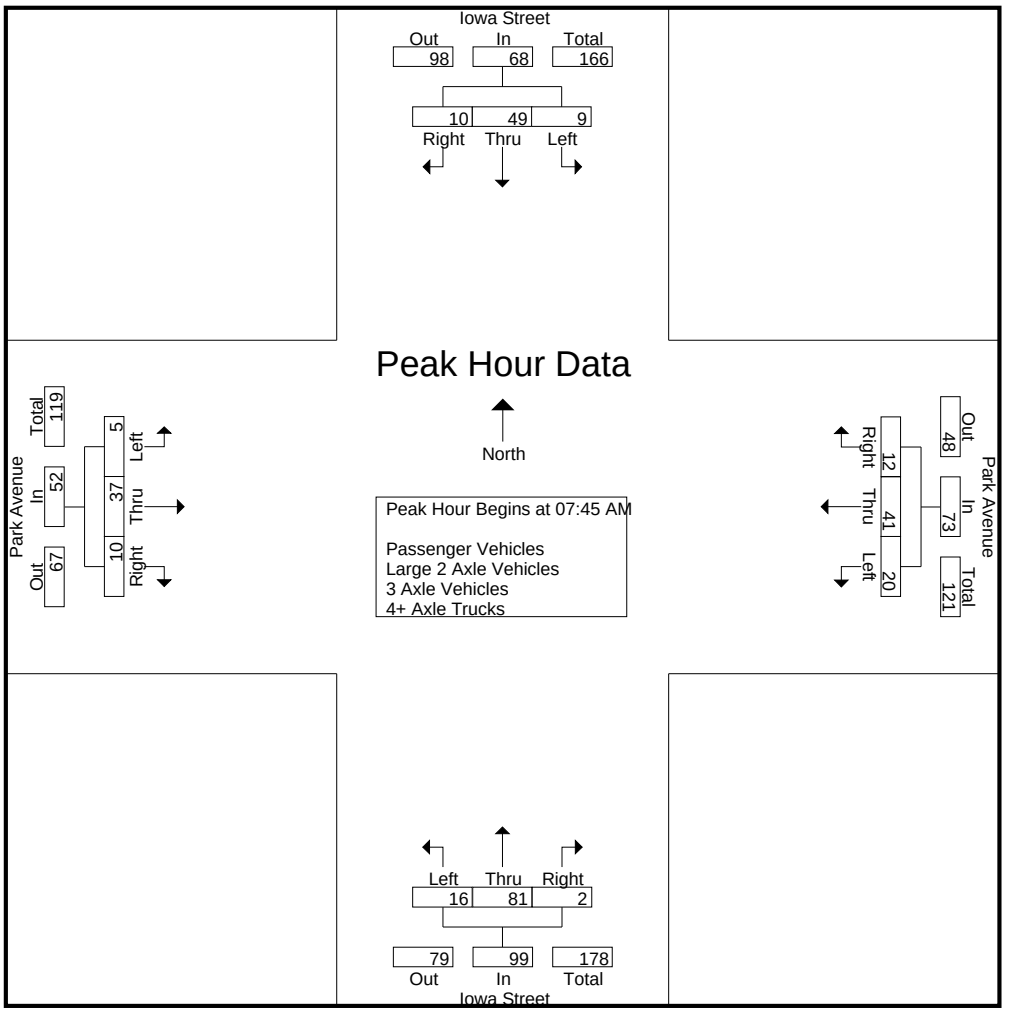

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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

Counts Unlimited
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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
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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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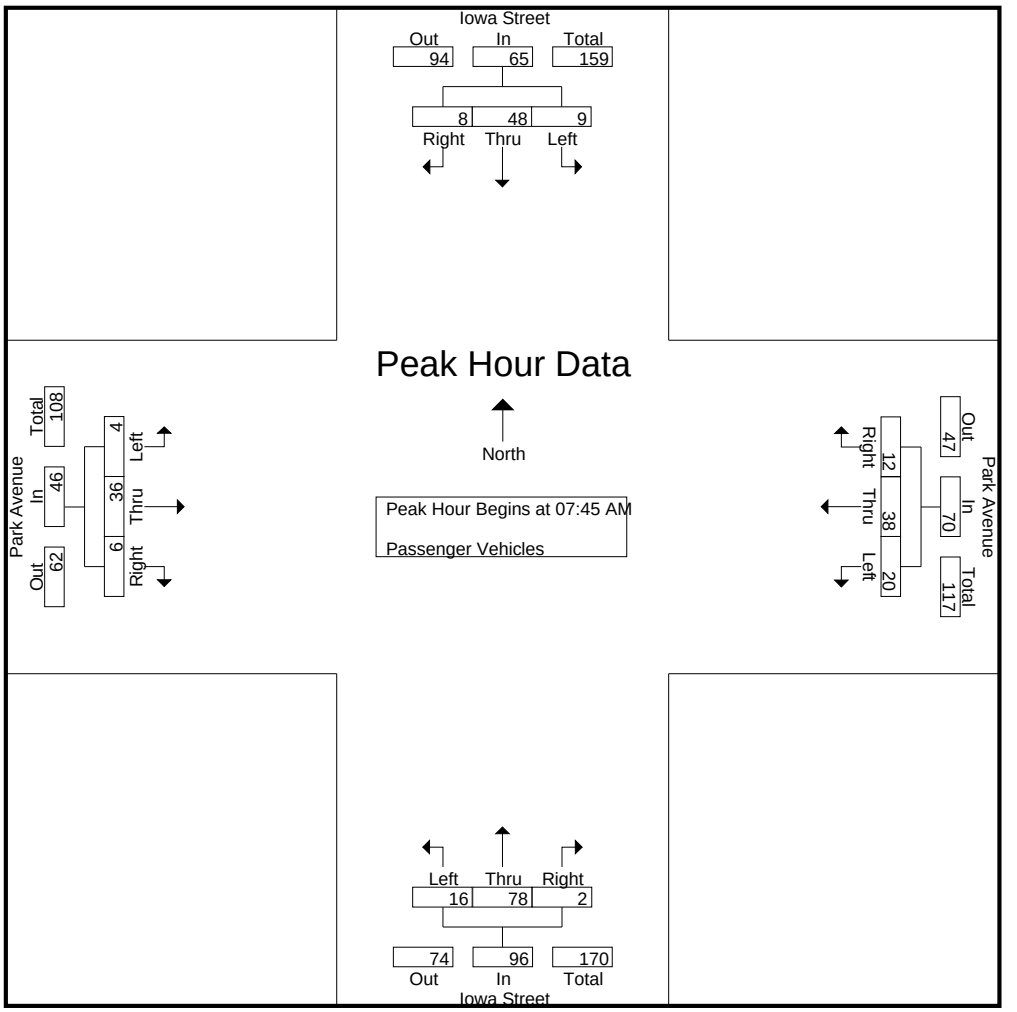

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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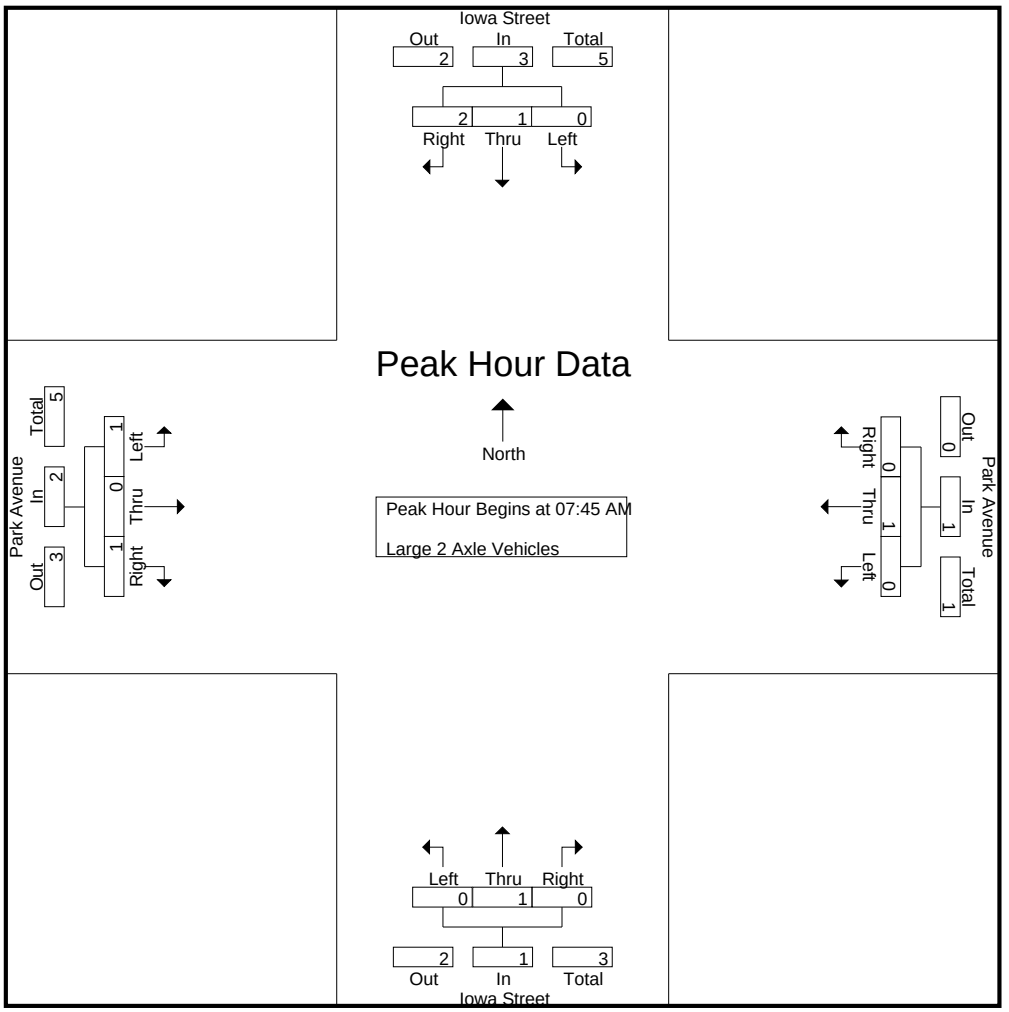

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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

File Name : 02_RED IO PA AM
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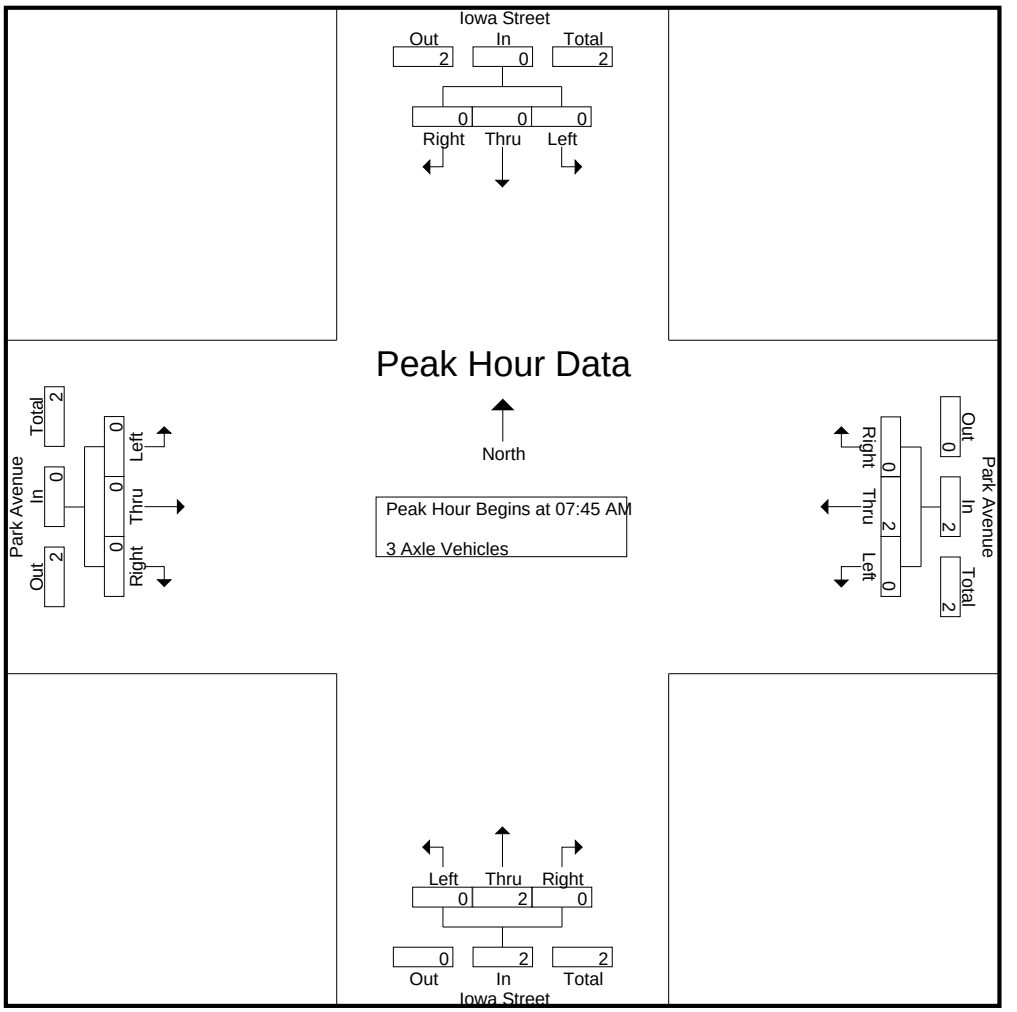

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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City of Redlands
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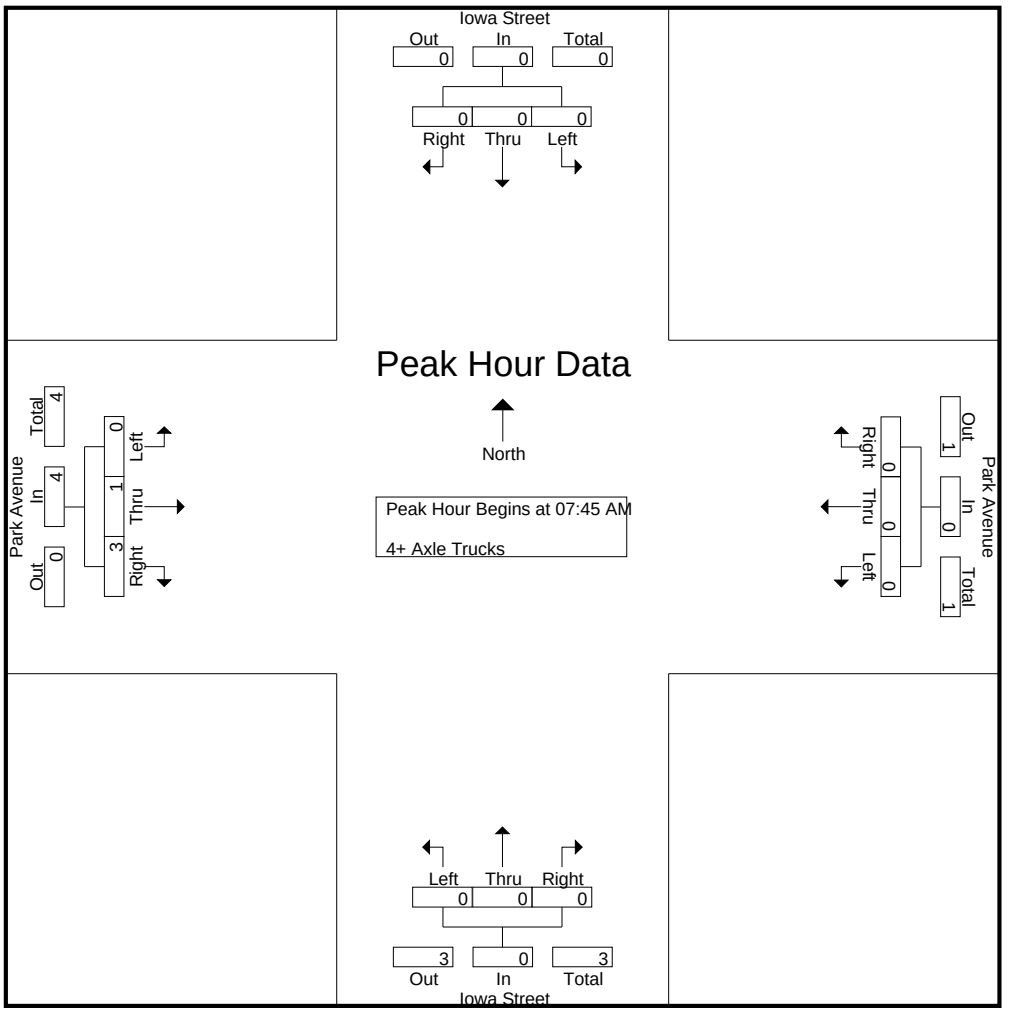

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Weather: Clear

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

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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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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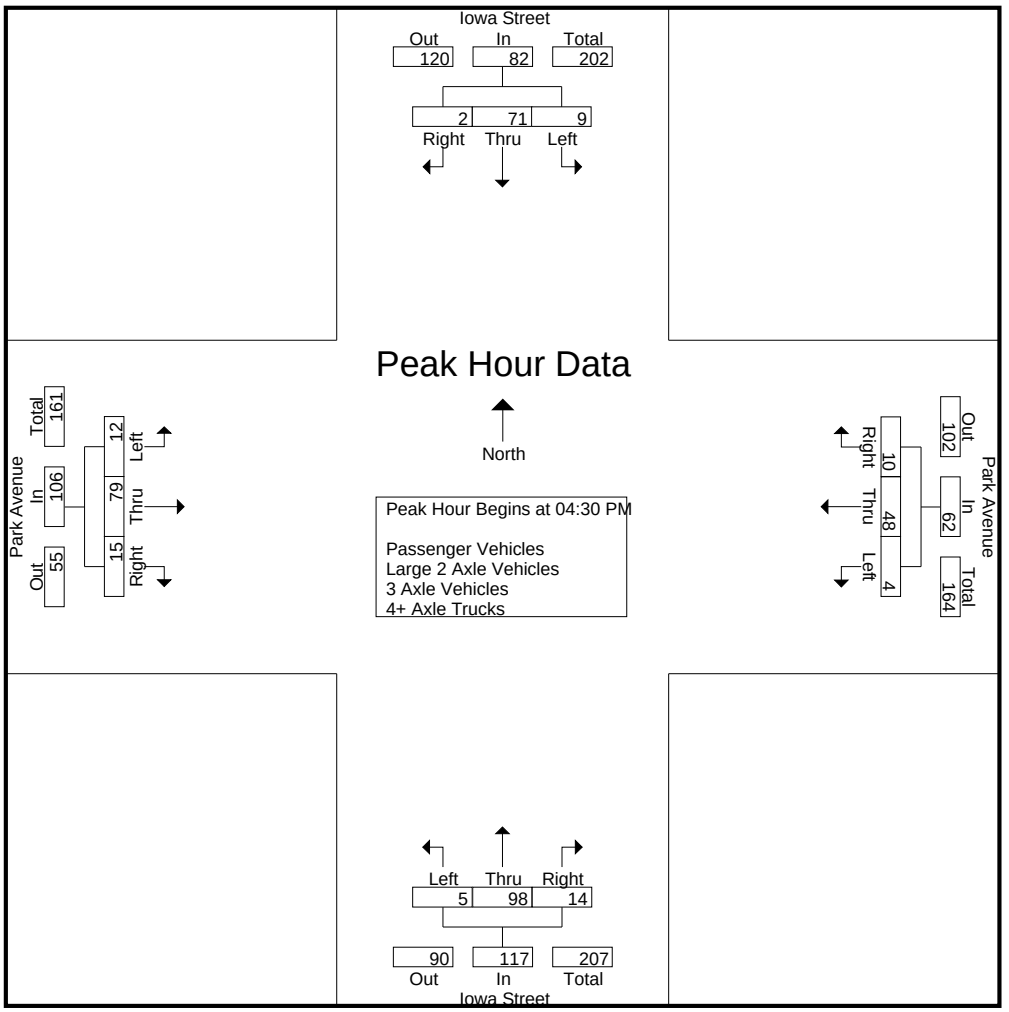

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Weather: Clear

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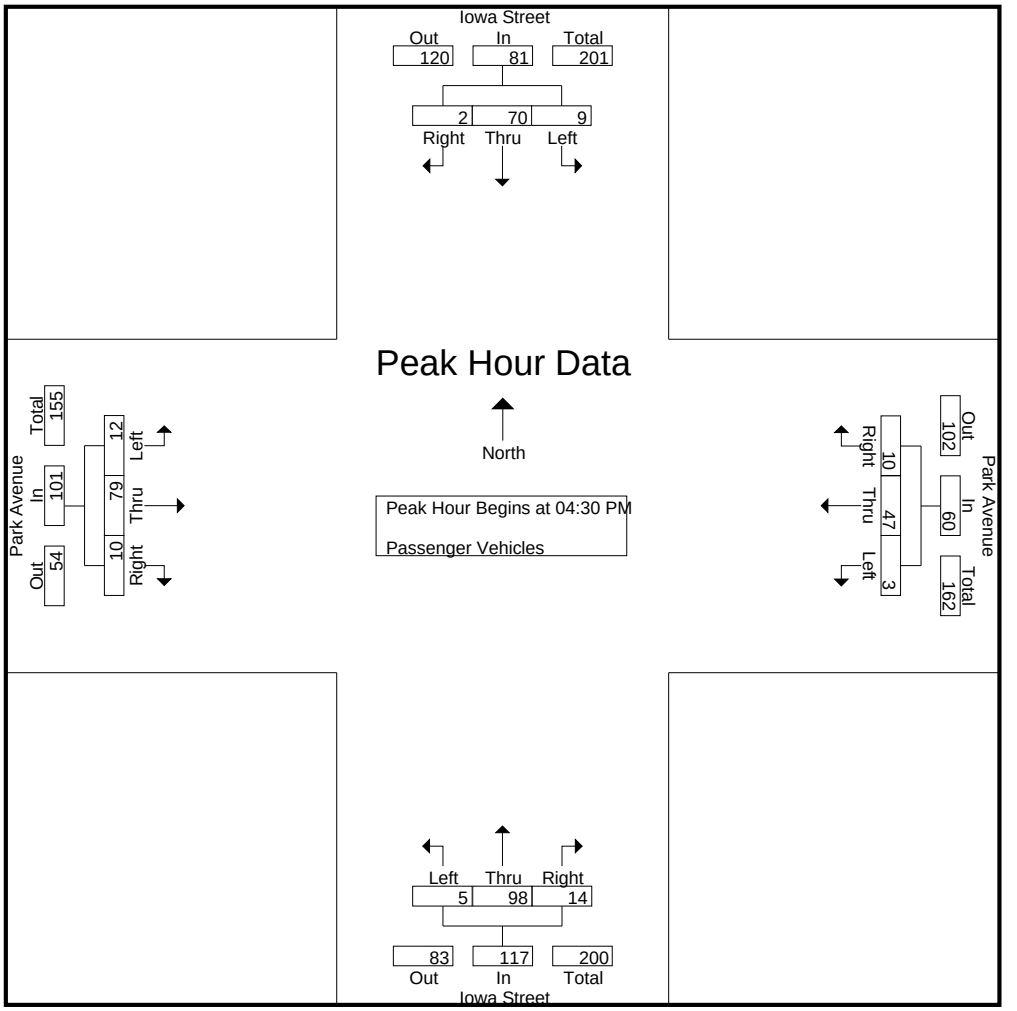

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	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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File Name : 02_RED IO PA PM
Site Code : 07517744
Start Date : 11/1/2017
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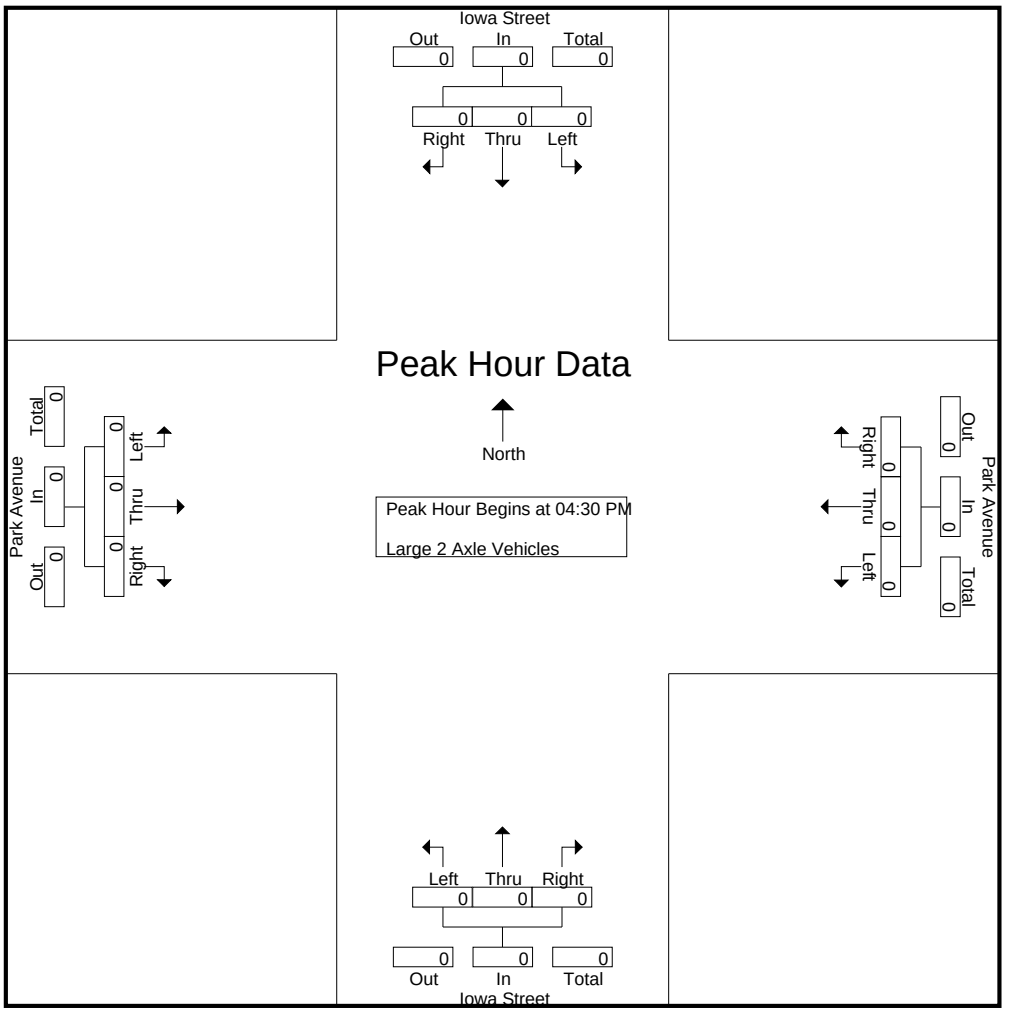

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	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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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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City of Redlands
N/S: Iowa Street
E/W: Park Avenue
Weather: Clear

File Name : 02_RED IO PA PM
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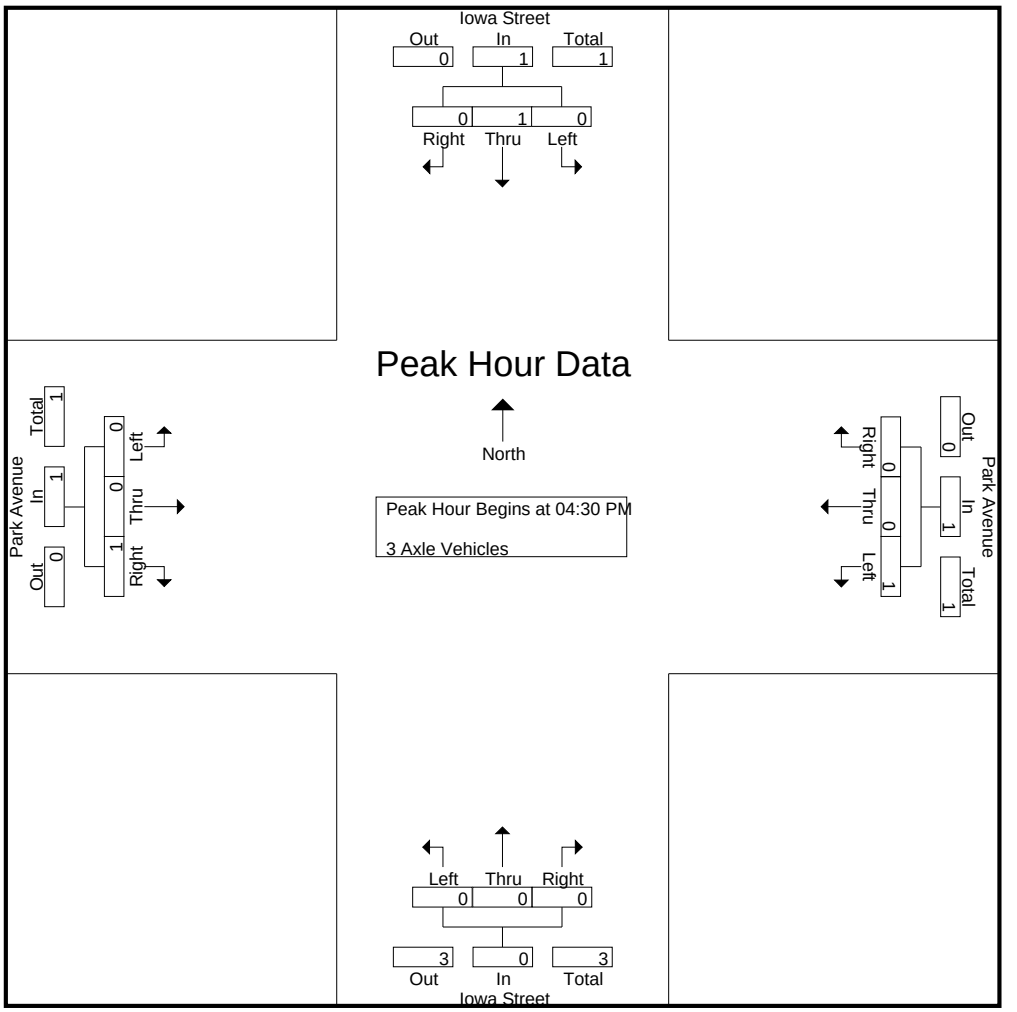

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**1**	0	**1**	**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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City of Redlands
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E/W: Park Avenue
Weather: Clear

File Name : 02_RED IO PA PM
Site Code : 07517744
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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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City of Redlands
N/S: Iowa Street
E/W: Park Avenue
Weather: Clear

File Name : 02_RED IO PA PM
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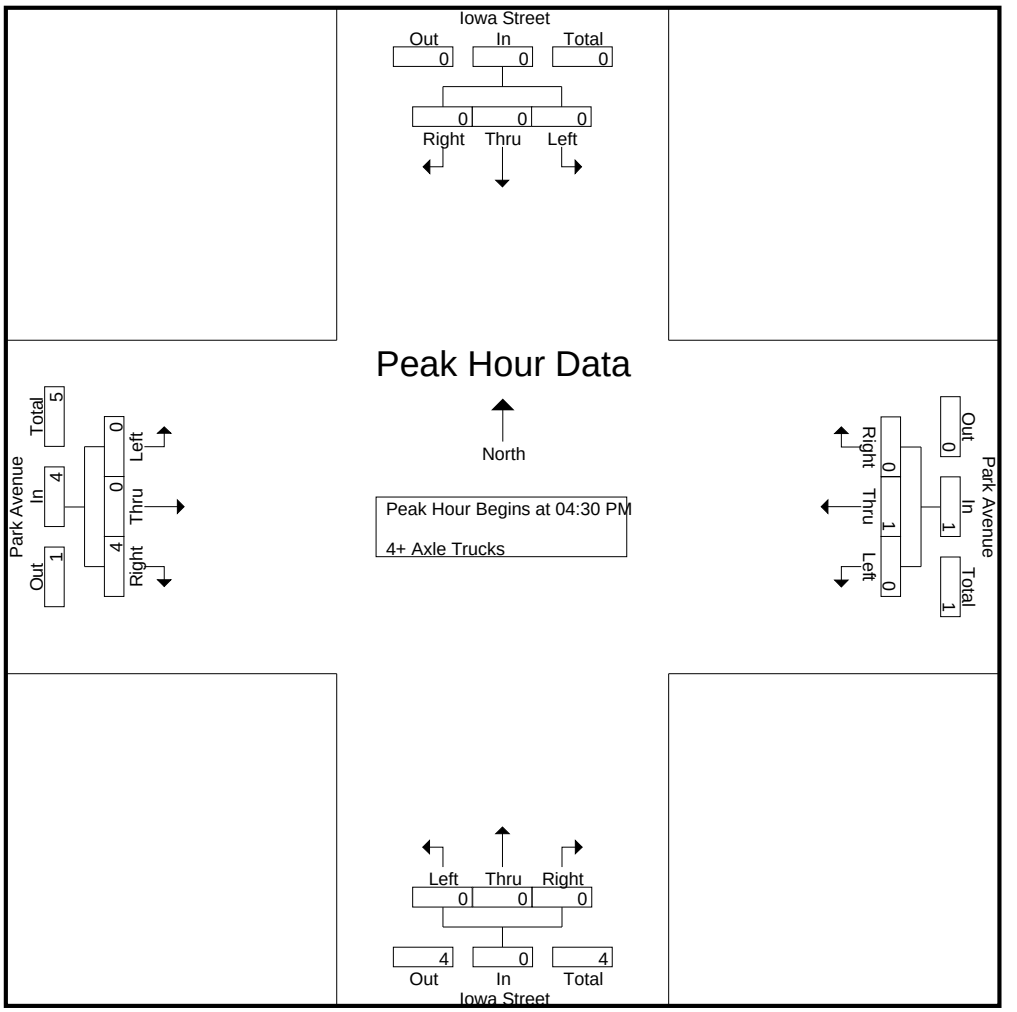

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	**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

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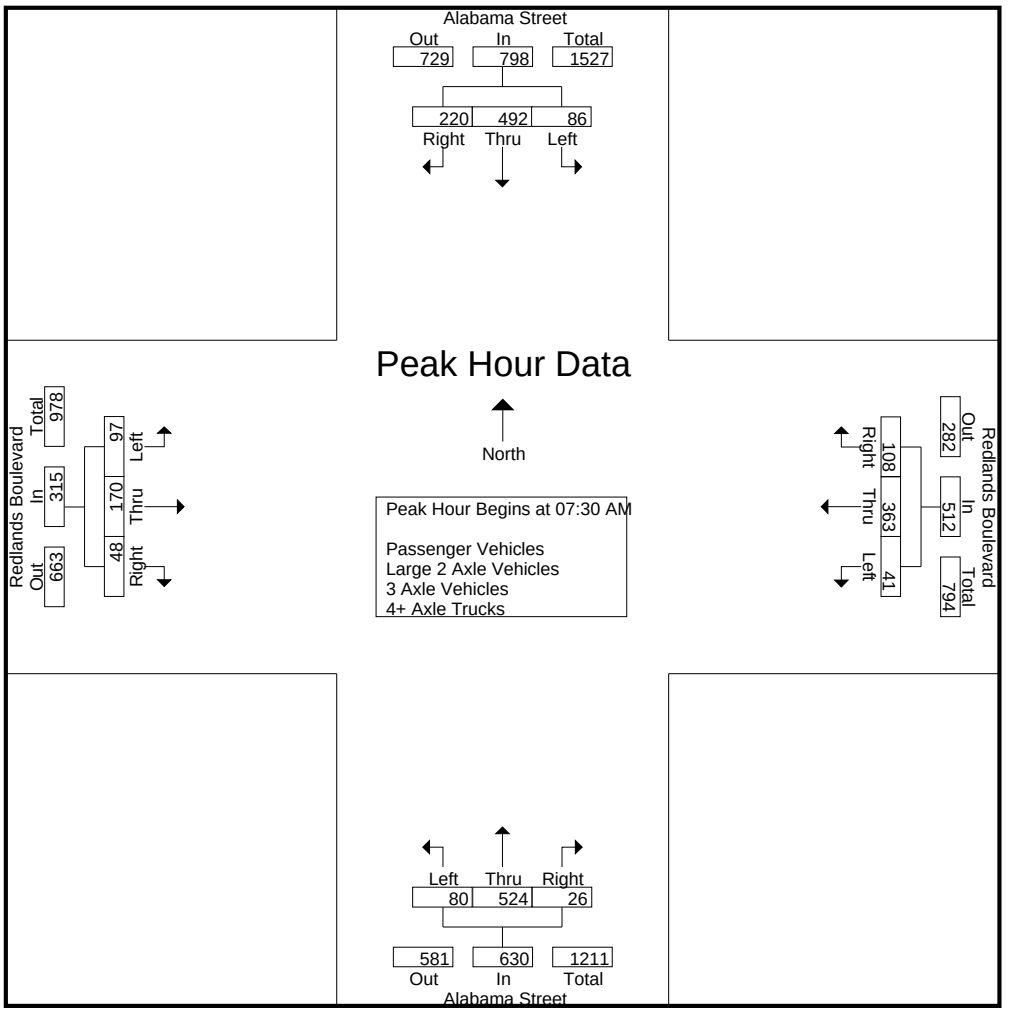
City of Redlands
N/S: Alabama Street
E/W: Redlands Boulevard
Weather: Clear

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



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

	07:30 AM				07:15 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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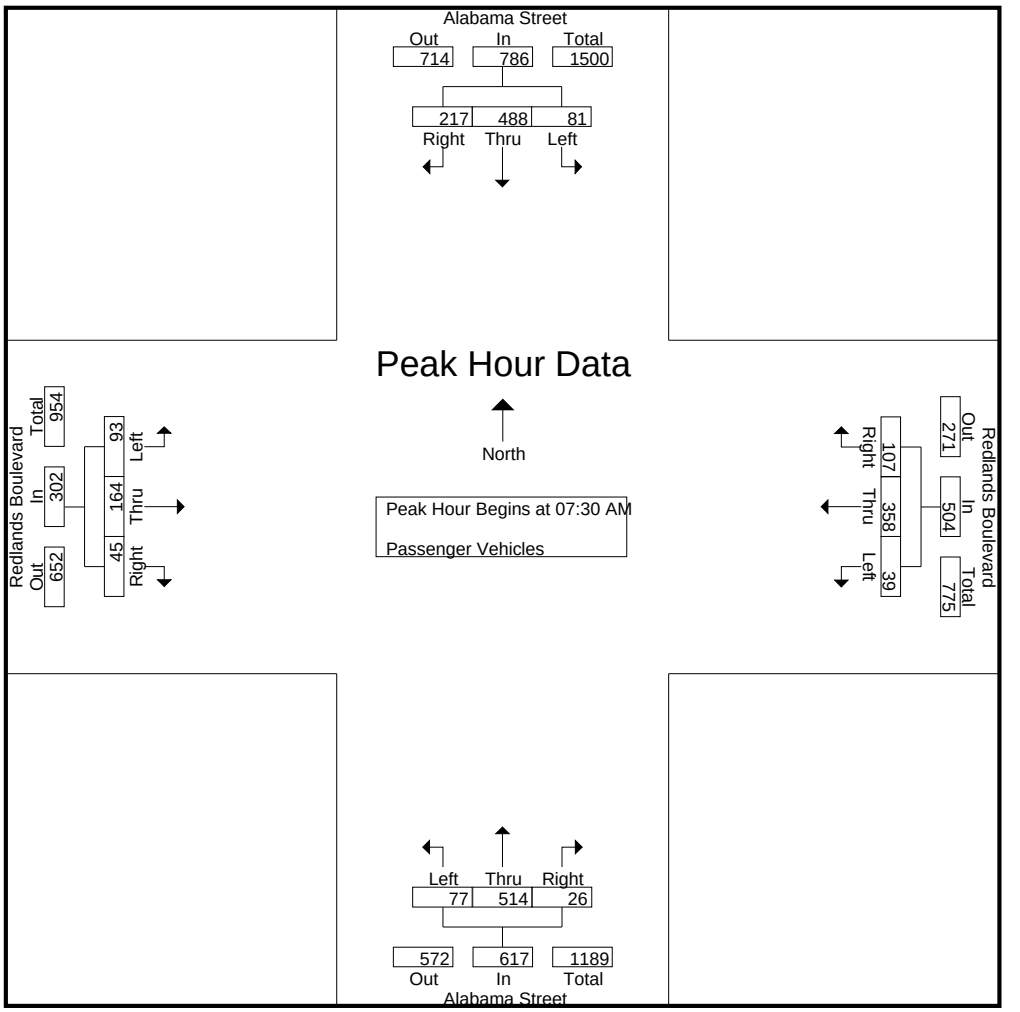

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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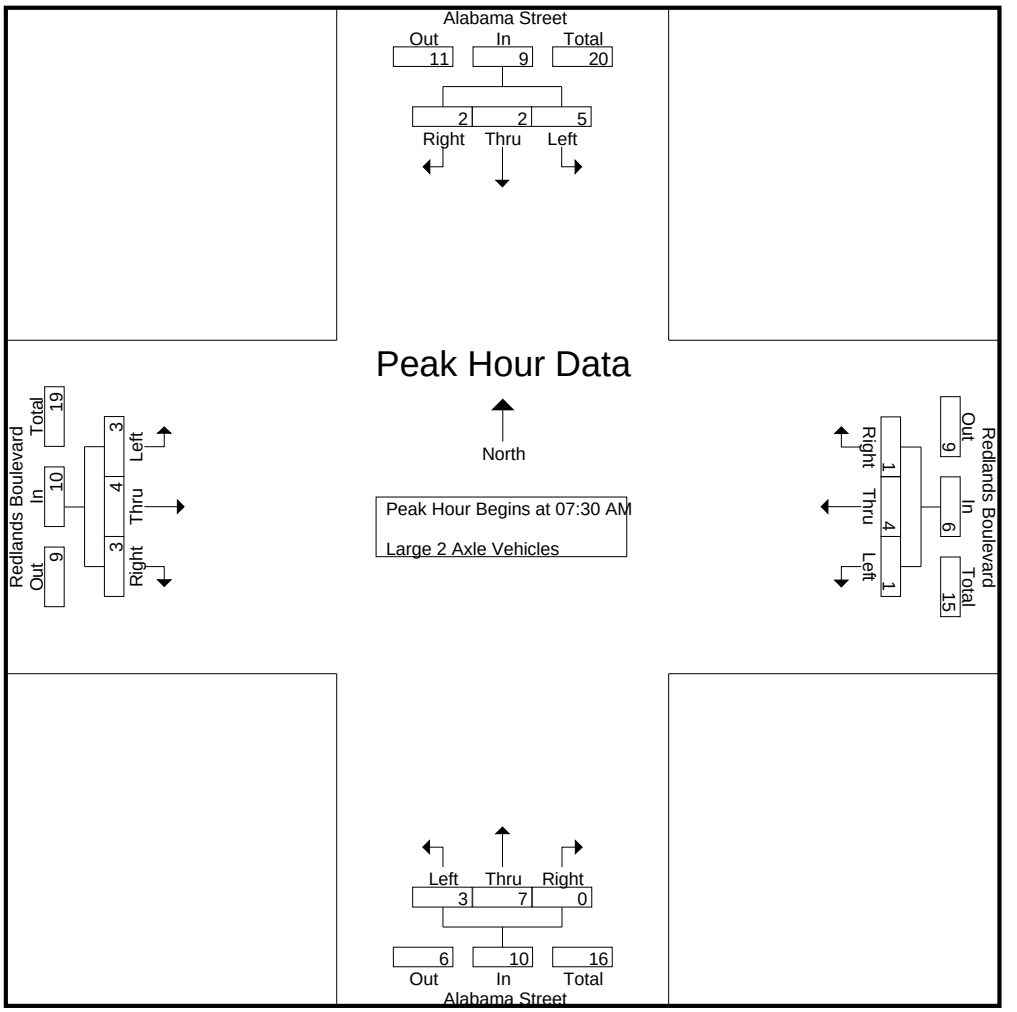

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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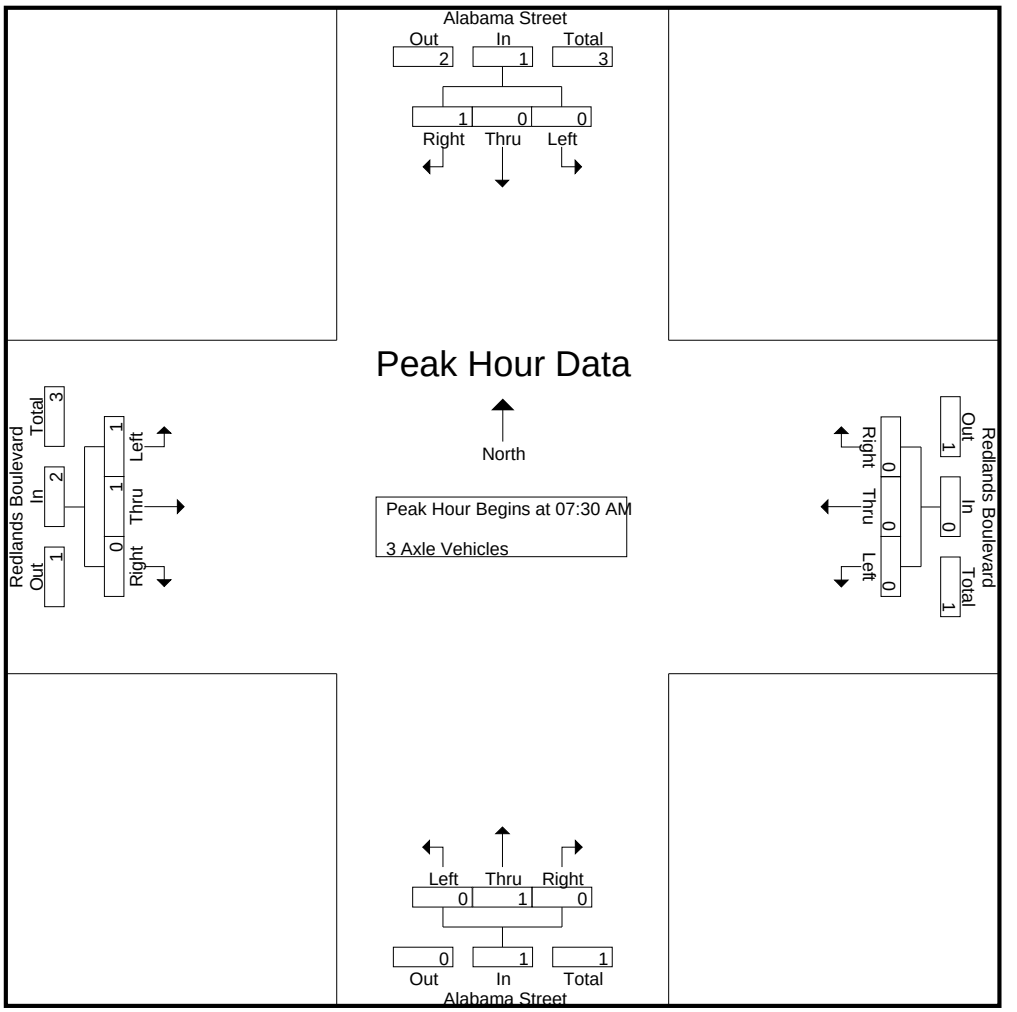

