

**Appendix I:
Traffic Supporting Information**

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I1: Traffic Study

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Anaheim & Ball Mixed Use Draft Transportation Impact Assessment

Prepared for:



July 2022

OC21-0845

FEHR & PEERS

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Executive Summary

Fehr & Peers has completed the Transportation Impact Assessment (TIA) of the proposed Anaheim Boulevard and Ball Road Residential and Retail Mixed-Use project (Project) in Anaheim, California. The Project site is on the southeast quadrant of Anaheim Boulevard and Ball Road. The Project proposes a General Plan Amendment to re-designate the Project site from General Commercial to Mixed-Use Medium Density Residential.

As part of the transportation impact study and consistent with the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, this traffic report summarizes traffic operations with and without the Project for the Existing Year (2021), Opening Year (2024) and General Plan Development (2035) scenarios. Key findings of the traffic analysis are summarized below.

- Two side-street stop-controlled project driveway intersections are forecast to perform at unacceptable Level of Service (LOS) in all scenarios. The LOS deficiency is based on the worst-case movement delay associated with the existing side street left-turn related to the high volume of the major arterial through movements. The overall intersection operates at acceptable LOS in all scenarios.
- Anaheim Boulevard between Cerritos Ave and I-5 is forecast to perform at unacceptable LOS under General Plan Development (2035) with Project conditions.
- No significant impacts have been determined for pedestrian, bicycle, and transit modes.

Detailed descriptions of analysis methodologies, traffic operations analysis, mitigation discussion, circulation and access analysis, and active transportation and public transit analysis are included in later sections of this report.

This Project meets all of requirements of Transit Priority Area (TPA) screening and can be presumed to have a less-than-significant transportation impact related to Vehicle Miles Traveled (VMT). The VMT analysis was submitted in a separate *Anaheim Boulevard and Ball Road Mixed-Use Project Vehicle Miles Traveled Screening Assessment (June 2022)* memorandum.



1. Introduction

The purpose of this Transportation Impact Assessment (TIA) is to evaluate the traffic impacts for the proposed Anaheim Boulevard and Ball Road Residential and Retail Mixed-Use project (Project). This chapter outlines the TIA purpose, study locations, analysis scenarios, and report organization. This analysis is consistent with the requirements set in the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*.

Project Description

The Project is located on the southeast quadrant of Anaheim Boulevard and Ball Road in the City of Anaheim, California. The Project site was partially occupied by automotive retail stores prior to 2021 but has since been vacated. The only active land use on the Project site is a 4,500 square feet of used car dealer at the northeast corner of the Project site. The Project proposes a General Plan Amendment to re-designate the Project site from General Commercial to Mixed-Use Medium Density Residential. The Project proposes redevelopment of the site with the following components:

- 213 three-story multi-family dwelling units
- 36 four-story multi-family dwelling units
- 2,250 square feet of fast casual restaurant (no drive-through)
- 2,250 square feet of coffee shop (no drive-through)

Access to the Project would be provided by two driveways on Anaheim Boulevard, one driveway on Ball Road, and one driveway on Claudina Street. The Project's site plan is shown on **Figure 1-1**.

Project Study Area

Intersections where the Project is forecast to add at least 50 peak hour trips were identified as study intersections. These locations are shown on **Figure 1-2** and listed below:

Intersections:

1. Harbor Boulevard and Ball Road
2. Anaheim Boulevard and Ball Road
3. Claudina Street and Ball Road



4. Harbor Boulevard and I-5 Northbound Ramps
5. Harbor Boulevard and I-5 Southbound Ramps
6. Anaheim Boulevard and Winston Road/Project Driveway D (proposed driveway)
7. Anaheim Boulevard and Palais Road
8. Anaheim Boulevard and Cerritos Avenue/Urbana Street
9. Anaheim Boulevard and I-5 Northbound On-Ramp/Anaheim Way
10. Anaheim Boulevard and Disney Way and Manchester Avenue
11. Technology Circle/Project Driveway A and Ball Road (proposed driveway)
12. Claudina Street Project Driveway B (future intersection/proposed driveway)
13. Anaheim Boulevard and Project Driveway C (future intersection/proposed driveway)

The following study roadway segments were evaluated consistent with City's requirements:

1. Anaheim Boulevard north of Ball Road
2. Anaheim Boulevard south of Ball Road
3. Anaheim Boulevard between Cerritos Avenue and I-5
4. Ball Road east of Anaheim Boulevard
5. Ball Road west of Anaheim Boulevard

Analysis Scenarios

Consistent with the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, the following scenarios were evaluated:

- Existing (2021) Conditions – 2021 traffic turning movement counts collected at existing study intersections
- Existing (2021) Plus Approved Plus Project Conditions – Existing traffic volumes plus traffic generated by approved development projects within a two-mile radius of the Project and traffic generated by the Project
- Opening Year (2024) Without Project Conditions – Existing traffic volumes grown by an annual growth rate plus traffic generated by approved development projects within a two-mile radius of the Project
- Opening Year (2024) With Project Conditions – Opening Year Without Project Conditions traffic volumes plus traffic generated by the Project



- General Plan Development (2035) Without Project Conditions – Traffic forecasts consistent with growth in the Anaheim Transportation Analysis Model (ATAM) General Plan year with the approved development projects within a two-mile radius of the Project
- General Plan Development (2035) With Project Conditions – General Plan Development Without Project Conditions traffic volumes plus traffic generated by the Project

As required by the City, the General Plan Development (2035) Without and With Project traffic forecasts were provided by the City's on-call traffic consultant.

Report Organization

This report is divided into eight chapters as described below:

- **Chapter 1 – Introduction** discusses the purpose and organization of the report.
- **Chapter 2 – Analysis Methodology** – describes the criteria for LOS analysis, future forecasting, Off-ramp queuing analysis and active transportation and public transit analysis.
- **Chapter 3 – Existing Conditions** describes the transportation system in the Project vicinity, including the surrounding roadway network, morning and evening peak period intersection turning movement volumes, and existing bicycle, pedestrian, and transit facilities.
- **Chapter 4 – Project Characteristics** presents relevant Project information, such as the Project components and Project trip generation, distribution, and assignment.
- **Chapter 5 – Level of Service (LOS) Analysis** describes the LOS results for the Existing (2021), Opening Year (2024), and General Plan Development (2035) analysis scenarios based on the criteria set by the City of Anaheim and Caltrans.
- **Chapter 6 – On-Site Circulation and Site Access Review** describes Project access and circulation for all travel modes.
- **Chapter 7 – Active Transportation and Public Transit Impact Analysis** presents the results of a review of potential impacts to active transportation and transit per CEQA requirements.