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Weather: Clear

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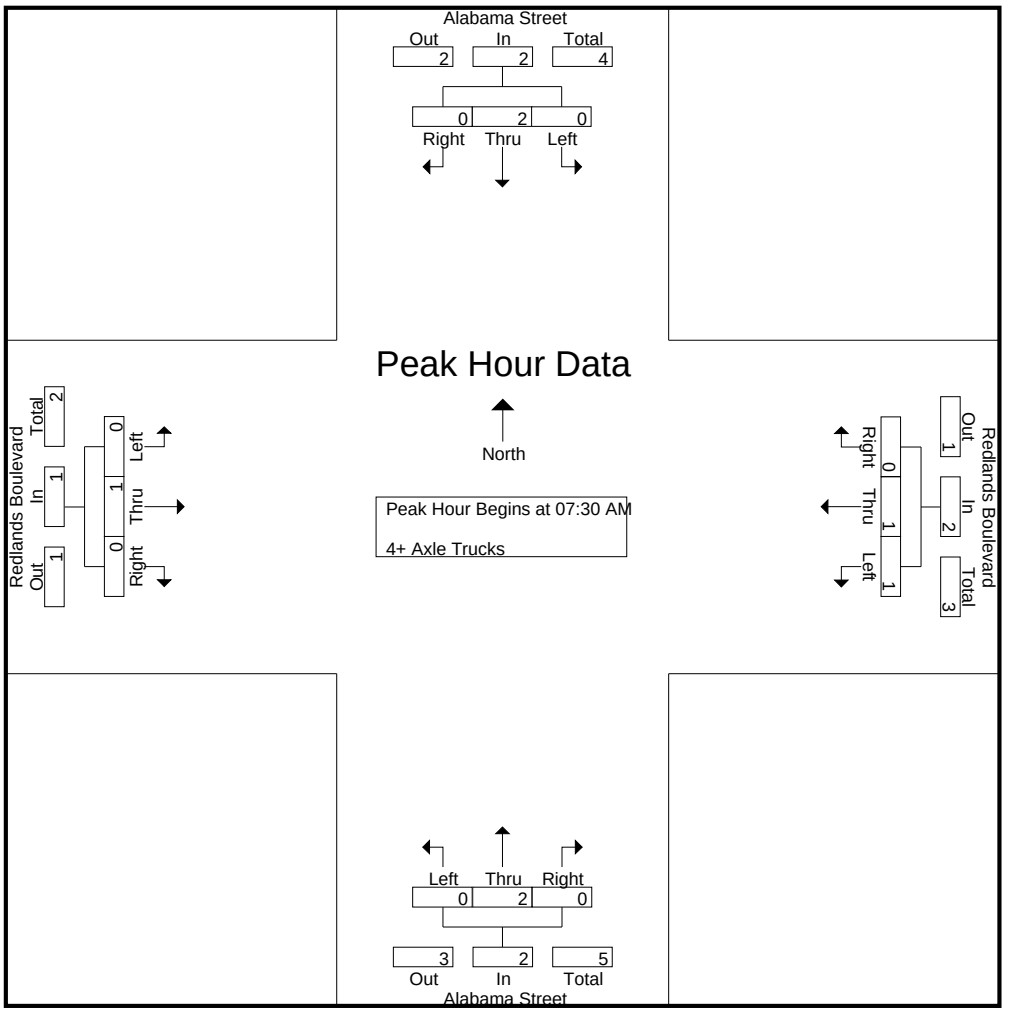

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	0	0	0	0	0	**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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Weather: Clear

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

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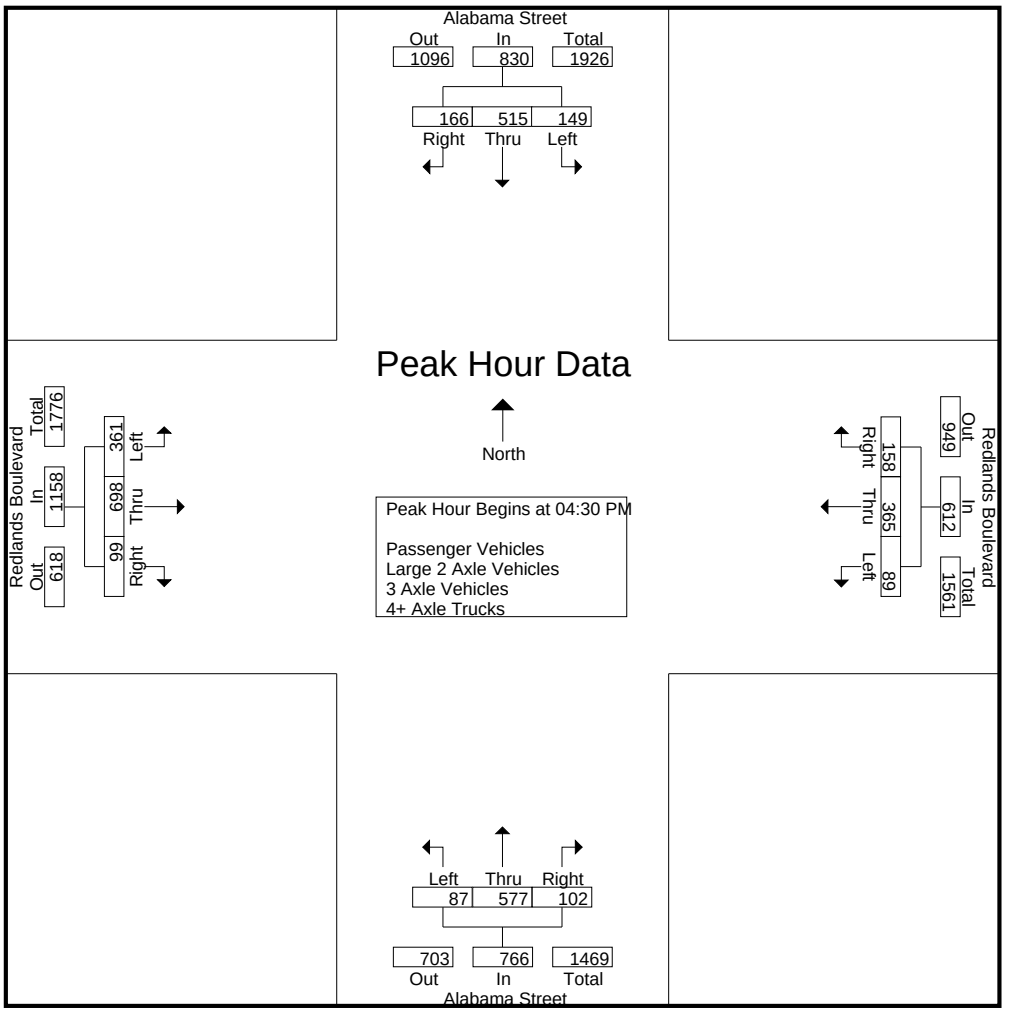
Weather: Clear

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



Peak Hour Analysis From 04:00 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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Site Code : 07517744
Start Date : 11/1/2017

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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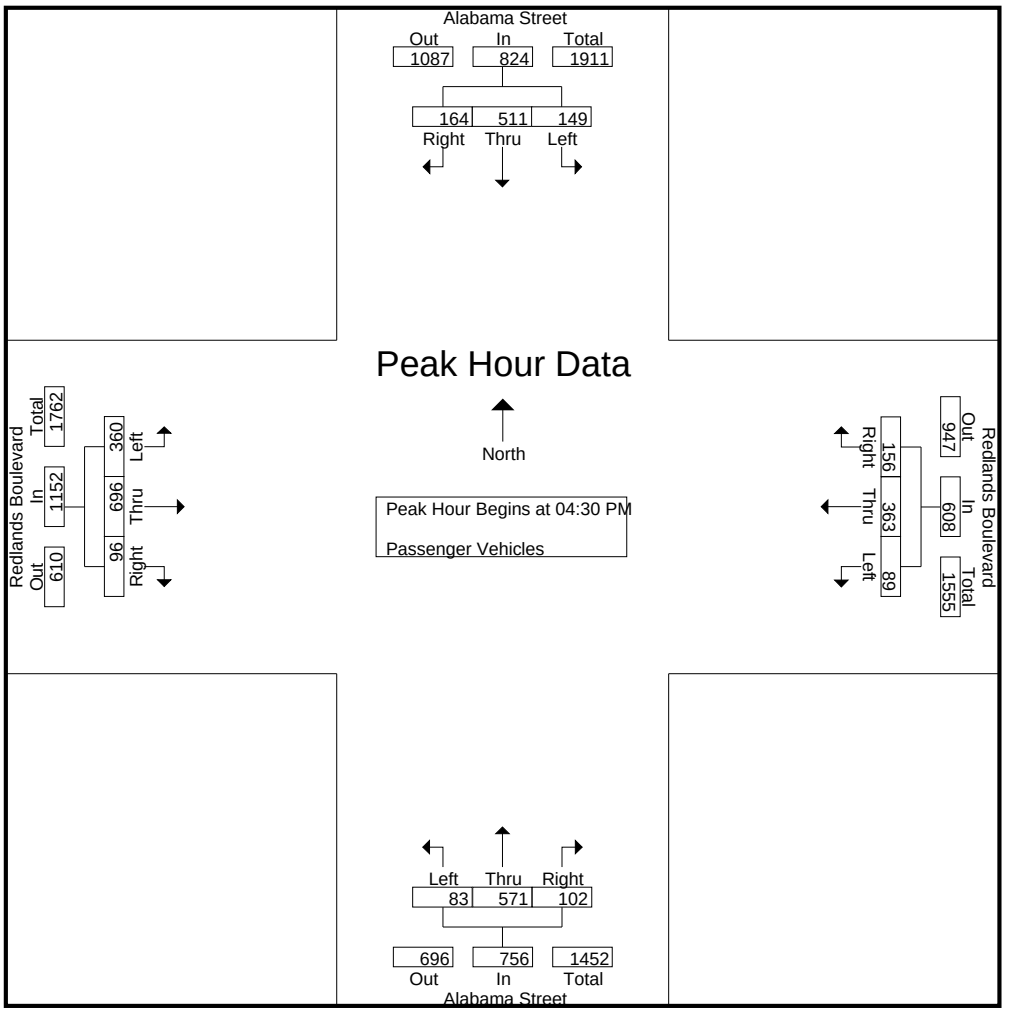

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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

File Name : 01A_RED AL RE PM
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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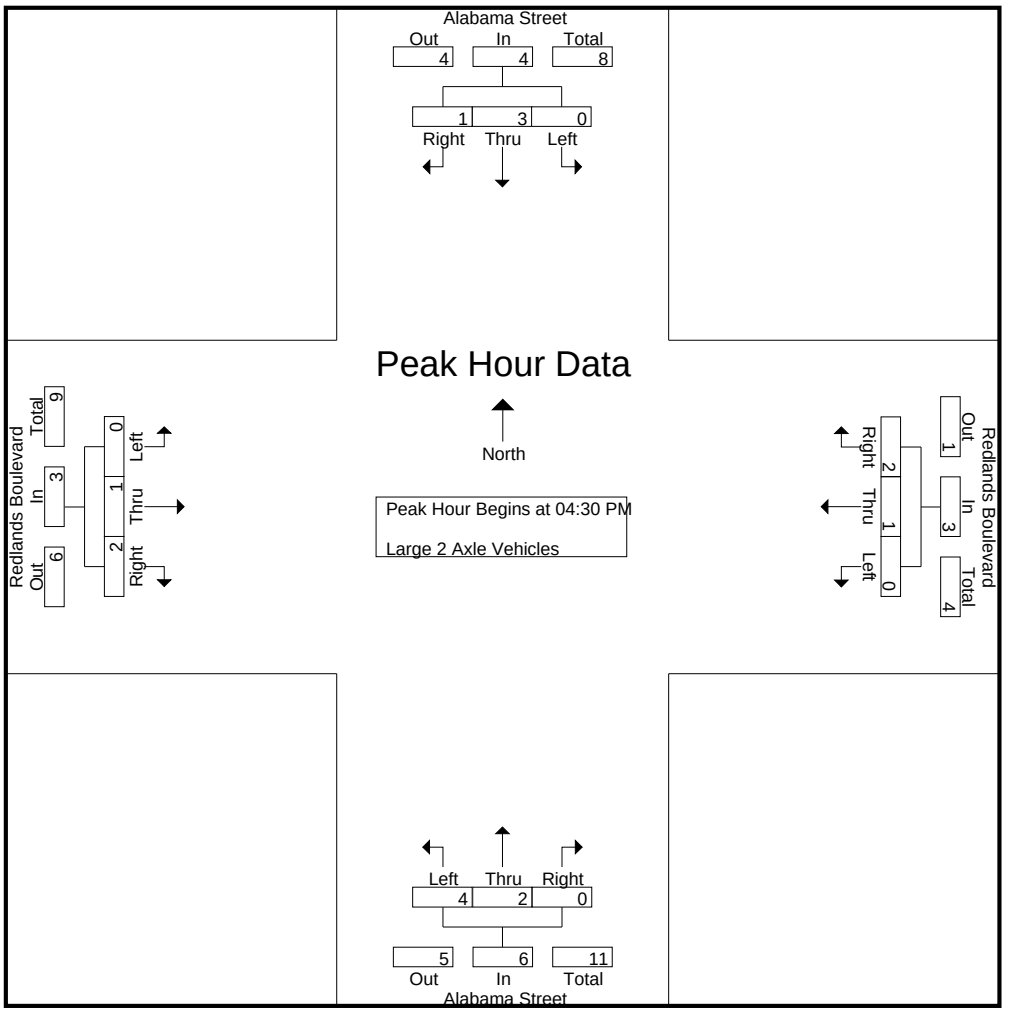

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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City of Redlands
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Weather: Clear

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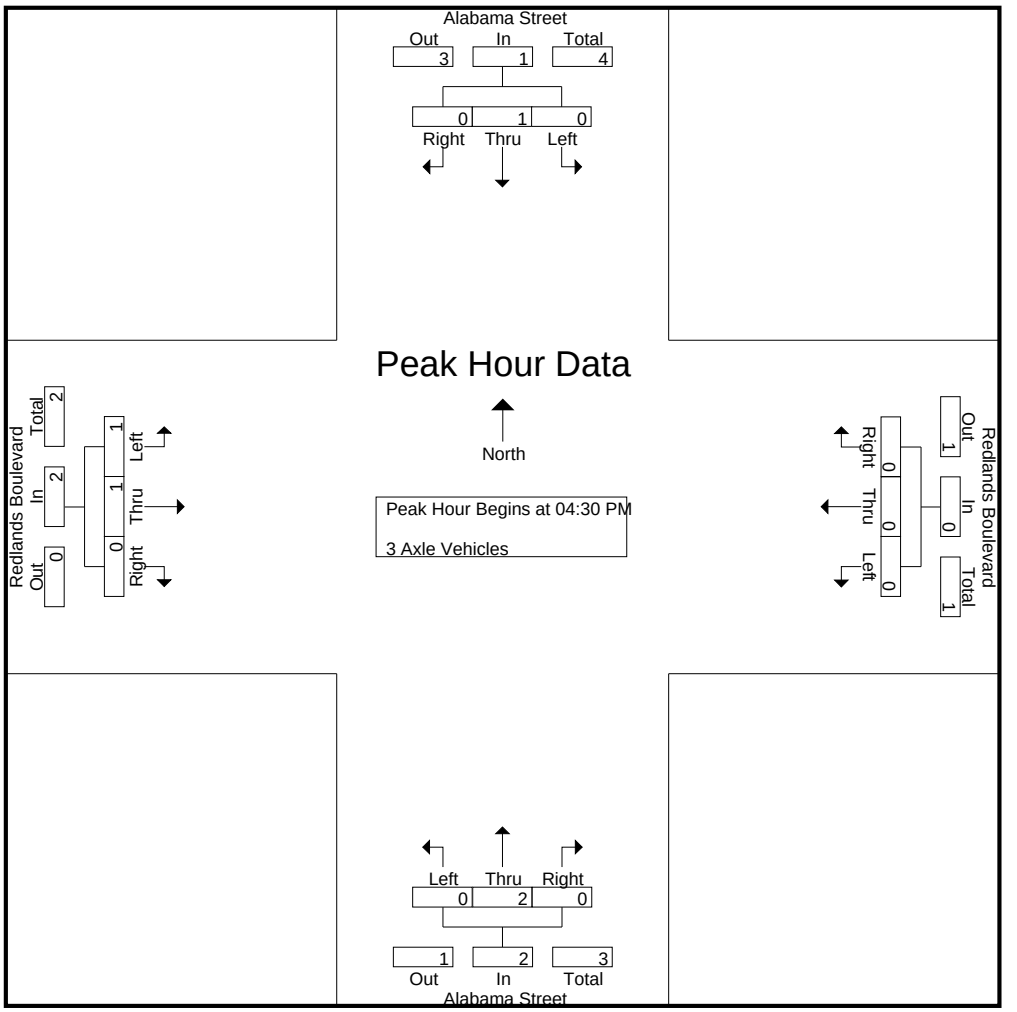

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	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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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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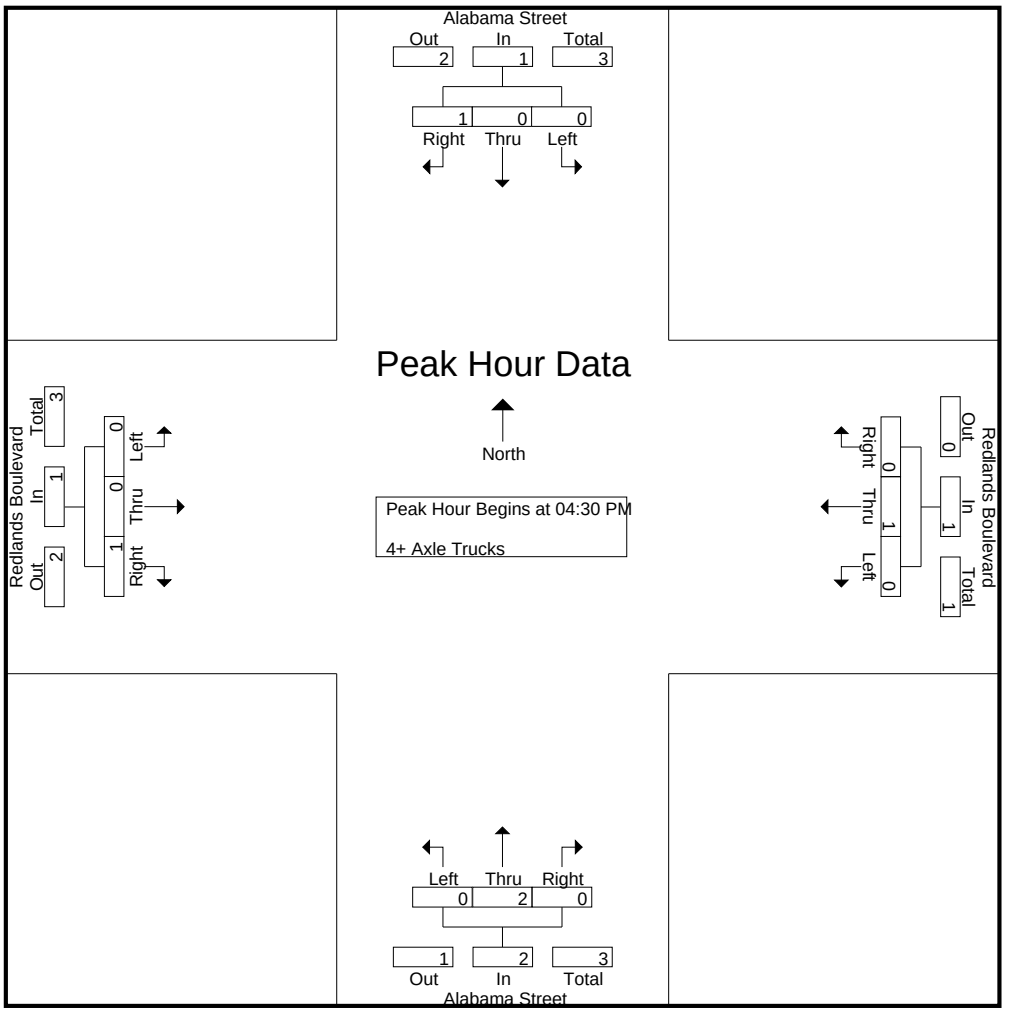

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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File Name : 02A_RED AL 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

	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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Weather: Clear

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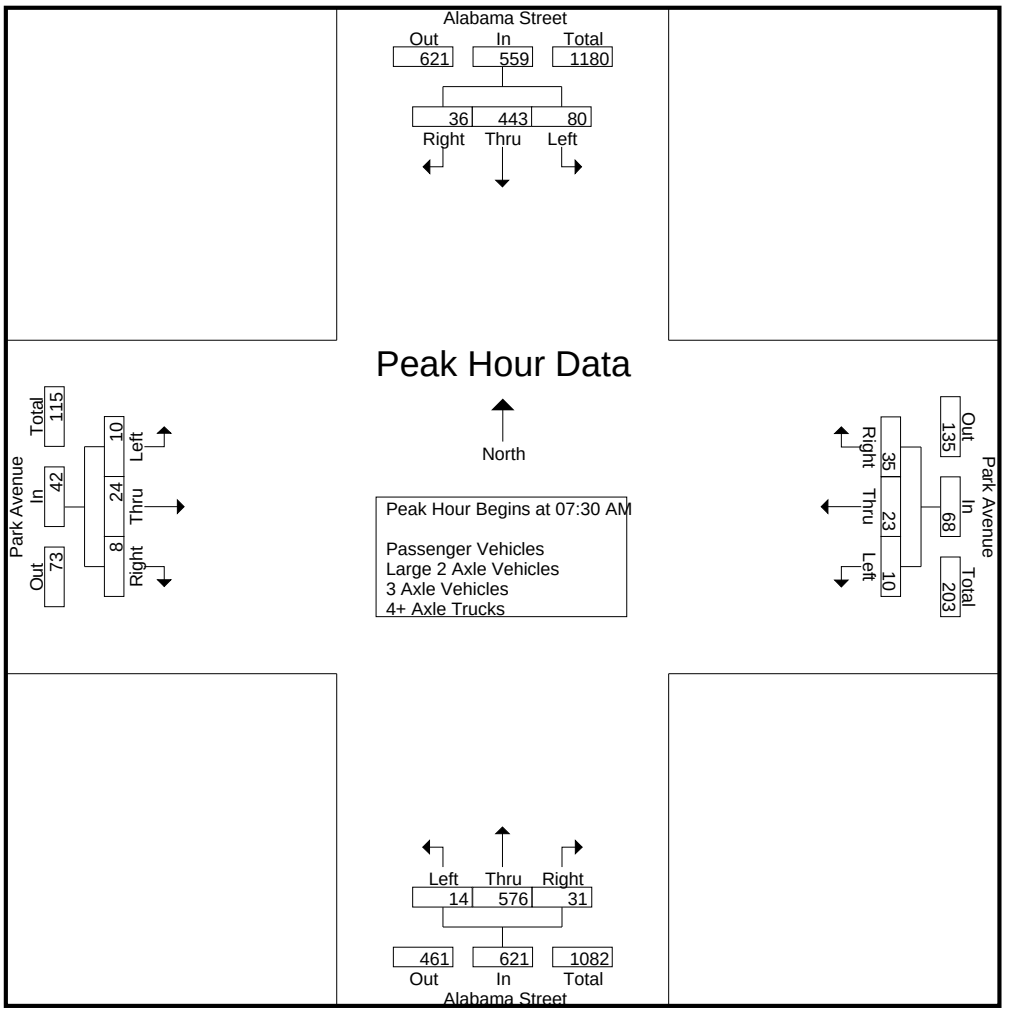

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 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

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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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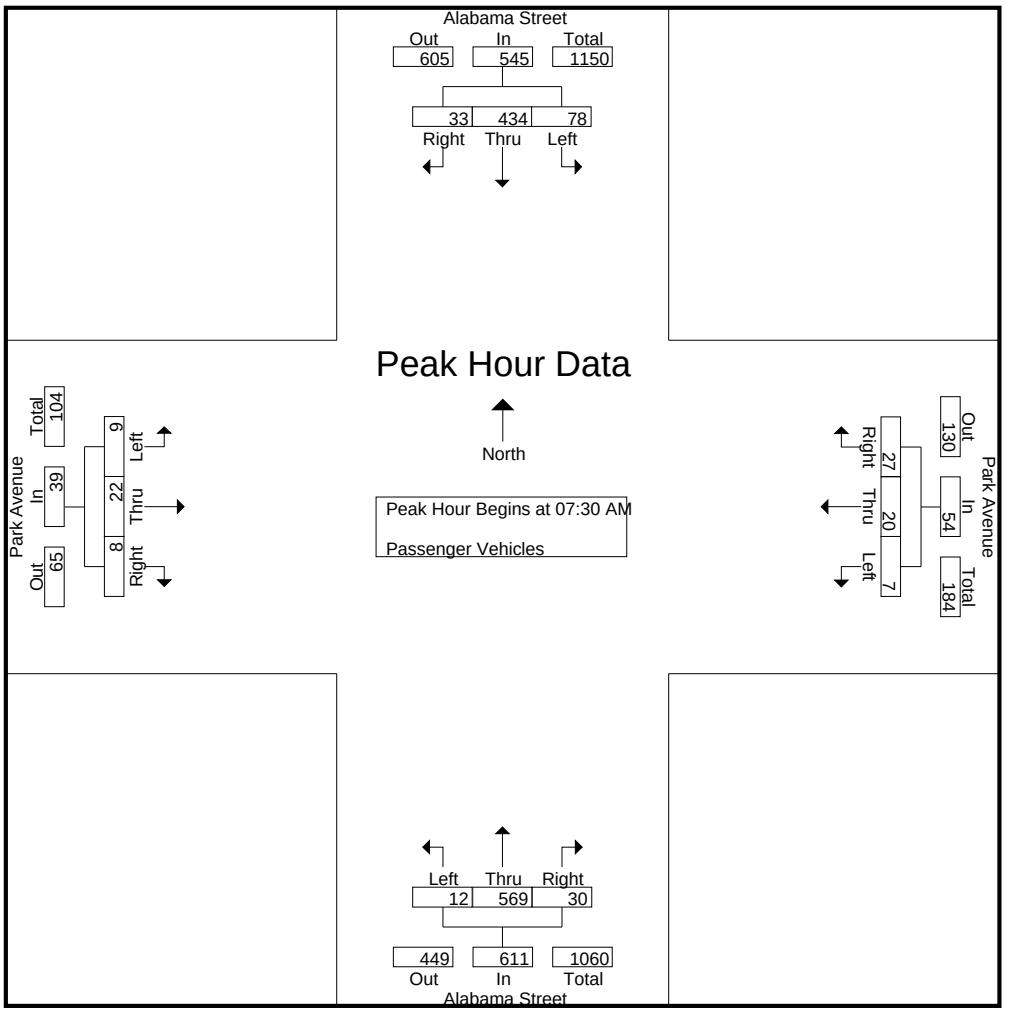

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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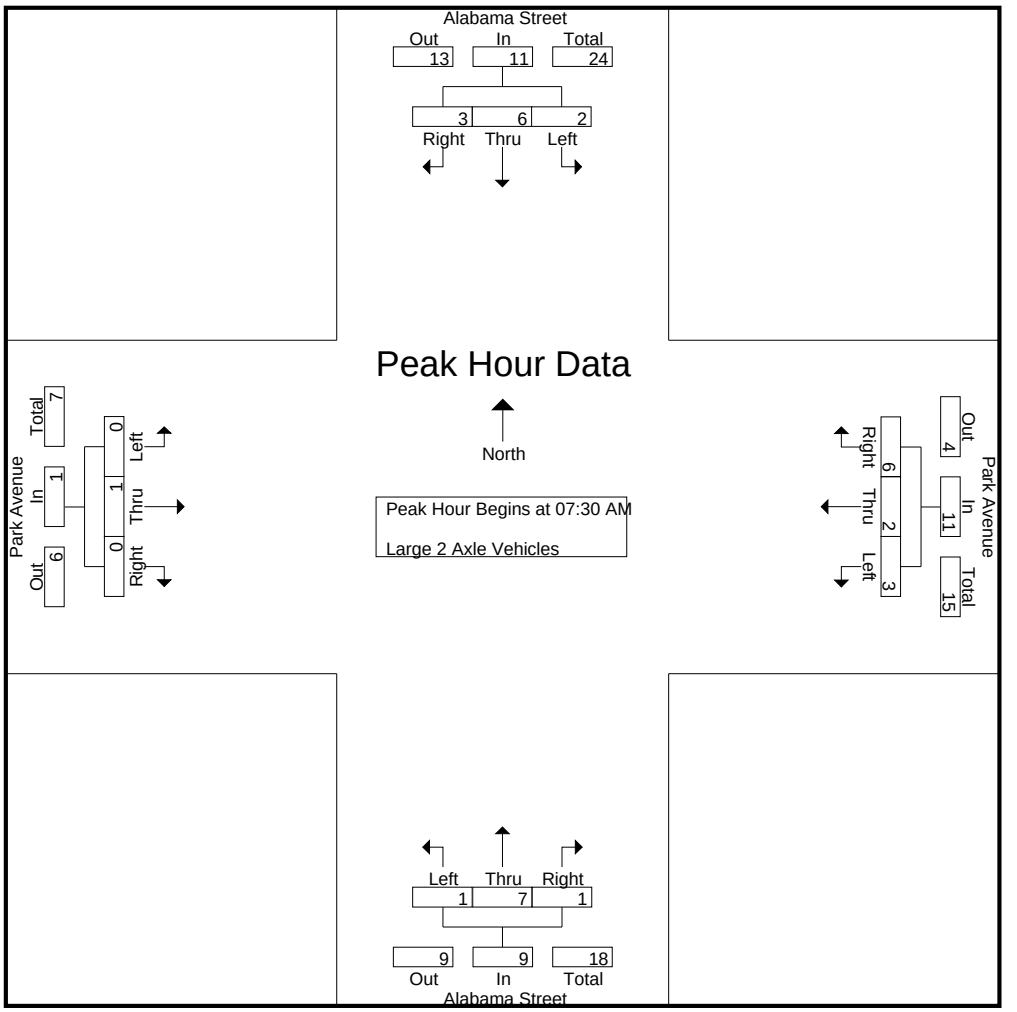

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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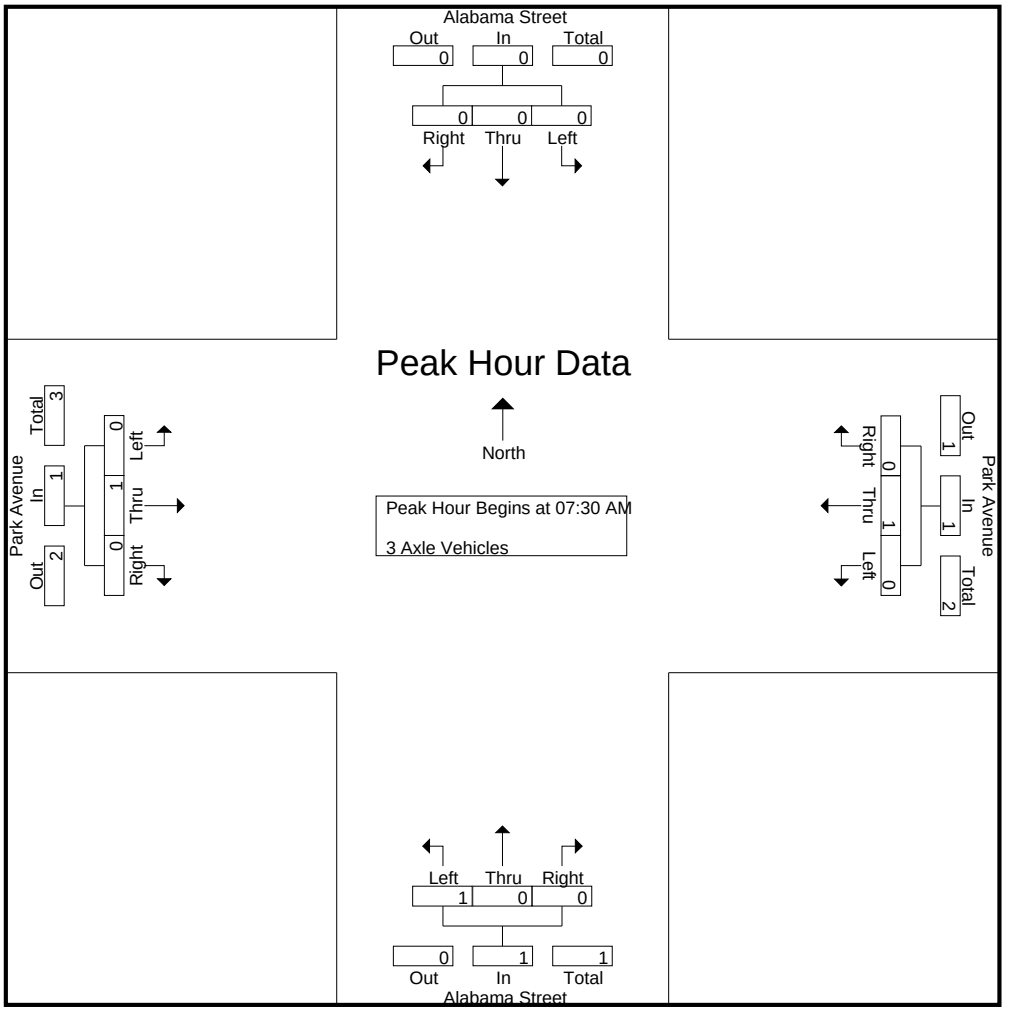

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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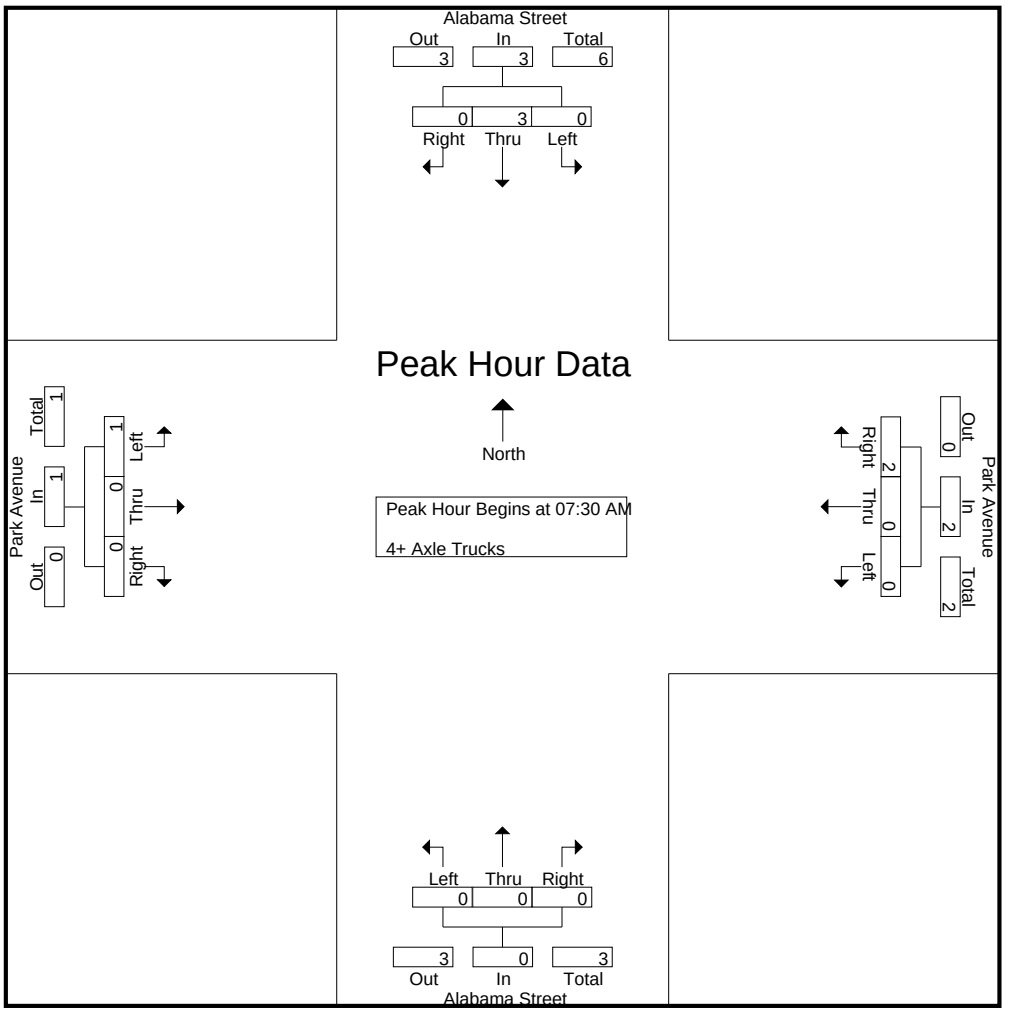

Peak Hour Analysis From 07:30 AM to 08:15 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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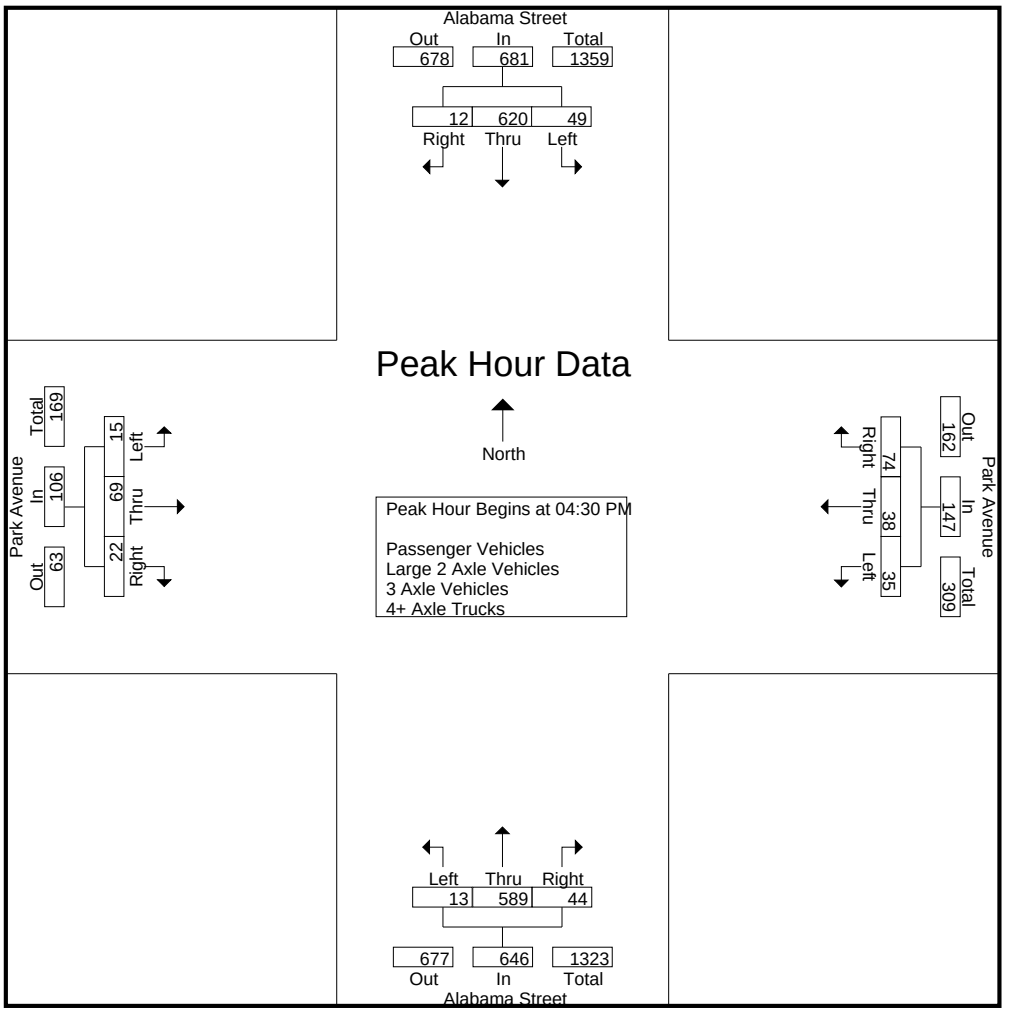

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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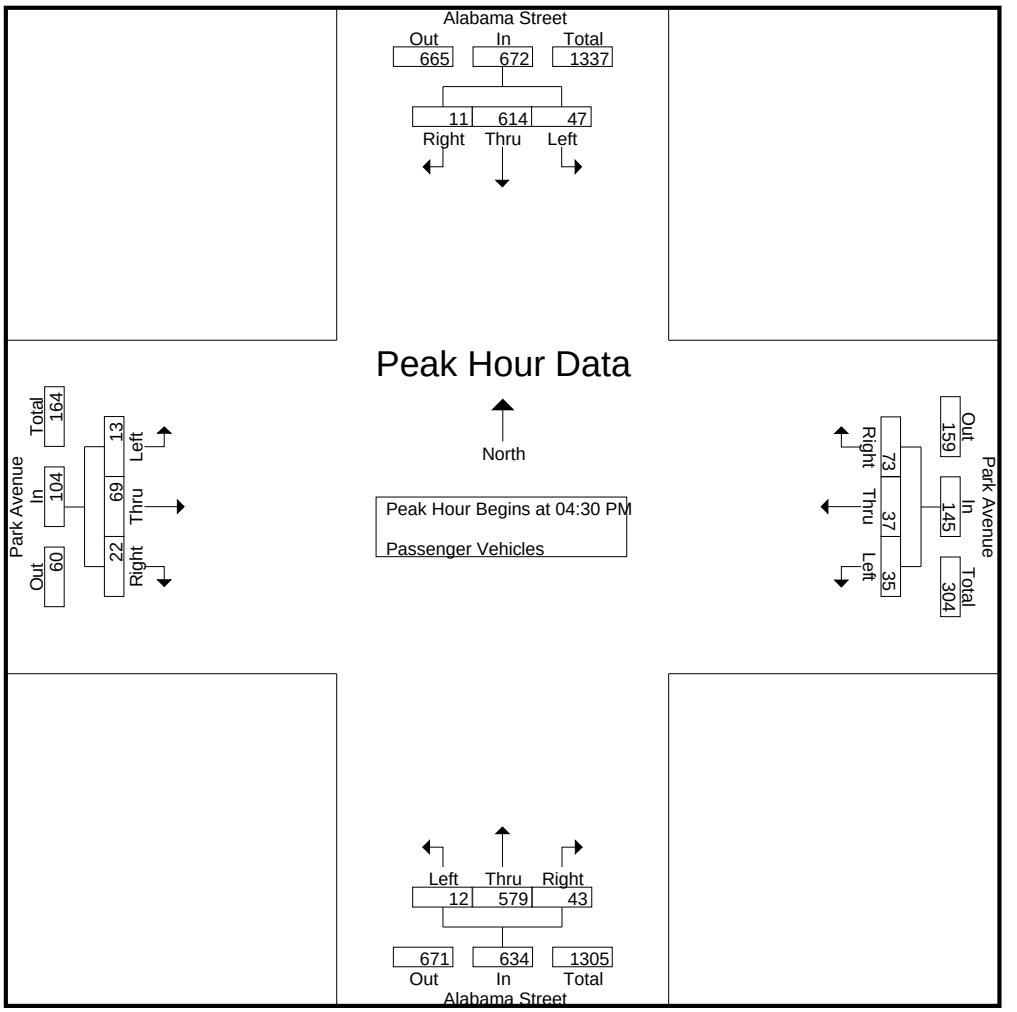

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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City of Redlands
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Weather: Clear

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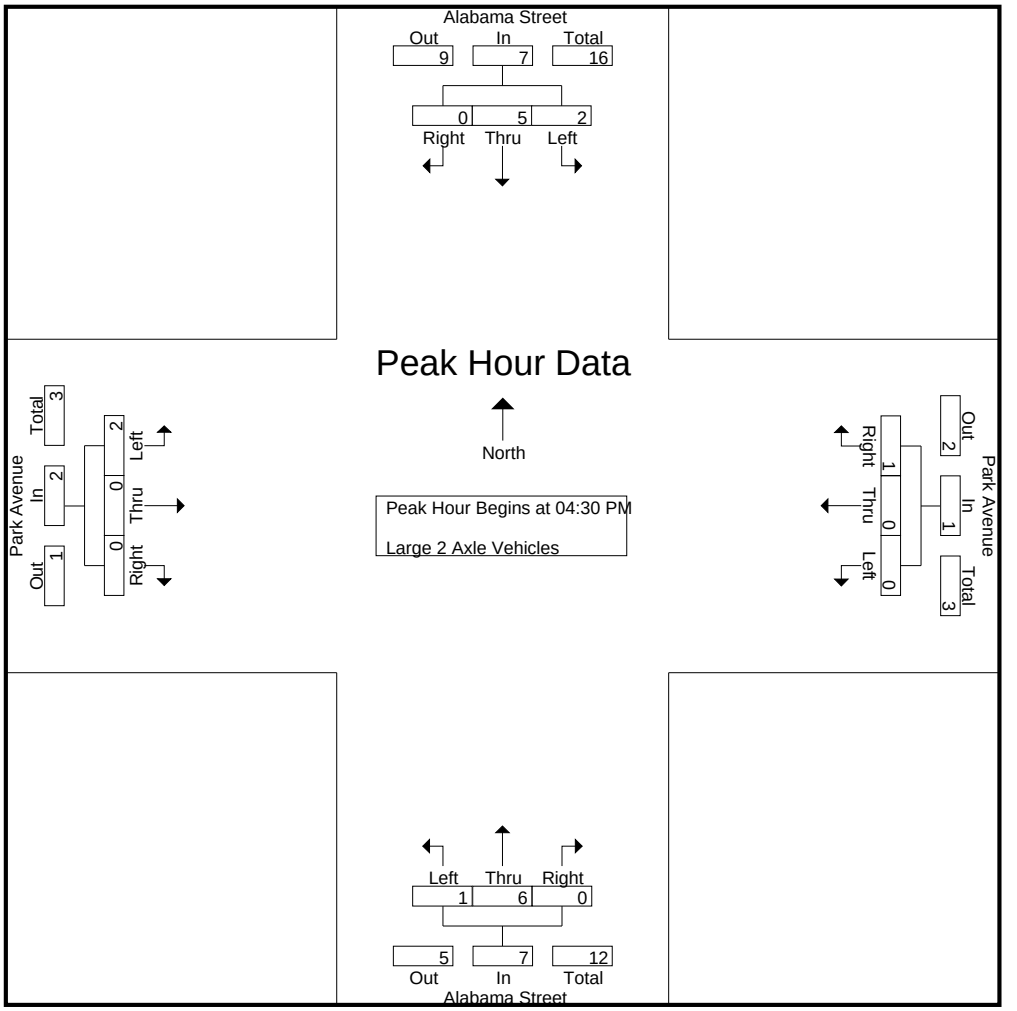