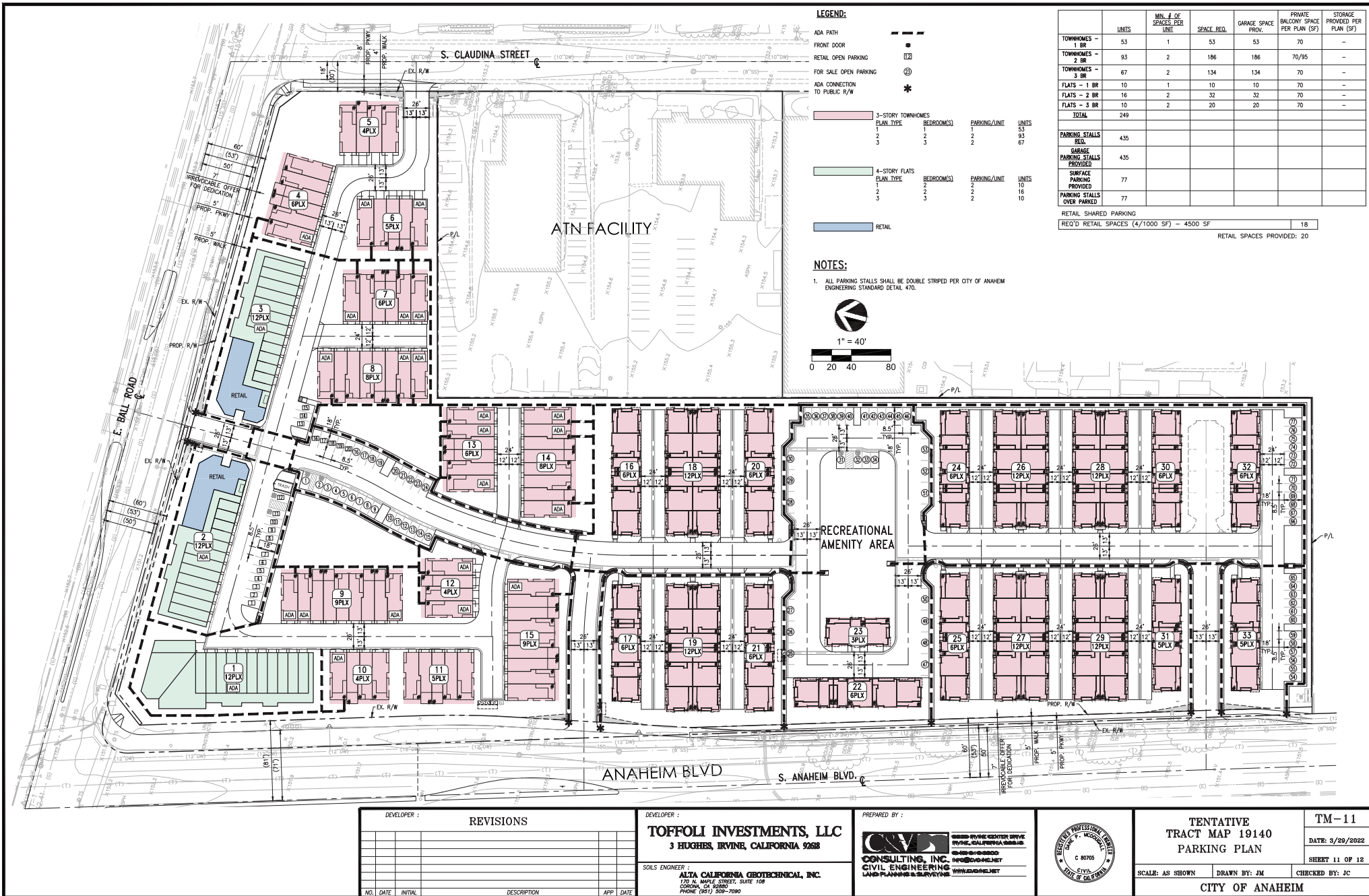
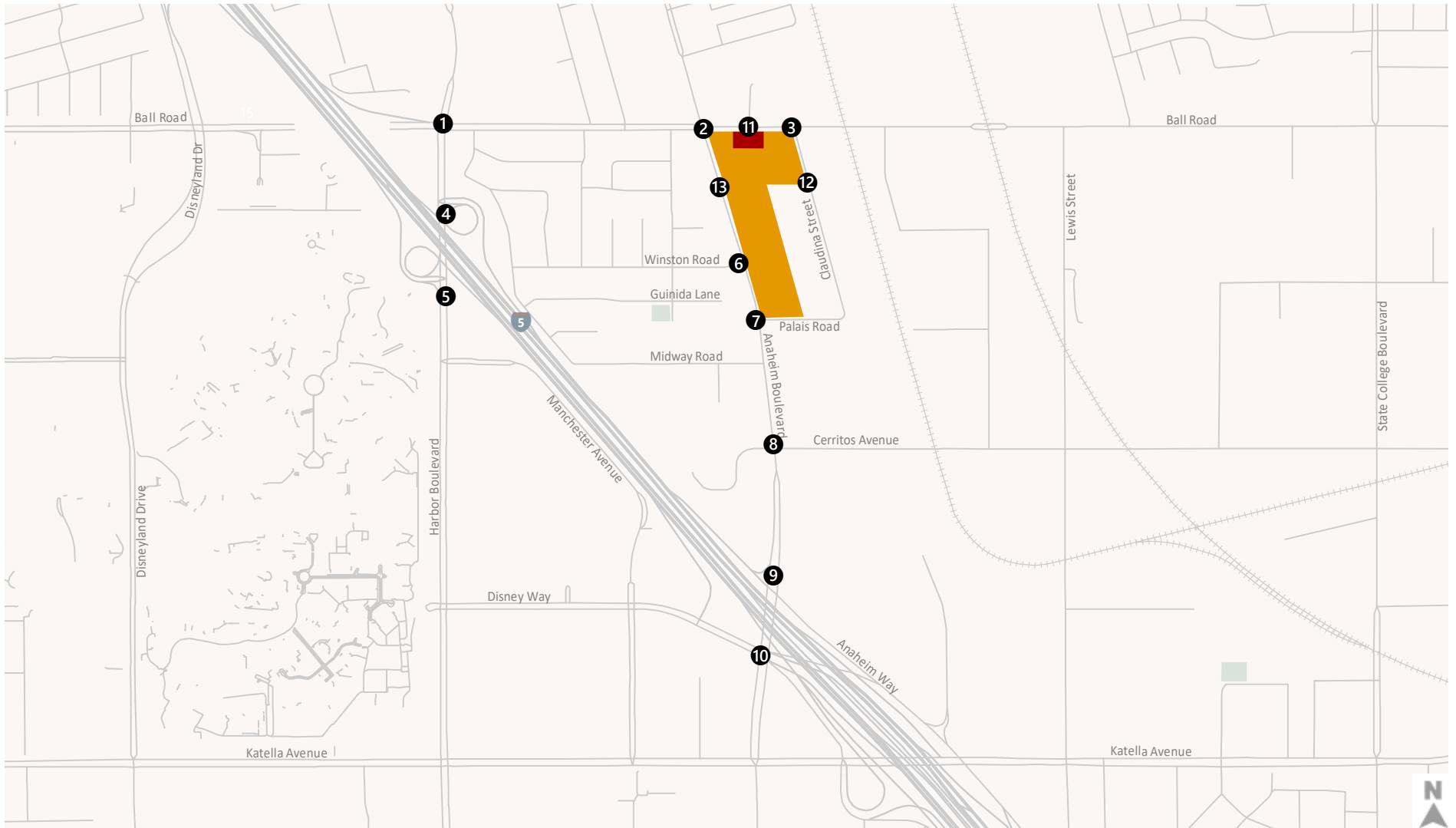


Figure 1-1
Project Site Plan



- Study Intersections
- Residential Project Site
- Retail Project Site
- ++++ Railroad



Figure 1-2
Study Locations



2. Analysis Methodology

As noted in the *City of Anaheim Traffic Impact Guidelines for California Environmental Quality Act Analysis (June 2020)*, with the adoption of Senate Bill (SB) 743, VMT replaces LOS as the metric for evaluating significant transportation impacts under CEQA. However, the City of Anaheim retains LOS as a metric for evaluating the effects of projects on the transportation system, for assessing consistency with the City's General Plan, and to ensure adequate intersection sizing to accommodate traffic flows consistent with requirements from the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*. The sections below describe analysis methodologies for addressing LOS assessment, forecasting, queuing at off-ramps, and active transportation and public transit analysis.

LOS Analysis Methodology

Intersection Analysis

Signalized study intersections within the City of Anaheim were analyzed utilizing the Intersection Capacity Utilization (ICU) methodology to satisfy City's analysis requirements. ICU methodology is a standard evaluation approach for intersections in Orange County and reports the volume-to-capacity (V/C) ratio for signalized intersections. The V/C ratio is determined by evaluating the critical movements for each intersection and comparing them to the critical movement capacity of the intersection. For all ICU calculations, a saturation flow rate of 1,700 vehicles per hour per lane (vphpl) was used.

Signalized intersections within California Department of Transportation (Caltrans) jurisdiction (along I-5 within City of Anaheim) were analyzed using the Highway Capacity Manual (HCM) 6th Edition (*Transportation Research Board, 2017*) methodology. The HCM 6th Edition methodology for signalized intersections estimates the average control delay for vehicles at the intersection.

For unsignalized study intersections within the City of Anaheim, methodologies consistent with HCM 6th Edition were utilized to evaluate intersection operations. The HCM 6th Edition methodology for unsignalized intersections estimates the average control delay for vehicles at all-way stop-controlled intersections and estimates the worst-case movement delay for side-street stop-controlled intersections.

After the quantitative V/C or delay estimates are complete, the methodologies assign a qualitative letter grade which represents the operations of the intersection. These grades range from level of service (LOS) A (minimal delay) to LOS F (excessive congestion). LOS E represents at-capacity operations. Descriptions of



the LOS letter grades for intersections are provided in **Table 2-1**. All analysis was performed using the PTV Vistro 2022 Software.

Table 2-1: Intersection Level of Service Grades

Level of Service	Description	Signalized Volume-to-Capacity (V/C) Ratio	Signalized Delay (Seconds)	Unsignalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length	0.000-0.600	≤ 10.0	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths	0.601-0.700	> 10.0 to 20.0	> 10.0 to 15.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	0.701-0.800	> 20.0 to 35.0	> 15.0 to 25.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable	0.801-0.900	> 35.0 to 55.0	> 25.0 to 35.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	0.901-1.000	> 55.0 to 80.0	> 35.0 to 50.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths	Greater than 1.000	> 80.0	> 50.0

The following factors were applied in the intersection analysis:

- For intersections using HCM method, Peak Hour Factor (PHF) for Existing Year (2021) and Opening Year (2024) scenarios were based on the 2021 traffic counts collected in the field; PHF for General Plan Development (2035) scenarios were set to 0.95
- Heavy vehicle percentage was updated to reflect counts taken in the field. A 2% heavy vehicle percentage was assumed for approaches with no heavy vehicle count information for intersections using ICU and HCM methods
- For signalized intersections using HCM method, the Existing Year (2021) signal timing is applied to Opening Year (2024) and General Plan Development (2035) scenarios
- Consistent with the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, for all intersections using ICU method, saturated flow rates were set to 1,700 vphpl



- For intersections using HCM method, saturated flow rates were set to 1,900 vphpl

The Project is anticipated to add traffic to facilities in City of Anaheim, Congestion Management Program (CMP) and Caltrans and therefore each jurisdiction or program’s LOS criteria was applied as appropriate.

City of Anaheim LOS Criteria

Per the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, signalized study intersection operations within the City of Anaheim were analyzed utilizing the Intersection Capacity Utilization (ICU) methodology. For unsignalized study intersections within the City of Anaheim, HCM 6th methodology was utilized to evaluate intersection operations.