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	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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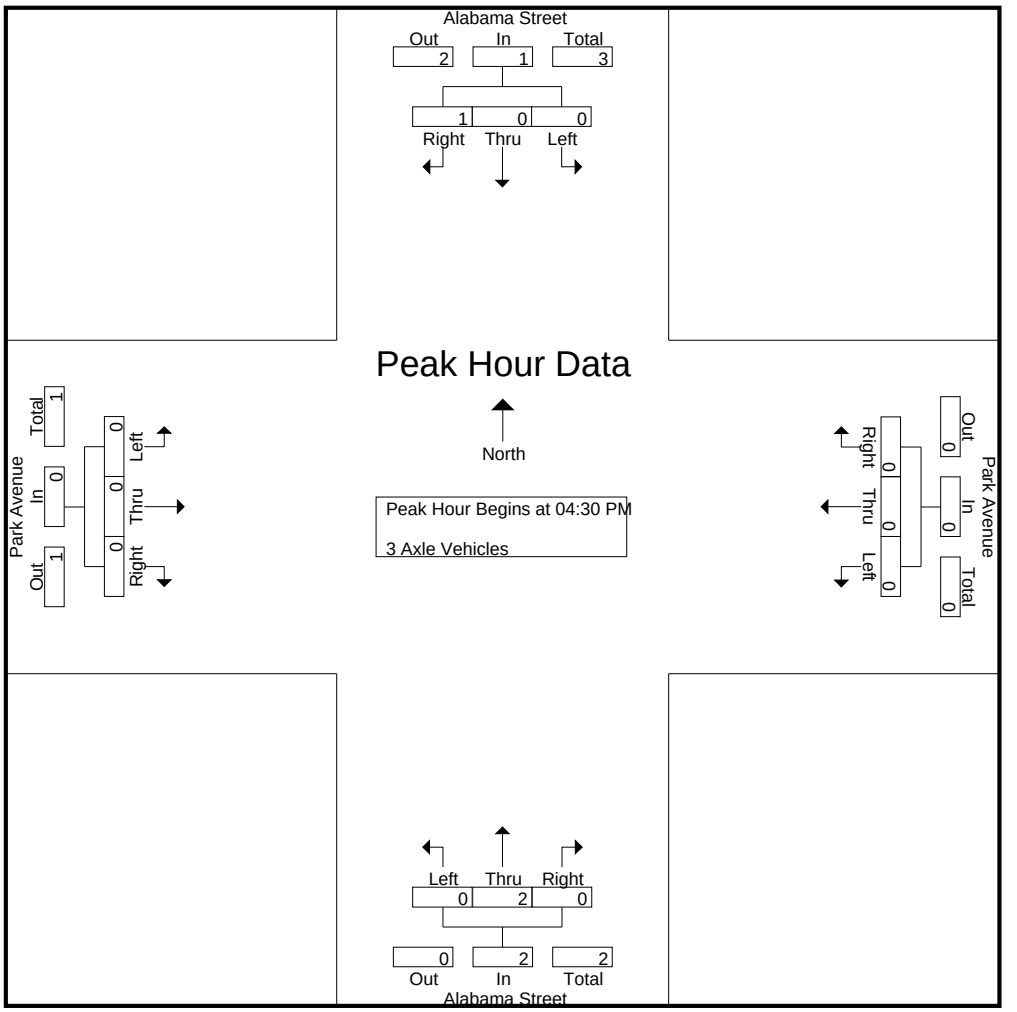

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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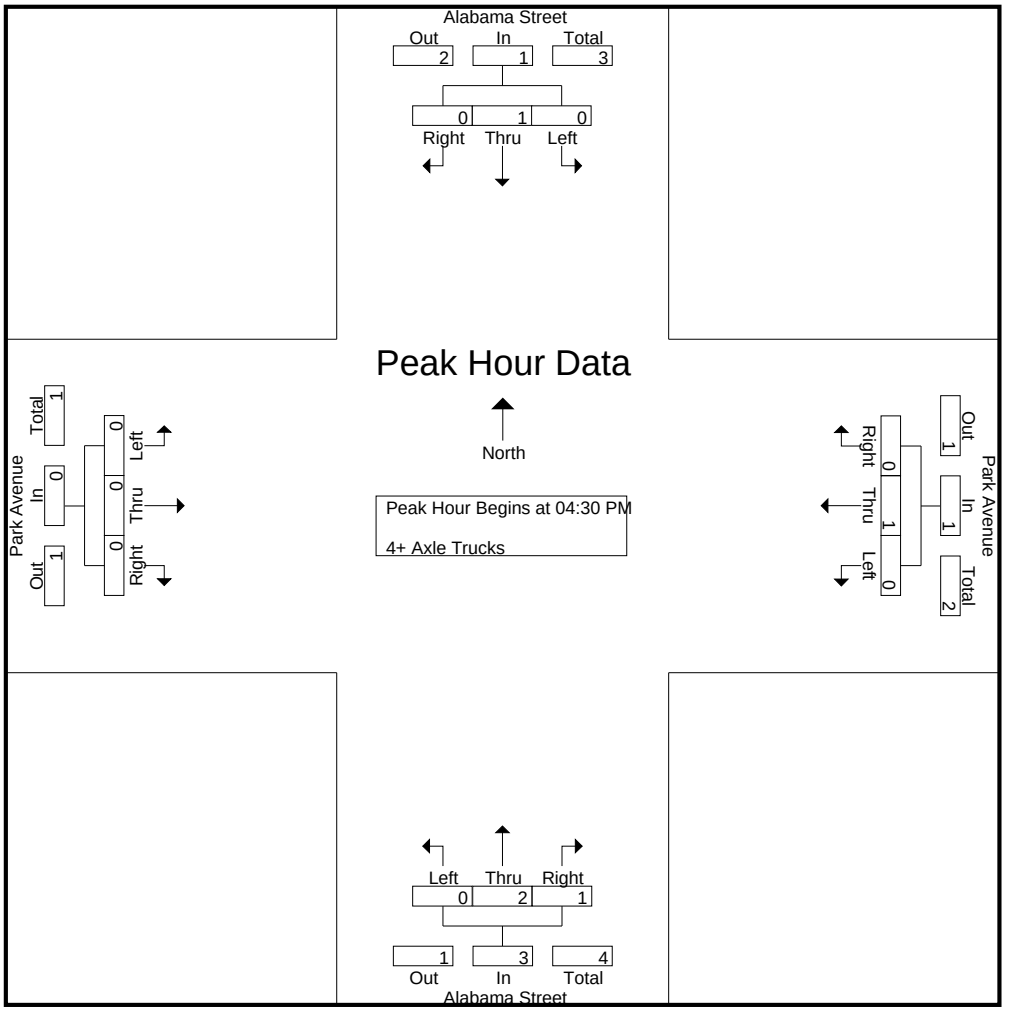

Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Weather: Clear

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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
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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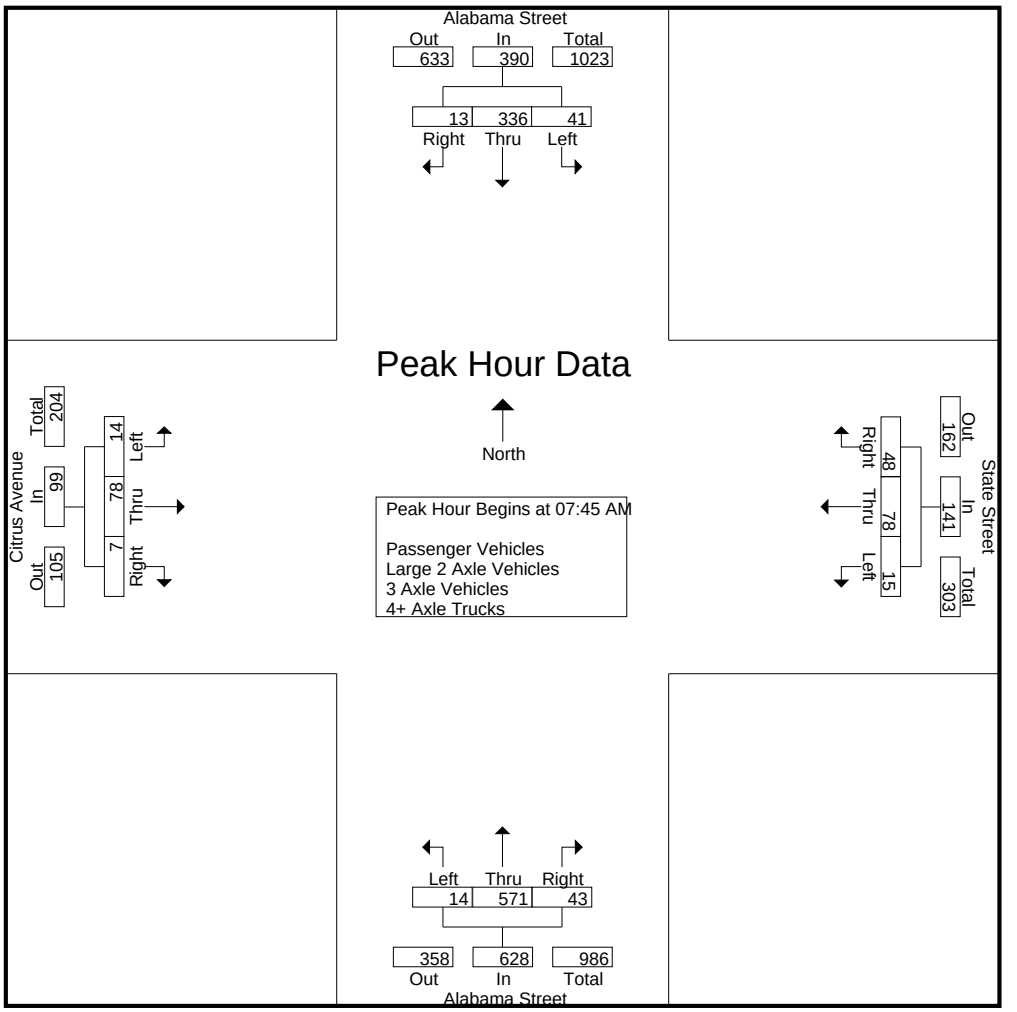

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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
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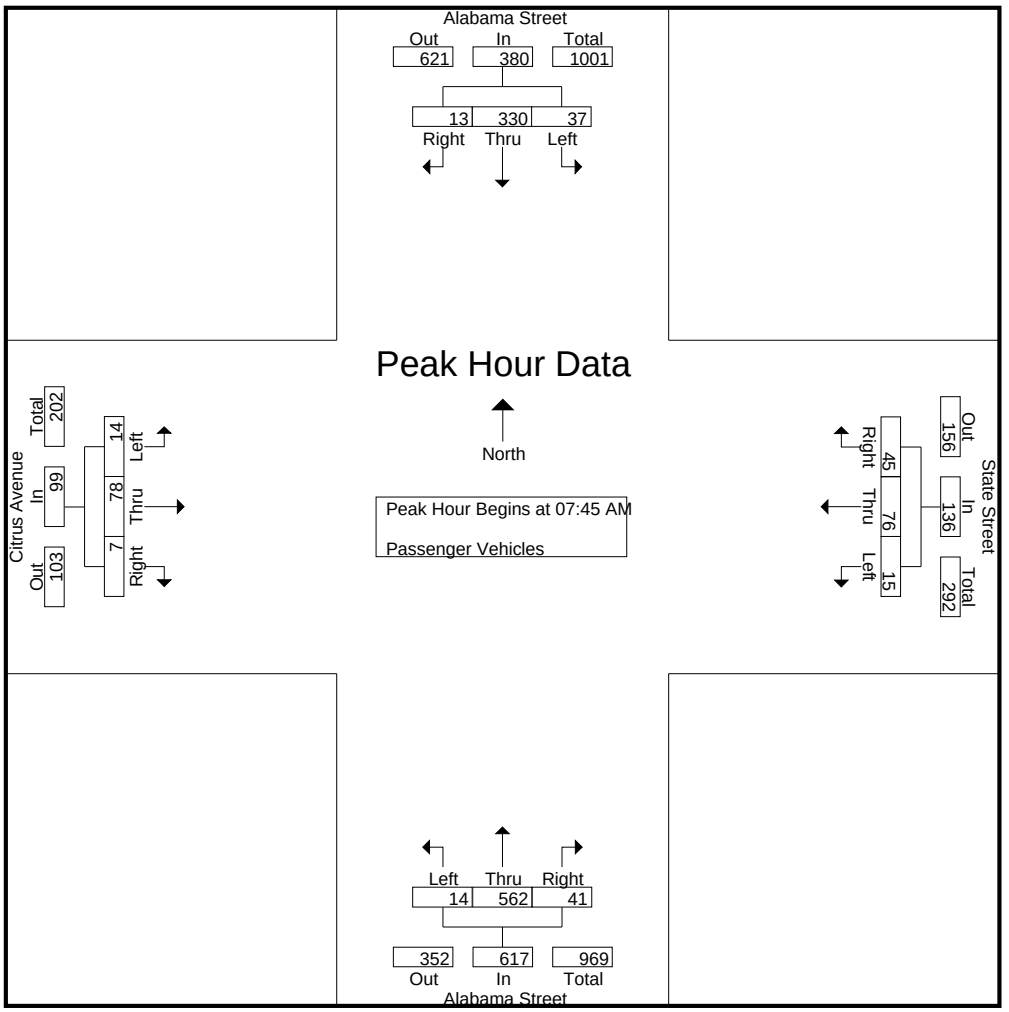

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:45 AM				07:45 AM			
+0 mins.	**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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File Name : 03A_RED AL CI AM
Site Code : 07517744
Start Date : 11/1/2017

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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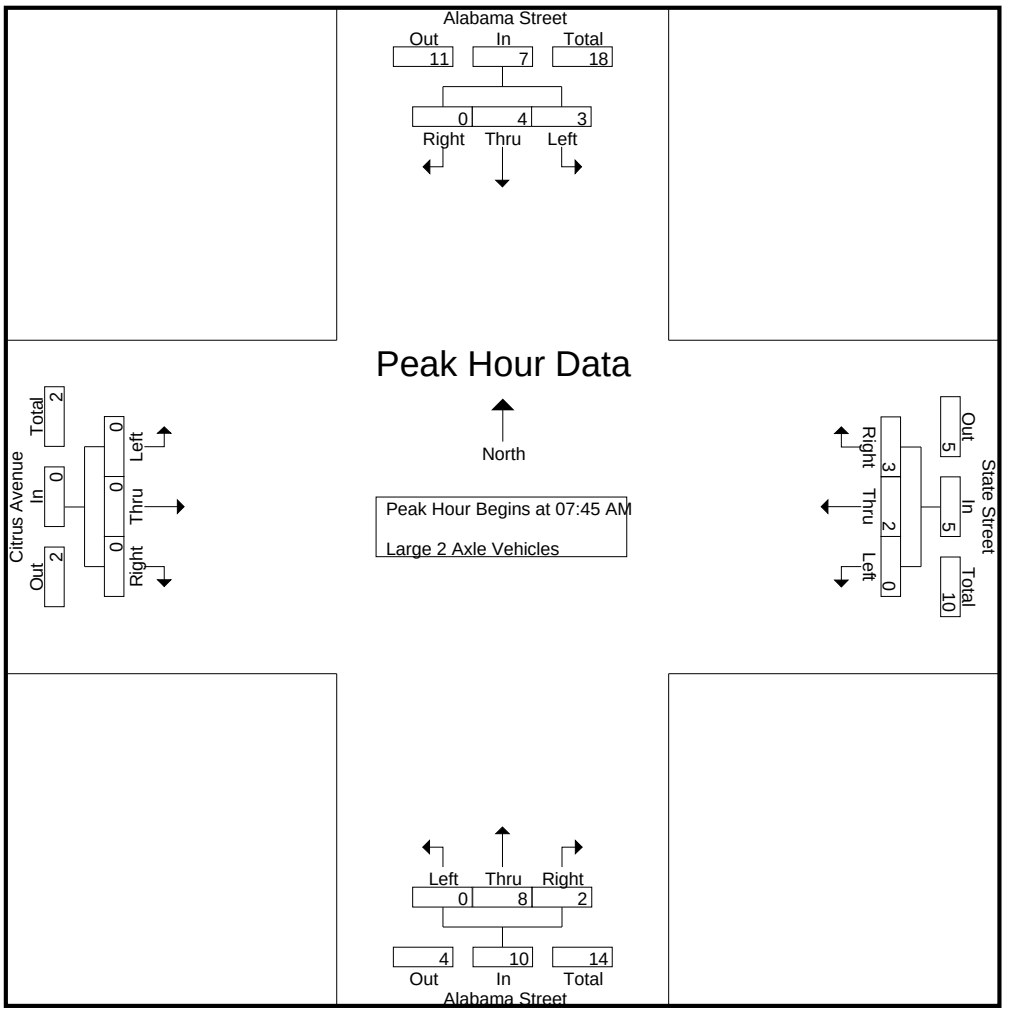

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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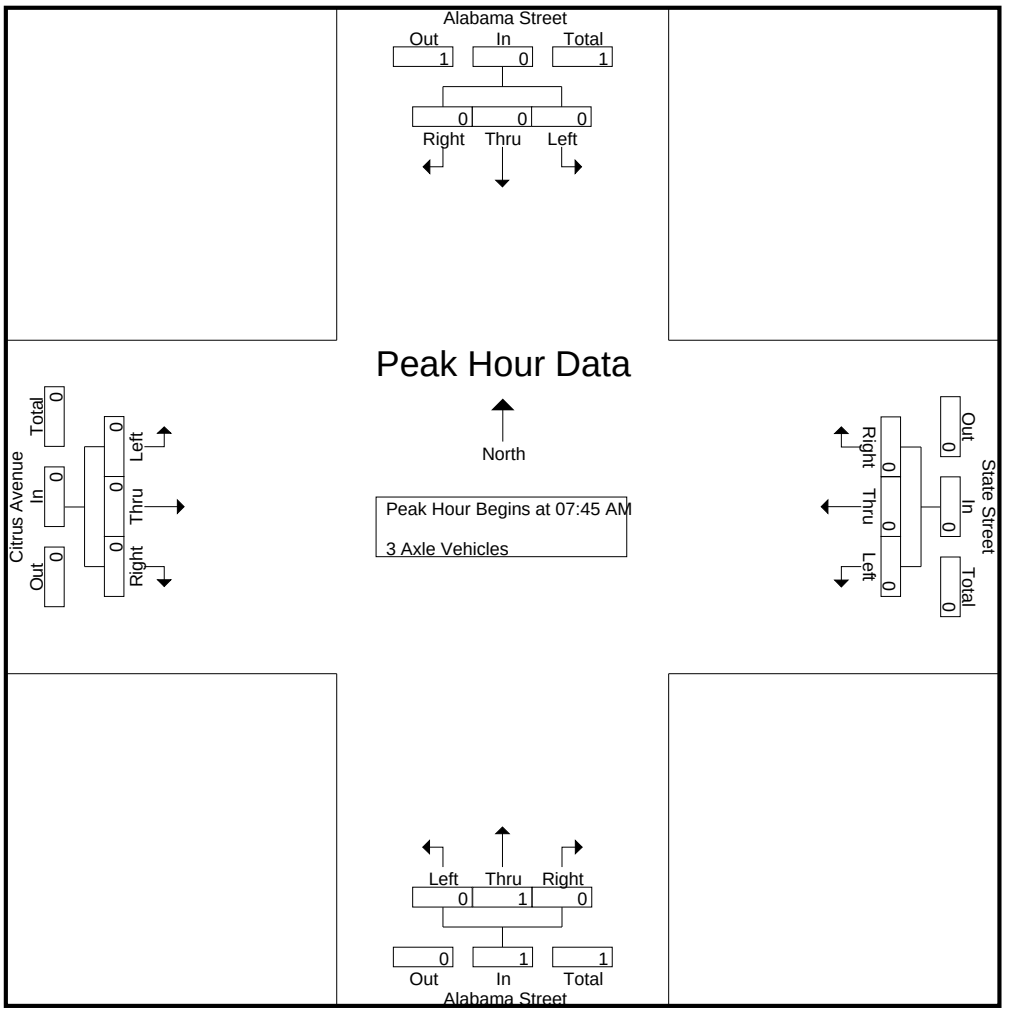

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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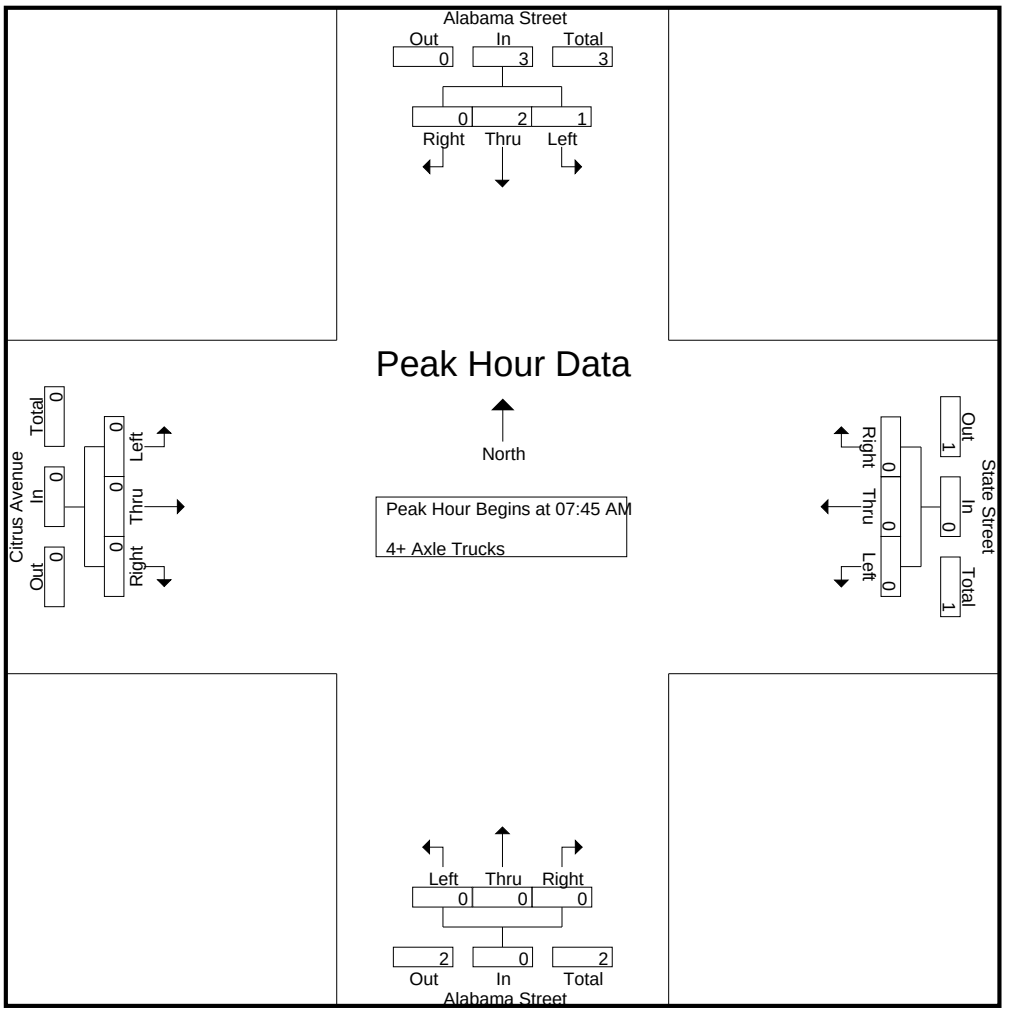

Peak Hour Analysis From 07:45 AM to 08:30 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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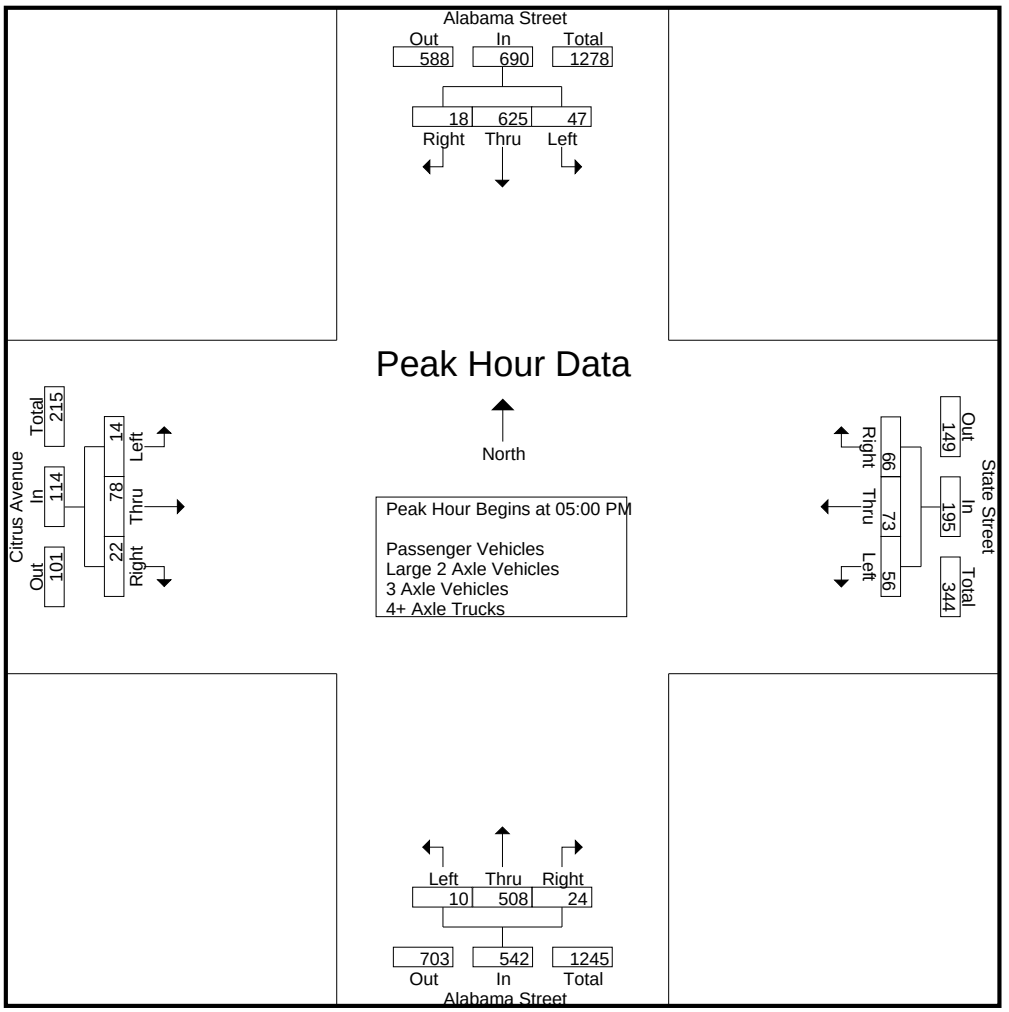

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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

Counts Unlimited
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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 PM
Site Code : 07517744
Start Date : 11/1/2017

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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City of Redlands
N/S: Alabama Street
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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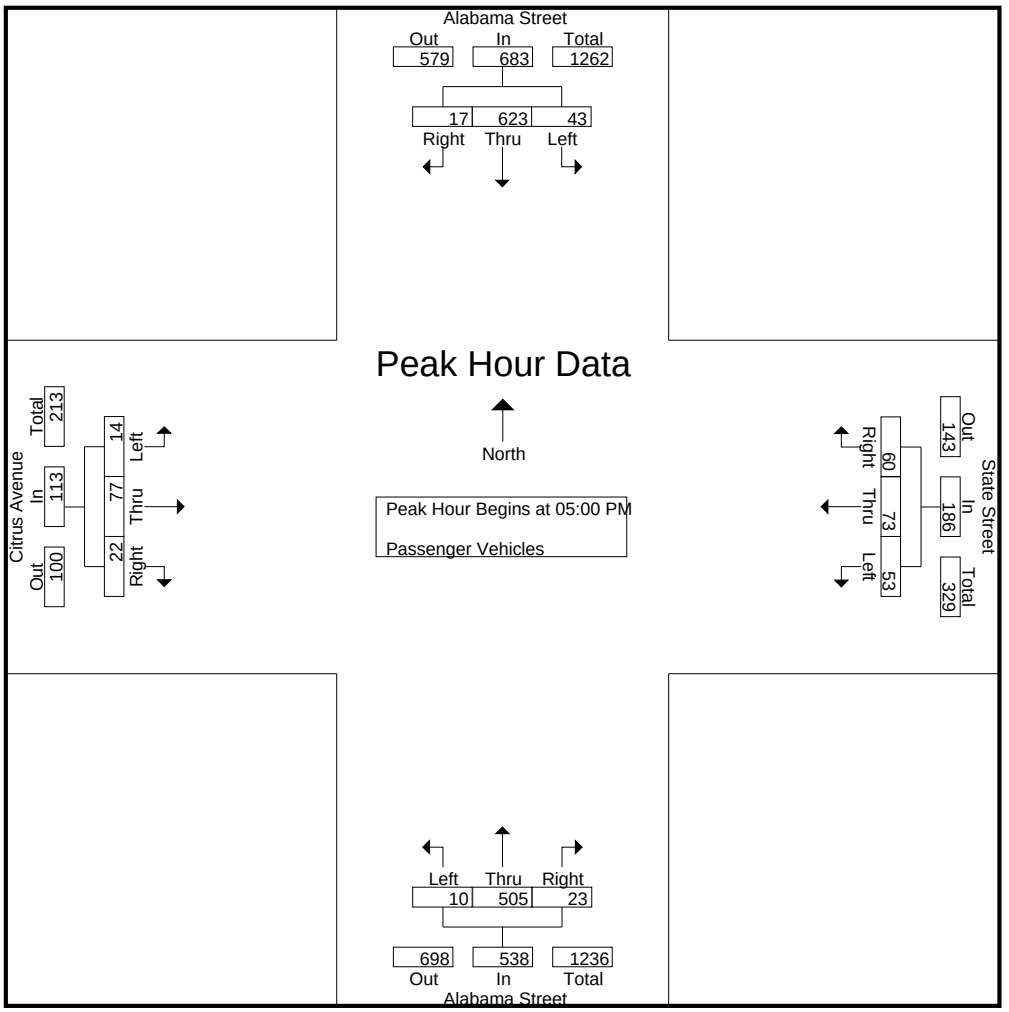

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				05:00 PM				05:00 PM				05:00 PM			
+0 mins.	**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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City of Redlands
N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI PM
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
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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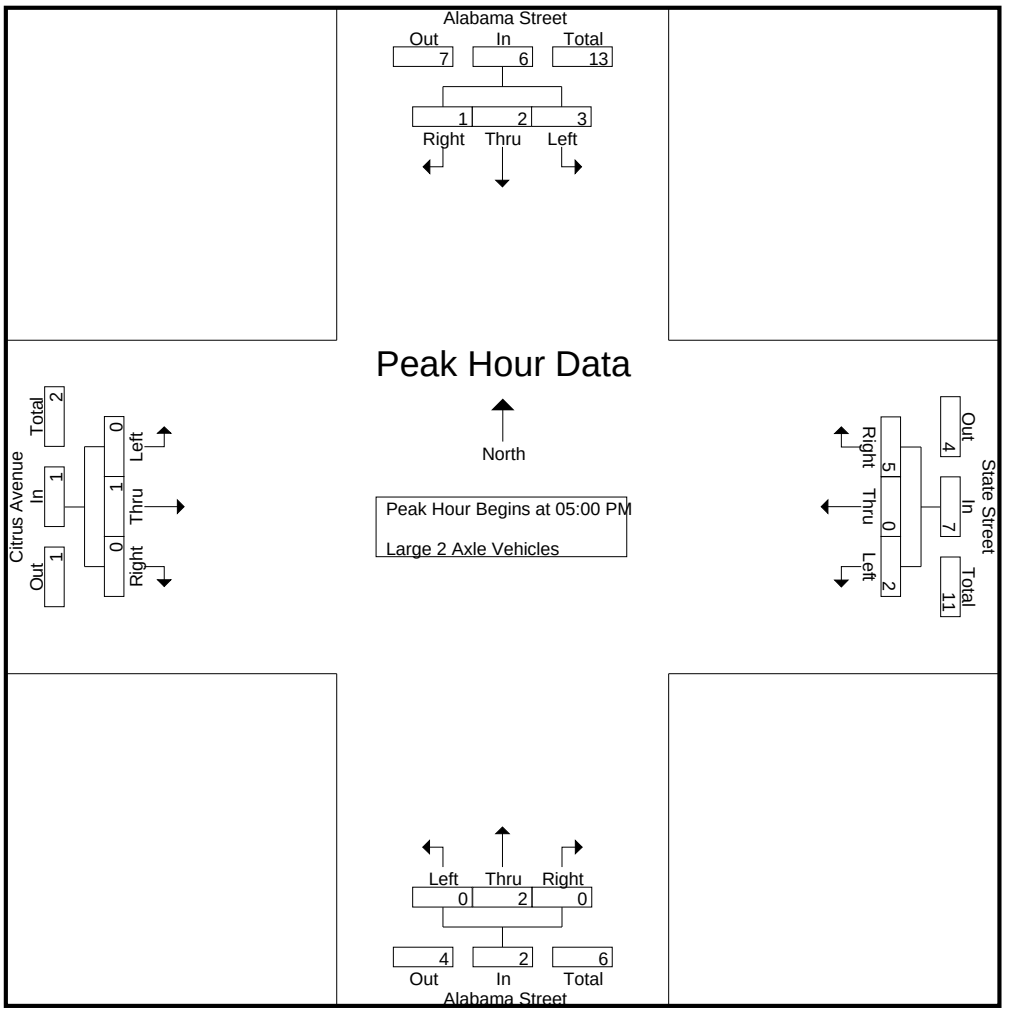
City of Redlands
N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI 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	**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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City of Redlands
N/S: Alabama Street
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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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

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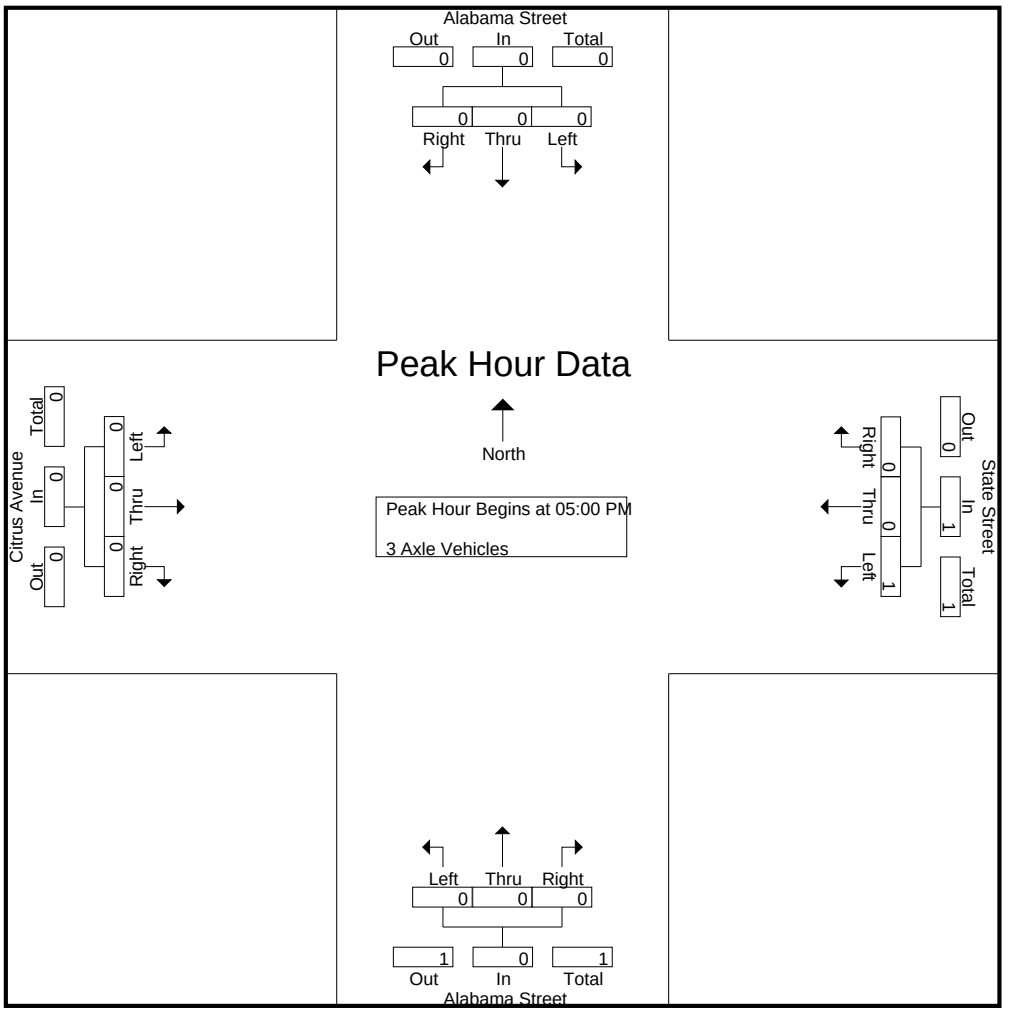
City of Redlands
N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI 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	**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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City of Redlands
N/S: Alabama Street
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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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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City of Redlands
N/S: Alabama Street
E/W: Citrus Avenue/State Street
Weather: Clear

File Name : 03A_RED AL CI PM
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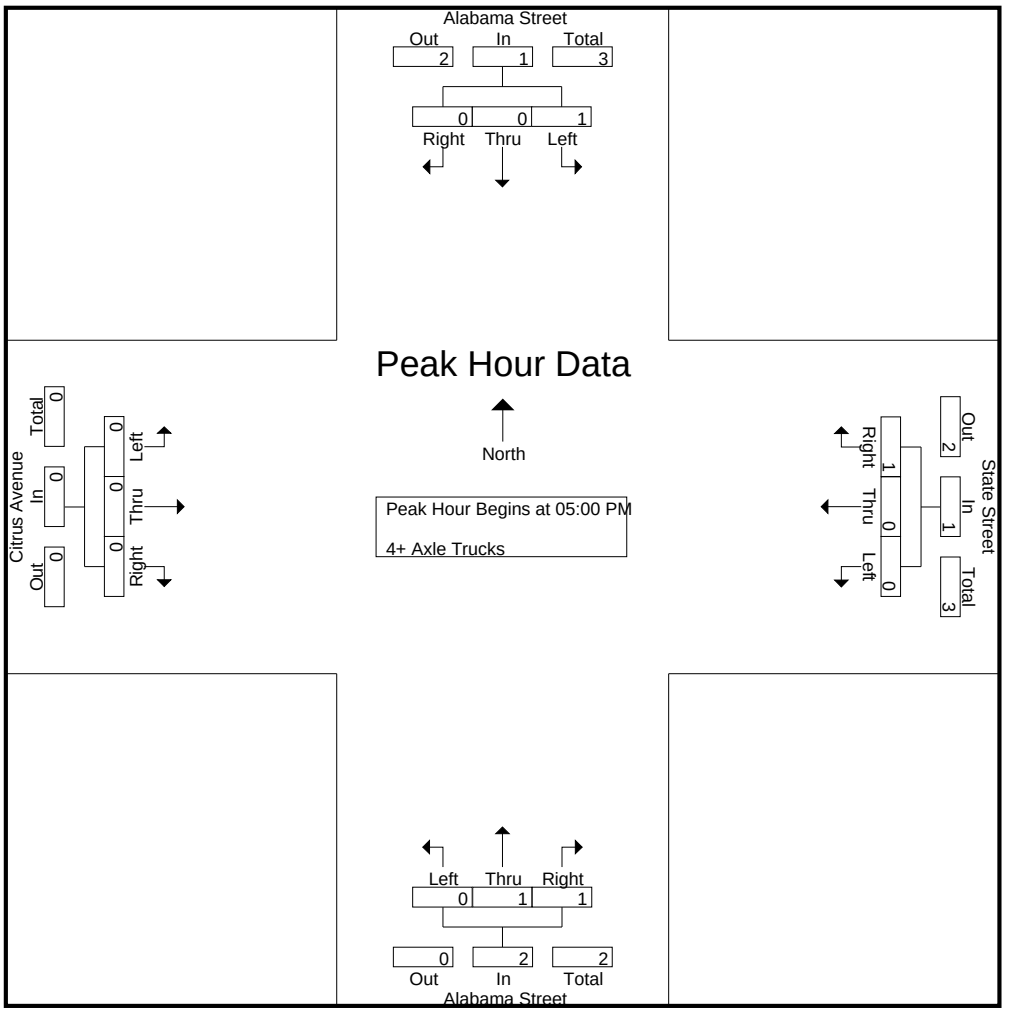

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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City of Redlands
N/S: Alabama Street
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

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

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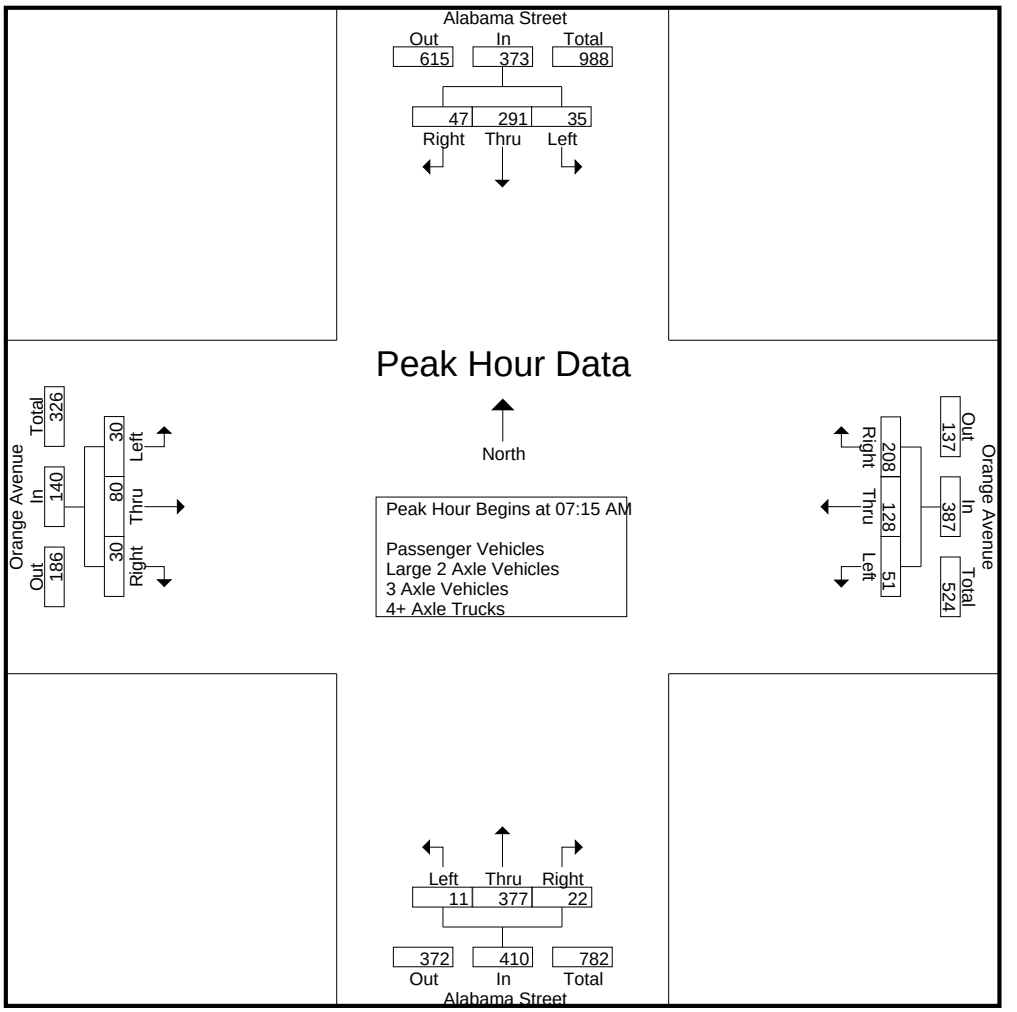