For the City of Anaheim, intersections operating at LOS D or better are considered acceptable. Improvements would be required if the project increases metrics in accordance with **Table 2-2** for signalized intersections. Unsignalized intersections were not considered deficient unless peak hour signal warrants were met. Although the City still uses this criteria to identify project improvement requirements, unacceptable intersection LOS will not be used to identify significant impacts in CEQA. In accordance with the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, when an intersection is operating unacceptably, intersection improvements must be identified which produce an acceptable LOS “D.” For cumulative long-range analysis, the project’s equitable share estimates will be calculated to determine fair share costs for intersection improvements.

Table 2-2: Anaheim LOS Deficiency Criteria

Level of Service	Final V/C Ratio	Project-Related Increase in V/C
C	> 0.700 – 0.800	Equal to or greater than 0.050
D	> 0.800 – 0.900	Equal to or greater than 0.030
E, F	> 0.900	Equal to or greater than 0.010

Congestion Management Program (CMP) LOS Criteria

The Orange County CMP aims to support regional mobility objectives by reducing traffic congestion, to provide a mechanism for coordinating land-use and development decisions that support the regional economy, and to support gas tax funding eligibility. The CMP contains a number of policies designed to monitor and address system performance issues. OCTA developed the policies that makeup Orange County’s CMP in coordination with local jurisdictions, the California Department of Transportation (Caltrans), and the South Coast Air Quality Management District (SCAQMD).



The ICU methodology proposed is consistent with *2021 OCTA Congestion Management Program (2021 OC CMP)* for study intersections designated as CMP intersections.

According to the 2021 OC CMP, the LOS standard for CMP intersections is LOS E or better (i.e. an ICU of 1.00 or better). The following intersections are identified as CMP intersections:

- Harbor Boulevard and I-5 Northbound Ramps
- Harbor Boulevard and I-5 Southbound Ramps

For unacceptable operations, improvements which offset the project contribution are required to bring the intersection back to an acceptable LOS where the deficiency is caused by the project, or to no project conditions when there is a V/C increase of greater than 0.03.

Caltrans LOS Criteria

For intersections controlled by Caltrans (along I-5 within City of Anaheim), methodologies consistent with the HCM 6th Edition were utilized to evaluate study intersections.

Caltrans no longer defines acceptable LOS standards with their latest adoption of the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (May 2020)*. This study assumes City of Anaheim LOS "D" minimum acceptable standard at Caltrans locations.

Roadway Segment Analysis

For the City of Anaheim, roadway segments operating at LOS C or better are considered acceptable. Improvements would be required if the addition of project traffic to a roadway segment operating at LOS C or better is degraded to LOS D or if project traffic is added to a roadway segment operating at LOS D or worse. In accordance with the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*, when an impact is determined at a roadway segment, improvements must be identified in order to bring the operations to minimum LOS "C." For cumulative long-range analysis, the project's equitable share estimates will be calculated to determine fair share costs for the mitigation measures.

Future Forecasting

The General Plan Development (2035) with and without Project forecasts were conducted and provided by the City's on-call traffic consultant. Average annual growth rates for study intersections and segments were calculated from the Existing (2021) conditions and General Plan Development (2035) Without Project



conditions and applied to estimate the Opening Year (2024) conditions. Traffic from the Project and approved development projects within a two-mile radius of the Project were developed and added to the corresponding analysis scenarios. Chapter 4 and 5 introduces the traffic development details for the Project and approved projects.

Off-Ramp Queuing Analysis

Freeway off-ramps in the study area were evaluated using HCM 6th methodologies. The 95th percentile queue length were reported from PTV Vistro 2022 Software and compared with the available turn-pocket length. According to the *Interim Local Development Intergovernmental Review Safety Practitioners Guidance Appendix A: Freeway Queuing Analysis (December 2020)*, if a project adds two or more car lengths to the ramp queue in the peak hour that will extend into the freeway mainline, then the locations must be reviewed for traffic safety impacts.

Active Transportation and Public Transit Analysis

Potential impacts to public transit, pedestrian facilities and travel, and bicycle facilities and travel can be evaluated using the following criteria:

- A significant impact occurs if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance¹ or safety of such facilities.

Therefore, the TIA should include analysis of a project to examine if it is inconsistent with adopted policies, plans, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities and decide as to whether it has the potential to conflict with existing or proposed facilities supporting these travel modes.

¹ Per the OPR Technical Advisory, decrease of performance does not include increase in users.



3. Existing Conditions

This chapter describes transportation facilities in the Project study area, including the surrounding roadway network, transit, pedestrian, and bicycle facilities in the Project site vicinity.

Roadway System

The Project site is on the southeast quadrant of Anaheim Boulevard and Ball Road. Regional access to the site vicinity is provided by Interstate 5, State Route 57, Harbor Boulevard, Anaheim Boulevard, Ball Road, Disney Way, Manchester Avenue and Cerritos Avenue.

The following describes the key roadways in the Project study area.

Interstate 5 (I-5) is a north-south facility which connects the west coast of the United States, running largely parallel to the Pacific coast of the contiguous U.S. from Mexico to Canada. Near the study area, I-5 has ten lanes, including a High-Occupancy Vehicle (HOV) lane in each direction, with a posted speed limit of 65 miles per hour (mph).

State Route 57 (SR-57) is a north-south facility, beginning in Orange and ending in Glendora. Near the study area, SR-57 has 11 lanes, including a High-Occupancy Vehicle (HOV) lane in each direction, with a posted speed limit of 65 mph.

Harbor Boulevard is a north-south facility located west of the Project site. Adjacent to the Project site, the roadway provides four lanes of travel in each direction. The segment of Harbor Boulevard in the study area, bounded by Ball Road to the north and Manchester Avenue to the south, is divided by a median. The posted speed limit is 35 mph, no on-street parking is permitted, sidewalk is provided on both sides of the roadway, and no bike facilities are present nearby the study area.

Anaheim Boulevard is a north-south facility located directly west of the Project site. Adjacent to the Project and south of Ball Road, the roadway provides six lanes of travel. The posted speed limit is 35 mph, no on-street parking is permitted, sidewalk is provided on both sides of the roadway, and a Class II bike facility is present.

Ball Road is an east-west roadway that is located at the northern border of the Project's study area. Near the Project site, the roadway provides three lanes of travel in each direction. The posted speed limit is 40 mph, no on-street parking is permitted, sidewalk is provided on both sides of the facility, and bike facilities are present west of Claudina Street.

Disney Way is a six-lane, east-west roadway south of the Project's study area. Disney Way provides direct vehicular access to the Anaheim Resort Specific Plan. It begins at Harbor Boulevard and ends at Anaheim Way. The posted speed limit is 30 mph, no on-street parking is permitted, sidewalk is provided on both sides of the roadway, and no bike facilities are present nearby the study area.

Manchester Avenue is a southbound one-way facility, beginning at Anaheim Boulevard and ending at Compton Avenue, with two lanes or three lanes. The posted speed limit is 40 mph, no on-street parking is permitted, sidewalk is provided on both sides of the roadway, and no bike facilities are present nearby the study area.

Cerritos Avenue is a four-lane, east-west roadway south of the Project's study area. Cerritos Avenue begins at Anaheim Boulevard and continues as Douglas Road east of SR-57. The posted speed limit is 35 mph, no on-street parking is permitted, sidewalk and bike facilities are provided on both sides of the facility.

Pedestrian and Bicycle Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signals and multi-use trails. The roadways in the study area generally provide sidewalks on both sides of the street. Sidewalks are provided on Anaheim Boulevard and Ball Road along the Project site frontage. At the existing signalized intersections in the area, crosswalks and pedestrian push-button actuated signals are provided.

Bicycle facilities in Anaheim include the following:

- **Bike paths (Class I)** – Class I bike paths provide for bicycle travel on right-of-way completely separated from the street. A Class I bike path may parallel a roadway (within the parkway) or may be a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.
- **Bike lanes (Class II)** – Class II bike lanes are striped lanes that provide bike travel within the street right-of-way. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.
- **Bike routes (Class III)** – Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.



- **Separated bikeways (Class IV)** – Separated bikeways, also referred to as cycle tracks or protected bikeways, are bikeways for the exclusive use of bicycles which are physically separated from vehicle traffic. Separated Bikeways were recently adopted by Caltrans in 2015. Types of separation may include, but are not limited to, grade separation, flexible posts, physical barriers, or on-street parking. At the time that the 2017 Anaheim Bicycle Master Plan was published, the City did not have and did not propose any Class IV bikeways.

Roadways in the study area currently provide bike facilities:

- Anaheim Boulevard (Class II between Vermont Avenue and Cerritos Avenue)
- Ball Road (Class II between Anaheim Boulevard and Claudina Street)
- Cerritos Avenue (Class II between Anaheim Boulevard and SR-57)

Transit Service

The Orange County Transportation Authority (OCTA) provides a network fixed-route bus routes in Anaheim. In addition to the bus routes that directly serve the City, multiple routes also traverse the periphery of the Project and connect with other Orange County destinations. OCTA operates bus routes within a half mile of the Project site. These routes include:

Route 46 (Los Alamitos to Orange) Route 46 runs weekdays between approximately 5:00 AM and 11:00 PM with headways of about 55 minutes. On Sundays and holidays, it runs between approximately 6:30 AM and 11:00 PM with headways of about 55 minutes. There are existing bus stops for Route 46 on Ball Road along the Project frontage.