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

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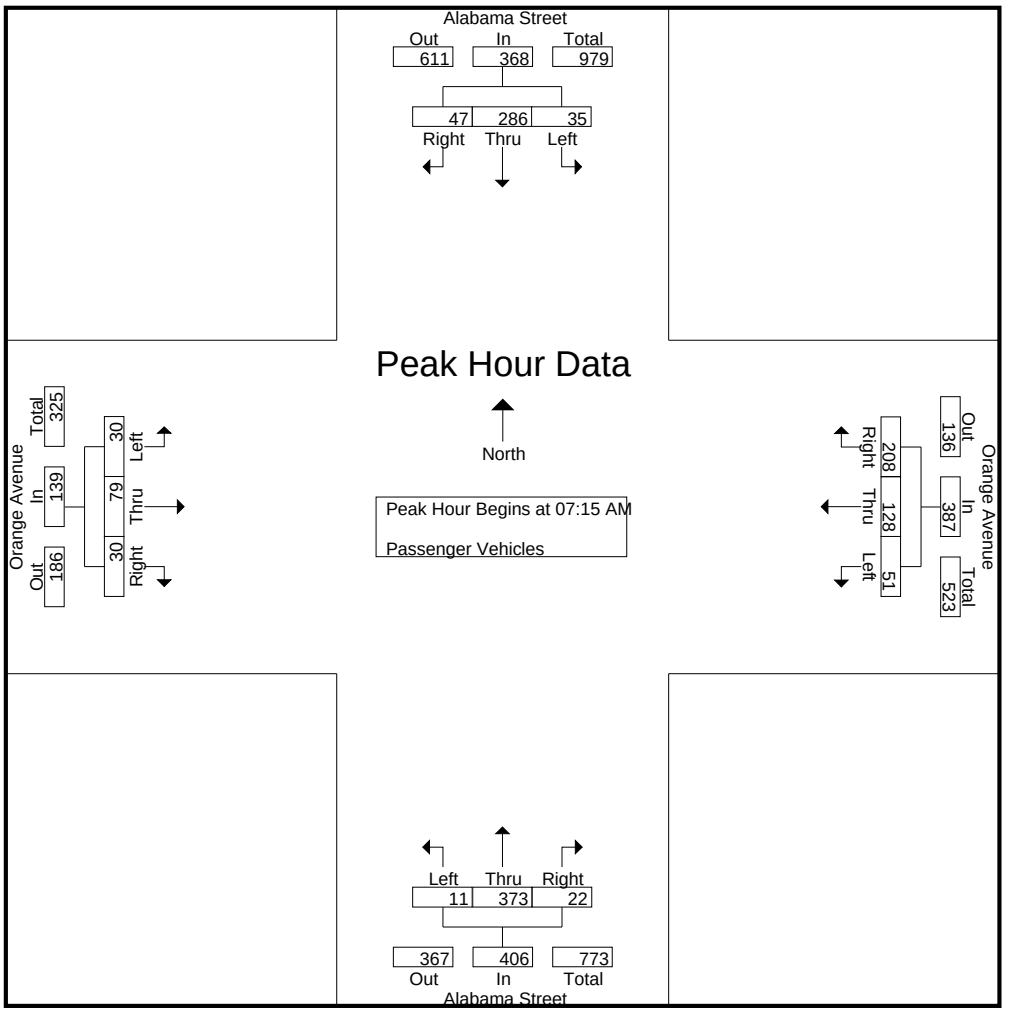

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	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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Site Code : 07517744
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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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City of Redlands
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File Name : 04A_RED AL OR AM
Site Code : 07517744
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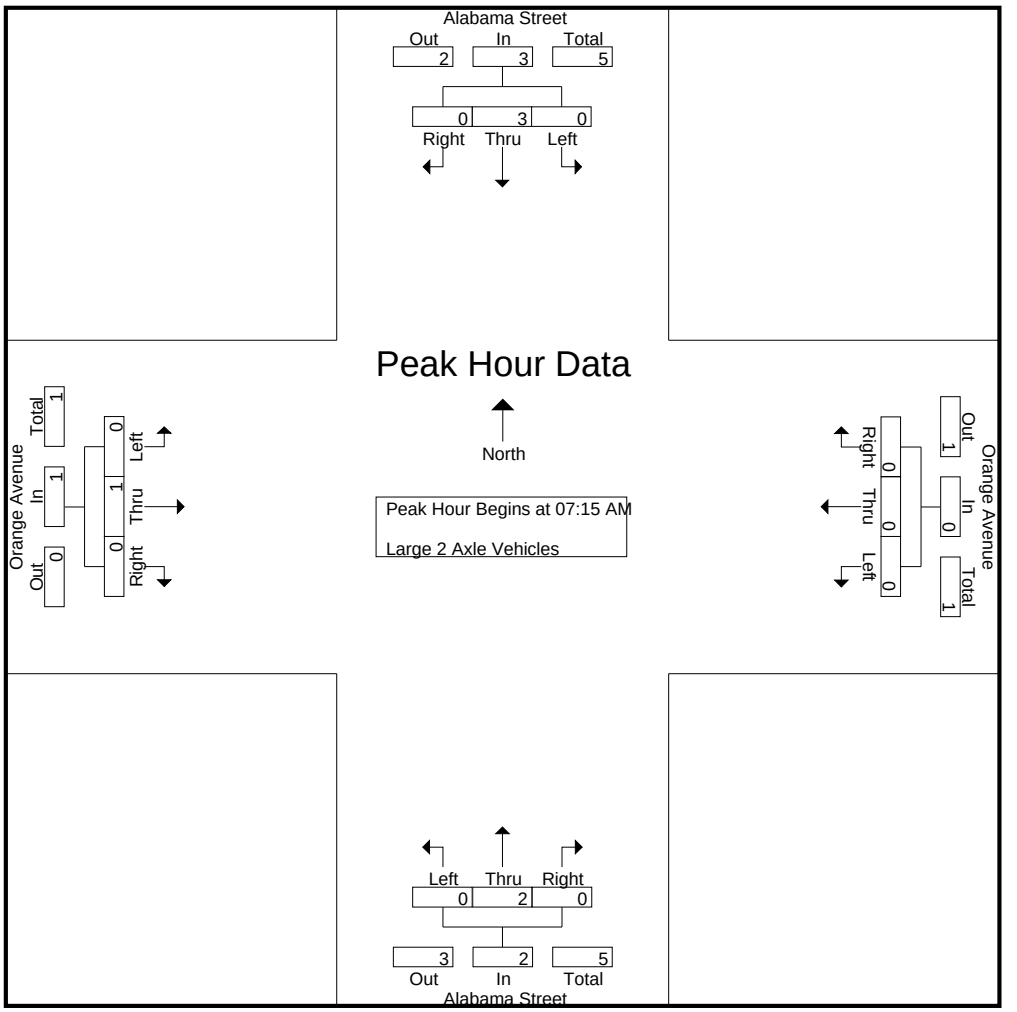

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**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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File Name : 04A_RED AL OR AM
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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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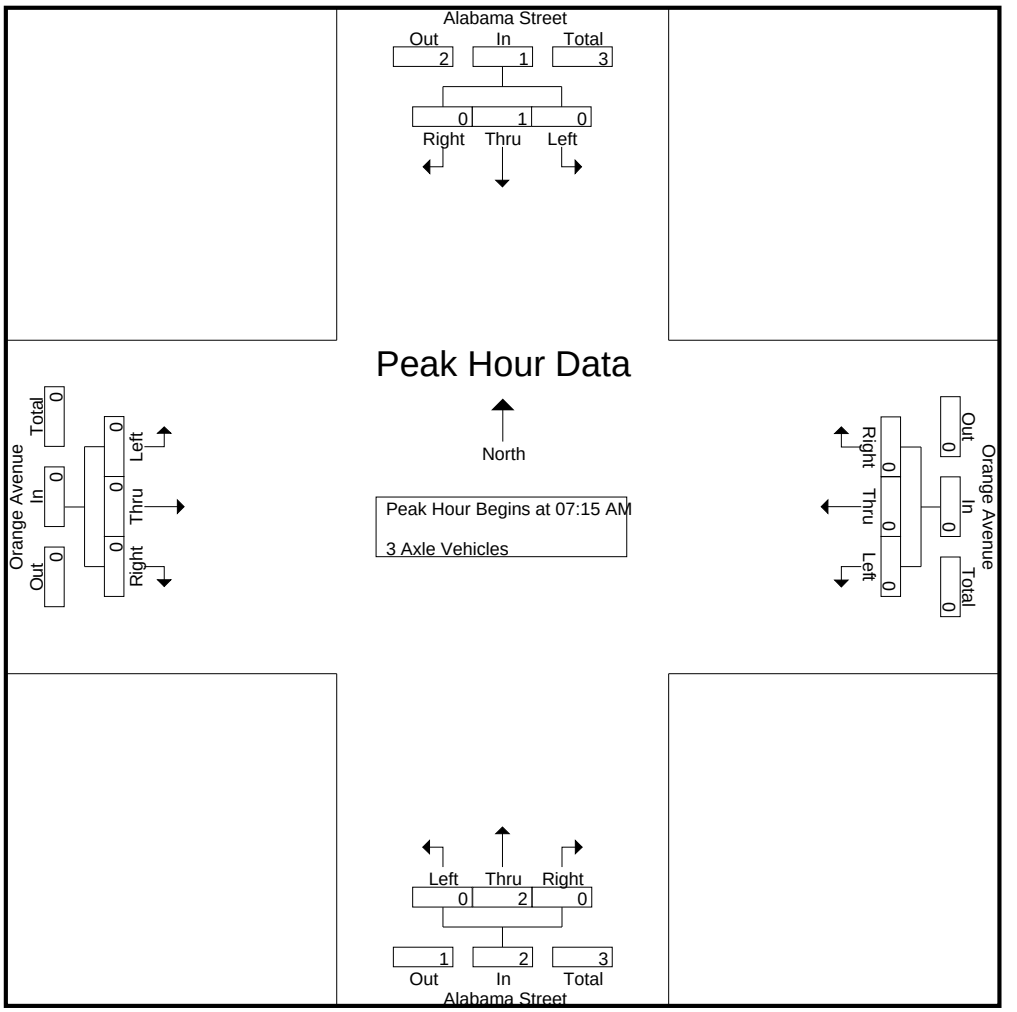

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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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City of Redlands
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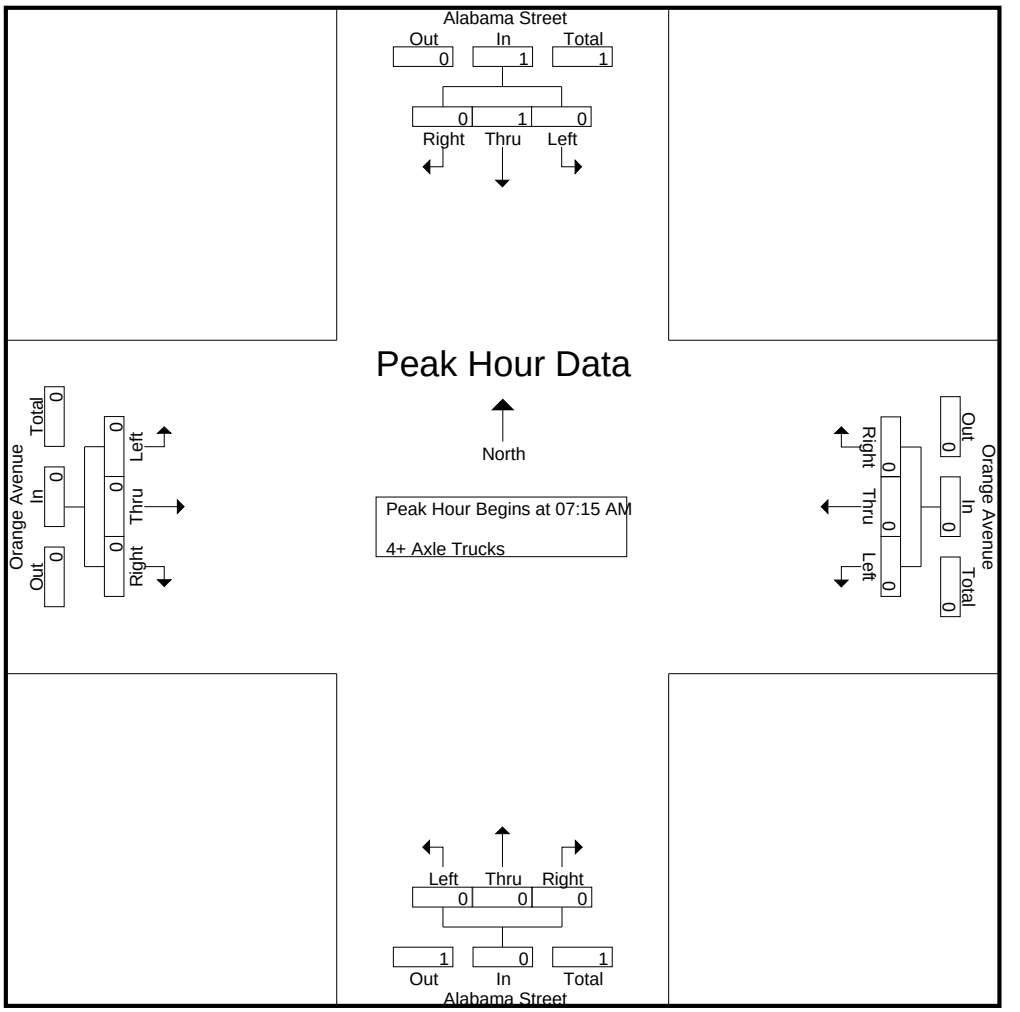

Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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
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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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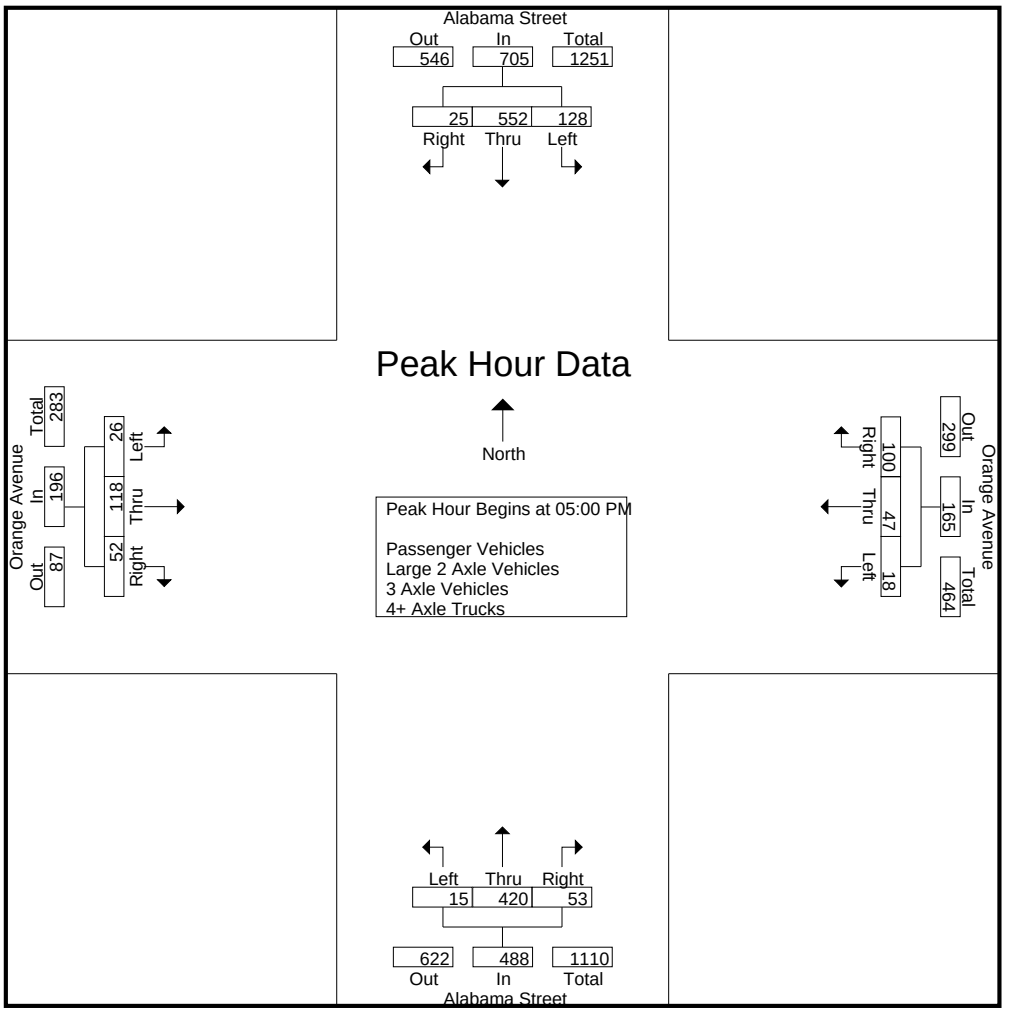

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Weather: Clear

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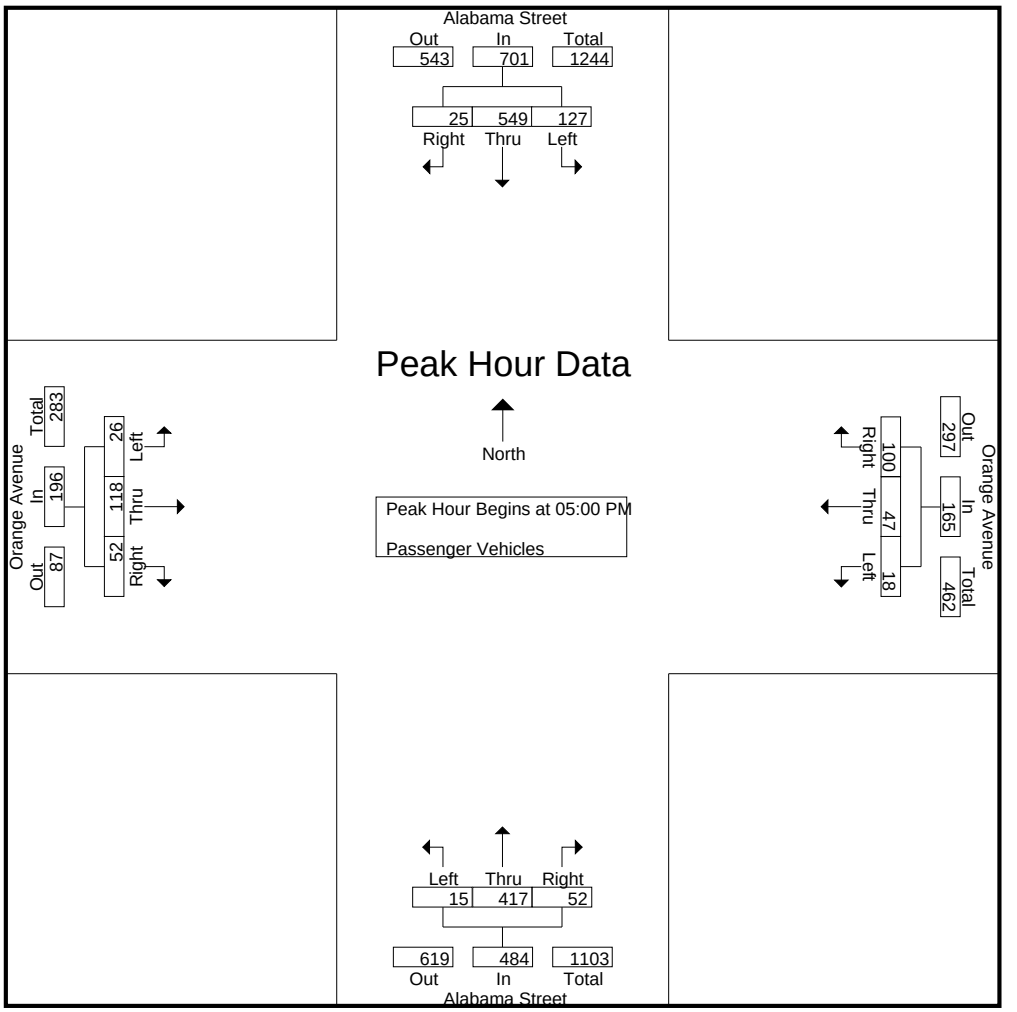

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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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

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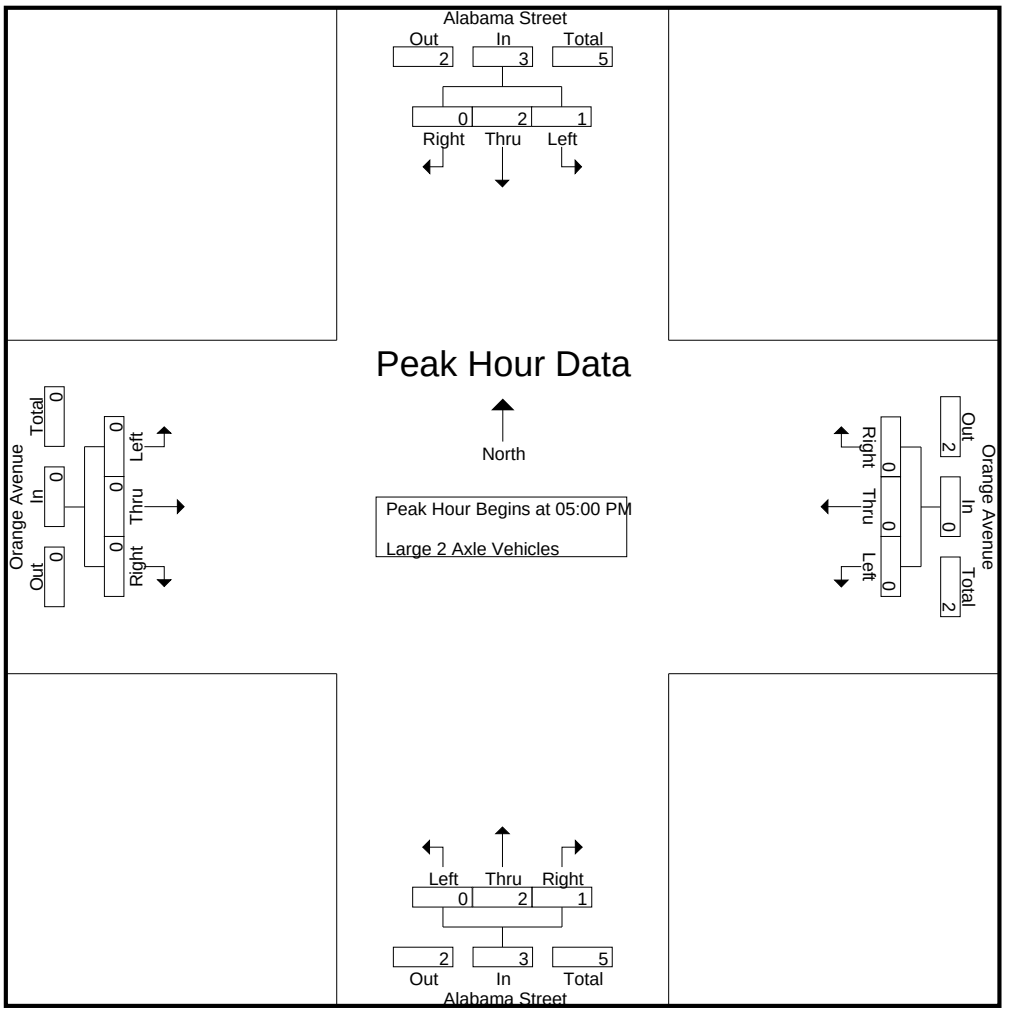

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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	**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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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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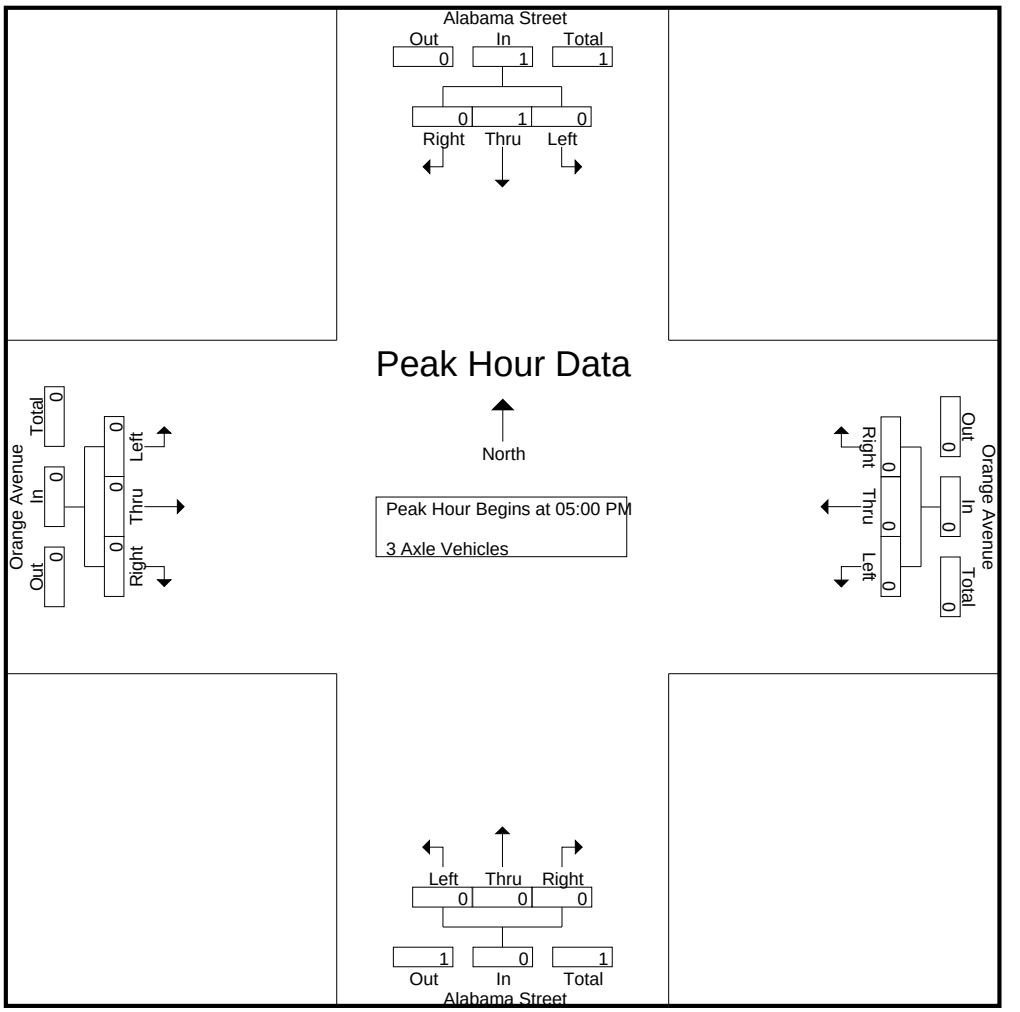

Peak Hour Analysis From 05:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	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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Groups Printed- 4+ Axle Trucks

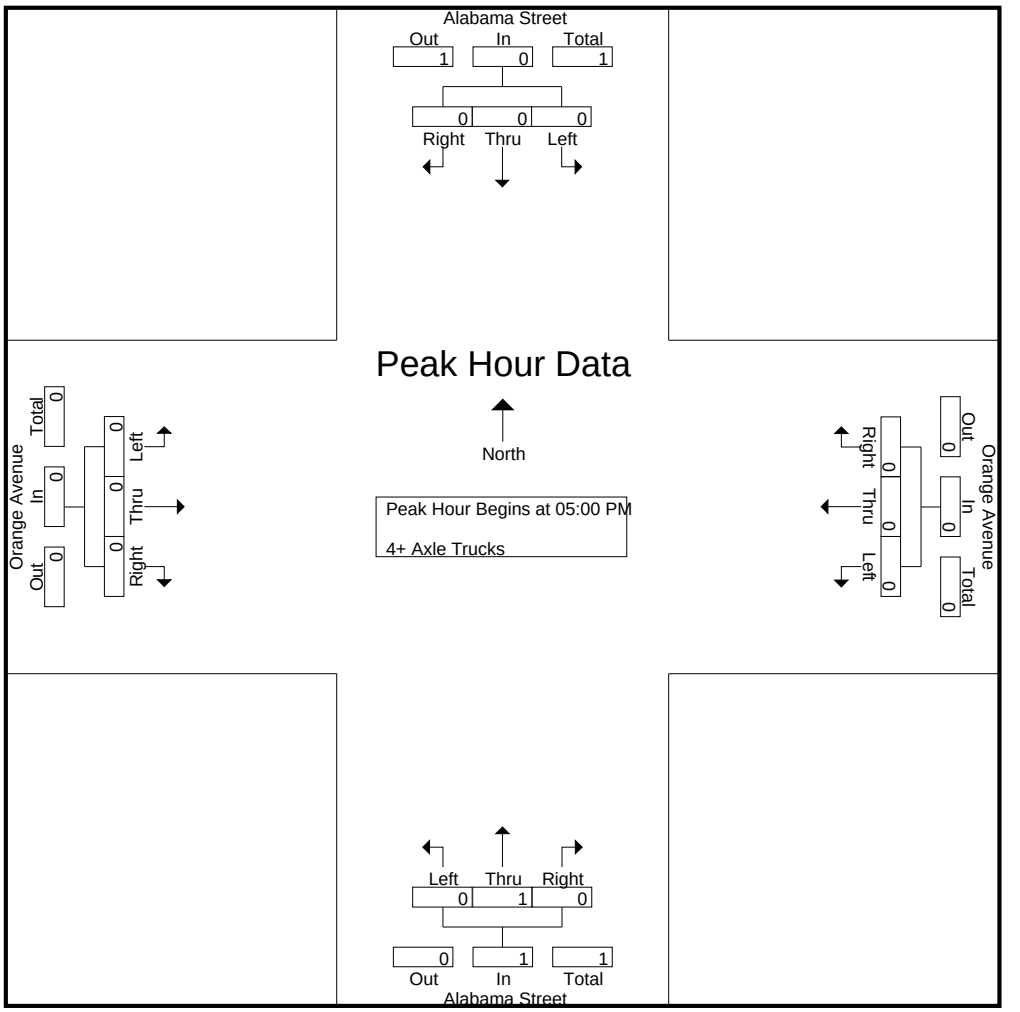
	Alabama Street Southbound				Orange Avenue Westbound				Alabama Street Northbound				Orange Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	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
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	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

Future Growth Increment Calculation Worksheets

AVERAGE DAILY TRAFFIC

SD Homes - Apartments Redlands 7221 INTERSECTION	LEG	MODEL **2012** ADT	EXISTING **2017** ADT	MODEL **2040** ADT	FUTURE **2040** ADT[1]	OPENING **2020** ADT
Iowa Street (NS) at:	North	922	**2,300**	3,379	3,380	2,560
Orange Street (EW) -#1	South	922	**2,600**	3,379	3,380	2,860
	East	1,585	**3,600**	5,449	5,990	4,010
	West	1,585	**3,400**	5,449	5,990	3,810
Alabama Street (NS) at:	North	24,226	**22,300**	31,600	31,600	23,100
Redlands Boulevard (EW) -#2	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
Alabama Street (NS) at:	North	14,345	**15,800**	16,640	16,600	16,000
Park Avenue (EW) -#3	South	14,063	**15,400**	16,106	16,100	15,600
	East	1,229	**3,600**	1,335	3,690	3,650
	West	4,185	**2,000**	5,791	5,790	2,170
Alabama Street (NS) at:	North	14,048	**14,900**	16,106	17,700	15,100
Citrus Street (EW) -#4	South	14,286	**14,400**	16,855	18,500	14,700
	East	1,108	**4,100**	2,767	5,460	4,280
	West	-	**2,500**	-	2,530	2,530
Alabama Street (NS) at:	North	14,238	**14,900**	16,855	18,500	15,200
Orange Street (EW) -#5	South	9,765	**14,400**	8,130	14,500	14,600
	East	5,243	**4,100**	7,744	8,520	4,370
	West	1,585	**2,500**	5,449	5,990	2,910
Project West Access (NS) at:	North	-		-	-	-
Orange Street (EW) -#6	South	-		-	-	-
	East	1,585	**3,600**	5,449	5,990	4,010
	West	1,585	**3,600**	5,449	5,990	4,010
Project East Access (NS) at:	North	-		-	-	-
Orange Street (EW) -#7	South	-		-	-	-
	East	1,585	**3,600**	5,449	5,990	4,010
	West	1,585	**3,600**	5,449	5,990	4,010
Alabama Street (NS) at:	North	9,765	**14,400**	8,130	14,500	14,600
Project South Access (EW) -#8	South	9,765	**14,400**	8,130	14,500	14,600
	East	-		-	-	-
	West	-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-
		-		-	-	-

7221

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

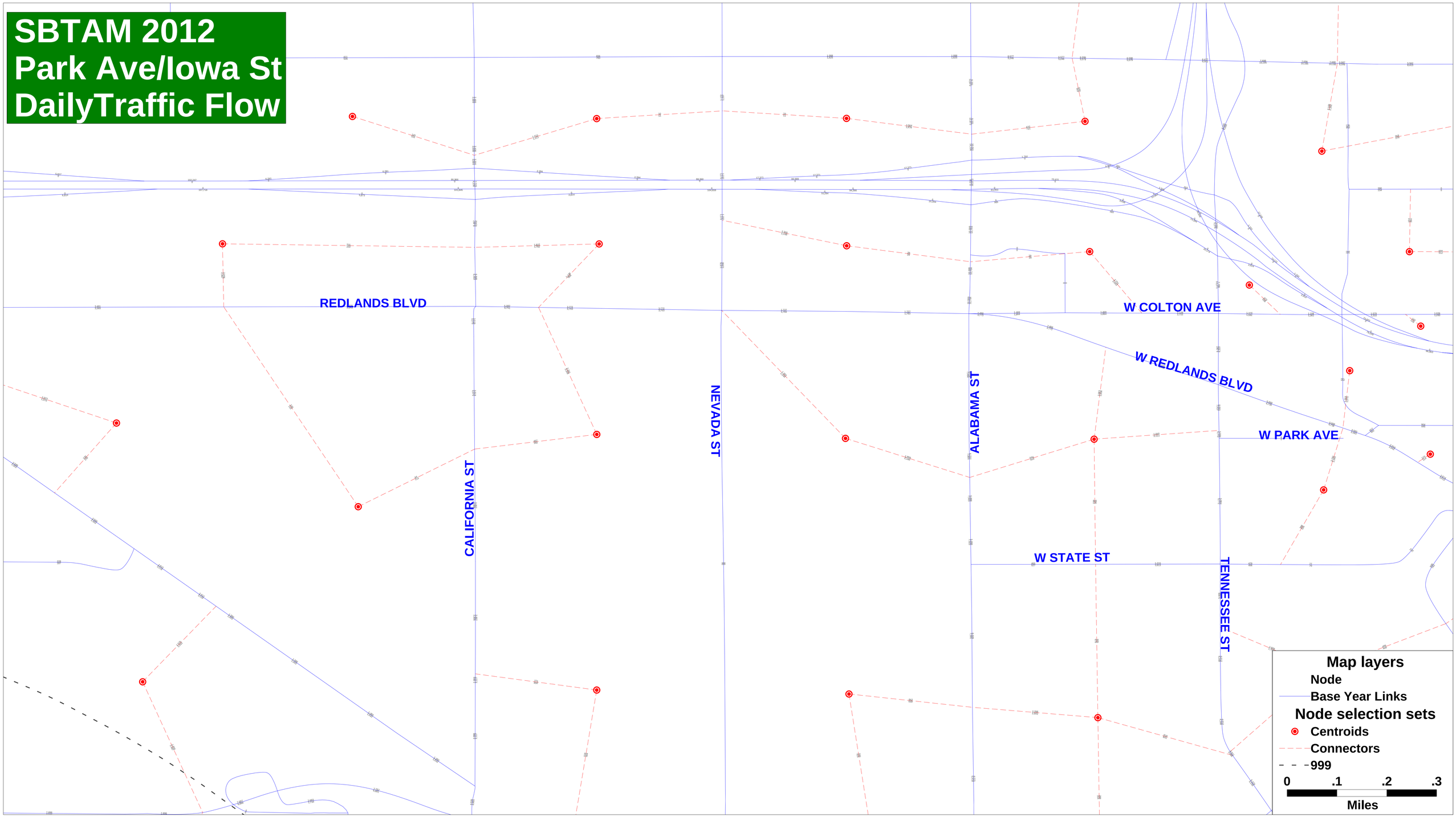
YEAR 2040 TRAFFIC CONDITIONS									
MORNING PEAK HOUR INPUT DATA					EVENING PEAK HOUR INPUT DATA				
APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL	APPROACH	TURNING MOVEMENT	BASE YEAR COUNT	APPROACH	YEAR 2040 TOTAL
NORTH	LEFT	**14**	SOUTH LEG		NORTH	LEFT	**10**	SOUTH LEG	
BOUND	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

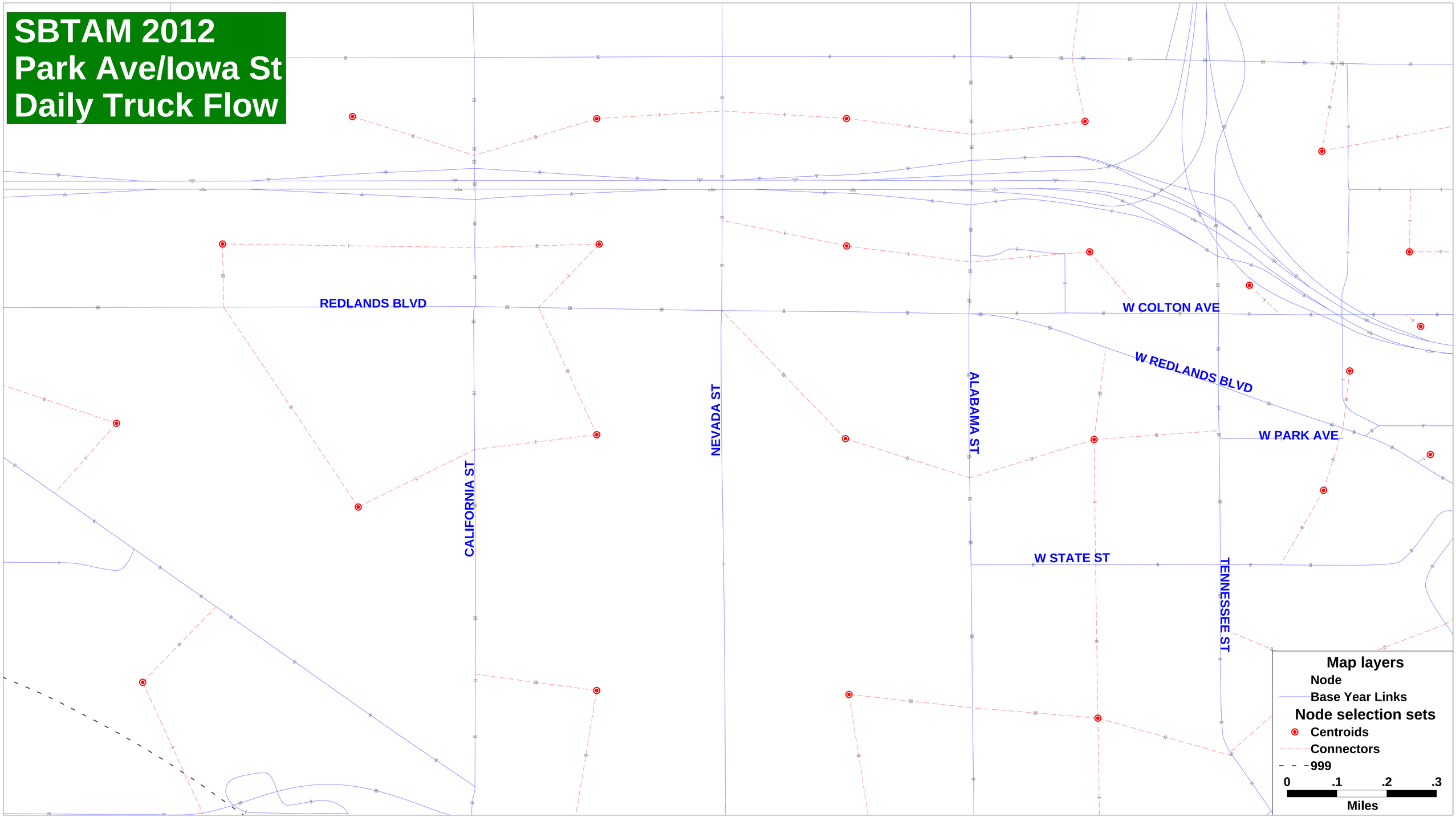
APPENDIX E

Traffic Model Plots

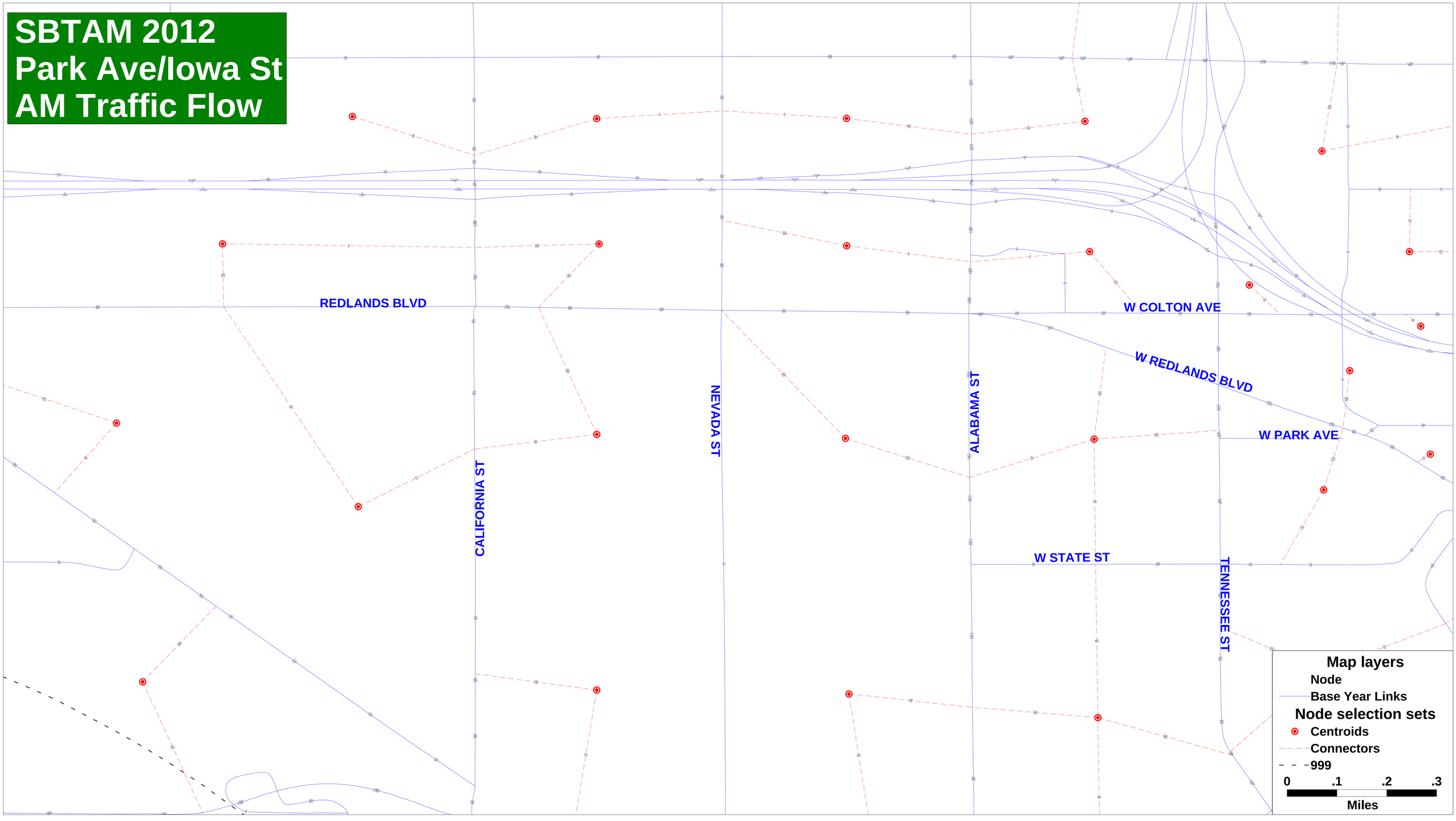
SBTAM 2012
Park Ave/Iowa St
DailyTraffic Flow



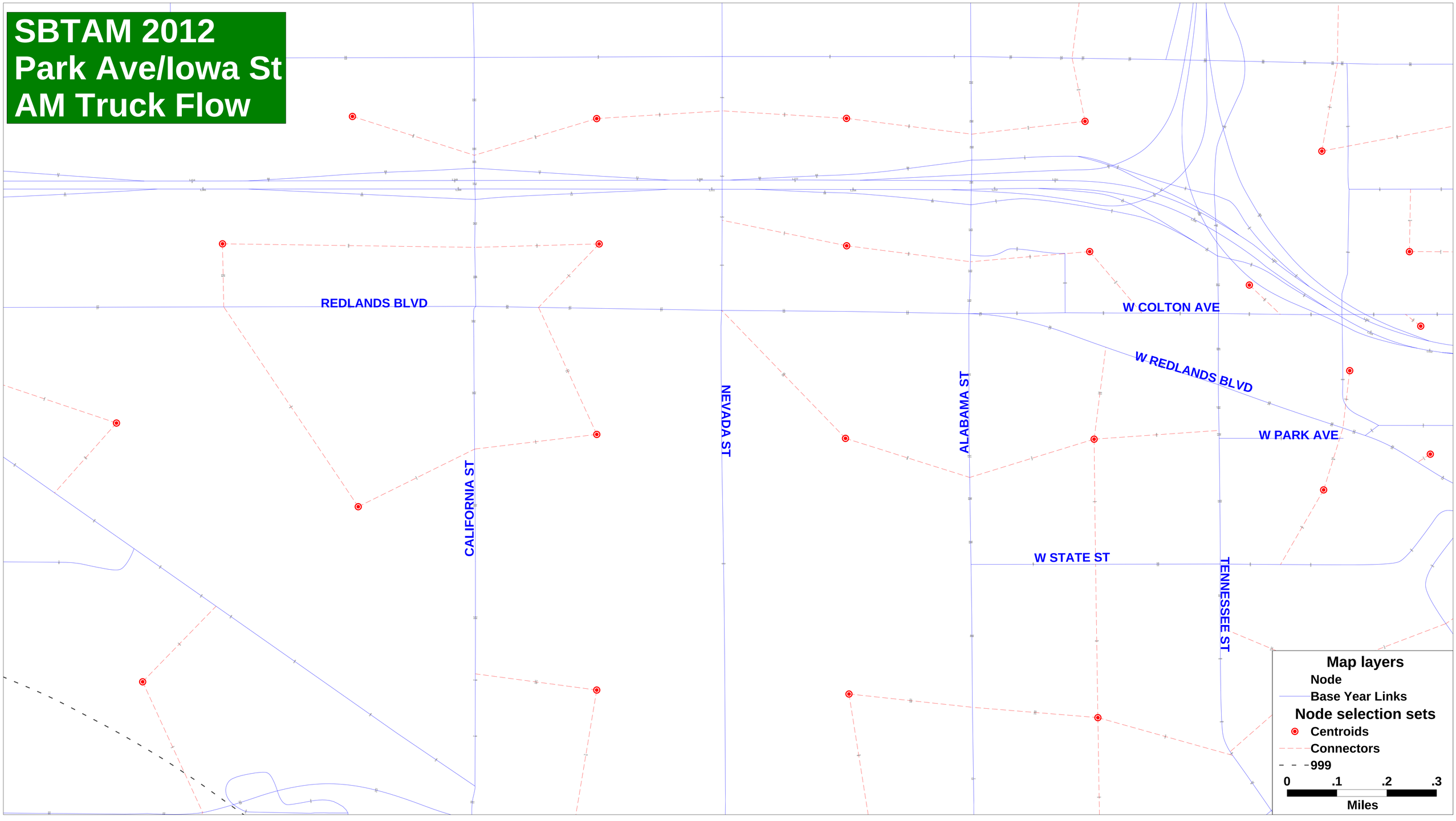
SBTAM 2012
Park Ave/Iowa St
Daily Truck Flow



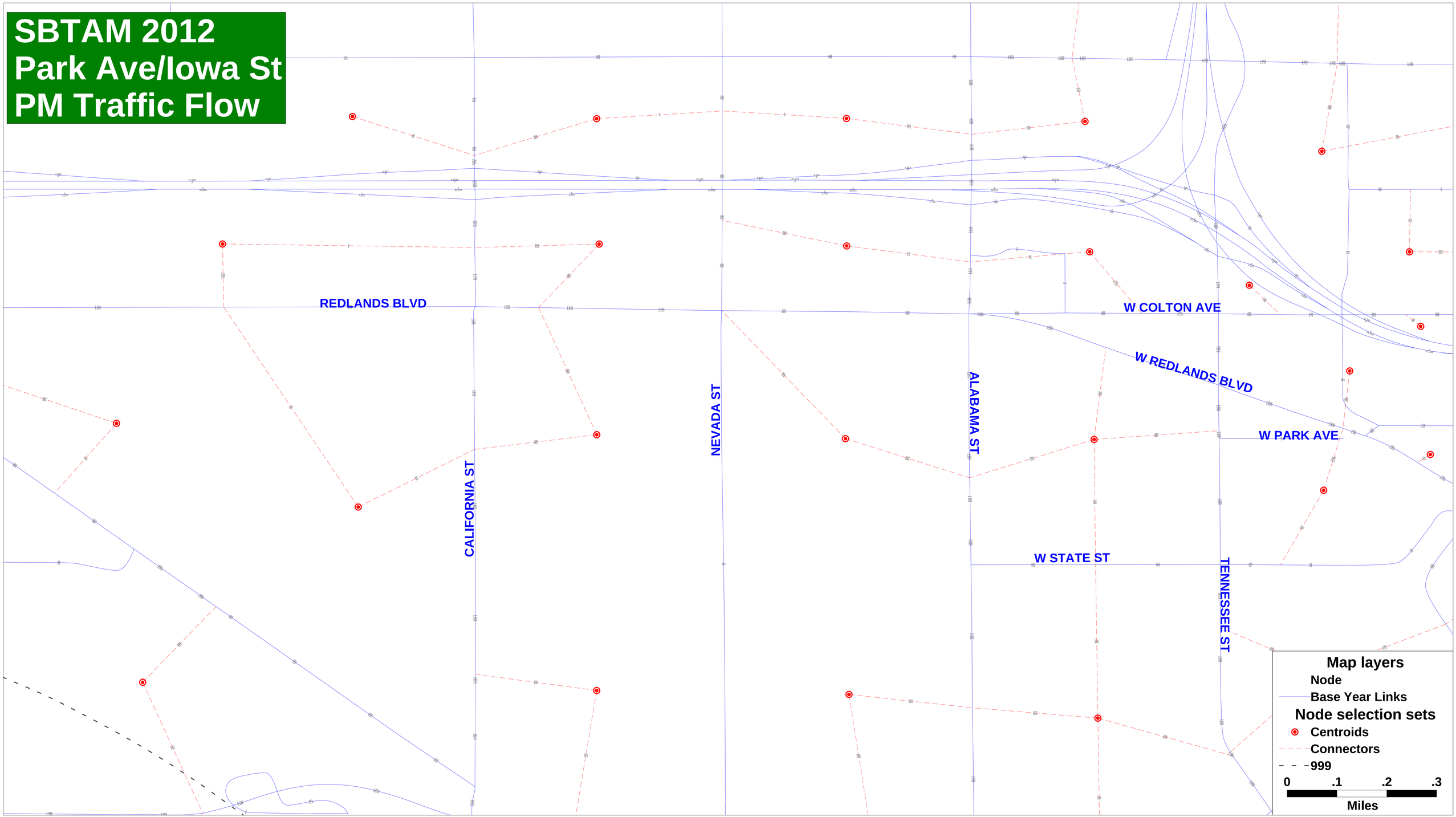
SBTAM 2012
Park Ave/Iowa St
AM Traffic Flow



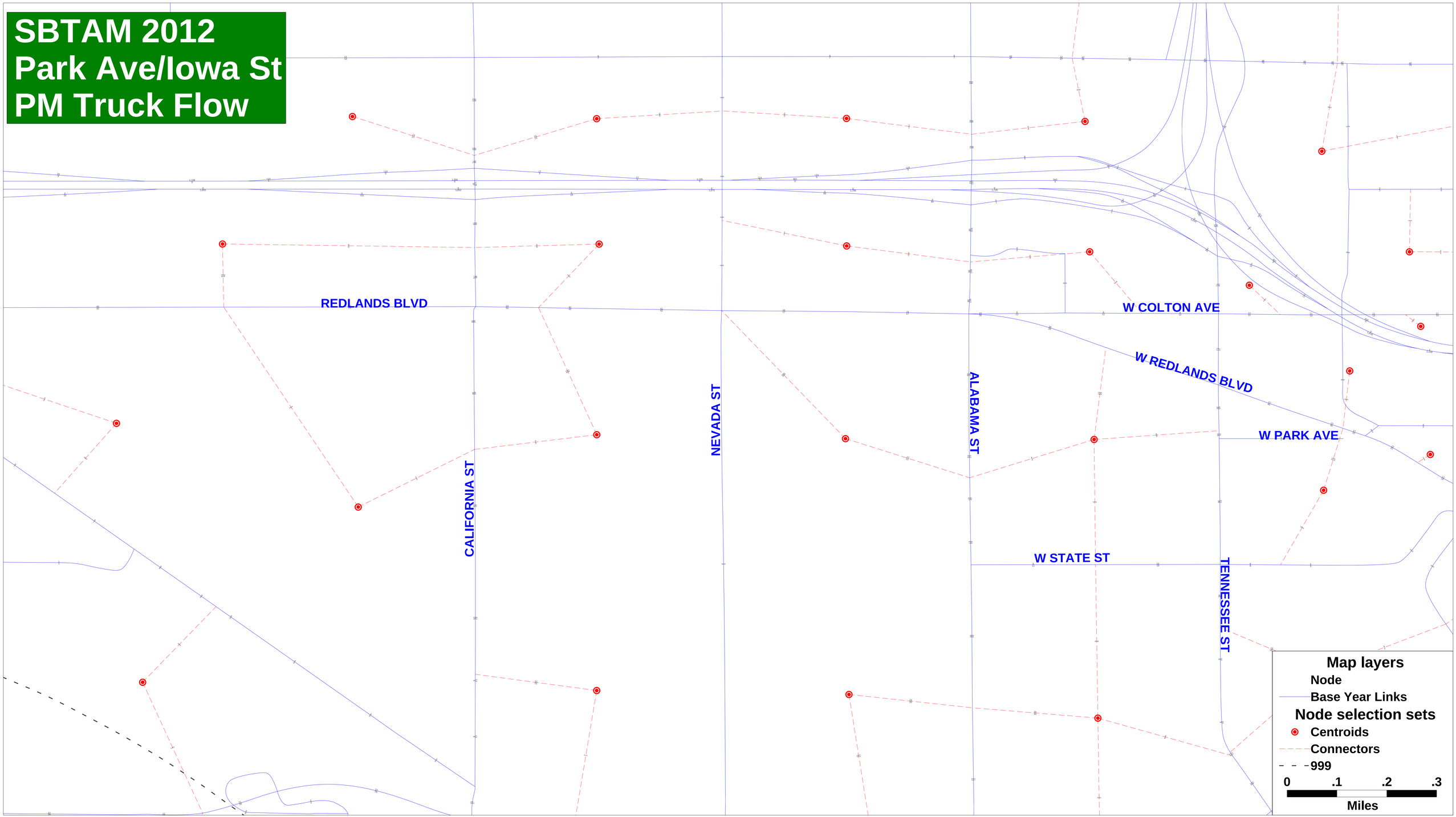
SBTAM 2012
Park Ave/Iowa St
AM Truck Flow



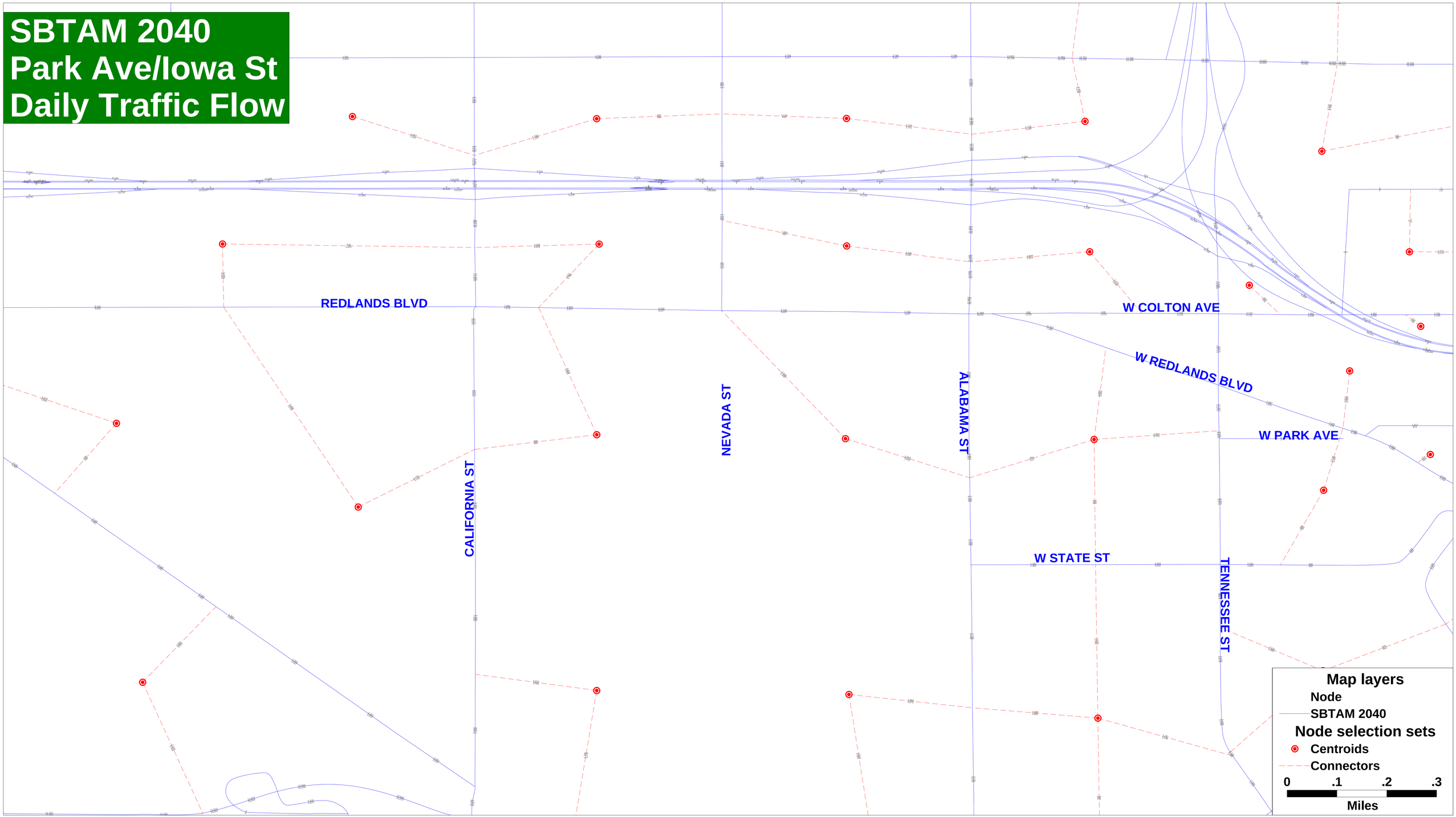
SBTAM 2012
Park Ave/Iowa St
PM Traffic Flow



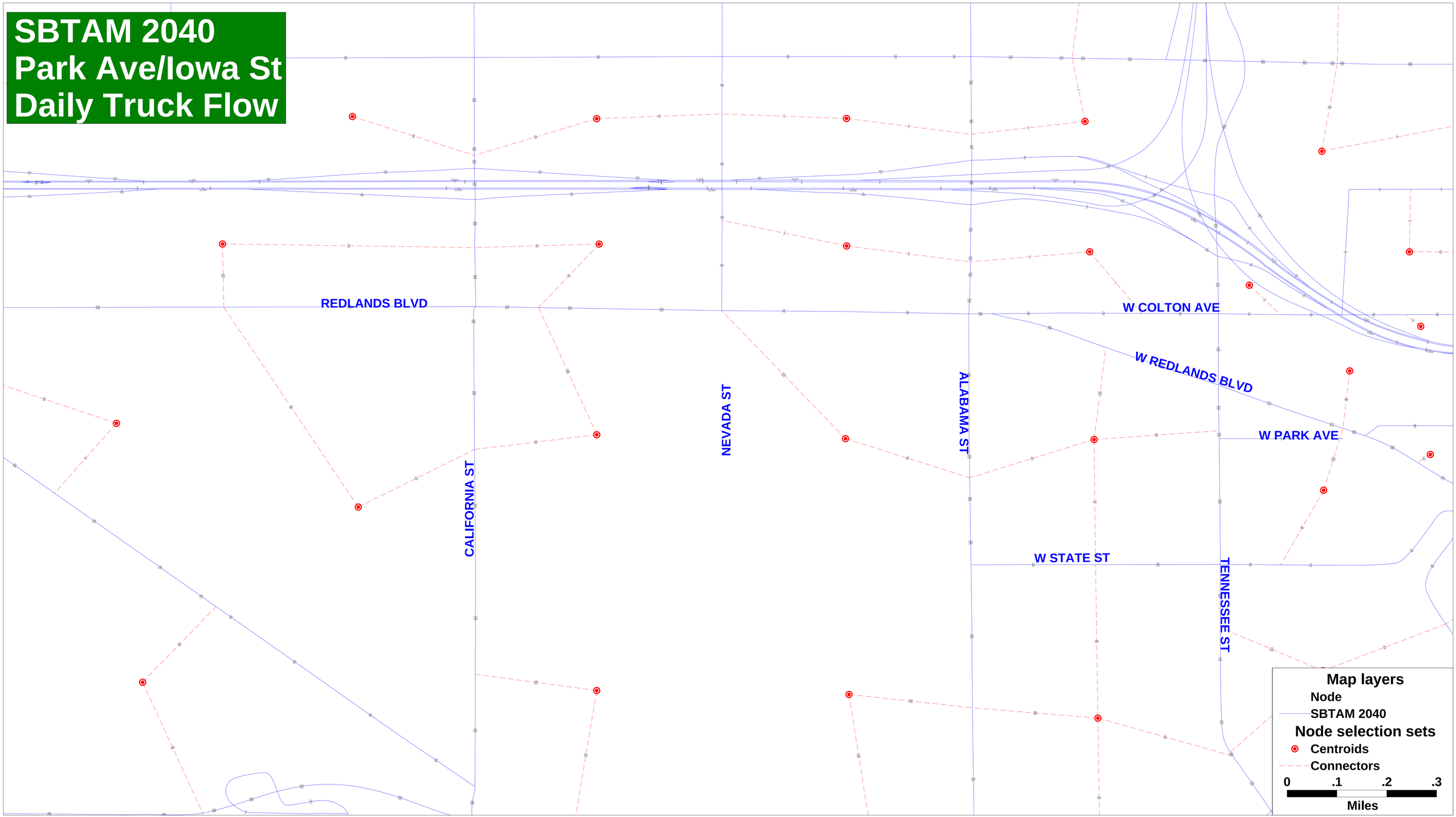
SBTAM 2012
Park Ave/Iowa St
PM Truck Flow



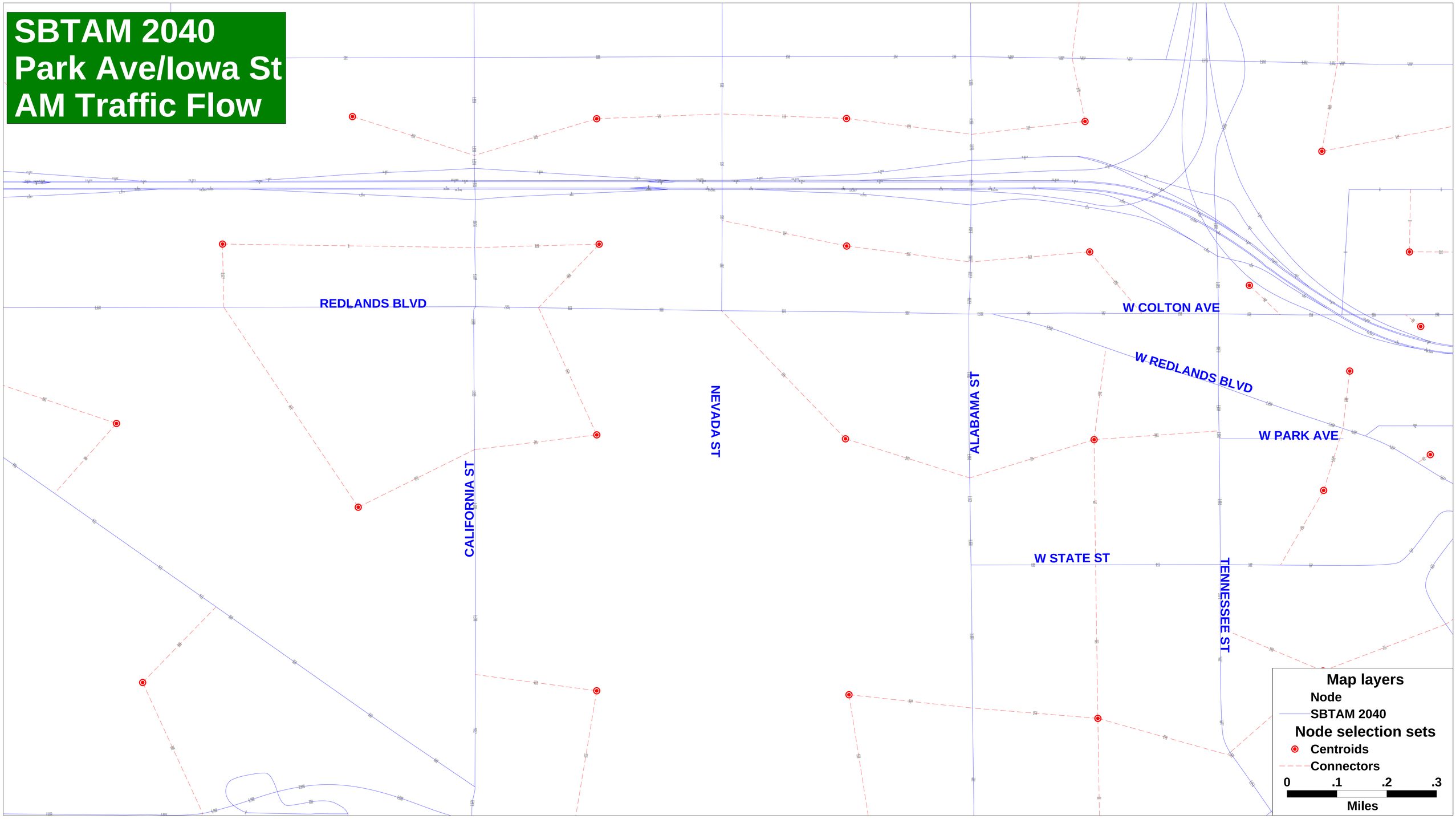
SBTAM 2040
Park Ave/Iowa St
Daily Traffic Flow



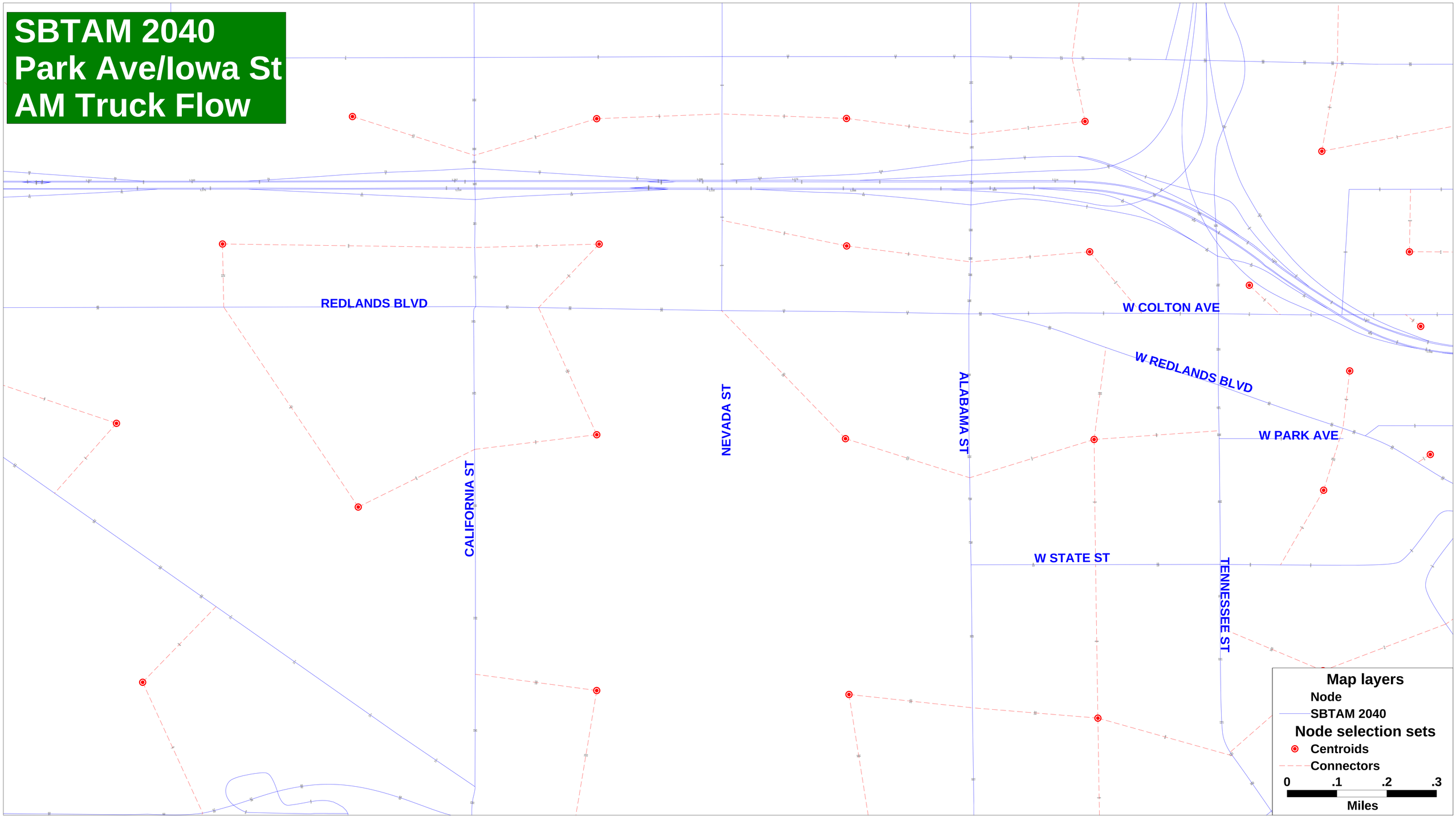
SBTAM 2040
Park Ave/Iowa St
Daily Truck Flow



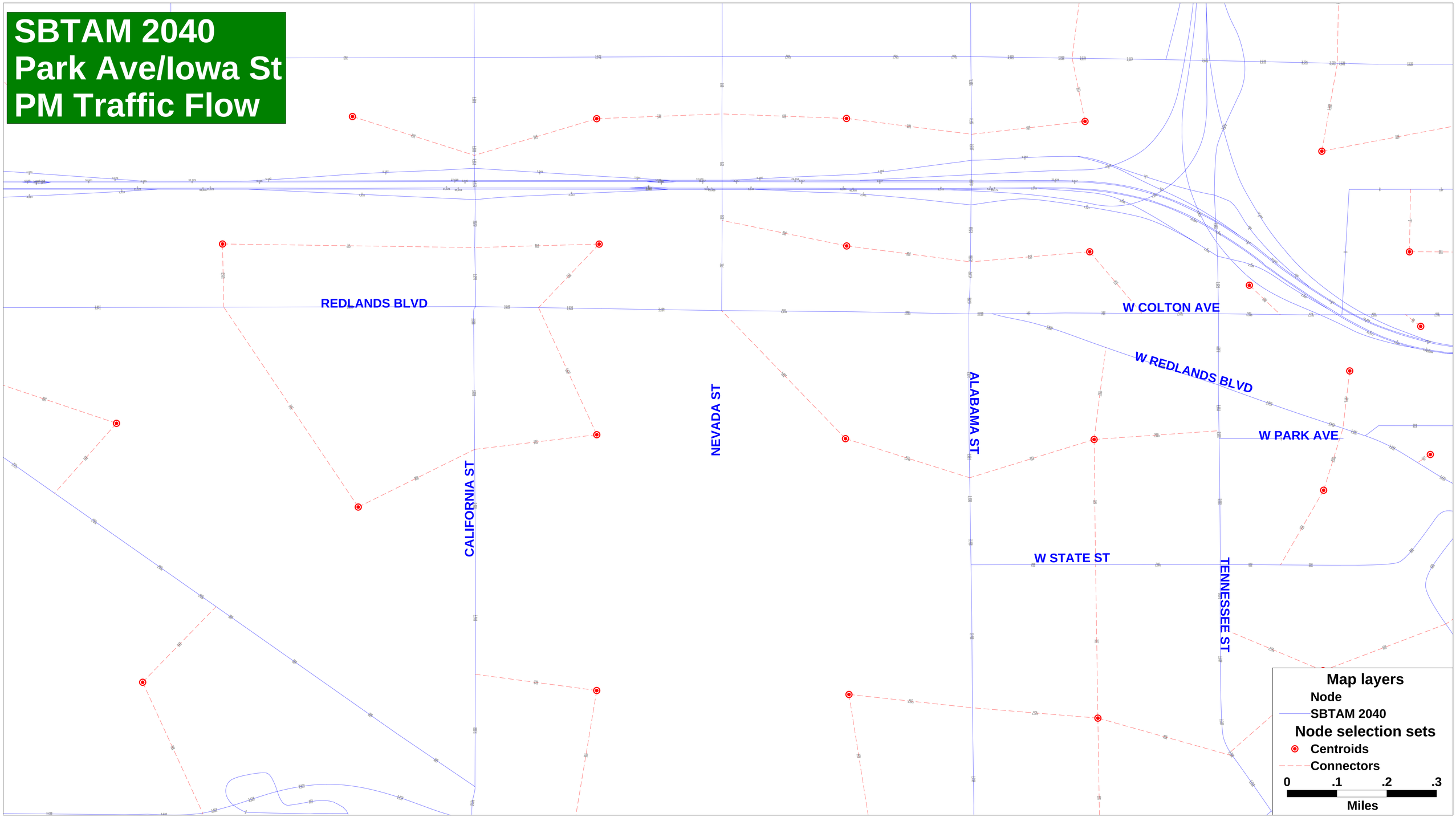
SBTAM 2040
Park Ave/Iowa St
AM Traffic Flow



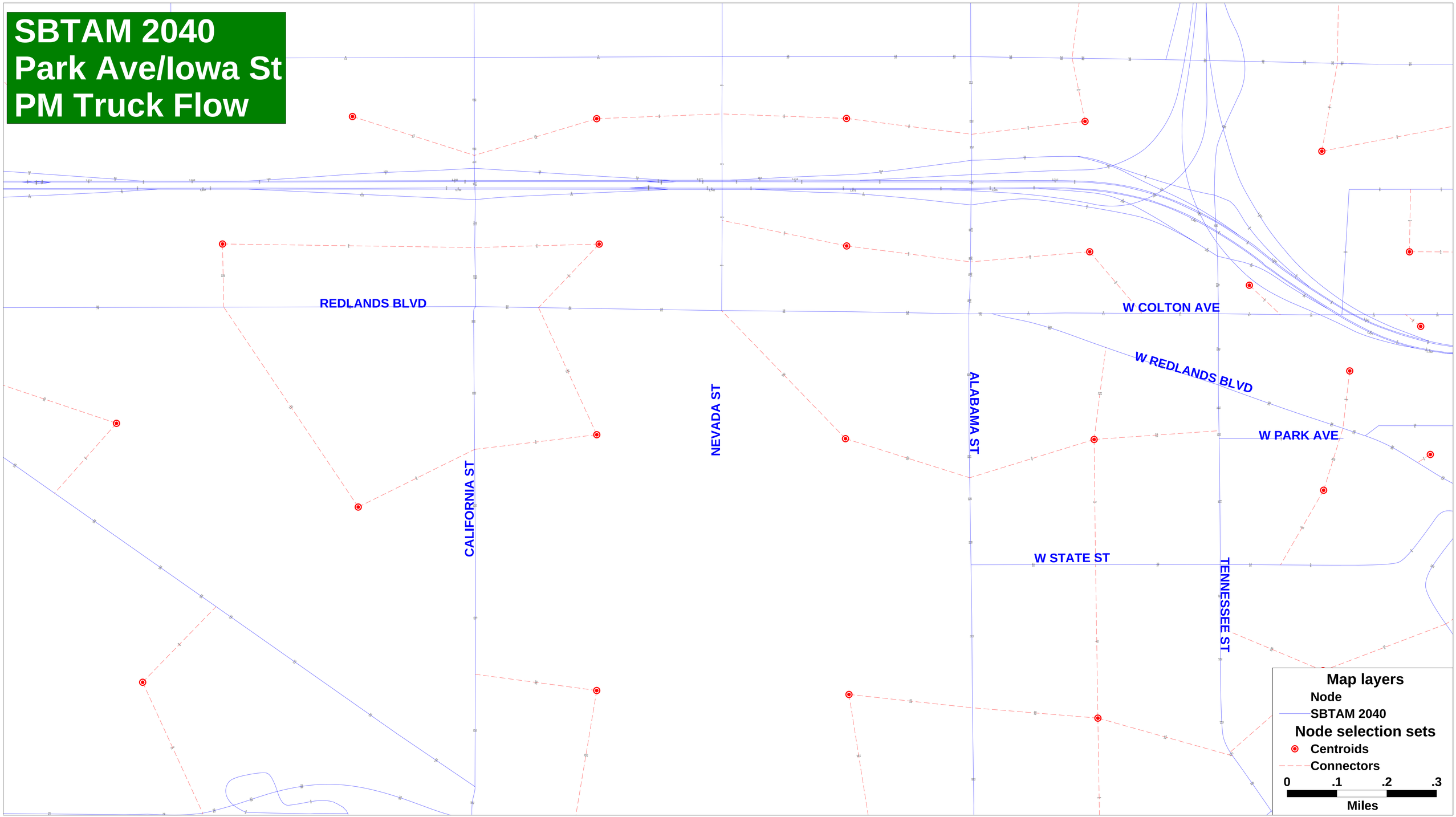
SBTAM 2040
Park Ave/Iowa St
AM Truck Flow



SBTAM 2040
Park Ave/Iowa St
PM Traffic Flow



SBTAM 2040
Park Ave/Iowa St
PM Truck Flow



APPENDIX F

Explanation and Calculation of Intersection Delay

EXPLANATION AND CALCULATION OF INTERSECTION LEVEL OF SERVICE USING DELAY METHODOLOGY

The Levels of Service at the unsignalized and signalized intersections are calculated using the delay methodology in the Highway Capacity Manual. This methodology views an intersection as consisting of several lane groups. A lane group is a set of lanes serving a movement. If there are two northbound left turn lanes, then the lane group serving the northbound left turn movement has two lanes. Similarly, there may be three lanes in the lane group serving the northbound through movement, one lane in the lane group serving the northbound right turn movement, and so forth. It is also possible for one lane to serve two lane groups. A shared lane might result in there being 1.5 lanes in the northbound left turn lane group and 2.5 lanes in the northbound through lane group.

For each lane group, there is a capacity. That capacity is calculated by multiplying the number of lanes in the lane group times a theoretical maximum lane capacity per lane time's 12 adjustment factors.

Each of the 12 adjustment factors has a value of approximately 1.00. A value less than 1.00 is generally assigned when a less than desirable condition occurs.

The 12 adjustment factors are as follows:

1. Peak hour factor (to account for peaking within the peak hour)
2. Lane utilization factor (to account for not all lanes loading equally)
3. Lane width
4. Percent of heavy trucks
5. Approach grade
6. Parking
7. Bus stops at intersections
8. Area type (CBD or other)
9. Right turns
10. Left turns
11. Pedestrian activity
12. Signal progression

The maximum theoretical lane capacity and the 12 adjustment factors for it are all unknowns for which approximate estimates have been recommended in the Highway Capacity Manual. For the most part, the recommended values are not based on statistical analysis but rather on educated estimates. However, it is possible to use the delay methodology and get reasonable results as will be discussed below.

Once the lane group volume is known and the lane group capacity is known, a volume to capacity ratio can be calculated for the lane group.

With a volume to capacity ratio calculated, average delay per vehicle in a lane group can be estimated. The average delay per vehicle in a lane group is calculated using a complex formula provided by the Highway Capacity Manual, which can be simplified and described as follows:

Delay per vehicle in a lane group is a function of the following:

1. Cycle length
2. Amount of red time faced by a lane group
3. Amount of yellow time for that lane group
4. The volume to capacity ratio of the lane group

The average delay per vehicle for each lane group is calculated, and eventually an overall average delay for all vehicles entering the intersection is calculated. This average delay per vehicle is then used to judge Level of Service. The Level of Services are defined in the table that follows this discussion.

Experience has shown that when a maximum lane capacity of 1,900 vehicles per hour is used (as recommended in the Highway Capacity Manual), little or no yellow time penalty is used, and none of the 12 penalty factors are applied, calculated delay is realistic. The delay calculation for instance assumes that yellow time is totally unused. Yet experience shows that most of the yellow time is used.

An idiosyncrasy of the delay methodology is that it is possible to add traffic to an intersection and reduce the average total delay per vehicle. If the average total delay is 30 seconds per vehicle for all vehicles traveling through an intersection, and traffic is added to a movement that has an average total delay of 15 seconds per vehicle, then the overall average total delay is reduced.

The delay calculation for a lane group is based on a concept that the delay is a function of the amount of unused capacity available. As the volume approaches capacity and there is no more unused capacity available, then the delay rapidly increases. Delay is not proportional to volume, but rather increases rapidly as the unused capacity approaches zero.

Because delay is not linearly related to volumes, the delay does not reflect how close an intersection is to overloading. If an intersection is operating at Level of Service C and has an average total delay of 18 seconds per vehicle, you know very little as to what percent the traffic can increase before Level of Service E is reached.

LEVEL OF SERVICE DESCRIPTION[1]

Level of Service	Description	Average Total Delay per Vehicle (Seconds)	
		Signalized	Unsignalized
A	Level of Service A occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	0 to 10.00	0 to 10.00
B	Level of Service B generally occurs with good progression and/or short cycle lengths. More vehicles stop than for Level of Service A, causing higher levels of average total delay.	10.01 to 20.00	10.01 to 15.00
C	Level of Service C generally results when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.	20.01 to 35.00	15.01 to 25.00
D	Level of Service D generally results in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35.01 to 55.00	25.01 to 35.00
E	Level of Service E is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume to capacity ratios. Individual cycle failures are frequent occurrences.	55.01 to 80.00	35.01 to 50.00
F	Level of Service F is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high volume to capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.	80.01 and up	50.01 and up

[1] Source: Highway Capacity Manual Special Report 209, Transportation Research Board, National Research Council, Washington, D.C., 2010.

Existing

SD Homes/ Redlands Apartment Project

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

Scenario 1 Existing Without Project
3/20/2018

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	0.351	19.7	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

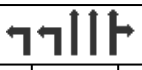
Movement, Approach, & Intersection Results

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]	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]	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]	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]	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]	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]	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]	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]	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):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.351

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]	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	48	0	11	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	R	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	0.21	0.04	0.03	0.12	0.12	0.07	0.01	0.01	0.09
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1777	1722	1530	1320	1685
c, Capacity [veh/h]	46	1783	796	90	983	970	585	487	401	536
d1, Uniform Delay [s]	52.61	15.95	13.12	50.99	12.90	12.91	27.28	25.72	31.01	28.21
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	0.66	0.16	6.49	0.52	0.53	0.16	0.02	0.05	0.30
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
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	0.40	0.07	0.61	0.22	0.22	0.19	0.02	0.04	0.29
d, Delay for Lane Group [s/veh]	57.53	16.61	13.29	57.48	13.42	13.44	27.44	25.73	31.06	28.52
Lane Group LOS	E	B	B	E	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.51	5.10	0.66	1.61	2.71	2.69	2.19	0.16	0.37	3.17
50th-Percentile Queue Length [ft]	12.81	127.50	16.42	40.14	67.74	67.16	54.74	4.11	9.21	79.35
95th-Percentile Queue Length [veh]	0.92	8.80	1.18	2.89	4.88	4.84	3.94	0.30	0.66	5.71
95th-Percentile Queue Length [ft]	23.05	220.08	29.55	72.25	121.93	120.89	98.54	7.40	16.57	142.84

Movement, Approach, & Intersection Results

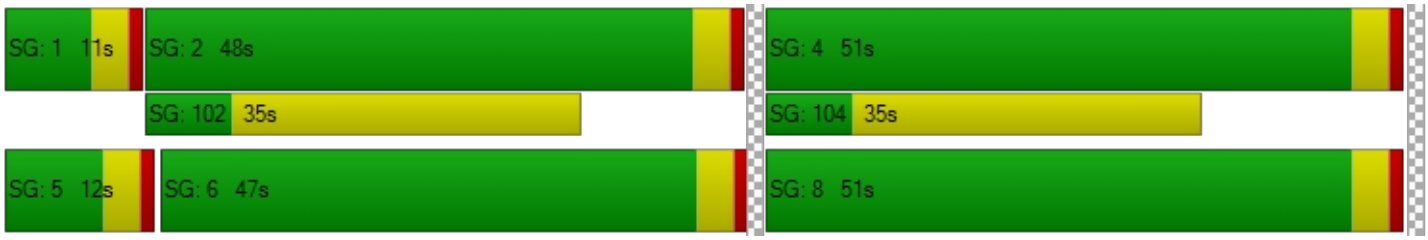
d_M, Delay for Movement [s/veh]	57.53	16.61	13.29	57.48	13.43	13.44	27.44	27.44	25.73	31.06	28.52	28.52
Movement LOS	E	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.28			18.37			27.31			28.78		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.69											
Intersection LOS	B											
Intersection V/C	0.351											

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	2.798	0.000	2.074
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]	800	782	855	855
d_b, Bicycle Delay [s]	19.80	20.40	18.04	18.04
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]	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	57	0	0	57	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	111	765	755	732	596	730	596
d1, Uniform Delay [s]	36.62	18.23	18.23	34.79	14.49	14.50	15.29	14.41	15.31	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]	3.89	0.74	0.77	3.43	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]	40.51	18.97	19.00	38.23	14.69	14.70	15.39	14.42	15.41	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]	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]	8.74	119.51	116.81	25.98	55.40	54.91	31.07	2.34	31.66	16.42
95th-Percentile Queue Length [veh]	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]	15.73	209.15	205.43	46.77	99.73	98.83	55.93	4.21	56.99	29.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.51	18.98	19.00	38.23	14.70	14.70	15.39	15.39	14.42	15.41	15.41	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]	44.55	44.55	44.55	44.55
l_p,int, Pedestrian LOS Score for Intersection	2.787	2.798	2.032	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]	691	673	964	964
d_b, Bicycle Delay [s]	23.56	24.22	14.77	14.77
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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Report File: J:\...\PME.pdf

Scenario 1 Existing Without Project
3/20/2018

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	SB Left	0.508	28.2	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	0.337	19.7	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

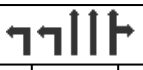
Movement, Approach, & Intersection Results

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):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.508

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]	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]	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	12	44	0	16	44	11	11	39	12
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]	89	89	89	89	89	89	89	89	89	89	89	89
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	30	30	7	31	31	13	30	30	6	24	24
g / C, Green / Cycle	0.07	0.34	0.34	0.08	0.34	0.34	0.14	0.34	0.34	0.07	0.27	0.27
(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]	237	1151	560	258	616	565	469	1151	514	237	913	407
d1, Uniform Delay [s]	39.58	22.77	22.83	39.79	24.18	24.19	37.02	24.81	21.11	39.58	26.96	26.86
k, delay calibration	0.11	0.11	0.11	0.11	0.16	0.16	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]	1.00	0.23	0.48	2.09	1.30	1.42	2.86	0.54	0.19	1.00	0.29	0.62
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	0.40	0.41	0.58	0.59	0.59	0.78	0.61	0.20	0.38	0.41	0.40
d, Delay for Lane Group [s/veh]	40.58	23.00	23.31	41.88	25.47	25.61	39.88	25.35	21.30	40.58	27.25	27.48
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh]	0.95	3.62	3.62	1.62	6.09	5.62	3.88	5.93	1.47	0.94	3.13	2.74
50th-Percentile Queue Length [ft]	23.85	90.42	90.61	40.48	152.34	140.41	96.98	148.32	36.85	23.58	78.27	68.46
95th-Percentile Queue Length [veh]	1.72	6.51	6.52	2.91	10.14	9.50	6.98	9.93	2.65	1.70	5.64	4.93
95th-Percentile Queue Length [ft]	42.92	162.76	163.10	72.87	253.55	237.57	174.57	248.18	66.34	42.45	140.89	123.23

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.58	23.07	23.31	41.88	25.51	25.61	39.88	25.35	21.30	40.58	27.25	27.48
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	25.11			28.45			29.51			29.24		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	28.20											
Intersection LOS	C											
Intersection V/C	0.508											

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	2.847	2.968	2.940	2.898
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]	709	727	727	636
d_b, Bicycle Delay [s]	22.91	22.27	22.27	25.57
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]	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]	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]	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]	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):	19.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.337

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]	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	43	0	12	43	0	0	50	0	0	50	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	R	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	52	52	6	56	56	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	0.17	0.02	0.03	0.21	0.21	0.06	0.02	0.05	0.10
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1781	1721	1530	1325	1656
c, Capacity [veh/h]	36	1703	760	95	957	947	613	510	428	552
d1, Uniform Delay [s]	50.70	16.07	13.55	48.48	14.55	14.56	24.83	23.74	29.35	25.98
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]	5.49	0.57	0.10	6.38	1.22	1.23	0.14	0.04	0.17	0.31
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	0.34	0.35	0.04	0.62	0.39	0.39	0.18	0.05	0.16	0.30
d, Delay for Lane Group [s/veh]	56.18	16.64	13.65	54.86	15.77	15.78	24.97	23.79	29.52	26.29
Lane Group LOS	E	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]	0.36	4.12	0.36	1.63	5.13	5.08	1.93	0.44	1.32	3.14
50th-Percentile Queue Length [ft]	8.91	103.01	9.00	40.87	128.17	126.98	48.15	11.10	32.90	78.59
95th-Percentile Queue Length [veh]	0.64	7.42	0.65	2.94	8.84	8.78	3.47	0.80	2.37	5.66
95th-Percentile Queue Length [ft]	16.04	185.42	16.20	73.57	221.01	219.39	86.67	19.97	59.22	141.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	56.18	16.64	13.65	54.86	15.78	15.78	24.97	24.97	23.79	29.52	26.29	26.29
Movement LOS	E	B	B	D	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.24			18.63			24.74			27.21		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.71											
Intersection LOS	B											
Intersection V/C	0.337											

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	2.849	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]	743	743	876	876
d_b, Bicycle Delay [s]	20.74	20.74	16.58	16.58
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]	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]	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	15.67	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]	4.64	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]	41.78	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]	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]	6.48	92.77	91.48	27.94	104.62	103.61	29.75	6.86	46.22	22.80
95th-Percentile Queue Length [veh]	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]	11.66	166.99	164.66	50.29	188.31	186.49	53.55	12.36	83.20	41.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	41.78	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]	42.08	42.08	42.08	42.08
l_p,int, Pedestrian LOS Score for Intersection	2.911	2.849	2.030	2.083
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	2.084	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
8/31/2018

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	0.447	11.1	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	NB Left	0.447	29.3	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.373	20.0	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.376	19.8	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.498	19.0	B
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.004	10.1	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	NB Thru	0.000	11.5	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):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.447

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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	5	0	13	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]	53	72	33	3	44	4	8	101	37	70	143	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	32	12	22	45	6
Total Analysis Volume [veh/h]	66	90	41	4	55	5	10	126	46	88	179	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	590	694	589	633	728	649
Degree of Utilization, x	0.26	0.06	0.11	0.21	0.06	0.45

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.06	0.19	0.36	0.81	0.20	2.31
95th-Percentile Queue Length [ft]	26.45	4.70	9.10	20.26	5.05	57.67
Approach Delay [s/veh]	10.41		9.86	9.44		12.96
Approach LOS	B		A	A		B
Intersection Delay [s/veh]	11.13					
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):	0.447