Route 47/A (Fullerton to Balboa) Route 47/A runs weekdays between approximately 3:55 AM and 11:50 PM with headways of about 15 to 30 minutes. During peak commute hours it operates with headways of about 15 to 25 minutes. On Saturdays, Sundays, and holidays, it runs between approximately 4:55 AM and 11:00 PM with headways of about 30 to 45 minutes.

Traffic Volumes and Configurations

Fehr & Peers collected six study intersection counts during the AM peak period (7:00-9:00AM) and PM peak period (4:00-6:00PM) and two of the 24-hour daily segment counts in Fall 2021 and collected the counts for remaining study locations in Winter 2022. Counts were collected during fair weather, while school is in

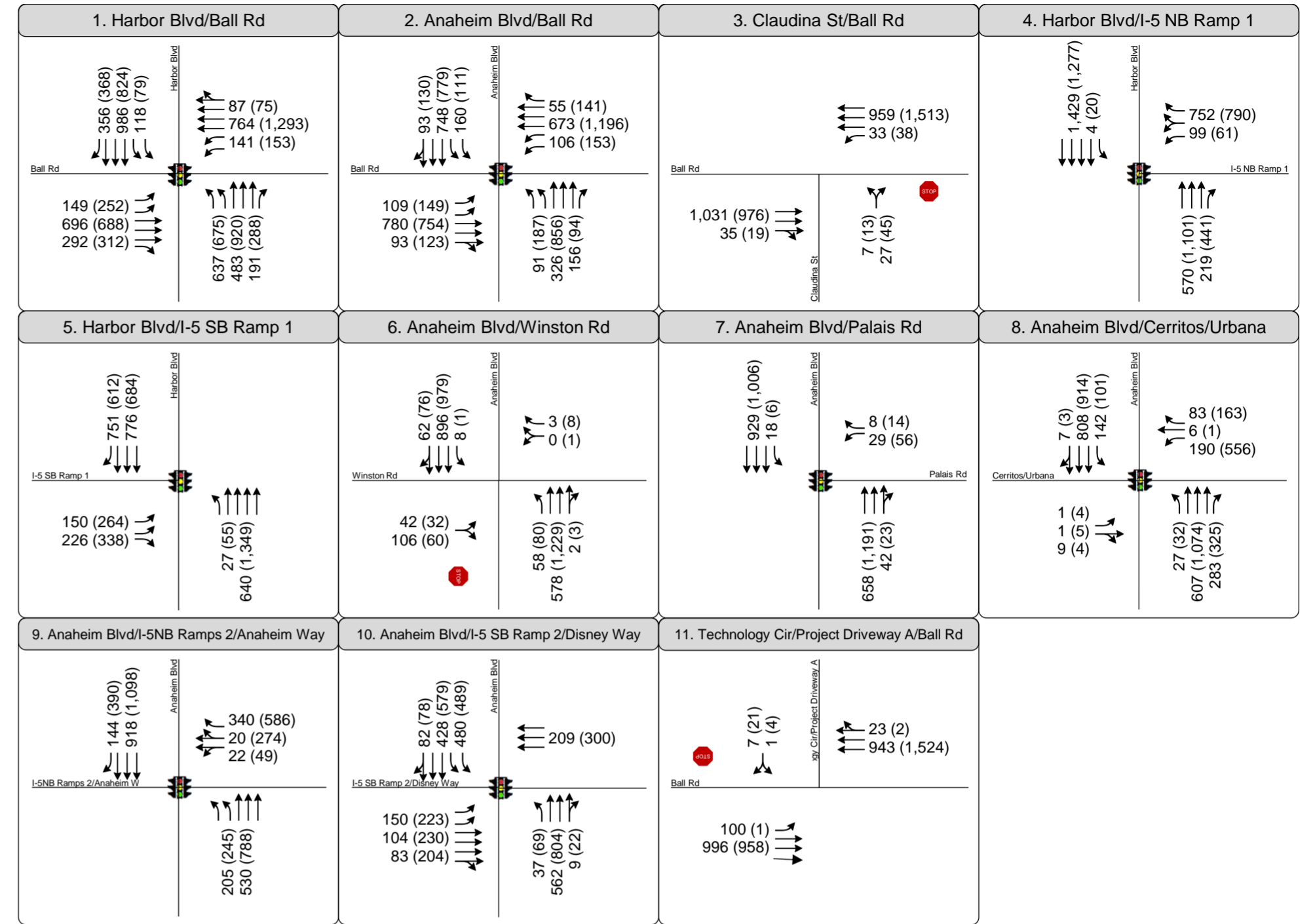


session, and during a typical (non-holiday) Tuesday, Wednesday, or Thursday. The traffic counts were used to represent the Existing Year conditions in 2021.

Existing Year (2021) peak hour traffic volumes for the study intersections are shown on **Figure 3-1**. The details of traffic counts are provided in **Appendix A**.