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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]	20	25	20	0	6	0	0	0	5	5	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]	102	558	46	89	503	222	100	175	55	49	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]	28	152	13	24	137	60	27	48	15	13	100	30
Total Analysis Volume [veh/h]	111	607	50	97	547	241	109	190	60	53	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	6	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	0.13	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	1731	3329	1800	1616	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	215	1370	692	210	717	644	214	1137	508	176	1099	490
d1, Uniform Delay [s]	47.56	21.69	21.71	47.49	24.71	24.72	47.55	24.82	24.41	47.87	27.45	26.30
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]	1.92	0.61	1.22	1.57	3.39	3.78	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	0.52	0.32	0.32	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]	49.48	22.30	22.94	49.06	28.10	28.50	49.41	24.89	24.51	48.82	27.65	26.55
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]	1.45	3.71	3.90	1.24	8.35	7.57	1.41	1.63	1.02	0.68	3.75	2.16
50th-Percentile Queue Length [ft/ln]	36.15	92.73	97.51	31.12	208.73	189.28	35.15	40.84	25.55	16.94	93.71	53.98
95th-Percentile Queue Length [veh/ln]	2.60	6.68	7.02	2.24	13.09	12.08	2.53	2.94	1.84	1.22	6.75	3.89
95th-Percentile Queue Length [ft/ln]	65.08	166.91	175.52	56.02	327.20	302.09	63.27	73.51	45.99	30.49	168.68	97.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.48	22.48	22.94	49.06	28.20	28.50	49.41	24.89	24.51	48.82	27.65	26.55
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	26.41			30.57			32.27			29.38		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	29.31											
Intersection LOS	C											
Intersection V/C	0.447											

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	2.833	2.921	2.807	2.770
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	1.982	2.290	1.856	2.031
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):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.373

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	65	0	0	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]	16	645	32	81	468	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	202	10	25	147	12	4	8	3	4	8	13
Total Analysis Volume [veh/h]	20	808	40	101	586	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	0.24	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	1753	1335	1729	1385	1620
c, Capacity [veh/h]	54	1407	628	129	817	796	511	646	552	605
d1, Uniform Delay [s]	40.36	19.33	15.17	38.64	15.41	15.42	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	0.37	0.04	10.00	0.31	0.32	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	0.57	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	19.71	15.21	48.64	15.72	15.74	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	5.78	0.45	2.37	3.88	3.79	0.22	0.56	0.21	1.14
50th-Percentile Queue Length [ft/ln]	11.58	144.49	11.27	59.20	97.08	94.76	5.38	14.04	5.19	28.43
95th-Percentile Queue Length [veh/ln]	0.83	9.72	0.81	4.26	6.99	6.82	0.39	1.01	0.37	2.05
95th-Percentile Queue Length [ft/ln]	20.84	243.05	20.28	106.56	174.75	170.56	9.69	25.27	9.34	51.17

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.58	19.71	15.21	48.64	15.73	15.74	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]	20.07			20.25			18.02			18.22		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	19.98											
Intersection LOS	B											
Intersection V/C	0.373											

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	2.852	2.776	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	2.276	2.166	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):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.376

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	65	0	0	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]	14	641	44	45	358	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	197	14	14	110	4	4	24	2	5	24	15
Total Analysis Volume [veh/h]	17	787	54	55	439	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]	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	48	0	11	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	R	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	0.23	0.04	0.03	0.13	0.13	0.07	0.01	0.01	0.09
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1778	1722	1530	1320	1685
c, Capacity [veh/h]	46	1783	796	90	983	971	585	487	401	536
d1, Uniform Delay [s]	52.61	16.43	13.12	50.99	12.98	12.98	27.28	25.72	31.01	28.21
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	0.80	0.16	6.49	0.55	0.56	0.16	0.02	0.05	0.30
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
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	0.44	0.07	0.61	0.23	0.23	0.19	0.02	0.04	0.29
d, Delay for Lane Group [s/veh]	57.53	17.23	13.29	57.48	13.53	13.55	27.44	25.73	31.06	28.52
Lane Group LOS	E	B	B	E	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.51	5.86	0.66	1.61	2.85	2.82	2.19	0.16	0.37	3.17
50th-Percentile Queue Length [ft/ln]	12.81	146.45	16.42	40.14	71.14	70.54	54.74	4.11	9.21	79.35
95th-Percentile Queue Length [veh/ln]	0.92	9.83	1.18	2.89	5.12	5.08	3.94	0.30	0.66	5.71
95th-Percentile Queue Length [ft/ln]	23.05	245.68	29.55	72.25	128.05	126.97	98.54	7.40	16.57	142.84

Movement, Approach, & Intersection Results

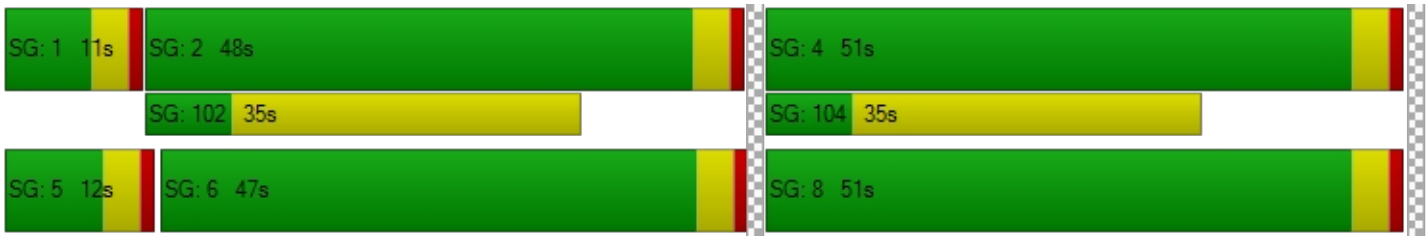
d_M, Delay for Movement [s/veh]	57.53	17.23	13.29	57.48	13.54	13.55	27.44	27.44	25.73	31.06	28.52	28.52
Movement LOS	E	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	17.78			18.28			27.31			28.78		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.79											
Intersection LOS	B											
Intersection V/C	0.376											

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	2.822	0.000	2.074
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]	800	782	855	855
d_b, Bicycle Delay [s]	19.80	20.40	18.04	18.04
l_b,int, Bicycle LOS Score for Intersection	2.267	1.980	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):	19.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.498

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]	7	0	0	0	0	16	65	7	27	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]	21	576	44	45	342	29	79	85	34	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	9	24	26	10	5	25	15
Total Analysis Volume [veh/h]	26	707	54	55	420	36	97	104	42	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]	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	57	0	0	57	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	0.41	0.41	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.02	0.21	0.21	0.03	0.13	0.13	0.21	0.03	0.09	0.04
s, saturation flow rate [veh/h]	1714	1800	1755	1714	1800	1751	945	1530	1355	1530
c, Capacity [veh/h]	69	702	684	111	745	725	438	596	582	596
d1, Uniform Delay [s]	35.98	18.23	18.23	34.79	15.16	15.18	22.62	14.73	15.64	14.92
k, delay calibration	0.11	0.12	0.12	0.11	0.11	0.11	0.12	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]	3.33	0.74	0.77	3.43	0.23	0.24	0.81	0.05	0.17	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	0.38	0.55	0.55	0.50	0.31	0.31	0.46	0.07	0.20	0.10
d, Delay for Lane Group [s/veh]	39.30	18.97	19.00	38.23	15.40	15.42	23.43	14.78	15.81	15.00
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]	0.51	4.78	4.67	1.04	2.41	2.37	3.18	0.45	1.30	0.66
50th-Percentile Queue Length [ft/ln]	12.79	119.52	116.80	25.98	60.34	59.14	79.56	11.16	32.41	16.42
95th-Percentile Queue Length [veh/ln]	0.92	8.37	8.22	1.87	4.34	4.26	5.73	0.80	2.33	1.18
95th-Percentile Queue Length [ft/ln]	23.02	209.16	205.42	46.77	108.60	106.45	143.22	20.08	58.34	29.56

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.30	18.98	19.00	38.23	15.41	15.42	23.43	23.43	14.78	15.81	15.81	15.00
Movement LOS	D	B	B	D	B	B	C	C	B	B	B	B
d_A, Approach Delay [s/veh]	19.66			17.86			21.94			15.53		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	19.02											
Intersection LOS	B											
Intersection V/C	0.498											

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	2.797	2.936	2.081	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]	691	673	964	964
d_b, Bicycle Delay [s]	23.56	24.22	14.77	14.77
l_b,int, Bicycle LOS Score for Intersection	2.209	1.981	1.961	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):	10.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

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]	3	7	0	8	27	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]	3	7	0	142	133	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	36	33	0
Total Analysis Volume [veh/h]	3	7	0	142	133	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]	10.06	8.96	7.46	0.00	0.00	0.00
Movement LOS	B	A	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]	0.89	0.89	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.29		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.33					
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):	11.5
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]	20	0	56	40	0	7	3	3	5	14	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]	20	0	56	40	0	7	3	137	5	14	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]	5	0	15	11	0	2	1	37	1	4	29	3
Total Analysis Volume [veh/h]	22	0	61	43	0	8	3	149	5	15	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	0.03	0.00	0.07	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]	11.20	11.55	9.51	11.52	11.51	9.34	7.45	0.00	0.00	7.53	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.34	0.34	0.34	0.26	0.26	0.26	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	8.54	8.54	8.54	6.54	6.54	6.54	0.15	0.15	0.15	0.74	0.74	0.74
d_A, Approach Delay [s/veh]	9.96			11.18			0.14			0.80		
Approach LOS	A			B			A			A		
d_I, Intersection Delay [s/veh]	3.54											
Intersection LOS	B											

SD Homes/ Redlands Apartment Project

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Scenario 2 Existing Plus Project
8/31/2018

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	0.299	9.6	A
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.517	32.7	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.332	18.8	B
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.358	19.8	B
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.487	19.8	B
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.002	11.1	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.056	14.3	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):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.299

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	13	0	0	0	0	20	0	7	11	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	52	21	52	24	7	184	22	21	81	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	14	6	14	6	2	49	6	6	21	1
Total Analysis Volume [veh/h]	13	93	55	22	55	25	7	194	23	22	85	5
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	644	746	651	673	777	651
Degree of Utilization, x	0.16	0.07	0.16	0.30	0.03	0.17

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.59	0.24	0.55	1.25	0.09	0.62
95th-Percentile Queue Length [ft]	14.65	5.95	13.82	31.33	2.29	15.44
Approach Delay [s/veh]	8.88		9.55	10.03		9.67
Approach LOS	A		A	B		A
Intersection Delay [s/veh]	9.57					
Intersection LOS	A					

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

Control Type:	Signalized	Delay (sec / veh):	32.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.517

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]	10	13	10	0	25	0	0	0	19	19	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	597	112	149	543	169	362	700	121	108	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	151	28	38	137	43	92	177	31	27	93	40
Total Analysis Volume [veh/h]	100	604	113	151	549	171	366	708	122	109	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]	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	44	0	18	51	0	20	52	11	11	43	18
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	40	40	7	41	41	14	35	35	7	28	28
g / C, Green / Cycle	0.06	0.38	0.38	0.07	0.39	0.39	0.13	0.33	0.33	0.06	0.27	0.27
(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	1660	3329	1800	1655	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	216	1314	636	225	695	639	436	1136	507	218	911	407
d1, Uniform Delay [s]	47.45	23.27	23.33	47.93	25.05	25.05	44.64	29.64	25.56	47.50	31.81	31.69
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	0.11
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]	1.55	0.79	1.66	3.46	2.99	3.25	4.37	0.56	0.24	1.76	0.29	0.62
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	0.46	0.37	0.37	0.67	0.54	0.54	0.84	0.62	0.24	0.50	0.41	0.40
d, Delay for Lane Group [s/veh]	49.00	24.06	24.99	51.39	28.04	28.31	49.00	30.21	25.80	49.26	32.10	32.31
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	1.30	4.30	4.39	2.00	7.48	6.93	4.80	7.30	2.18	1.40	3.81	3.32
50th-Percentile Queue Length [ft/ln]	32.38	107.56	109.85	49.99	186.93	173.25	119.99	182.44	54.40	35.10	95.20	83.06
95th-Percentile Queue Length [veh/ln]	2.33	7.70	7.83	3.60	11.96	11.25	8.39	11.73	3.92	2.53	6.85	5.98
95th-Percentile Queue Length [ft/ln]	58.28	192.60	195.79	89.98	299.05	281.18	209.81	293.20	97.92	63.18	171.36	149.51

Movement, Approach, & Intersection Results

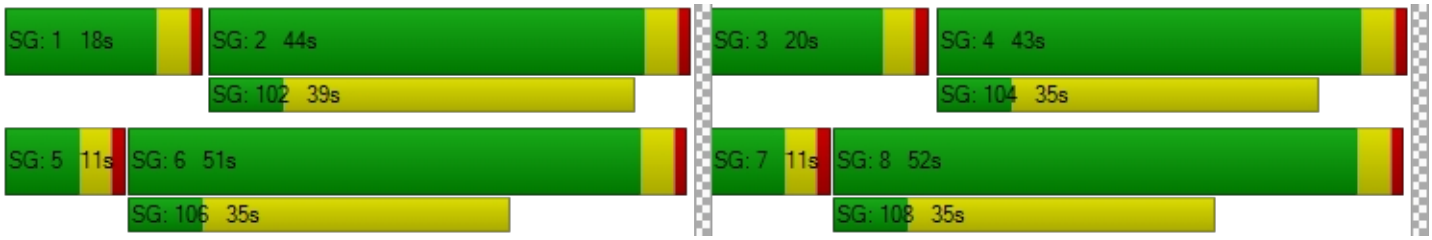
d_M, Delay for Movement [s/veh]	49.00	24.25	24.99	51.39	28.12	28.31	49.00	30.21	25.80	49.26	32.10	32.31
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.38			32.19			35.51			35.07		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	32.73											
Intersection LOS	C											
Intersection V/C	0.517											

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	2.861	2.973	2.943	2.901
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]	762	895	914	743
d_b, Bicycle Delay [s]	20.12	16.02	15.47	20.74
l_b,int, Bicycle LOS Score for Intersection	2.009	2.278	2.546	2.089
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):	0.332

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	33	0	0	63	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	631	46	50	688	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	171	12	14	187	4	4	19	6	10	11	20
Total Analysis Volume [veh/h]	15	685	50	54	747	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	18.51	15.31	38.79	16.65	16.65	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	0.44	0.45	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	0.49	0.08	0.53	0.48	0.48	0.03	0.15	0.07	0.20
d, Delay for Lane Group [s/veh]	45.44	18.77	15.36	42.90	17.09	17.09	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	4.68	0.57	1.18	4.93	4.90	0.25	1.30	0.54	1.68
50th-Percentile Queue Length [ft/ln]	8.94	116.90	14.19	29.55	123.36	122.60	6.13	32.51	13.58	41.89
95th-Percentile Queue Length [veh/ln]	0.64	8.22	1.02	2.13	8.58	8.54	0.44	2.34	0.98	3.02
95th-Percentile Queue Length [ft/ln]	16.10	205.56	25.55	53.19	214.43	213.40	11.03	58.52	24.44	75.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	45.44	18.77	15.36	42.90	17.09	17.09	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]	19.08			18.80			17.70			18.33		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.80											
Intersection LOS	B											
Intersection V/C	0.332											

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	2.898	2.777	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	2.178	2.232	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):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.358

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	33	0	0	63	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	544	26	51	689	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	158	8	15	200	6	4	23	6	17	21	21
Total Analysis Volume [veh/h]	12	633	30	59	801	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	43	0	12	43	0	0	50	0	0	50	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	R	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	0.02	0.03	0.23	0.23	0.06	0.02	0.05	0.10
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1783	1721	1530	1325	1656
c, Capacity [veh/h]	35	1778	794	93	994	985	585	487	405	527
d1, Uniform Delay [s]	53.13	15.62	12.99	50.96	14.31	14.31	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	0.56	0.09	7.08	1.28	1.30	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	0.36	0.04	0.64	0.42	0.42	0.18	0.05	0.17	0.32
d, Delay for Lane Group [s/veh]	58.76	16.17	13.08	58.05	15.59	15.60	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	4.46	0.36	1.73	5.77	5.72	2.09	0.48	1.42	3.41
50th-Percentile Queue Length [ft/ln]	9.34	111.41	9.00	43.28	144.36	143.10	52.16	12.02	35.53	85.16
95th-Percentile Queue Length [veh/ln]	0.67	7.92	0.65	3.12	9.72	9.65	3.76	0.87	2.56	6.13
95th-Percentile Queue Length [ft/ln]	16.82	197.96	16.20	77.90	242.88	241.20	93.89	21.64	63.95	153.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	58.76	16.17	13.08	58.05	15.60	15.60	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]	16.79			18.44			27.10			29.78		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	19.85											
Intersection LOS	B											
Intersection V/C	0.358											

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	2.879	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]	709	709	836	836
d_b, Bicycle Delay [s]	22.91	22.91	18.62	18.62
l_b,int, Bicycle LOS Score for Intersection	2.116	2.287	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):	19.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.487

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]	25	0	0	0	0	63	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]	35	511	26	51	626	82	47	82	36	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	24	14	24	10	17	23	21
Total Analysis Volume [veh/h]	41	594	30	59	728	95	55	95	42	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]	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	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	0.18	0.03	0.19	0.05
s, saturation flow rate [veh/h]	1714	1800	1770	1714	1800	1728	847	1530	827	1530
c, Capacity [veh/h]	94	700	688	114	722	693	393	595	388	595
d1, Uniform Delay [s]	35.31	17.45	17.46	34.80	18.06	18.06	19.12	14.81	21.31	15.23
k, delay calibration	0.11	0.11	0.11	0.11	0.16	0.16	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]	3.19	0.45	0.46	3.57	1.08	1.13	0.61	0.05	0.69	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	0.44	0.45	0.45	0.52	0.58	0.58	0.38	0.07	0.41	0.14
d, Delay for Lane Group [s/veh]	38.50	17.91	17.92	38.37	19.14	19.19	19.73	14.86	22.00	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]	0.78	3.71	3.66	1.12	5.28	5.08	1.73	0.45	2.57	0.91
50th-Percentile Queue Length [ft/ln]	19.60	92.79	91.46	27.94	132.11	127.12	43.37	11.21	64.34	22.80
95th-Percentile Queue Length [veh/ln]	1.41	6.68	6.59	2.01	9.05	8.78	3.12	0.81	4.63	1.64
95th-Percentile Queue Length [ft/ln]	35.29	167.03	164.63	50.29	226.36	219.57	78.06	20.18	115.81	41.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.50	17.91	17.92	38.37	19.16	19.19	19.73	19.73	14.86	22.00	22.00	15.34
Movement LOS	D	B	B	D	B	B	B	B	B	C	C	B
d_A, Approach Delay [s/veh]	19.18			20.45			18.67			19.72		
Approach LOS	B			C			B			B		
d_I, Intersection Delay [s/veh]	19.76											
Intersection LOS	B											
Intersection V/C	0.487											

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	2.924	2.934	2.086	2.088
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]	673	655	891	891
d_b, Bicycle Delay [s]	24.22	24.89	16.91	16.91
l_b,int, Bicycle LOS Score for Intersection	2.108	2.287	1.876	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):	11.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

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	240	102	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]	1	4	0	33	15	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]	1	4	0	273	117	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]	0	1	0	74	32	0
Total Analysis Volume [veh/h]	1	4	0	297	127	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]	11.12	8.90	7.45	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]	0.45	0.45	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	9.35		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):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.056

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	240	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]	11	0	28	21	0	4	13	1	20	54	0	40
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]	11	0	28	21	0	4	13	241	20	54	102	40
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]	3	0	8	6	0	1	4	65	5	15	28	11
Total Analysis Volume [veh/h]	12	0	30	23	0	4	14	262	22	59	111	43
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	0.04	0.06	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	13.91	14.28	10.09	14.29	14.27	9.42	7.53	0.00	0.00	7.92	0.00	0.00
Movement LOS	B	B	B	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.22	0.22	0.22	0.19	0.19	0.19	0.03	0.03	0.03	0.13	0.13	0.13
95th-Percentile Queue Length [ft/ln]	5.39	5.39	5.39	4.80	4.80	4.80	0.68	0.68	0.68	3.27	3.27	3.27
d_A, Approach Delay [s/veh]	11.18			13.57			0.35			2.20		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.43											
Intersection LOS	B											

Opening Year (2020) Without Project

SD Homes/ Redlands Apartment Project

Vistro File: J:\...\AMOY.vistro
Report File: J:\...\AMOY.pdf

Scenario 1 OpeningYear (2020) Without Project
3/20/2018

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	SB Left	0.603	34.2	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	SB Left	0.385	20.0	C
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):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.603

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]	115
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	19	51	0	14	39	11	14	39	19
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]	115	115	115	115	115	115	115	115	115	115	115	115
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	51	51	7	51	51	8	35	35	6	33	33
g / C, Green / Cycle	0.06	0.44	0.44	0.06	0.45	0.45	0.07	0.30	0.30	0.05	0.29	0.29
(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]	194	1518	776	203	802	729	232	1037	463	182	985	440
d1, Uniform Delay [s]	52.46	20.69	20.70	52.99	26.84	27.00	52.54	30.08	29.04	52.49	33.86	32.77
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]	1.75	0.53	1.04	4.30	6.87	7.86	4.75	0.11	0.11	1.25	0.36	0.54
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	0.47	0.31	0.31	0.70	0.77	0.77	0.75	0.23	0.12	0.37	0.48	0.38
d, Delay for Lane Group [s/veh]	54.21	21.21	21.74	57.29	33.70	34.86	57.28	30.19	29.15	53.74	34.22	33.31
Lane Group LOS	D	C	C	E	C	C	E	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]	1.31	4.10	4.33	2.10	14.92	13.98	2.56	2.42	1.09	0.95	5.33	3.68
50th-Percentile Queue Length [ft]	32.75	102.44	108.16	52.50	373.12	349.56	64.05	60.62	27.35	23.77	133.36	91.97
95th-Percentile Queue Length [veh]	2.36	7.38	7.74	3.78	21.26	20.11	4.61	4.36	1.97	1.71	9.12	6.62
95th-Percentile Queue Length [ft]	58.95	184.39	193.43	94.50	531.52	502.87	115.29	109.12	49.23	42.78	228.05	165.54

Movement, Approach, & Intersection Results

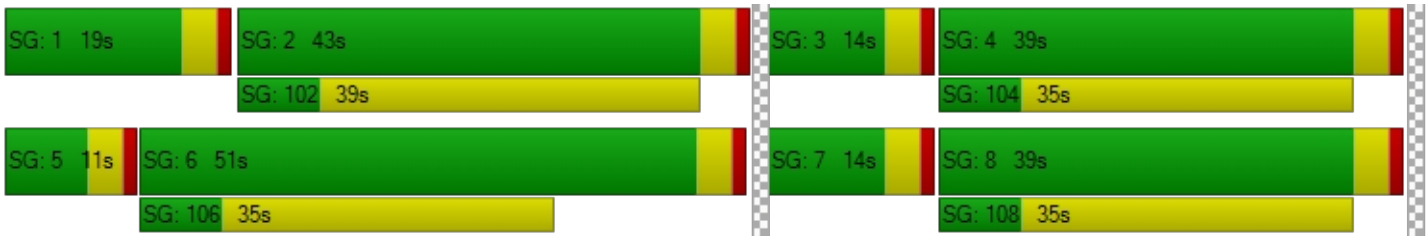
d_M, Delay for Movement [s/veh]	54.21	21.38	21.74	57.29	34.03	34.86	57.28	30.19	29.15	53.74	34.22	33.31
Movement LOS	D	C	C	E	C	C	E	C	C	D	C	C
d_A, Approach Delay [s/veh]	25.13			36.73			40.15			35.86		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	34.21											
Intersection LOS	C											
Intersection V/C	0.603											

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]	47.03	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersection	2.895	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]	678	817	609	609
d_b, Bicycle Delay [s]	25.11	20.10	27.83	27.83
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]	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]	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]	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]	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):	20.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.385

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]	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	45	0	12	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	R	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	0.23	0.04	0.03	0.14	0.14	0.08	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1775	1531	1530	1318	1685
c, Capacity [veh/h]	48	1781	795	91	981	967	527	487	340	536
d1, Uniform Delay [s]	52.52	16.53	13.16	50.98	13.21	13.22	27.52	25.77	34.98	28.36
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]	4.85	0.82	0.17	6.63	0.62	0.63	0.23	0.02	0.07	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	0.38	0.45	0.07	0.62	0.25	0.25	0.24	0.02	0.06	0.31
d, Delay for Lane Group [s/veh]	57.36	17.34	13.33	57.61	13.84	13.85	27.75	25.79	35.05	28.69
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.54	5.97	0.68	1.64	3.15	3.12	2.44	0.22	0.44	3.35
50th-Percentile Queue Length [ft]	13.50	149.30	17.07	40.92	78.81	77.99	61.11	5.50	10.98	83.83
95th-Percentile Queue Length [veh]	0.97	9.98	1.23	2.95	5.67	5.62	4.40	0.40	0.79	6.04
95th-Percentile Queue Length [ft]	24.30	249.49	30.72	73.65	141.85	140.39	110.00	9.89	19.77	150.89

Movement, Approach, & Intersection Results

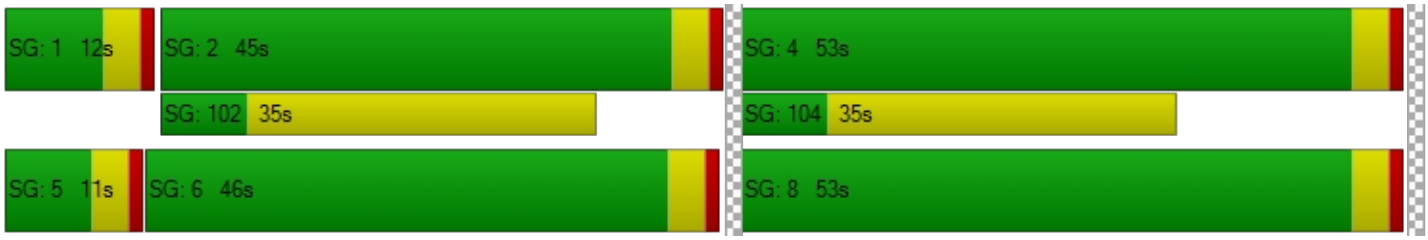
d_M, Delay for Movement [s/veh]	57.36	17.34	13.33	57.61	13.84	13.85	27.75	27.75	25.79	35.05	28.69	28.69
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	17.91			18.29			27.58			29.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.01											
Intersection LOS	C											
Intersection V/C	0.385											

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	2.852	0.000	2.078
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	764	891	891
d_b, Bicycle Delay [s]	21.64	21.02	16.91	16.91
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]	115
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	43	0	11	42	0	0	61	0	0	61	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]	3.46	1.36	1.40	3.87	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]	39.86	20.42	20.46	38.69	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]	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]	11.52	141.39	138.38	31.43	66.42	65.37	38.11	3.16	39.94	17.48
95th-Percentile Queue Length [veh]	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]	20.73	238.89	234.85	56.58	119.55	117.67	68.60	5.69	71.89	31.47

Movement, Approach, & Intersection Results

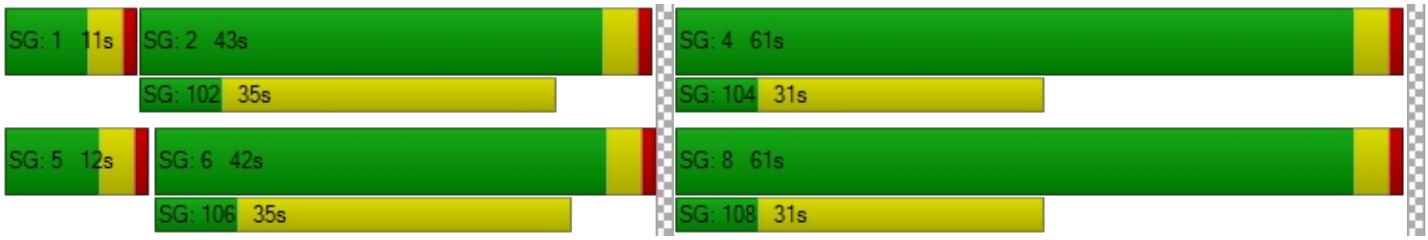
d_M, Delay for Movement [s/veh]	39.86	20.44	20.46	38.69	15.38	15.38	15.83	15.83	14.65	15.89	15.89	15.24
Movement LOS	D	C	C	D	B	B	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.96			18.09			15.73			15.68		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	19.02											
Intersection LOS	B											
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]	47.03	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersection	2.824	2.858	2.057	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]	678	661	991	991
d_b, Bicycle Delay [s]	25.11	25.78	14.63	14.63
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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Scenario 1 Opening Year (2020) Without Project
3/20/2018

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	SB Left	0.640	31.3	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	0.377	20.6	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):	31.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.640

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	99	89	61	0	8	77	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	275	461	784	105	100	457	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	70	117	198	27	25	116	57
Total Analysis Volume [veh/h]	93	906	126	213	633	278	466	793	106	101	462	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]	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	12	44	0	11	39	11	11	39	12
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]	91	91	91	91	91	91	91	91	91	91	91	91
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	30	30	8	32	32	16	30	30	7	21	21
g / C, Green / Cycle	0.07	0.33	0.33	0.09	0.35	0.35	0.17	0.33	0.33	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.06	0.27	0.27	0.14	0.23	0.07	0.03	0.13	0.15
s, saturation flow rate [veh/h]	3329	3427	1690	3329	1800	1616	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	236	1132	558	303	631	566	572	1132	505	240	790	353
d1, Uniform Delay [s]	40.33	25.52	25.54	40.08	26.12	26.14	36.22	26.51	21.89	40.32	31.08	31.58
k, delay calibration	0.11	0.11	0.17	0.11	0.31	0.31	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]	1.07	0.54	1.67	2.95	5.32	5.98	2.88	0.80	0.20	1.17	0.69	1.97
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	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	0.39	0.61	0.61	0.70	0.76	0.76	0.81	0.70	0.21	0.42	0.58	0.64
d, Delay for Lane Group [s/veh]	41.40	26.05	27.21	43.04	31.44	32.12	39.09	27.31	22.10	41.49	31.77	33.54
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	No	Yes
50th-Percentile Queue Length [veh]	1.01	6.03	6.15	2.35	9.44	8.61	4.98	7.11	1.57	1.08	4.36	4.47
50th-Percentile Queue Length [ft]	25.17	150.79	153.70	58.81	236.05	215.18	124.56	177.63	39.24	27.09	108.95	111.70
95th-Percentile Queue Length [veh]	1.81	10.06	10.21	4.23	14.48	13.42	8.64	11.48	2.83	1.95	7.78	7.93
95th-Percentile Queue Length [ft]	45.31	251.48	255.36	105.86	362.03	335.47	216.07	286.91	70.63	48.75	194.55	198.36

Movement, Approach, & Intersection Results

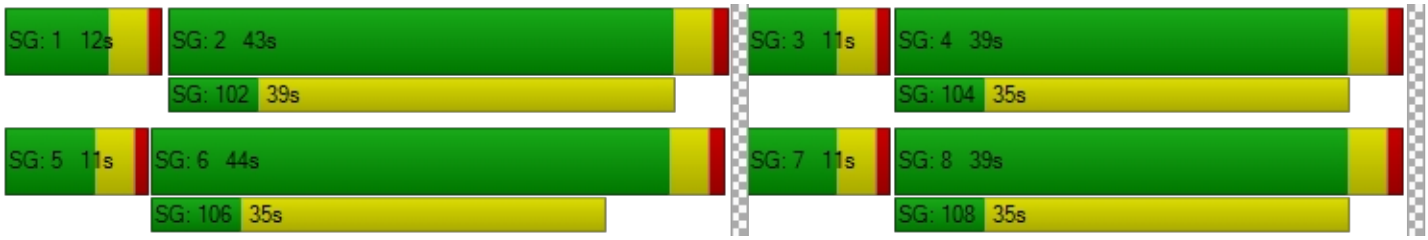
d_M, Delay for Movement [s/veh]	41.40	26.33	27.21	43.04	31.60	32.12	39.09	27.31	22.10	41.49	31.77	33.54
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.67			33.90			30.93			33.52		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	31.32											
Intersection LOS	C											
Intersection V/C	0.640											

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	3.107	3.009	2.958
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	762	667	667
d_b, Bicycle Delay [s]	20.74	20.12	23.33	23.33
l_b,int, Bicycle LOS Score for Intersection	2.178	2.487	2.686	2.211
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]	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]	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]	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]	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):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.377

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]	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	R	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	0.20	0.02	0.04	0.24	0.24	0.08	0.02	0.05	0.11
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1775	1594	1530	1317	1653
c, Capacity [veh/h]	42	1772	791	96	987	974	546	487	335	526
d1, Uniform Delay [s]	52.80	15.95	13.12	50.96	14.79	14.79	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	0.62	0.10	8.19	1.43	1.45	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	0.38	0.04	0.68	0.44	0.44	0.22	0.06	0.22	0.33
d, Delay for Lane Group [s/veh]	57.94	16.57	13.22	59.15	16.22	16.24	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]	0.46	4.82	0.41	1.93	6.26	6.18	2.36	0.54	1.66	3.57
50th-Percentile Queue Length [ft]	11.42	120.60	10.28	48.16	156.55	154.53	58.97	13.43	41.53	89.16
95th-Percentile Queue Length [veh]	0.82	8.43	0.74	3.47	10.37	10.26	4.25	0.97	2.99	6.42
95th-Percentile Queue Length [ft]	20.56	210.66	18.50	86.69	259.15	256.47	106.15	24.18	74.75	160.49

Movement, Approach, & Intersection Results

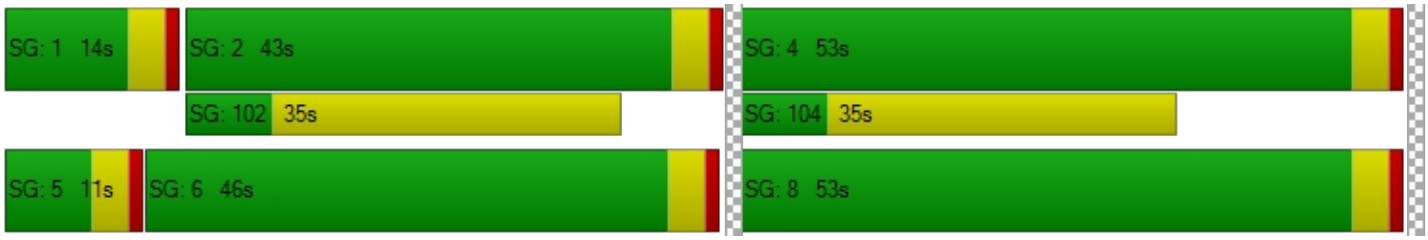
d_M, Delay for Movement [s/veh]	57.94	16.57	13.22	59.15	16.23	16.24	27.63	27.63	26.11	37.13	28.96	28.96
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	17.27			19.23			27.34			31.34		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.60											
Intersection LOS	C											
Intersection V/C	0.377											

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	2.911	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	2.154	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]	11	39	0	11	39	0	0	55	0	0	55	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]	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]	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]	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]	14.17	191.65	189.59	54.77	221.48	219.23	76.16	16.34	110.36	46.05

Movement, Approach, & Intersection Results

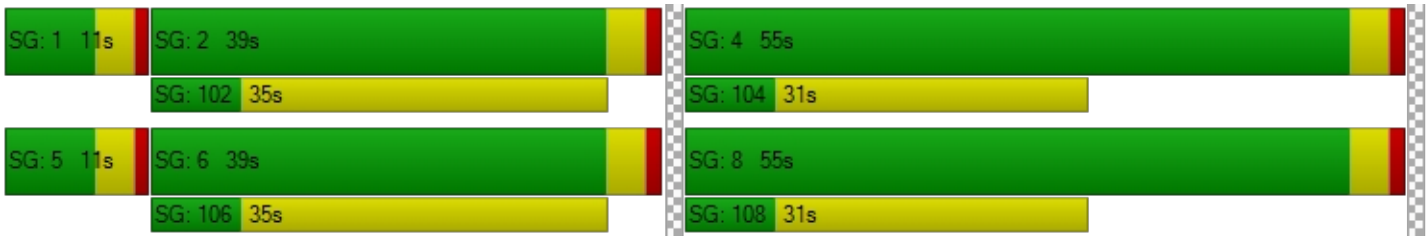
d_M, Delay for Movement [s/veh]	41.11	18.56	18.57	38.59	17.52	17.53	16.46	16.46	14.86	20.84	20.84	15.54
Movement LOS	D	B	B	D	B	B	B	B	B	C	C	B
d_A, Approach Delay [s/veh]	19.04			18.98			16.16			18.91		
Approach LOS	B			B			B			B		
d_I, Intersection Delay [s/veh]	18.74											
Intersection LOS	B											
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]	667	667	971	971
d_b, Bicycle Delay [s]	23.33	23.33	13.89	13.89
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

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Report File: G:\...\AMOYp.pdf

Scenario 2 Opening Year (2020) With Project
8/31/2018

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	0.527	12.3	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	EB Left	0.617	36.1	D
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.407	22.5	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.410	20.2	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.593	20.5	C
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.005	10.7	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.084	12.7	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):	12.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.527

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	13	0	13	23	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	117	38	74	170	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	37	12	23	53	7
Total Analysis Volume [veh/h]	73	99	44	4	56	5	13	146	48	93	213	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	569	665	562	614	704	634
Degree of Utilization, x	0.30	0.07	0.12	0.26	0.07	0.53

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.27	0.21	0.39	1.03	0.22	3.09
95th-Percentile Queue Length [ft]	31.72	5.30	9.75	25.75	5.48	77.18
Approach Delay [s/veh]	11.09		10.25	10.04		14.83
Approach LOS	B		B	B		B
Intersection Delay [s/veh]	12.28					
Intersection LOS	B					

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

Control Type:	Signalized	Delay (sec / veh):	36.1
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

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]	20	93	27	30	278	67	56	37	5	20	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]	104	643	54	131	794	295	159	218	56	67	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]	28	175	15	36	216	80	43	59	15	18	117	42
Total Analysis Volume [veh/h]	113	699	59	142	863	321	173	237	61	73	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	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	41	41	7	41	41	7	35	35	6	34	34
g / C, Green / Cycle	0.06	0.39	0.39	0.07	0.39	0.39	0.07	0.33	0.33	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.15	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	1729	3329	1800	1637	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	215	1339	676	220	706	642	234	1137	508	197	1099	491
d1, Uniform Delay [s]	47.57	22.85	22.88	47.86	29.53	29.72	47.89	25.20	24.43	47.53	28.09	27.19
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]	1.98	0.81	1.61	3.17	14.13	16.32	4.54	0.09	0.10	1.16	0.26	0.40
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	0.53	0.38	0.38	0.65	0.87	0.88	0.74	0.21	0.12	0.37	0.43	0.34
d, Delay for Lane Group [s/veh]	49.56	23.66	24.49	51.03	43.66	46.04	52.43	25.29	24.53	48.69	28.36	27.59
Lane Group LOS	D	C	C	D	D	D	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]	1.47	4.47	4.70	1.87	16.28	15.42	2.32	2.07	1.04	0.93	4.52	3.12
50th-Percentile Queue Length [ft/ln]	36.84	111.83	117.45	46.76	407.10	385.59	57.96	51.71	26.00	23.29	113.07	77.99
95th-Percentile Queue Length [veh/ln]	2.65	7.94	8.25	3.37	22.90	21.86	4.17	3.72	1.87	1.68	8.01	5.62
95th-Percentile Queue Length [ft/ln]	66.31	198.54	206.32	84.17	572.55	546.60	104.32	93.07	46.79	41.92	200.26	140.39

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	49.56	23.89	24.49	51.03	44.34	46.04	52.43	25.29	24.53	48.69	28.36	27.59
Movement LOS	D	C	C	D	D	D	D	C	C	D	C	C
d_A, Approach Delay [s/veh]	27.26			45.47			35.16			30.27		
Approach LOS	C			D			D			C		
d_I, Intersection Delay [s/veh]	36.14											
Intersection LOS	D											
Intersection V/C	0.617											

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	2.905	3.040	2.857	2.814
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	2.039	2.654	1.948	2.145
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):	0.407

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	112	0	0	123	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	709	33	83	588	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	222	10	26	184	67	13	9	4	4	10	13
Total Analysis Volume [veh/h]	49	888	41	104	737	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	0.26	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	1638	1324	1709	1376	1633
c, Capacity [veh/h]	97	1406	628	131	774	704	501	636	544	608
d1, Uniform Delay [s]	38.93	19.95	15.18	38.61	19.52	19.54	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	0.47	0.04	10.36	2.08	2.31	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	0.63	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	20.42	15.23	48.97	21.61	21.85	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	6.56	0.46	2.45	8.13	7.46	0.79	0.66	0.21	1.27
50th-Percentile Queue Length [ft/ln]	26.86	164.05	11.56	61.19	203.33	186.57	19.85	16.46	5.23	31.73
95th-Percentile Queue Length [veh/ln]	1.93	10.76	0.83	4.41	12.81	11.94	1.43	1.19	0.38	2.28
95th-Percentile Queue Length [ft/ln]	48.34	269.07	20.81	110.13	320.26	298.57	35.73	29.63	9.42	57.11

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.91	20.42	15.23	48.97	21.68	21.85	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]	21.33			24.28			19.42			18.43		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.53											
Intersection LOS	C											
Intersection V/C	0.407											

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	2.895	2.924	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	2.366	2.475	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):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.410

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	122	0	0	47	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	715	46	46	403	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	219	14	14	124	5	7	25	3	5	25	16
Total Analysis Volume [veh/h]	18	878	56	56	495	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]	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	48	0	11	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	R	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	0.26	0.04	0.03	0.14	0.14	0.08	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1776	1531	1530	1318	1685
c, Capacity [veh/h]	48	1781	795	91	981	968	527	487	340	536
d1, Uniform Delay [s]	52.52	17.05	13.16	50.98	13.30	13.31	27.52	25.77	35.01	28.36
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]	4.85	0.98	0.17	6.63	0.66	0.67	0.23	0.02	0.07	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	0.38	0.49	0.07	0.62	0.26	0.26	0.24	0.02	0.06	0.31
d, Delay for Lane Group [s/veh]	57.36	18.02	13.33	57.61	13.96	13.97	27.75	25.79	35.08	28.69
Lane Group LOS	E	B	B	E	B	B	C	C	D	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.54	6.79	0.68	1.64	3.30	3.27	2.44	0.22	0.44	3.35
50th-Percentile Queue Length [ft/ln]	13.50	169.73	17.07	40.92	82.55	81.71	61.11	5.50	10.99	83.83
95th-Percentile Queue Length [veh/ln]	0.97	11.06	1.23	2.95	5.94	5.88	4.40	0.40	0.79	6.04
95th-Percentile Queue Length [ft/ln]	24.30	276.56	30.72	73.65	148.59	147.08	110.00	9.89	19.78	150.89

Movement, Approach, & Intersection Results

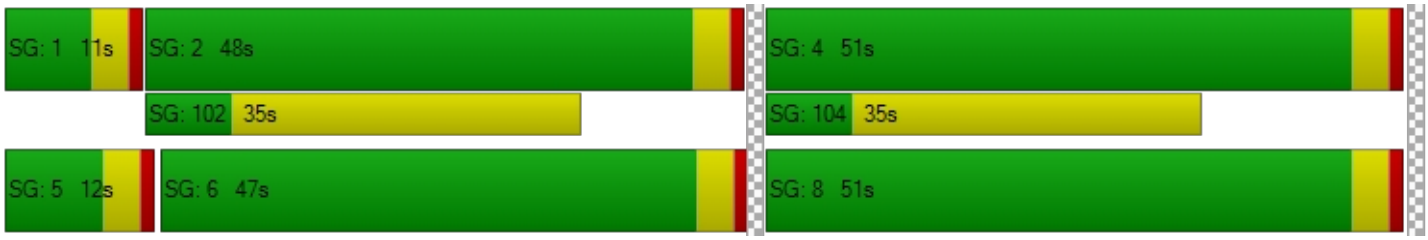
d_M, Delay for Movement [s/veh]	57.36	18.02	13.33	57.61	13.96	13.97	27.75	27.75	25.79	35.08	28.69	28.69
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	18.49			18.25			27.58			29.37		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.19											
Intersection LOS	C											
Intersection V/C	0.410											

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	2.876	0.000	2.078
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]	800	782	855	855
d_b, Bicycle Delay [s]	19.80	20.40	18.04	18.04
l_b,int, Bicycle LOS Score for Intersection	2.345	2.031	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):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.593

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]	8	52	0	0	32	18	70	7	30	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]	26	645	45	54	384	40	88	94	37	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]	8	198	14	17	118	12	27	29	11	5	31	16
Total Analysis Volume [veh/h]	32	792	55	66	471	49	108	115	45	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	42	0	11	41	0	0	57	0	0	57	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	32	32	30	30	30	30
g / C, Green / Cycle	0.05	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	0.27	0.03	0.11	0.04
s, saturation flow rate [veh/h]	1714	1800	1759	1714	1800	1741	823	1530	1310	1530
c, Capacity [veh/h]	80	697	682	120	740	716	388	593	560	593
d1, Uniform Delay [s]	35.86	19.06	19.06	34.82	15.74	15.75	25.18	14.97	16.20	15.16
k, delay calibration	0.11	0.17	0.17	0.11	0.11	0.11	0.23	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]	3.21	1.36	1.40	3.87	0.29	0.30	2.84	0.05	0.24	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	0.40	0.61	0.61	0.55	0.36	0.36	0.57	0.08	0.26	0.11
d, Delay for Lane Group [s/veh]	39.07	20.42	20.46	38.69	16.03	16.06	28.02	15.02	16.43	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]	0.62	5.66	5.54	1.26	2.87	2.79	3.99	0.49	1.63	0.70
50th-Percentile Queue Length [ft/ln]	15.59	141.39	138.38	31.43	71.66	69.80	99.63	12.13	40.82	17.48
95th-Percentile Queue Length [veh/ln]	1.12	9.56	9.39	2.26	5.16	5.03	7.17	0.87	2.94	1.26
95th-Percentile Queue Length [ft/ln]	28.07	238.89	234.84	56.58	128.99	125.63	179.34	21.83	73.48	31.47

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	39.07	20.44	20.46	38.69	16.04	16.06	28.02	28.02	15.02	16.43	16.43	15.24
Movement LOS	D	C	C	D	B	B	C	C	B	B	B	B
d_A, Approach Delay [s/veh]	21.12			18.59			25.84			16.06		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.47											
Intersection LOS	C											
Intersection V/C	0.593											

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	2.832	2.994	2.104	2.094
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]	691	673	964	964
d_b, Bicycle Delay [s]	23.56	24.22	14.77	14.77
l_b,int, Bicycle LOS Score for Intersection	2.285	2.043	2.002	1.901
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 6: Apt West Acces (NS) at Orange Ave (EW)

Control Type:	Two-way stop	Delay (sec / veh):	10.7
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	140	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]	3	7	0	16	30	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]	3	7	0	196	170	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	49	43	0
Total Analysis Volume [veh/h]	3	7	0	196	170	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]	10.70	9.15	7.54	0.00	0.00	0.00
Movement LOS	B	A	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]	0.96	0.96	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]	0.26					
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):	12.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

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	180	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]	20	0	56	40	0	7	3	10	5	14	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]	20	0	56	40	0	7	3	190	5	14	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]	5	0	15	11	0	2	1	52	1	4	39	3
Total Analysis Volume [veh/h]	22	0	61	43	0	8	3	207	5	15	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	0.04	0.00	0.07	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]	12.24	12.48	9.94	12.70	12.50	9.72	7.53	0.00	0.00	7.66	0.00	0.00
Movement LOS	B	B	A	B	B	A	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.38	0.38	0.38	0.31	0.31	0.31	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	9.55	9.55	9.55	7.65	7.65	7.65	0.16	0.16	0.16	0.77	0.77	0.77
d_A, Approach Delay [s/veh]	10.55			12.23			0.11			0.63		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	3.08											
Intersection LOS	B											

SD Homes/ Redlands Apartment Project

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Scenario 2 Opening Year (2020) With Project
8/31/2018

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	0.354	10.2	B
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.642	35.7	D
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.492	20.6	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.399	20.8	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.655	22.2	C
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.002	13.5	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.084	19.2	C

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

Intersection Level Of Service Report
Intersection 1: 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):	0.354

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	13	0	0	1	0	26	0	7	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]	13	96	54	25	66	30	8	211	27	23	98	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	56	7	6	26	2
Total Analysis Volume [veh/h]	14	101	57	26	70	32	8	223	28	24	103	6
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	619	713	629	652	750	630
Degree of Utilization, x	0.19	0.08	0.20	0.35	0.04	0.21

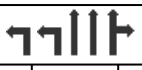
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	0.68	0.26	0.76	1.60	0.12	0.79
95th-Percentile Queue Length [ft]	16.92	6.49	18.95	39.94	2.90	19.84
Approach Delay [s/veh]	9.29		10.18	10.84		10.24
Approach LOS	A		B	B		B
Intersection Delay [s/veh]	10.22					
Intersection LOS	B					

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

Control Type:	Signalized	Delay (sec / veh):	35.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.642

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
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]	10	300	28	41	117	99	89	61	19	27	77	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]	102	909	135	211	651	275	461	784	124	119	457	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	230	34	53	165	70	117	198	31	30	116	57
Total Analysis Volume [veh/h]	103	919	137	213	658	278	466	793	125	120	462	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]	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	44	0	18	51	0	20	52	11	11	43	18
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	38	38	9	41	41	16	35	35	7	26	26
g / C, Green / Cycle	0.06	0.36	0.36	0.08	0.39	0.39	0.15	0.33	0.33	0.07	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.21	0.06	0.27	0.27	0.14	0.23	0.08	0.04	0.13	0.15
s, saturation flow rate [veh/h]	3329	3427	1683	3329	1800	1621	3329	3427	1530	3329	3427	1530
c, Capacity [veh/h]	217	1249	613	285	693	624	510	1137	507	221	839	375
d1, Uniform Delay [s]	47.46	26.79	26.81	47.00	27.39	27.42	43.89	30.58	25.60	47.59	34.68	35.23
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]	1.62	1.87	3.79	3.89	6.07	6.78	6.92	0.79	0.25	2.08	0.57	1.58
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	0.48	0.57	0.57	0.75	0.71	0.71	0.91	0.70	0.25	0.54	0.55	0.61
d, Delay for Lane Group [s/veh]	49.08	28.66	30.60	50.89	33.46	34.20	50.80	31.37	25.85	49.66	35.25	36.81
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.34	7.20	7.43	2.82	11.05	10.11	6.29	8.46	2.23	1.55	5.06	5.15
50th-Percentile Queue Length [ft/ln]	33.39	180.08	185.66	70.38	276.20	252.80	157.20	211.43	55.86	38.86	126.48	128.73
95th-Percentile Queue Length [veh/ln]	2.40	11.60	11.90	5.07	16.50	15.33	10.40	13.23	4.02	2.80	8.75	8.87
95th-Percentile Queue Length [ft/ln]	60.09	290.12	297.39	126.68	412.48	383.18	260.01	330.67	100.54	69.95	218.69	221.77

Movement, Approach, & Intersection Results

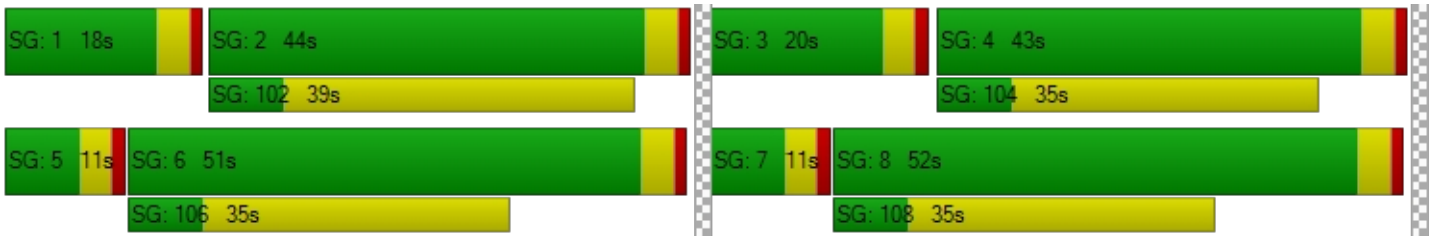
d_M, Delay for Movement [s/veh]	49.08	29.10	30.60	50.89	33.65	34.20	50.80	31.37	25.85	49.66	35.25	36.81
Movement LOS	D	C	C	D	C	C	D	C	C	D	D	D
d_A, Approach Delay [s/veh]	31.06			36.98			37.41			37.82		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	35.74											
Intersection LOS	D											
Intersection V/C	0.642											

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	2.936	3.114	3.015	2.964
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]	762	895	914	743
d_b, Bicycle Delay [s]	20.12	16.02	15.47	20.74
l_b,int, Bicycle LOS Score for Intersection	2.197	2.508	2.701	2.227
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):	0.492

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	127	0	0	129	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	744	47	51	772	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	202	13	14	210	12	61	21	12	10	11	21
Total Analysis Volume [veh/h]	20	808	51	55	838	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	0.24	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	19.38	15.32	38.77	17.83	17.83	24.48	17.24	20.39	17.28
k, delay calibration	0.11	0.11	0.11	0.11	0.12	0.12	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	0.70	0.72	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	0.58	0.08	0.53	0.57	0.57	0.50	0.20	0.08	0.21
d, Delay for Lane Group [s/veh]	44.45	19.75	15.37	42.92	18.54	18.55	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	5.78	0.58	1.20	6.19	6.07	4.46	1.78	0.58	1.75
50th-Percentile Queue Length [ft/ln]	11.55	144.61	14.49	30.10	154.71	151.80	111.52	44.56	14.39	43.79
95th-Percentile Queue Length [veh/ln]	0.83	9.73	1.04	2.17	10.27	10.11	7.92	3.21	1.04	3.15
95th-Percentile Queue Length [ft/ln]	20.79	243.21	26.08	54.18	256.71	252.83	198.11	80.20	25.89	78.82

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.45	19.75	15.37	42.92	18.54	18.55	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]	20.06			19.97			24.47			18.64		
Approach LOS	C			B			C			B		
d_I, Intersection Delay [s/veh]	20.62											
Intersection LOS	C											
Intersection V/C	0.492											

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	2.939	3.189	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	2.285	2.337	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):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.399

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	80	0	0	134	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	611	29	56	778	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	178	8	16	226	8	6	25	7	18	22	22
Total Analysis Volume [veh/h]	15	711	34	65	905	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]	12	43	0	12	43	0	0	50	0	0	50	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	R	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	0.02	0.04	0.26	0.26	0.08	0.02	0.05	0.11
s, saturation flow rate [veh/h]	1714	3427	1530	1714	1800	1777	1593	1530	1317	1653
c, Capacity [veh/h]	42	1772	791	96	987	975	546	487	333	526
d1, Uniform Delay [s]	52.80	16.18	13.12	50.96	15.20	15.20	27.43	26.06	36.96	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	0.68	0.10	8.19	1.66	1.68	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	0.04	0.68	0.48	0.48	0.22	0.06	0.22	0.33
d, Delay for Lane Group [s/veh]	57.94	16.86	13.22	59.15	16.86	16.89	27.64	26.11	37.29	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	5.18	0.41	1.93	7.00	6.92	2.36	0.54	1.66	3.57
50th-Percentile Queue Length [ft/ln]	11.42	129.52	10.28	48.16	175.04	172.96	58.97	13.43	41.62	89.16
95th-Percentile Queue Length [veh/ln]	0.82	8.91	0.74	3.47	11.34	11.23	4.25	0.97	3.00	6.42
95th-Percentile Queue Length [ft/ln]	20.56	222.85	18.50	86.69	283.52	280.80	106.15	24.18	74.92	160.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	57.94	16.86	13.22	59.15	16.87	16.89	27.64	27.64	26.11	37.29	28.96	28.96
Movement LOS	E	B	B	E	B	B	C	C	C	D	C	C
d_A, Approach Delay [s/veh]	17.51			19.61			27.34			31.39		
Approach LOS	B			B			C			C		
d_I, Intersection Delay [s/veh]	20.75											
Intersection LOS	C											
Intersection V/C	0.399											

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	2.939	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	709	836	836
d_b, Bicycle Delay [s]	22.91	22.91	18.62	18.62
l_b,int, Bicycle LOS Score for Intersection	2.187	2.388	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):	22.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.655

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]	28	46	0	1	66	69	37	3	16	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]	38	572	27	55	710	91	58	105	43	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]	11	166	8	16	206	26	17	31	13	17	24	23
Total Analysis Volume [veh/h]	44	665	31	64	826	106	67	122	50	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]	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	0.06	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	0.03	0.19	0.19	0.04	0.26	0.26	0.31	0.03	0.31	0.06
s, saturation flow rate [veh/h]	1714	1800	1772	1714	1800	1729	601	1530	543	1530
c, Capacity [veh/h]	98	698	687	119	720	692	296	593	276	593
d1, Uniform Delay [s]	35.30	18.00	18.00	34.81	18.92	18.92	23.51	14.98	24.74	15.42
k, delay calibration	0.11	0.11	0.11	0.11	0.22	0.22	0.31	0.11	0.30	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]	3.23	0.56	0.57	3.78	2.07	2.16	6.45	0.06	5.91	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	0.45	0.50	0.50	0.54	0.66	0.66	0.64	0.08	0.61	0.16
d, Delay for Lane Group [s/veh]	38.53	18.56	18.57	38.59	20.99	21.07	29.96	15.04	30.65	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]	0.84	4.28	4.22	1.22	6.43	6.19	3.84	0.54	3.41	1.02
50th-Percentile Queue Length [ft/ln]	21.04	106.89	105.39	30.43	160.67	154.76	96.04	13.50	85.13	25.58
95th-Percentile Queue Length [veh/ln]	1.51	7.67	7.58	2.19	10.58	10.27	6.92	0.97	6.13	1.84
95th-Percentile Queue Length [ft/ln]	37.87	191.67	189.57	54.77	264.62	256.77	172.88	24.29	153.23	46.05

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.53	18.56	18.57	38.59	21.02	21.07	29.96	29.96	15.04	30.65	30.65	15.54
Movement LOS	D	B	B	D	C	C	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	19.75			22.16			26.84			25.30		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	22.23											
Intersection LOS	C											
Intersection V/C	0.655											

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	2.973	3.001	2.108	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]	673	655	891	891
d_b, Bicycle Delay [s]	24.22	24.89	16.91	16.91
l_b,int, Bicycle LOS Score for Intersection	2.170	2.381	1.954	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):	13.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

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	441	110	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]	1	4	0	39	24	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]	1	4	0	480	134	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]	0	1	0	130	36	0
Total Analysis Volume [veh/h]	1	4	0	522	146	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	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	13.47	9.00	7.49	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]	9.90		0.00		0.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.07					
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):	19.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.084

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	441	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]	11	0	28	21	0	4	13	7	20	54	9	40
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]	11	0	28	21	0	4	13	448	20	54	119	40
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]	3	0	8	6	0	1	4	122	5	15	32	11
Total Analysis Volume [veh/h]	12	0	30	23	0	4	14	487	22	59	129	43
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	0.04	0.00	0.05	0.08	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	18.31	18.23	12.07	19.20	18.36	10.12	7.57	0.00	0.00	8.57	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.31	0.31	0.31	0.29	0.29	0.29	0.03	0.03	0.03	0.16	0.16	0.16
95th-Percentile Queue Length [ft/ln]	7.70	7.70	7.70	7.17	7.17	7.17	0.69	0.69	0.69	4.00	4.00	4.00
d_A, Approach Delay [s/veh]	13.86			17.85			0.20			2.19		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	2.04											
Intersection LOS	C											

Horizon Year (2040) Without Project

SD Homes/ Redlands Apartment Project

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Report File: J:\...\AMHY.pdf

Scenario 1 Horizon Year (2040) Without Project
3/20/2018

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	0.727	17.4	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.582	34.2	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.346	23.0	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.343	20.5	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.402	24.2	C

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

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

Control Type:	All-way stop	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.727

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	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]	89	143	38	6	63	11	18	136	41	71	290	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	36	11	19	76	13
Total Analysis Volume [veh/h]	94	151	40	6	66	12	19	143	43	75	305	53
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	531	614	512	553	627	596
Degree of Utilization, x	0.46	0.07	0.16	0.29	0.07	0.73

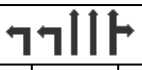
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.40	0.21	0.58	1.21	0.22	6.14
95th-Percentile Queue Length [ft]	60.12	5.22	14.57	30.32	5.50	153.50
Approach Delay [s/veh]	14.27		11.41	11.25		23.47
Approach LOS	B		B	B		C
Intersection Delay [s/veh]	17.37					
Intersection LOS	C					

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

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.582

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	21	1	0	165	0	0	0	0	7	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]	90	651	31	177	809	246	120	203	55	76	491	270
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	171	8	47	213	65	32	53	14	20	129	71
Total Analysis Volume [veh/h]	95	685	33	186	852	259	126	214	58	80	517	284
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]	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	17	49	0	11	39	11	11	39	17
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]	125	125	125	125	125	125	125	125	125	125	125	125
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	59	59	9	61	61	7	35	35	7	35	35
g / C, Green / Cycle	0.05	0.47	0.47	0.07	0.49	0.49	0.06	0.28	0.28	0.05	0.28	0.28
(v / s)_i Volume / Saturation Flow Rate	0.03	0.13	0.13	0.05	0.30	0.31	0.04	0.06	0.04	0.02	0.14	0.18
s, saturation flow rate [veh/h]	3514	3618	1856	3514	1900	1751	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	190	1703	874	244	924	851	195	1009	451	185	999	446
d1, Uniform Delay [s]	57.48	20.15	20.16	57.14	23.68	23.77	57.84	34.53	33.70	57.40	38.20	39.72
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	0.18
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]	2.02	0.41	0.80	4.86	3.17	3.51	3.57	0.10	0.13	1.59	0.42	2.52
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	0.28	0.28	0.76	0.62	0.63	0.65	0.21	0.13	0.43	0.52	0.64
d, Delay for Lane Group [s/veh]	59.50	20.55	20.96	62.00	26.85	27.28	61.40	34.63	33.83	58.98	38.61	42.25
Lane Group LOS	E	C	C	E	C	C	E	C	C	E	D	D
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.51	4.26	4.49	3.01	12.81	12.02	2.02	2.48	1.32	1.25	6.63	7.82
50th-Percentile Queue Length [ft]	37.63	106.53	112.23	75.25	320.14	300.48	50.54	62.00	33.01	31.27	165.64	195.42
95th-Percentile Queue Length [veh]	2.71	7.65	7.96	5.42	18.67	17.70	3.64	4.46	2.38	2.25	10.85	12.40
95th-Percentile Queue Length [ft]	67.73	191.17	199.10	135.46	466.85	442.62	90.98	111.61	59.41	56.28	271.17	310.05

Movement, Approach, & Intersection Results

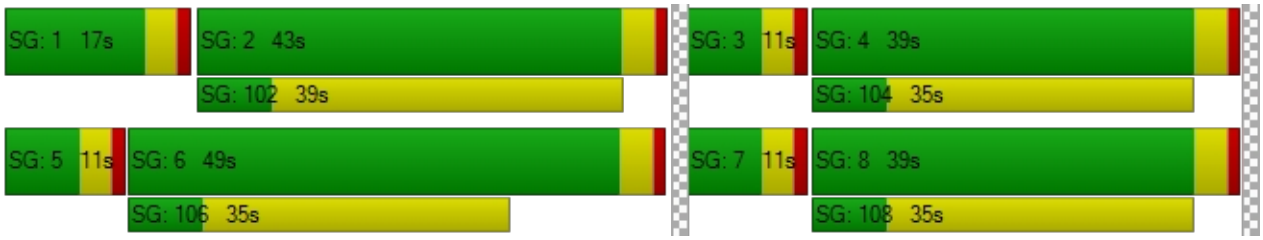
d_M, Delay for Movement [s/veh]	59.50	20.68	20.96	62.00	26.99	27.28	61.40	34.63	33.83	58.98	38.61	42.25
Movement LOS	E	C	C	E	C	C	E	C	C	E	D	D
d_A, Approach Delay [s/veh]	25.23			32.07			42.99			41.63		
Approach LOS	C			C			D			D		
d_I, Intersection Delay [s/veh]	34.20											
Intersection LOS	C											
Intersection V/C	0.582											

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	2.903	3.054	2.845	2.854
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]	624	720	560	560
d_b, Bicycle Delay [s]	29.58	25.60	32.40	32.40
l_b,int, Bicycle LOS Score for Intersection	2.007	2.630	1.888	2.286
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):	23.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.346

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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]	8	7	0	0	77	80	15	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]	52	655	35	89	624	188	35	37	17	13	48	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]	14	172	9	23	164	49	9	10	4	3	13	12
Total Analysis Volume [veh/h]	55	689	37	94	657	198	37	39	18	14	51	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]	5	33	33	6	35	35	33	33	33	33
g / C, Green / Cycle	0.06	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	0.03	0.19	0.02	0.05	0.23	0.23	0.03	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1751	1317	1800	1368	1750
c, Capacity [veh/h]	111	1419	633	135	771	710	521	706	561	686
d1, Uniform Delay [s]	38.67	19.41	16.08	38.42	19.62	19.62	19.57	16.23	18.27	16.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	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]	3.42	1.19	0.18	6.33	3.14	3.40	0.26	0.22	0.08	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.49	0.06	0.70	0.58	0.58	0.07	0.08	0.02	0.14
d, Delay for Lane Group [s/veh]	42.09	20.60	16.26	44.76	22.76	23.03	19.83	16.45	18.35	17.10
Lane Group LOS	D	C	B	D	C	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.19	5.02	0.46	2.10	7.02	6.52	0.53	0.72	0.19	1.29
50th-Percentile Queue Length [ft]	29.69	125.45	11.42	52.44	175.45	162.98	13.24	17.97	4.74	32.18
95th-Percentile Queue Length [veh]	2.14	8.69	0.82	3.78	11.36	10.71	0.95	1.29	0.34	2.32
95th-Percentile Queue Length [ft]	53.44	217.29	20.55	94.39	284.06	267.66	23.83	32.35	8.54	57.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.09	20.60	16.26	44.76	22.85	23.03	19.83	16.45	16.45	18.35	17.10	17.10
Movement LOS	D	C	B	D	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	21.91			25.05			17.78			17.25		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	22.98											
Intersection LOS	C											
Intersection V/C	0.346											

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	2.829	2.066	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	2.204	2.343	1.715	1.746
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):	0.343

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]	0	15	0	0	4	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]	15	658	54	50	446	14	15	86	9	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	173	14	13	117	4	4	23	2	8	25	19
Total Analysis Volume [veh/h]	16	693	57	53	469	15	16	91	9	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]	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	45	0	11	45	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	R	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]	2	39	39	5	42	42	38	38	38	38
g / C, Green / Cycle	0.03	0.42	0.42	0.06	0.45	0.45	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.04	0.03	0.13	0.13	0.06	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1879	1796	1615	1326	1765
c, Capacity [veh/h]	46	1501	670	100	845	836	768	651	535	712
d1, Uniform Delay [s]	45.52	20.12	16.86	43.65	16.78	16.79	17.92	17.00	20.77	18.81
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	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]	4.46	1.02	0.25	4.24	0.19	0.19	0.08	0.01	0.21	0.84
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
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	0.09	0.53	0.29	0.29	0.14	0.01	0.06	0.25
d, Delay for Lane Group [s/veh]	49.98	21.14	17.11	47.90	16.97	16.97	18.00	17.01	20.98	19.65
Lane Group LOS	D	C	B	D	B	B	B	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.41	5.30	0.75	1.28	3.13	3.10	1.48	0.12	0.49	2.71
50th-Percentile Queue Length [ft]	10.36	132.50	18.69	32.11	78.24	77.60	36.92	2.95	12.17	67.85
95th-Percentile Queue Length [veh]	0.75	9.08	1.35	2.31	5.63	5.59	2.66	0.21	0.88	4.89
95th-Percentile Queue Length [ft]	18.65	226.89	33.64	57.81	140.84	139.68	66.45	5.31	21.91	122.13

Movement, Approach, & Intersection Results

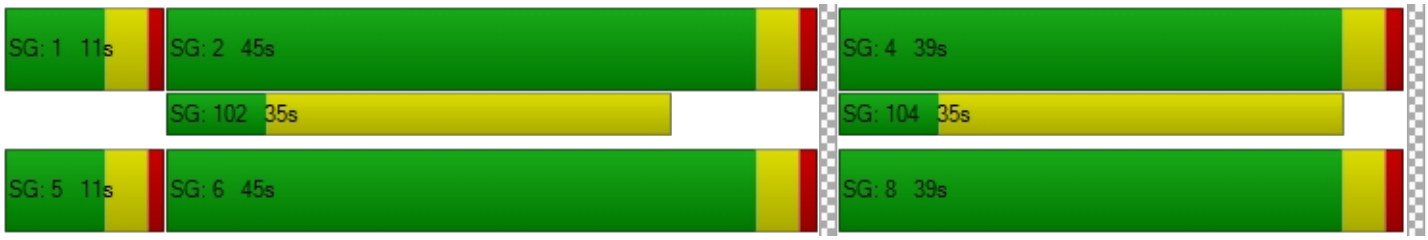
d_M, Delay for Movement [s/veh]	49.98	21.14	17.11	47.90	16.97	16.97	18.00	18.00	17.01	20.98	19.65	19.65
Movement LOS	D	C	B	D	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.44			20.02			17.92			19.84		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.52											
Intersection LOS	C											
Intersection V/C	0.343											

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	2.800	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]	863	863	737	737
d_b, Bicycle Delay [s]	15.35	15.35	18.95	18.95
l_b,int, Bicycle LOS Score for Intersection	2.192	2.003	1.751	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):	24.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

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]	0	14	0	0	4	0	0	0	0	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]	28	648	48	81	380	94	42	107	8	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]	7	171	13	21	100	25	11	28	2	4	52	18
Total Analysis Volume [veh/h]	29	682	51	85	400	99	44	113	8	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]	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	11	39	0	0	55	0	0	55	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]	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]	4	43	43	6	46	46	43	43	43	43
g / C, Green / Cycle	0.04	0.41	0.41	0.06	0.44	0.44	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.05	0.14	0.14	0.14	0.00	0.12	0.04
s, saturation flow rate [veh/h]	1810	1900	1854	1810	1900	1772	1149	1615	1850	1615
c, Capacity [veh/h]	71	783	764	112	826	771	517	665	799	665
d1, Uniform Delay [s]	49.27	22.56	22.57	48.47	19.39	19.42	21.45	18.25	20.61	19.00
k, delay calibration	0.11	0.22	0.22	0.11	0.50	0.50	0.50	0.50	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]	3.79	0.90	0.93	9.97	0.98	1.07	1.51	0.03	0.19	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	0.41	0.47	0.47	0.76	0.31	0.31	0.30	0.01	0.28	0.11
d, Delay for Lane Group [s/veh]	53.06	23.46	23.49	58.43	20.37	20.49	22.96	18.28	20.80	19.08
Lane Group LOS	D	C	C	E	C	C	C	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.80	6.45	6.31	2.43	4.06	3.85	2.66	0.12	3.70	1.09
50th-Percentile Queue Length [ft]	19.89	161.31	157.75	60.84	101.48	96.24	66.44	3.02	92.52	27.20
95th-Percentile Queue Length [veh]	1.43	10.62	10.43	4.38	7.31	6.93	4.78	0.22	6.66	1.96
95th-Percentile Queue Length [ft]	35.80	265.45	260.75	109.51	182.66	173.24	119.60	5.43	166.54	48.96

Movement, Approach, & Intersection Results

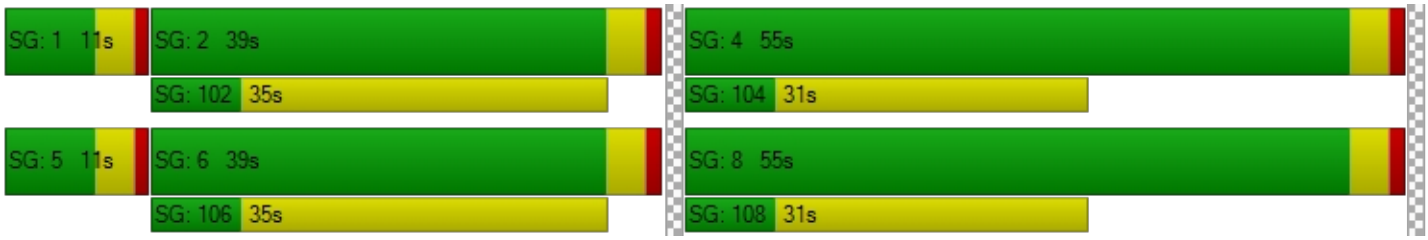
d_M, Delay for Movement [s/veh]	53.06	23.47	23.49	58.43	20.41	20.49	22.96	22.96	18.28	20.80	20.80	19.08
Movement LOS	D	C	C	E	C	C	C	C	B	C	C	B
d_A, Approach Delay [s/veh]	24.60			25.96			22.74			20.38		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	24.17											
Intersection LOS	C											
Intersection V/C	0.402											

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	2.775	2.860	2.110	2.125
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]	667	667	971	971
d_b, Bicycle Delay [s]	23.33	23.33	13.89	13.89
l_b,int, Bicycle LOS Score for Intersection	2.188	2.041	1.832	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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Report File: J:\...\PMHY.pdf
Scenario 1 Horizon Year (2040) Without Project
3/20/2018

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	0.683	32.9	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.425	20.6	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.359	21.0	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	EB Thru	1.002	52.4	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

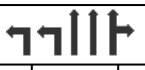
Movement, Approach, & Intersection Results

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):	32.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.683

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]	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	11	39	11	12	40	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]	94	94	94	94	94	94	94	94	94	94	94	94
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	30	30	12	35	35	15	30	30	7	22	22
g / C, Green / Cycle	0.07	0.32	0.32	0.12	0.37	0.37	0.16	0.32	0.32	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.20	0.10	0.24	0.24	0.13	0.26	0.07	0.03	0.13	0.20
s, saturation flow rate [veh/h]	3514	3618	1768	3514	1900	1739	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	245	1148	561	439	708	648	556	1152	514	246	832	372
d1, Uniform Delay [s]	42.12	27.66	27.67	40.04	24.49	24.53	38.38	29.52	23.67	42.13	32.03	34.85
k, delay calibration	0.11	0.11	0.19	0.11	0.27	0.28	0.11	0.11	0.11	0.11	0.11	0.17
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]	1.14	0.61	2.17	2.89	2.48	2.78	2.83	1.37	0.22	1.16	0.56	8.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.64	0.64	0.77	0.65	0.65	0.81	0.81	0.23	0.42	0.55	0.85
d, Delay for Lane Group [s/veh]	43.27	28.27	29.85	42.94	26.98	27.31	41.21	30.89	23.90	43.28	32.59	43.35
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	1.17	6.95	7.05	3.84	8.37	7.76	5.04	9.29	1.88	1.17	4.44	7.52
50th-Percentile Queue Length [ft]	29.20	173.69	176.33	96.09	209.20	194.02	126.04	232.17	47.04	29.19	110.90	187.99
95th-Percentile Queue Length [veh]	2.10	11.27	11.41	6.92	13.11	12.33	8.72	14.28	3.39	2.10	7.89	12.02
95th-Percentile Queue Length [ft]	52.56	281.76	285.21	172.97	327.81	308.24	218.09	357.11	84.67	52.54	197.25	300.42

Movement, Approach, & Intersection Results

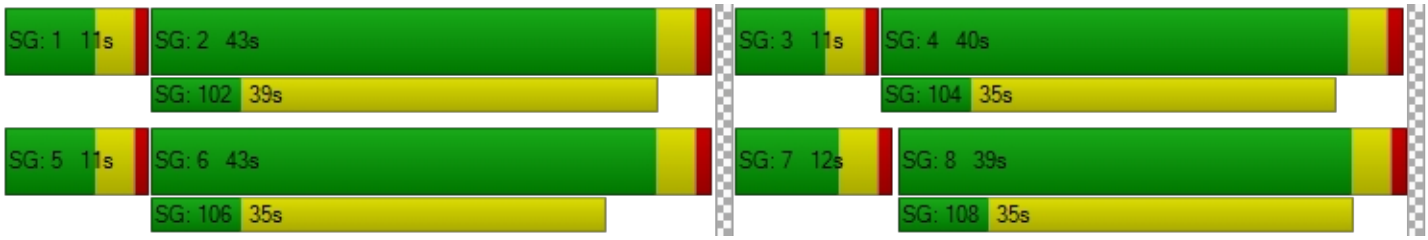
d_M, Delay for Movement [s/veh]	43.27	28.61	29.85	42.94	27.08	27.31	41.21	30.89	23.90	43.28	32.59	43.35
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	30.03			31.53			33.44			37.76		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	32.89											
Intersection LOS	C											
Intersection V/C	0.683											

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	2.939	3.145	3.023	3.027
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	686
d_b, Bicycle Delay [s]	20.74	20.74	23.33	22.67
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):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.425

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]	7	35	35	7	35	35	31	31	31	31
g / C, Green / Cycle	0.08	0.41	0.41	0.08	0.41	0.41	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.23	0.03	0.03	0.21	0.21	0.14	0.10	0.03	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1868	1262	1796	1228	1719
c, Capacity [veh/h]	153	1486	663	153	780	767	439	654	417	626
d1, Uniform Delay [s]	36.21	19.09	15.30	36.87	18.61	18.61	25.53	19.09	23.44	18.81
k, delay calibration	0.50	0.11	0.11	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
d2, Incremental Delay [s]	2.41	0.32	0.05	7.05	0.50	0.51	0.58	0.22	0.10	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.17	0.55	0.08	0.38	0.50	0.50	0.39	0.27	0.10	0.23
d, Delay for Lane Group [s/veh]	38.62	19.41	15.35	43.92	19.11	19.12	26.10	19.31	23.54	19.00
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]	0.59	5.76	0.61	1.41	5.42	5.33	2.90	2.41	0.62	1.97
50th-Percentile Queue Length [ft]	14.78	143.92	15.33	35.26	135.52	133.36	72.47	60.19	15.51	49.23
95th-Percentile Queue Length [veh]	1.06	9.69	1.10	2.54	9.24	9.12	5.22	4.33	1.12	3.54
95th-Percentile Queue Length [ft]	26.61	242.29	27.59	63.47	230.98	228.06	130.44	108.35	27.92	88.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.62	19.41	15.35	43.92	19.11	19.12	26.10	19.31	19.31	23.54	19.00	19.00
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.72			20.84			22.68			20.00		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	20.61											
Intersection LOS	C											
Intersection V/C	0.425											

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):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.359

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]	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]	11	39	0	22	50	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	R	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	46	46	7	51	51	35	35	35	35
g / C, Green / Cycle	0.02	0.46	0.46	0.07	0.51	0.51	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.19	0.04	0.05	0.20	0.20	0.07	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1881	1819	1615	1305	1746
c, Capacity [veh/h]	40	1674	747	122	965	955	677	565	346	611
d1, Uniform Delay [s]	48.14	17.76	15.10	45.86	15.18	15.18	22.63	21.47	33.60	23.45
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]	4.51	0.73	0.25	9.67	1.23	1.24	0.13	0.03	0.41	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
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	0.40	0.10	0.77	0.40	0.40	0.18	0.04	0.27	0.28
d, Delay for Lane Group [s/veh]	52.65	18.49	15.36	55.52	16.41	16.42	22.76	21.51	34.01	23.70
Lane Group LOS	D	B	B	E	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh]	0.36	4.90	0.90	2.54	5.19	5.15	2.05	0.39	1.93	2.94
50th-Percentile Queue Length [ft]	8.99	122.45	22.39	63.60	129.83	128.63	51.37	9.76	48.16	73.44
95th-Percentile Queue Length [veh]	0.65	8.53	1.61	4.58	8.93	8.86	3.70	0.70	3.47	5.29
95th-Percentile Queue Length [ft]	16.19	213.19	40.31	114.48	223.26	221.62	92.47	17.57	86.69	132.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.65	18.49	15.36	55.52	16.42	16.42	22.76	22.76	21.51	34.01	23.70	23.70
Movement LOS	D	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	18.78			20.69			22.55			27.29		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	20.97											
Intersection LOS	C											
Intersection V/C	0.359											

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	2.880	0.000	2.120
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]	700	920	700	700
d_b, Bicycle Delay [s]	21.13	14.58	21.13	21.13
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):	52.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.002

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]	115
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	65	0	0	65	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]	2	30	30	6	34	34	30	30	30	30
g / C, Green / Cycle	0.02	0.39	0.39	0.07	0.44	0.44	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.17	0.04	0.21	0.21	0.70	0.03	0.58	0.08
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1852	451	1615	326	1615
c, Capacity [veh/h]	40	732	720	135	832	811	234	623	188	623
d1, Uniform Delay [s]	37.45	17.62	17.63	34.81	15.61	15.61	24.54	15.11	25.45	16.04
k, delay calibration	0.11	0.11	0.11	0.11	0.12	0.12	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]	4.09	0.40	0.41	3.84	0.50	0.51	187.81	0.05	66.27	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.43	0.43	0.58	0.49	0.49	1.36	0.07	1.00	0.22
d, Delay for Lane Group [s/veh]	41.54	18.02	18.04	38.65	16.11	16.13	212.35	15.16	91.72	16.22
Lane Group LOS	D	B	B	D	B	B	F	B	F	B
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh]	0.26	3.76	3.70	1.48	4.52	4.41	16.56	0.49	7.00	1.57
50th-Percentile Queue Length [ft]	6.45	93.95	92.59	37.10	113.11	110.36	413.91	12.23	174.93	39.30
95th-Percentile Queue Length [veh]	0.46	6.76	6.67	2.67	8.01	7.86	27.43	0.88	11.35	2.83
95th-Percentile Queue Length [ft]	11.60	169.11	166.66	66.77	200.32	196.51	685.86	22.01	283.85	70.74

Movement, Approach, & Intersection Results

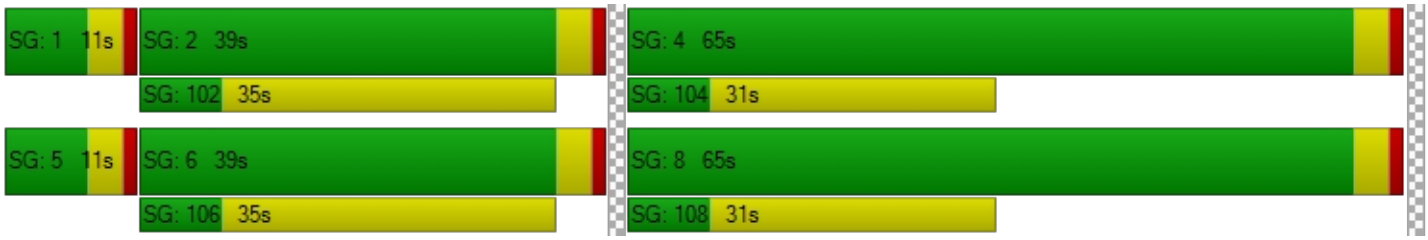
d_M, Delay for Movement [s/veh]	41.54	18.03	18.04	38.65	16.12	16.13	212.35	212.35	15.16	91.72	91.72	16.22
Movement LOS	D	B	B	D	B	B	F	F	B	F	F	B
d_A, Approach Delay [s/veh]	18.47			18.12			187.91			60.12		
Approach LOS	B			B			F			E		
d_I, Intersection Delay [s/veh]	52.36											
Intersection LOS	D											
Intersection V/C	1.002											

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]	47.03	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersection	2.924	3.010	2.132	2.166
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]	609	609	1061	1061
d_b, Bicycle Delay [s]	27.83	27.83	12.68	12.68
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Horizon Year (2040) With Project

SD Homes/ Redlands Apartment Project

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Scenario 2 Horizon Year (2040) With Project
8/31/2018

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	0.794	20.0	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	SB Left	0.592	34.7	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.350	23.3	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	NB Left	0.363	20.8	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.617	27.5	C
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.006	12.2	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.107	15.1	C

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

Intersection Level Of Service Report
Intersection 1: 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):	0.794

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	0	5	0	13	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	18	141	41	84	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	37	11	22	82	13
Total Analysis Volume [veh/h]	94	151	43	6	66	12	19	148	43	88	326	53
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	519	597	497	542	614	588
Degree of Utilization, x	0.47	0.07	0.17	0.31	0.07	0.79

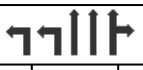
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	2.50	0.23	0.60	1.30	0.23	7.67
95th-Percentile Queue Length [ft]	62.56	5.81	15.09	32.48	5.64	191.86
Approach Delay [s/veh]	14.73		11.72	11.60		28.61
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):	34.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.592

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]	20	46	21	0	171	0	0	0	5	12	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	110	676	51	177	815	246	120	203	60	81	491	270
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]	29	178	13	47	214	65	32	53	16	21	129	71
Total Analysis Volume [veh/h]	116	712	54	186	858	259	126	214	63	85	517	284
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern 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	23	55	0	11	43	11	11	43	23
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	32	0	0	32	0	0	32	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]	120	120	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	7	50	50	9	52	52	7	39	39	7	39	39
g / C, Green / Cycle	0.06	0.42	0.42	0.07	0.43	0.43	0.06	0.32	0.32	0.06	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.03	0.14	0.14	0.05	0.30	0.31	0.04	0.06	0.04	0.02	0.14	0.18
s, saturation flow rate [veh/h]	3514	3618	1832	3514	1900	1751	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	201	1506	763	251	818	754	203	1172	523	194	1163	519
d1, Uniform Delay [s]	55.15	23.79	23.81	54.64	28.00	28.11	55.27	29.15	28.54	54.91	32.24	33.53
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	0.12
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]	2.59	0.61	1.20	4.28	5.13	5.71	3.10	0.07	0.10	1.56	0.27	0.99
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	0.58	0.34	0.34	0.74	0.71	0.71	0.62	0.18	0.12	0.44	0.44	0.55
d, Delay for Lane Group [s/veh]	57.74	24.39	25.01	58.92	33.13	33.83	58.37	29.23	28.64	56.47	32.51	34.52
Lane Group LOS	E	C	C	E	C	C	E	C	C	E	C	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.77	4.96	5.18	2.86	14.20	13.37	1.92	2.19	1.27	1.27	5.85	6.78
50th-Percentile Queue Length [ft/ln]	44.27	123.90	129.48	71.54	355.02	334.23	48.05	54.84	31.81	31.72	146.35	169.56
95th-Percentile Queue Length [veh/ln]	3.19	8.61	8.91	5.15	20.38	19.37	3.46	3.95	2.29	2.28	9.82	11.05
95th-Percentile Queue Length [ft/ln]	79.69	215.17	222.79	128.77	509.53	484.14	86.49	98.71	57.25	57.09	245.55	276.33

Movement, Approach, & Intersection Results

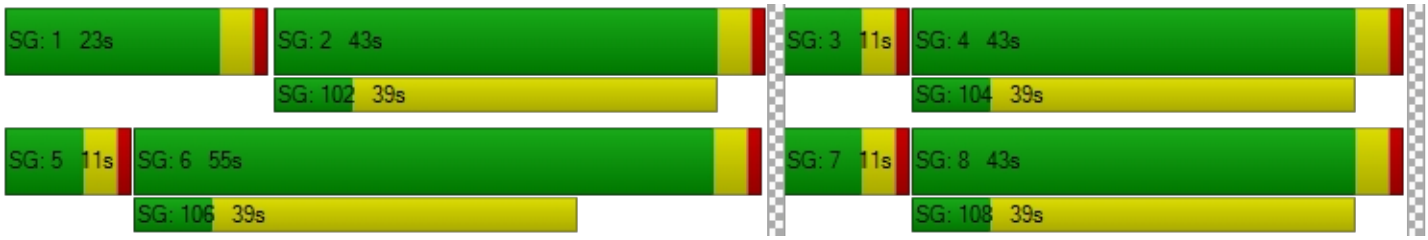
d_M, Delay for Movement [s/veh]	57.74	24.57	25.01	58.92	33.36	33.83	58.37	29.23	28.64	56.47	32.51	34.52
Movement LOS	E	C	C	E	C	C	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	28.96			37.10			38.25			35.45		
Approach LOS	C			D			D			D		
d_I, Intersection Delay [s/veh]	34.75											
Intersection LOS	C											
Intersection V/C	0.592											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.914	3.058	2.848	2.857
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]	650	850	650	650
d_b, Bicycle Delay [s]	27.34	19.84	27.34	27.34
l_b,int, Bicycle LOS Score for Intersection	2.045	2.635	1.892	2.291
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):	23.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.350

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]	8	72	0	0	93	80	15	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]	52	720	35	89	640	188	35	37	17	13	48	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]	14	189	9	23	168	49	9	10	4	3	13	12
Total Analysis Volume [veh/h]	55	758	37	94	674	198	37	39	18	14	51	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]	5	33	33	6	35	35	33	33	33	33
g / C, Green / Cycle	0.06	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	0.03	0.21	0.02	0.05	0.24	0.24	0.03	0.03	0.01	0.06
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1754	1317	1800	1368	1750
c, Capacity [veh/h]	111	1419	633	135	771	711	521	706	561	686
d1, Uniform Delay [s]	38.67	19.88	16.08	38.42	19.74	19.74	19.57	16.23	18.27	16.65
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	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]	3.42	1.45	0.18	6.33	3.28	3.55	0.26	0.22	0.08	0.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.53	0.06	0.70	0.59	0.59	0.07	0.08	0.02	0.14
d, Delay for Lane Group [s/veh]	42.09	21.32	16.26	44.76	23.02	23.29	19.83	16.45	18.35	17.10
Lane Group LOS	D	C	B	D	C	C	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.19	5.67	0.46	2.10	7.21	6.71	0.53	0.72	0.19	1.29
50th-Percentile Queue Length [ft/ln]	29.69	141.85	11.42	52.44	180.19	167.64	13.24	17.97	4.74	32.18
95th-Percentile Queue Length [veh/ln]	2.14	9.58	0.82	3.78	11.61	10.95	0.95	1.29	0.34	2.32
95th-Percentile Queue Length [ft/ln]	53.44	239.51	20.55	94.39	290.27	273.81	23.83	32.35	8.54	57.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.09	21.32	16.26	44.76	23.11	23.29	19.83	16.45	16.45	18.35	17.10	17.10
Movement LOS	D	C	B	D	C	C	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	22.45			25.25			17.78			17.25		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	23.28											
Intersection LOS	C											
Intersection V/C	0.350											

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	2.845	2.066	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	2.261	2.357	1.715	1.746
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):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.363

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]	0	80	0	0	20	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]	15	723	54	50	462	14	15	86	9	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	190	14	13	122	4	4	23	2	8	25	19
Total Analysis Volume [veh/h]	16	761	57	53	486	15	16	91	9	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]	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	45	0	11	45	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	R	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]	2	40	40	5	42	42	38	38	38	38
g / C, Green / Cycle	0.03	0.42	0.42	0.06	0.45	0.45	0.40	0.40	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.01	0.21	0.04	0.03	0.13	0.13	0.06	0.01	0.02	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1880	1797	1615	1326	1765
c, Capacity [veh/h]	46	1507	673	100	849	840	765	649	533	709
d1, Uniform Delay [s]	45.52	20.48	16.76	43.65	16.76	16.77	18.02	17.10	20.89	18.91
k, delay calibration	0.11	0.50	0.50	0.11	0.11	0.11	0.11	0.11	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]	4.46	1.21	0.25	4.24	0.19	0.20	0.08	0.01	0.21	0.85
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	0.50	0.08	0.53	0.30	0.30	0.14	0.01	0.06	0.25
d, Delay for Lane Group [s/veh]	49.98	21.69	17.01	47.90	16.96	16.96	18.10	17.11	21.10	19.76
Lane Group LOS	D	C	B	D	B	B	B	B	C	B
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.41	5.95	0.74	1.28	3.24	3.22	1.48	0.12	0.49	2.72
50th-Percentile Queue Length [ft/ln]	10.36	148.76	18.62	32.11	81.08	80.42	37.05	2.96	12.21	68.10
95th-Percentile Queue Length [veh/ln]	0.75	9.95	1.34	2.31	5.84	5.79	2.67	0.21	0.88	4.90
95th-Percentile Queue Length [ft/ln]	18.65	248.77	33.52	57.81	145.95	144.76	66.69	5.33	21.99	122.57

Movement, Approach, & Intersection Results

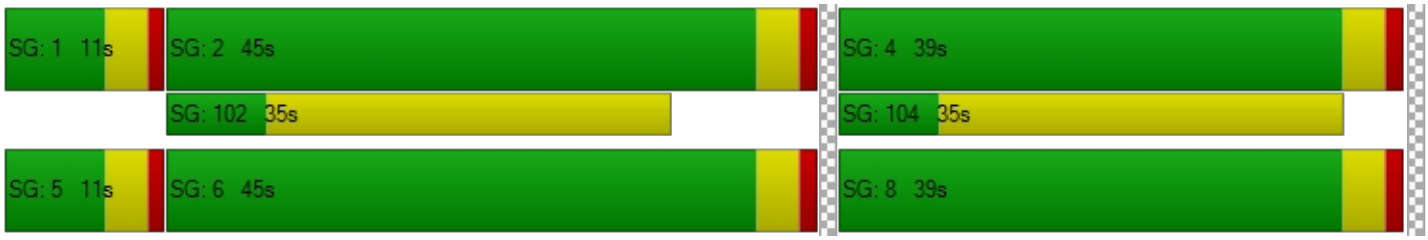
d_M, Delay for Movement [s/veh]	49.98	21.69	17.01	47.90	16.96	16.96	18.10	18.10	17.11	21.10	19.76	19.76
Movement LOS	D	C	B	D	B	B	B	B	B	C	B	B
d_A, Approach Delay [s/veh]	21.91			19.92			18.03			19.96		
Approach LOS	C			B			B			B		
d_I, Intersection Delay [s/veh]	20.77											
Intersection LOS	C											
Intersection V/C	0.363											

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	2.821	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]	863	863	737	737
d_b, Bicycle Delay [s]	15.35	15.35	18.95	18.95
l_b,int, Bicycle LOS Score for Intersection	2.248	2.017	1.751	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):	27.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.617

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]	7	14	0	0	4	16	65	7	27	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]	35	648	48	81	380	110	107	114	35	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	171	13	21	100	29	28	30	9	4	53	18
Total Analysis Volume [veh/h]	37	682	51	85	400	116	113	120	37	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]	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	11	39	0	0	55	0	0	55	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]	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]	5	43	43	7	45	45	43	43	43	43
g / C, Green / Cycle	0.04	0.41	0.41	0.06	0.43	0.43	0.41	0.41	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.02	0.20	0.20	0.05	0.14	0.14	0.34	0.02	0.17	0.04
s, saturation flow rate [veh/h]	1810	1900	1854	1810	1900	1756	687	1615	1354	1615
c, Capacity [veh/h]	83	782	763	114	814	752	334	664	594	664
d1, Uniform Delay [s]	48.78	22.59	22.60	48.37	19.95	19.99	36.87	18.61	21.46	19.03
k, delay calibration	0.11	0.22	0.22	0.11	0.50	0.50	0.50	0.50	0.15	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]	3.71	0.90	0.93	9.36	1.07	1.18	11.53	0.16	0.57	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	0.45	0.47	0.47	0.75	0.33	0.33	0.70	0.06	0.39	0.11
d, Delay for Lane Group [s/veh]	52.49	23.49	23.53	57.73	21.03	21.17	48.39	18.77	22.03	19.10
Lane Group LOS	D	C	C	E	C	C	D	B	C	B
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.00	6.46	6.31	2.42	4.30	4.05	6.79	0.57	3.81	1.09
50th-Percentile Queue Length [ft/ln]	25.08	161.39	157.82	60.44	107.62	101.24	169.72	14.24	95.24	27.21
95th-Percentile Queue Length [veh/ln]	1.81	10.62	10.43	4.35	7.71	7.29	11.06	1.03	6.86	1.96
95th-Percentile Queue Length [ft/ln]	45.14	265.56	260.83	108.79	192.69	182.23	276.55	25.64	171.43	48.97

Movement, Approach, & Intersection Results

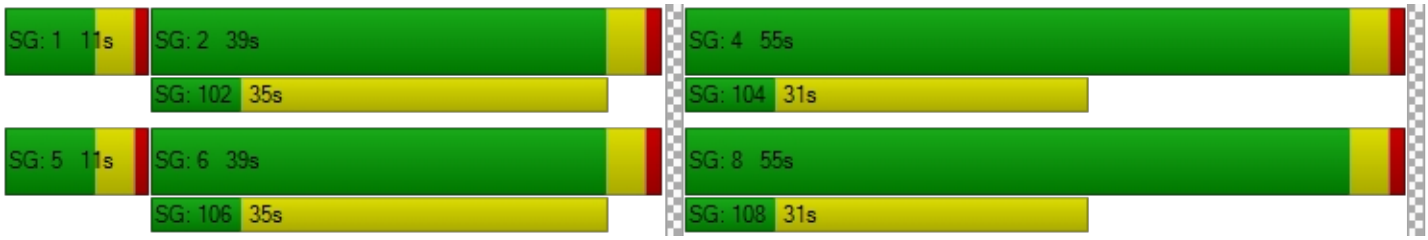
d_M, Delay for Movement [s/veh]	52.49	23.51	23.53	57.73	21.07	21.17	48.39	48.39	18.77	22.03	22.03	19.10
Movement LOS	D	C	C	E	C	C	D	D	B	C	C	B
d_A, Approach Delay [s/veh]	24.90			26.28			44.33			21.33		
Approach LOS	C			C			D			C		
d_I, Intersection Delay [s/veh]	27.48											
Intersection LOS	C											
Intersection V/C	0.617											

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	2.784	2.979	2.154	2.128
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]	667	667	971	971
d_b, Bicycle Delay [s]	23.33	23.33	13.89	13.89
l_b,int, Bicycle LOS Score for Intersection	2.195	2.055	2.005	2.056
Bicycle LOS	B	B	B	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):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

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	157	320	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]	3	7	0	8	27	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]	3	7	0	165	347	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	43	91	0
Total Analysis Volume [veh/h]	3	7	0	174	365	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	0.01	0.01	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	12.20	10.35	7.99	0.00	0.00	0.00
Movement LOS	B	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	1.23	1.23	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.91		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.20					
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):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.107

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]	20	0	56	40	0	7	3	3	5	14	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]	20	0	56	40	0	7	3	160	5	14	320	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]	5	0	15	11	0	2	1	43	1	4	87	3
Total Analysis Volume [veh/h]	22	0	61	43	0	8	3	174	5	15	348	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	0.05	0.00	0.07	0.11	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00
d_M, Delay for Movement [s/veh]	14.21	14.19	9.86	15.07	14.54	11.31	7.98	0.00	0.00	7.58	0.00	0.00
Movement LOS	B	B	A	C	B	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.41	0.41	0.41	0.40	0.40	0.40	0.01	0.01	0.01	0.03	0.03	0.03
95th-Percentile Queue Length [ft/ln]	10.34	10.34	10.34	10.00	10.00	10.00	0.19	0.19	0.19	0.75	0.75	0.75
d_A, Approach Delay [s/veh]	11.01			14.48			0.13			0.30		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	2.59											
Intersection LOS	C											

SD Homes/ Redlands Apartment Project

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Report File: G:\...\PMHYp.pdf

Scenario 2 Horizon Year (2040) With Project
8/31/2018

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	0.720	17.5	C
2	Alabama St (NS) at Redlands Blvd (EW)	Signalized	HCM 6th Edition	WB Left	0.688	33.2	C
3	Alabama St (NS) at Park Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.435	20.9	C
4	Alabama St (NS) at Citrus Ave (EW)	Signalized	HCM 6th Edition	SB Left	0.369	21.1	C
5	Alabama St (NS) at Orange Ave (EW)	Signalized	HCM 6th Edition	EB Thru	1.703	147.3	F
6	Apt West Acces (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.002	12.8	B
7	Apt East Access (NS) at Orange Ave (EW)	Two-way stop	HCM 6th Edition	SB Left	0.077	18.1	C

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

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

Control Type:	All-way stop	Delay (sec / veh):	17.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.720

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	13	0	0	0	0	20	0	7	11	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	66	47	135	49	16	361	53	39	138	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	17	12	36	13	4	95	14	10	36	3
Total Analysis Volume [veh/h]	16	140	69	49	142	52	17	380	56	41	145	12
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	499	559	515	552	622	512
Degree of Utilization, x	0.31	0.12	0.47	0.72	0.09	0.39

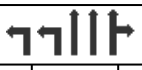
Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.32	0.42	2.50	5.90	0.30	1.81
95th-Percentile Queue Length [ft]	33.06	10.49	62.40	147.55	7.40	45.26
Approach Delay [s/veh]	12.20		16.07	22.34		14.41
Approach LOS	B		C	C		B
Intersection Delay [s/veh]	17.54					
Intersection LOS	C					

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

Control Type:	Signalized	Delay (sec / veh):	33.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.688

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]	10	180	18	0	53	0	0	0	19	20	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right-Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	108	913	155	321	648	210	427	882	131	118	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]	28	240	41	84	171	55	112	232	34	31	113	79
Total Analysis Volume [veh/h]	114	961	163	338	682	221	449	928	138	124	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]	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]	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	44	0	18	51	0	20	52	11	12	43	18
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	32	0	0	32	0	0	32	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]	95	95	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	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	30	30	12	35	35	15	30	30	7	22	22
g / C, Green / Cycle	0.07	0.32	0.32	0.12	0.37	0.37	0.16	0.32	0.32	0.07	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.21	0.10	0.25	0.25	0.13	0.26	0.09	0.04	0.13	0.20
s, saturation flow rate [veh/h]	3514	3618	1762	3514	1900	1743	3514	3618	1615	3514	3618	1615
c, Capacity [veh/h]	249	1145	558	439	704	646	557	1151	514	252	836	373
d1, Uniform Delay [s]	42.29	27.99	28.00	40.14	24.93	24.98	38.47	29.65	24.10	42.34	32.05	34.87
k, delay calibration	0.11	0.11	0.20	0.11	0.29	0.29	0.11	0.11	0.11	0.11	0.11	0.17
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]	1.31	0.66	2.50	2.87	2.91	3.26	2.80	1.39	0.28	1.49	0.55	8.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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	0.46	0.66	0.66	0.77	0.67	0.67	0.81	0.81	0.27	0.49	0.54	0.85
d, Delay for Lane Group [s/veh]	43.61	28.64	30.50	43.01	27.84	28.24	41.27	31.04	24.38	43.83	32.60	43.20
Lane Group LOS	D	C	C	D	C	C	D	C	C	D	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.30	7.19	7.30	3.85	8.80	8.20	5.05	9.33	2.24	1.41	4.44	7.52
50th-Percentile Queue Length [ft/ln]	32.53	179.70	182.59	96.34	219.94	204.96	126.35	233.20	56.04	35.15	111.05	187.90
95th-Percentile Queue Length [veh/ln]	2.34	11.58	11.74	6.94	13.66	12.89	8.74	14.34	4.03	2.53	7.90	12.01
95th-Percentile Queue Length [ft/ln]	58.55	289.62	293.40	173.41	341.55	322.35	218.52	358.43	100.86	63.27	197.46	300.30

Movement, Approach, & Intersection Results

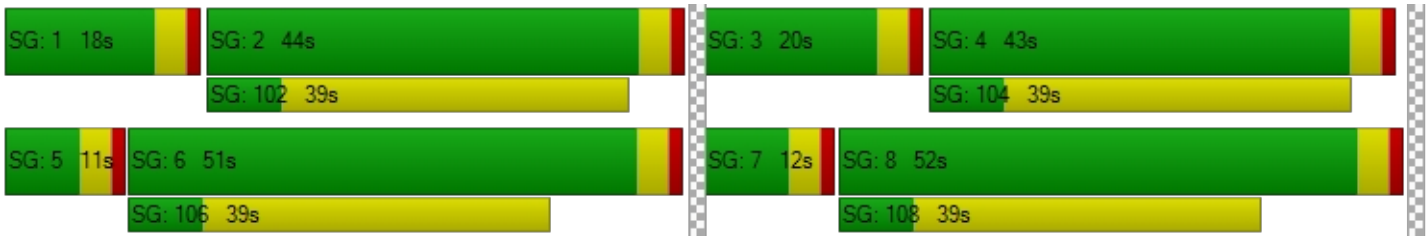
d_M, Delay for Movement [s/veh]	43.61	29.04	30.50	43.01	27.96	28.24	41.27	31.04	24.38	43.83	32.60	43.20
Movement LOS	D	C	C	D	C	C	D	C	C	D	C	D
d_A, Approach Delay [s/veh]	30.57			32.11			33.46			37.91		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	33.20											
Intersection LOS	C											
Intersection V/C	0.688											

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	2.964	3.161	3.038	3.041
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]	640	752	768	624
d_b, Bicycle Delay [s]	28.90	24.34	23.72	29.58
l_b,int, Bicycle LOS Score for Intersection	2.241	2.583	2.809	2.298
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):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.435

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	79	0	0	76	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	808	51	55	764	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	213	13	14	201	9	43	29	14	10	15	22
Total Analysis Volume [veh/h]	26	851	54	58	804	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]	7	35	35	7	35	35	31	31	31	31
g / C, Green / Cycle	0.08	0.41	0.41	0.08	0.41	0.41	0.36	0.36	0.36	0.36
(v / s)_i Volume / Saturation Flow Rate	0.01	0.24	0.03	0.03	0.22	0.22	0.14	0.10	0.03	0.08
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1871	1262	1796	1228	1719
c, Capacity [veh/h]	153	1486	663	153	780	768	439	654	417	626
d1, Uniform Delay [s]	36.21	19.33	15.30	36.87	19.03	19.03	25.53	19.09	23.44	18.81
k, delay calibration	0.50	0.11	0.11	0.50	0.12	0.12	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]	2.41	0.35	0.05	7.05	0.65	0.66	0.58	0.22	0.10	0.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.17	0.57	0.08	0.38	0.54	0.54	0.39	0.27	0.10	0.23
d, Delay for Lane Group [s/veh]	38.62	19.68	15.35	43.92	19.67	19.69	26.10	19.31	23.54	19.00
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	6.08	0.61	1.41	6.03	5.94	2.90	2.41	0.62	1.97
50th-Percentile Queue Length [ft/ln]	14.78	152.06	15.33	35.26	150.79	148.53	72.47	60.19	15.51	49.23
95th-Percentile Queue Length [veh/ln]	1.06	10.13	1.10	2.54	10.06	9.94	5.22	4.33	1.12	3.54
95th-Percentile Queue Length [ft/ln]	26.61	253.18	27.59	63.47	251.48	248.47	130.44	108.35	27.92	88.61

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	38.62	19.68	15.35	43.92	19.68	19.69	26.10	19.31	19.31	23.54	19.00	19.00
Movement LOS	D	B	B	D	B	B	C	B	B	C	B	B
d_A, Approach Delay [s/veh]	19.96			21.24			22.68			20.00		
Approach LOS	B			C			C			B		
d_I, Intersection Delay [s/veh]	20.85											
Intersection LOS	C											
Intersection V/C	0.435											

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	2.947	3.077	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	2.328	2.301	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):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.369

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	37	0	0	80	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	676	67	89	769	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	178	18	23	202	6	4	27	6	23	22	22
Total Analysis Volume [veh/h]	13	712	71	94	809	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]	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]	11	39	0	22	50	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	R	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	46	46	7	51	51	35	35	35	35
g / C, Green / Cycle	0.02	0.46	0.46	0.07	0.51	0.51	0.35	0.35	0.35	0.35
(v / s)_i Volume / Saturation Flow Rate	0.01	0.20	0.04	0.05	0.22	0.22	0.07	0.02	0.07	0.10
s, saturation flow rate [veh/h]	1810	3618	1615	1810	1900	1882	1819	1615	1305	1746
c, Capacity [veh/h]	40	1674	747	122	965	956	677	565	346	611
d1, Uniform Delay [s]	48.14	17.98	15.10	45.86	15.52	15.52	22.63	21.47	33.60	23.45
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]	4.51	0.79	0.25	9.67	1.41	1.43	0.13	0.03	0.41	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
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	0.43	0.10	0.77	0.43	0.43	0.18	0.04	0.27	0.28
d, Delay for Lane Group [s/veh]	52.65	18.77	15.36	55.52	16.93	16.94	22.76	21.51	34.01	23.70
Lane Group LOS	D	B	B	E	B	B	C	C	C	C
Critical Lane Group	No	Yes	No	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.36	5.22	0.90	2.54	5.78	5.73	2.05	0.39	1.93	2.94
50th-Percentile Queue Length [ft/ln]	8.99	130.44	22.39	63.60	144.45	143.20	51.37	9.76	48.16	73.44
95th-Percentile Queue Length [veh/ln]	0.65	8.96	1.61	4.58	9.72	9.65	3.70	0.70	3.47	5.29
95th-Percentile Queue Length [ft/ln]	16.19	224.09	40.31	114.48	243.01	241.33	92.47	17.57	86.69	132.20

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	52.65	18.77	15.36	55.52	16.94	16.94	22.76	22.76	21.51	34.01	23.70	23.70
Movement LOS	D	B	B	E	B	B	C	C	C	C	C	C
d_A, Approach Delay [s/veh]	19.02			20.86			22.55			27.29		
Approach LOS	B			C			C			C		
d_I, Intersection Delay [s/veh]	21.09											
Intersection LOS	C											
Intersection V/C	0.369											

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	2.904	0.000	2.120
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]	700	920	700	700
d_b, Bicycle Delay [s]	21.13	14.58	21.13	21.13
l_b,int, Bicycle LOS Score for Intersection	2.216	2.323	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):	147.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.703

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in 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]	25	4	0	1	16	63	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	566	29	74	705	118	120	218	57	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	31	32	57	15	17	32	34
Total Analysis Volume [veh/h]	38	596	31	78	742	124	126	229	60	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]	120
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	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]	120	120	120	120	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
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	51	51	7	52	52	51	51	51	51
g / C, Green / Cycle	0.04	0.42	0.42	0.06	0.43	0.43	0.42	0.42	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.02	0.17	0.17	0.04	0.23	0.23	1.36	0.04	0.90	0.08
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1806	260	1615	216	1615
c, Capacity [veh/h]	79	802	788	101	826	785	151	681	131	681
d1, Uniform Delay [s]	56.01	24.02	24.03	55.82	25.01	25.01	40.60	20.80	37.23	21.87
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	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]	4.55	1.45	1.48	11.59	2.51	2.63	631.08	0.25	253.78	0.66
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	0.48	0.39	0.39	0.77	0.54	0.54	2.36	0.09	1.48	0.20
d, Delay for Lane Group [s/veh]	60.56	25.47	25.51	67.40	27.51	27.64	671.69	21.05	291.01	22.52
Lane Group LOS	E	C	C	E	C	C	F	C	F	C
Critical Lane Group	Yes	No	No	No	No	Yes	Yes	No	No	No
50th-Percentile Queue Length [veh/ln]	1.20	6.27	6.18	2.60	9.41	8.98	30.98	1.07	13.26	2.55
50th-Percentile Queue Length [ft/ln]	29.97	156.65	154.41	65.01	235.33	224.44	774.41	26.69	331.57	63.85
95th-Percentile Queue Length [veh/ln]	2.16	10.37	10.25	4.68	14.44	13.89	54.81	1.92	23.42	4.60
95th-Percentile Queue Length [ft/ln]	53.94	259.28	256.31	117.02	361.12	347.29	1370.23	48.05	585.40	114.94

Movement, Approach, & Intersection Results

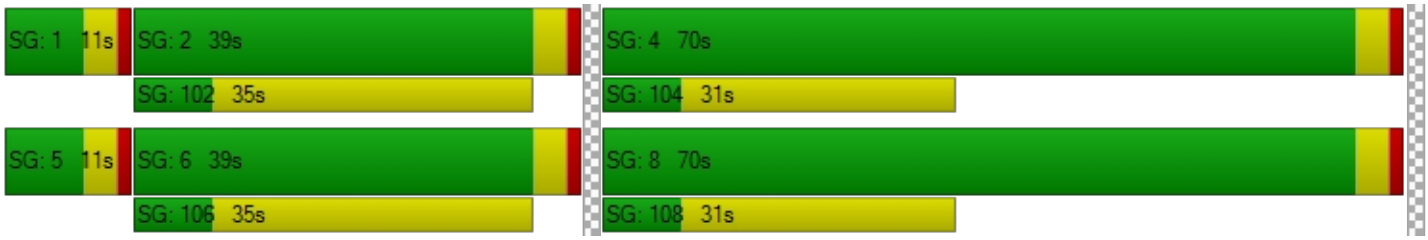
d_M, Delay for Movement [s/veh]	60.56	25.49	25.51	67.40	27.57	27.64	671.69	671.69	21.05	291.01	291.01	22.52
Movement LOS	E	C	C	E	C	C	F	F	C	F	F	C
d_A, Approach Delay [s/veh]	27.49			30.87			577.62			180.70		
Approach LOS	C			C			F			F		
d_I, Intersection Delay [s/veh]	147.32											
Intersection LOS	F											
Intersection V/C	1.703											

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]	49.50	49.50	49.50	49.50
l_p,int, Pedestrian LOS Score for Intersection	2.936	3.085	2.183	2.171
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]	583	583	1100	1100
d_b, Bicycle Delay [s]	30.10	30.10	12.15	12.15
l_b,int, Bicycle LOS Score for Intersection	2.108	2.338	2.244	2.106
Bicycle LOS	B	B	B	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):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.002

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	345	182	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]	1	4	0	33	15	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]	1	4	0	378	197	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	0	99	52	0
Total Analysis Volume [veh/h]	1	4	0	398	207	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]	12.79	9.33	7.62	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]	0.52	0.52	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	10.02		0.00		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.08					
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):	18.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.077

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	345	0	0	182	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]	11	0	28	21	0	4	13	1	20	54	0	40
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]	11	0	28	21	0	4	13	346	20	54	182	40
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]	3	0	8	6	0	1	4	94	5	15	49	11
Total Analysis Volume [veh/h]	12	0	30	23	0	4	14	376	22	59	198	43
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	0.04	0.00	0.05	0.08	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00
d_M, Delay for Movement [s/veh]	17.33	17.34	11.07	18.11	17.50	10.34	7.72	0.00	0.00	8.24	0.00	0.00
Movement LOS	C	C	B	C	C	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.27	0.27	0.27	0.27	0.27	0.27	0.03	0.03	0.03	0.14	0.14	0.14
95th-Percentile Queue Length [ft/ln]	6.84	6.84	6.84	6.68	6.68	6.68	0.74	0.74	0.74	3.62	3.62	3.62
d_A, Approach Delay [s/veh]	12.86			16.96			0.26			1.62		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	2.04											
Intersection LOS	C											

IMPROVEMENTS

Horizon Year (2040) Without Project - With Improvements

SD Homes/ Redlands Apartment Project

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Scenario 1 Horizon Year (2040) Without Project
3/20/2018

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	SB Left	0.391	20.3	C

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange 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):	0.391

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]	0	14	0	0	4	0	0	0	0	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]	28	648	48	81	380	94	42	107	8	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]	7	171	13	21	100	25	11	28	2	4	52	18
Total Analysis Volume [veh/h]	29	682	51	85	400	99	44	113	8	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	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	L	C	C	R
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]	4	33	33	6	36	36	33	33	33	33
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	0.02	0.20	0.20	0.05	0.14	0.14	0.04	0.06	0.12	0.04
s, saturation flow rate [veh/h]	1810	1900	1854	1810	1900	1772	1192	1878	1867	1615
c, Capacity [veh/h]	76	747	729	131	805	751	426	739	780	635
d1, Uniform Delay [s]	39.66	19.46	19.46	38.40	16.34	16.37	22.49	16.74	17.77	16.39
k, delay calibration	0.11	0.12	0.12	0.11	0.50	0.50	0.50	0.50	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]	3.09	0.58	0.60	5.29	1.05	1.14	0.49	0.48	0.20	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	0.38	0.50	0.50	0.65	0.32	0.32	0.10	0.16	0.29	0.11
d, Delay for Lane Group [s/veh]	42.75	20.04	20.06	43.69	17.39	17.51	22.98	17.21	17.98	16.47
Lane Group LOS	D	C	C	D	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.63	5.08	4.97	1.83	3.22	3.05	0.70	1.58	2.98	0.88
50th-Percentile Queue Length [ft]	15.69	126.95	124.13	45.75	80.41	76.36	17.39	39.44	74.47	21.90
95th-Percentile Queue Length [veh]	1.13	8.77	8.62	3.29	5.79	5.50	1.25	2.84	5.36	1.58
95th-Percentile Queue Length [ft]	28.25	219.34	215.49	82.35	144.74	137.45	31.30	70.99	134.05	39.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.75	20.05	20.06	43.69	17.43	17.51	22.98	17.21	17.21	17.98	17.98	16.47
Movement LOS	D	C	C	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	20.91			21.27			18.75			17.61		
Approach LOS	C			C			B			B		
d_I, Intersection Delay [s/veh]	20.29											
Intersection LOS	C											
Intersection V/C	0.391											

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	2.765	2.849	2.100	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	824	729	729
d_b, Bicycle Delay [s]	14.71	14.71	17.15	17.15
l_b,int, Bicycle LOS Score for Intersection	2.188	2.041	1.832	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 Horizon Year (2040) Without Project
3/20/2018

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	0.404	18.5	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):	18.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.404

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]	115
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	65	0	0	65	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	L	C	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]	2	30	30	6	34	34	30	30	30	30
g / C, Green / Cycle	0.02	0.39	0.39	0.07	0.44	0.44	0.39	0.39	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.01	0.17	0.17	0.04	0.21	0.21	0.07	0.15	0.15	0.08
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1852	1289	1846	1236	1615
c, Capacity [veh/h]	40	732	720	135	832	811	341	712	539	623
d1, Uniform Delay [s]	37.45	17.62	17.63	34.81	15.61	15.61	27.32	17.22	18.13	16.04
k, delay calibration	0.11	0.11	0.11	0.11	0.12	0.12	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]	4.09	0.40	0.41	3.84	0.50	0.51	0.42	0.34	0.39	0.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.43	0.43	0.58	0.49	0.49	0.27	0.38	0.35	0.22
d, Delay for Lane Group [s/veh]	41.54	18.02	18.04	38.65	16.11	16.13	27.75	17.56	18.51	16.22
Lane Group LOS	D	B	B	D	B	B	C	B	B	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh]	0.26	3.76	3.70	1.48	4.52	4.41	1.48	3.36	2.64	1.57
50th-Percentile Queue Length [ft]	6.45	93.95	92.59	37.10	113.11	110.36	37.05	84.11	66.03	39.30
95th-Percentile Queue Length [veh]	0.46	6.76	6.67	2.67	8.01	7.86	2.67	6.06	4.75	2.83
95th-Percentile Queue Length [ft]	11.60	169.11	166.66	66.77	200.32	196.51	66.69	151.39	118.85	70.74

Movement, Approach, & Intersection Results

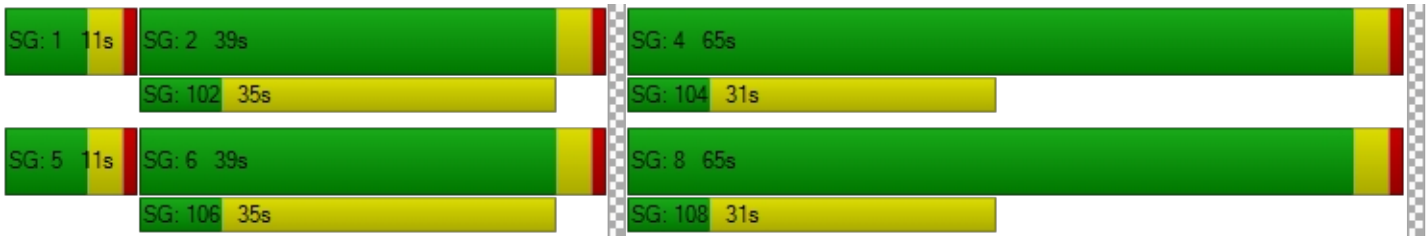
d_M, Delay for Movement [s/veh]	41.54	18.03	18.04	38.65	16.12	16.13	27.75	17.56	17.56	18.51	18.51	16.22
Movement LOS	D	B	B	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	18.47			18.12			20.14			17.55		
Approach LOS	B			B			C			B		
d_I, Intersection Delay [s/veh]	18.47											
Intersection LOS	B											
Intersection V/C	0.404											

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]	47.03	47.03	47.03	47.03
l_p,int, Pedestrian LOS Score for Intersection	2.924	3.010	2.132	2.166
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]	609	609	1061	1061
d_b, Bicycle Delay [s]	27.83	27.83	12.68	12.68
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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Horizon Year (2040) With Project - With Improvements

SD Homes/ Redlands Apartment Project

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Scenario 2 Horizon Year (2040) With Project
8/31/2018

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	SB Left	0.393	20.8	C

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	20.8
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	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]	7	14	0	0	4	16	65	7	27	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]	35	648	48	81	380	110	107	114	35	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	171	13	21	100	29	28	30	9	4	53	18
Total Analysis Volume [veh/h]	37	682	51	85	400	116	113	120	37	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]	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	L	C	C	R
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]	4	33	33	6	35	35	33	33	33	33
g / C, Green / Cycle	0.05	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	0.02	0.20	0.20	0.05	0.14	0.14	0.10	0.09	0.12	0.04
s, saturation flow rate [veh/h]	1810	1900	1854	1810	1900	1756	1189	1824	1864	1615
c, Capacity [veh/h]	89	747	729	131	791	731	424	717	779	635
d1, Uniform Delay [s]	39.25	19.46	19.46	38.40	16.85	16.88	24.02	17.13	17.80	16.39
k, delay calibration	0.11	0.12	0.12	0.11	0.50	0.50	0.50	0.50	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]	3.06	0.58	0.60	5.29	1.15	1.27	1.54	0.70	0.21	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	0.41	0.50	0.50	0.65	0.34	0.34	0.27	0.22	0.29	0.11
d, Delay for Lane Group [s/veh]	42.30	20.04	20.06	43.69	18.00	18.15	25.56	17.84	18.01	16.47
Lane Group LOS	D	C	C	D	B	B	C	B	B	B
Critical Lane Group	No	No	Yes	Yes	No	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.79	5.08	4.97	1.83	3.42	3.22	1.93	2.11	3.02	0.88
50th-Percentile Queue Length [ft/ln]	19.75	126.96	124.13	45.75	85.55	80.60	48.22	52.63	75.60	21.90
95th-Percentile Queue Length [veh/ln]	1.42	8.77	8.62	3.29	6.16	5.80	3.47	3.79	5.44	1.58
95th-Percentile Queue Length [ft/ln]	35.54	219.35	215.48	82.35	154.00	145.09	86.79	94.74	136.09	39.42

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.30	20.05	20.06	43.69	18.05	18.15	25.56	17.84	17.84	18.01	18.01	16.47
Movement LOS	D	C	C	D	B	B	C	B	B	B	B	B
d_A, Approach Delay [s/veh]	21.12			21.70			21.07			17.64		
Approach LOS	C			C			C			B		
d_I, Intersection Delay [s/veh]	20.75											
Intersection LOS	C											
Intersection V/C	0.393											

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	2.968	2.143	2.118
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	2.195	2.055	2.005	2.056
Bicycle LOS	B	B	B	B

Sequence

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

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Scenario 2 Horizon Year (2040) With Project
8/31/2018

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	SB Left	0.448	22.8	C

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

Intersection Level Of Service Report
Intersection 5: Alabama St (NS) at Orange Ave (EW)

Control Type:	Signalized	Delay (sec / veh):	22.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.448

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]	25	4	0	1	16	63	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	566	29	74	705	118	120	218	57	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	31	32	57	15	17	32	34
Total Analysis Volume [veh/h]	38	596	31	78	742	124	126	229	60	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]	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	L	C	C	R
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]	4	34	34	6	35	35	34	34	34	34
g / C, Green / Cycle	0.05	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	0.17	0.17	0.04	0.23	0.23	0.10	0.16	0.16	0.08
s, saturation flow rate [veh/h]	1810	1900	1867	1810	1900	1806	1282	1833	1205	1615
c, Capacity [veh/h]	91	749	736	128	788	749	318	723	532	637
d1, Uniform Delay [s]	39.20	18.72	18.73	38.40	19.02	19.02	31.58	18.53	19.84	17.04
k, delay calibration	0.11	0.50	0.50	0.11	0.50	0.50	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]	3.06	1.74	1.78	4.68	2.91	3.06	3.68	1.65	1.95	0.77
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	0.42	0.42	0.61	0.56	0.56	0.40	0.40	0.37	0.21
d, Delay for Lane Group [s/veh]	42.26	20.46	20.50	43.08	21.93	22.07	35.26	20.18	21.78	17.81
Lane Group LOS	D	C	C	D	C	C	D	C	C	B
Critical Lane Group	Yes	No	No	No	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	0.81	4.43	4.37	1.67	6.58	6.28	2.62	4.25	3.28	1.83
50th-Percentile Queue Length [ft/ln]	20.25	110.79	109.27	41.65	164.40	157.08	65.54	106.22	81.94	45.78
95th-Percentile Queue Length [veh/ln]	1.46	7.88	7.80	3.00	10.78	10.39	4.72	7.63	5.90	3.30
95th-Percentile Queue Length [ft/ln]	36.46	197.10	194.98	74.97	269.54	259.86	117.97	190.73	147.49	82.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.26	20.48	20.50	43.08	21.99	22.07	35.26	20.18	20.18	21.78	21.78	17.81
Movement LOS	D	C	C	D	C	C	D	C	C	C	C	B
d_A, Approach Delay [s/veh]	21.73			23.74			24.76			20.15		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	22.85											
Intersection LOS	C											
Intersection V/C	0.448											

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	2.919	3.068	2.166	2.154
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	2.108	2.338	2.244	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

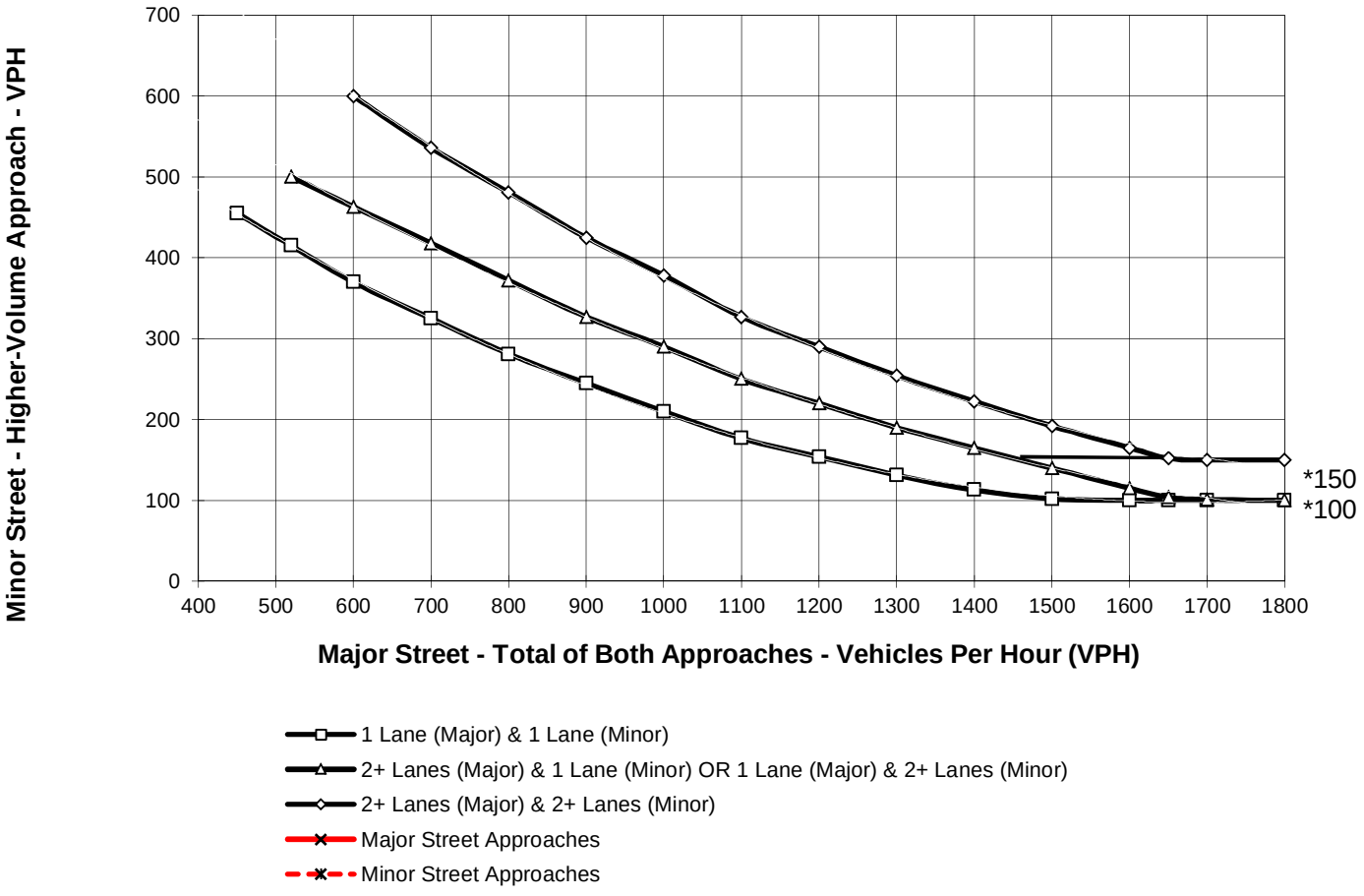
WARRANT 3, PEAK HOUR
(Urban Areas)

Traffic Conditions = **Horizon Year (2040) With Project**

Major Street Name = **Iowa Street**
Total of Both Approaches (VPH) = **290**
Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Project West Driveway**
High Volume Approach (VPH) = **6**
Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

WARRANT 3, PEAK HOUR
(Urban Areas)

Traffic Conditions = **Horizon Year (2040) With Project**

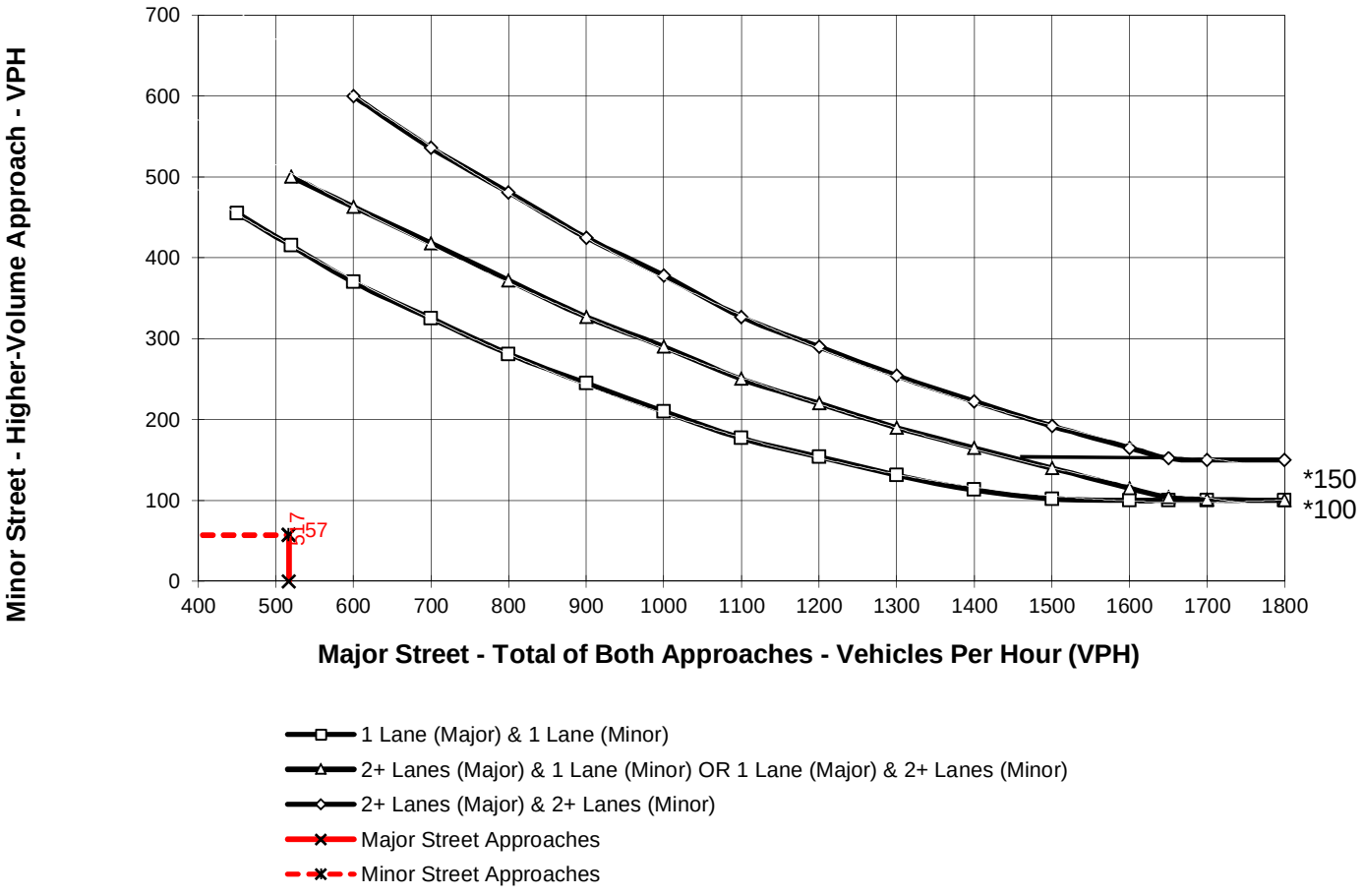
Major Street Name = **Orange Avenue** Total of Both Approaches (VPH) = **517**

Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Project Main Driveway** High Volume Approach (VPH) = **57**

Number of Approach Lanes On Minor Street = **1**

SIGNAL WARRANT NOT SATISFIED



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

APPENDIX H

Sight Distance 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 advisory 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 Headquarters (HQ) Traffic Liaison 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 HQ Traffic Liaison 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(12) 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 waiting at the crossroad and the driver of an approaching vehicle. Line of sight for all users should be included in right of way, in order to preserve sight lines.

Adequate time must be provided for the waiting user 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 values given in Table 405.1A provide 7-1/2 seconds for the driver on the crossroad to complete the necessary maneuver while the approaching vehicle travels at the assumed design speed of the main highway. The 7-1/2 second criterion is normally applied to all lanes of through traffic in order to cover all possible maneuvers by the vehicle at the crossroad. However, by providing the standard corner sight distance to the lane nearest to and farthest from the waiting vehicle, adequate time should be obtained to make the necessary movement. On multilane highways a 7-1/2 second criterion for the outside lane, in both directions of travel, normally will provide increased sight distance to the inside lanes. Consideration should be given to increasing these values on downgrades steeper than 3 percent and longer than 1 mile (see Index 201.3), where there are high truck volumes on the crossroad, or where the skew of the intersection substantially increases the distance traveled by the crossing vehicle.

In determining corner sight distance, a set back distance for the vehicle waiting at the crossroad must be assumed. **Set back for the driver of the vehicle on the crossroad shall be a minimum of 10 feet plus the shoulder width of the major road but not less than 15 feet.** Line of sight for corner sight distance is to be determined from a 3 and 1/2-foot height at the location of the driver of the vehicle on the minor road to a 4 and 1/4-foot object height in the center of the approaching lane of the major road as illustrated in Figure 504.3I. If the major road has a median barrier, a 2-foot object height should be used to determine the median barrier set back.

In some cases the cost to obtain 7-1/2 seconds of corner sight distances may be excessive. High costs may be attributable to right of way acquisition, building removal, extensive excavation, or immitigable environmental impacts. In such cases a lesser value of corner sight distance, as described under the following headings, may be used.

(b) Public Road Intersections (Refer to Topic 205)--<u>At unsignalized public road intersections (see Index 405.7) corner sight distance values given in Table 405.1A should be provided.</u>

At signalized intersections the values for corner sight distances given in Table 405.1A 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.

Table 405.1A Corner Sight Distance (7-1/2 Second Criteria)

Design Speed (mph)	Corner Sight Distance (ft)
25	275
30	330
35	385
40	440
45	495
50	550
55	605
60	660
65	715
70	770

Where restrictive conditions exist, similar to those listed in Index 405.1(2)(a), the minimum value for corner sight distance at both signalized and unsignalized intersections shall be equal to the stopping sight distance as given in Table 201.1, measured as previously described.

(c) Private Road Intersections (Refer to Index 205.2) and Rural Driveways (Refer to Index 205.4)--**The minimum corner sight distance shall 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.

(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	(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 evaluated for both the major highway and the cross road:

- divided versus undivided

APPENDIX I

Gate Analysis

APPENDIX I

GATE STACKING QUEUE ANALYSIS[1]

PROJECT:	SD Homes		DATE:	September 6, 2018
LOCATION:	Orange Ave/Alabama St (North)		JN:	7221
GATE LOCATION	AM		PM	
DEMAND RATE (q) (Vehicles/ hour)	13		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)	0.15	P' 85%	0.15	P' 85%
UTILIZATION FACTOR (q/(N*Q))	0.07		0.29	
LENGTH OF VEHICLE (L) FEET	22.00		22.00	
Q(M) VALUE	0.07		0.29	
NO. OF VEHICLES BEING SERVED (N)	1.00	ROUND VALUE TO	1.00	ROUND VALUE TO
NO. OF VEHICLES IN QUEUE (M)	-1.28	0	-0.45	0
TOTAL NUMBER OF VEHICLES (N+M)	1.00	1	1.00	1
NO. OF VEHICLES IN EACH LANE PER LANE ((N+M)/N1)	1.00	1	1.00	1
LENGTH OF QUEUE (L) FEET		22		22

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. 85% OF THE TIME THE QUEUE WILL BE EQUAL TO OR LESS THAN THE MAXIMUM VEHICLE QUE.)

APPENDIX G

GATE STACKING QUEUE ANALYSIS[1]

PROJECT:	SD Homes		DATE:	September 6, 2018
LOCATION:	Orange Ave/Alabama St (South)		JN:	7221
GATE LOCATION	AM		PM	
DEMAND RATE (q) (Vehicles/ hour)	19		74	
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)	0.15	P' 85%	0.15	P' 85%
UTILIZATION FACTOR (q/(N*Q))	0.11		0.41	
LENGTH OF VEHICLE (L) FEET	22.00		22.00	
Q(M) VALUE	0.11		0.41	
NO. OF VEHICLES BEING SERVED (N)	1.00	ROUND VALUE TO	1.00	ROUND VALUE TO
NO. OF VEHICLES IN QUEUE (M)	-1.16	0	0.13	1
TOTAL NUMBER OF VEHICLES (N+M)	1.00	1	1.13	2
NO. OF VEHICLES IN EACH LANE PER LANE ((N+M)/N1)	1.00	1	1.13	2
LENGTH OF QUEUE (L) FEET		22		44

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. 85% OF THE TIME THE QUEUE WILL BE EQUAL TO OR LESS THAN THE MAXIMUM VEHICLE QUE.)

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