As part of the field inventory, Fehr & Peers also collected the following information:

- Lane configurations
- Signal phasing
- Land uses in the study area
- Existing pedestrian and bicycle facilities
- On-street parking conditions
- Transit service



LEGEND

- # Study Intersection
- Residential Project Site
- Hotel & Retail Project Site
- Railroad
- Segment Daily Volume
- AM (PM) Peak Hour Traffic Volume
- Movement
- Stop Sign
- Signalized



Figure 3-1
Existing Conditions (2021) Peak Hour Traffic Volumes and Lane Configuration



4. Project Characteristics

This chapter addresses the proposed Project trip generation, distribution, and assignment characteristics, allowing for an evaluation of the Project on the surrounding roadway network. The amount of traffic associated with the Project was estimated using a three-step process:

1. **Trip Generation** – The *amount* of vehicle traffic entering/exiting the Project site was estimated.
2. **Trip Distribution** – The *direction* trips would use to approach and depart the site was projected.
3. **Trip Assignment** – Trips were then *assigned* to specific roadway segments and intersection turning movements.

Trip Generation

Trip generation rates from *Trip Generation, 11th Edition* (Institute of Transportation Engineers [ITE], 2021) were used to estimate the daily, AM peak hour, and PM peak hour trips associated with the Project and are provided in **Table 4-1**. ITE trip generation rates for Multi-Family Residential (ITE Code 220 and 221) were used for the multi-family units of the Project based on the building height (e.g. number of stories). ITE trip generation rates for Fast Casual Restaurant (ITE Code 930) and Coffee Shop without Drive-through Window (ITE Code 936) were used for the remaining project land uses. The existing use credit was analyzed using ITE trip generation rate for Automobile Sales (Used) (ITE Code 841).

Rates published in the *ITE Trip Generation Handbook, 3rd Edition* were referenced to estimate appropriate pass-by reductions for the Project land uses. Pass-by trips are assumed to be trips already traveling that stop at a near-by/convenient commercial development and are not considered new trips on the road. Pass-by reductions were applied for the Coffee Shop without Drive-through Window land use.

As presented in Table 4-1, the Project is expected to generate approximately 2,776 daily trips, including approximately 210 trips (78 inbound/132 outbound) during the AM peak hour, and approximately 176 trips (106 inbound/70 outbound) during the PM peak hour.

Trip Distribution and Assignment

Project trip distribution refers to the directions of approach and departure that vehicles would use to travel to and from the Project site. Surrounding land uses, existing roadway network characteristics, Census travel-to-work data, local knowledge of the study area, and professional judgement were used to develop the trip



distribution. **Figure 4-1** presents the Project's trip distributions and identifies the intersections that were analyzed in the traffic assessment. These intersections were discussed in a Chapter 2 of the report.

The trip generation estimates were applied to the Project's trip distribution to estimate the total trip assignment, which is shown on **Figure 4-2**. Under the With Project conditions, driveways at Anaheim Boulevard and Ball Road are planned to operate as right-turn in and right-turn out only. The driveway intersection at Claudina Street will allow full turning movements.

Table 4-1: Project Trip Generation Estimates

Land Use	ITE Land Code	Quantity	Unit	Trip Generation Rates						Estimated Trip Generation								
				Daily Rate	AM Peak		PM Peak		Daily Trips	AM Peak			PM Peak					
					Rate	% In	% Out	Rate		% In	% Out	In	Out	Total	In	Out	Total	
PROJECT LAND USE																		
Multi-family 3 stories	220	213	DU	6.74	0.40	24%	76%	0.51	63%	37%	1,436	20	65	85	69	40	109	
Multi-family 4 stories	221	36	DU	4.54	0.37	23%	77%	0.39	61%	39%	163	3	10	13	9	5	14	
Fast Casual Restaurant	930	2.25	KSF	97.14	1.43	50%	50%	12.55	55%	45%	219	2	1	3	15	13	28	
Coffee Shop without Drive-through Window	936	2.25	KSF	533.57	93.08	51%	49%	32.29	50%	50%	1,201	107	102	209	37	36	73	
<i>Total Driveway Trips</i>											3,019	132	178	310	130	94	224	
<i>Pass-by reduction: Coffee Shop</i>											-121	-46	-44	-90	-16	-15	-31	
Project Trips Total											2,898	86	134	220	114	79	193	
EXISTING USE CREDIT																		
Used Car Dealer	841	4.50	KSF	27.06	2.13	76%	24%	3.75	47%	53%	122	8	2	10	8	9	17	
Net Existing Credit											-122	-8	-2	-10	-8	-9	-17	
Net Project External Vehicle Trips											2,776	78	132	210	106	70	176	

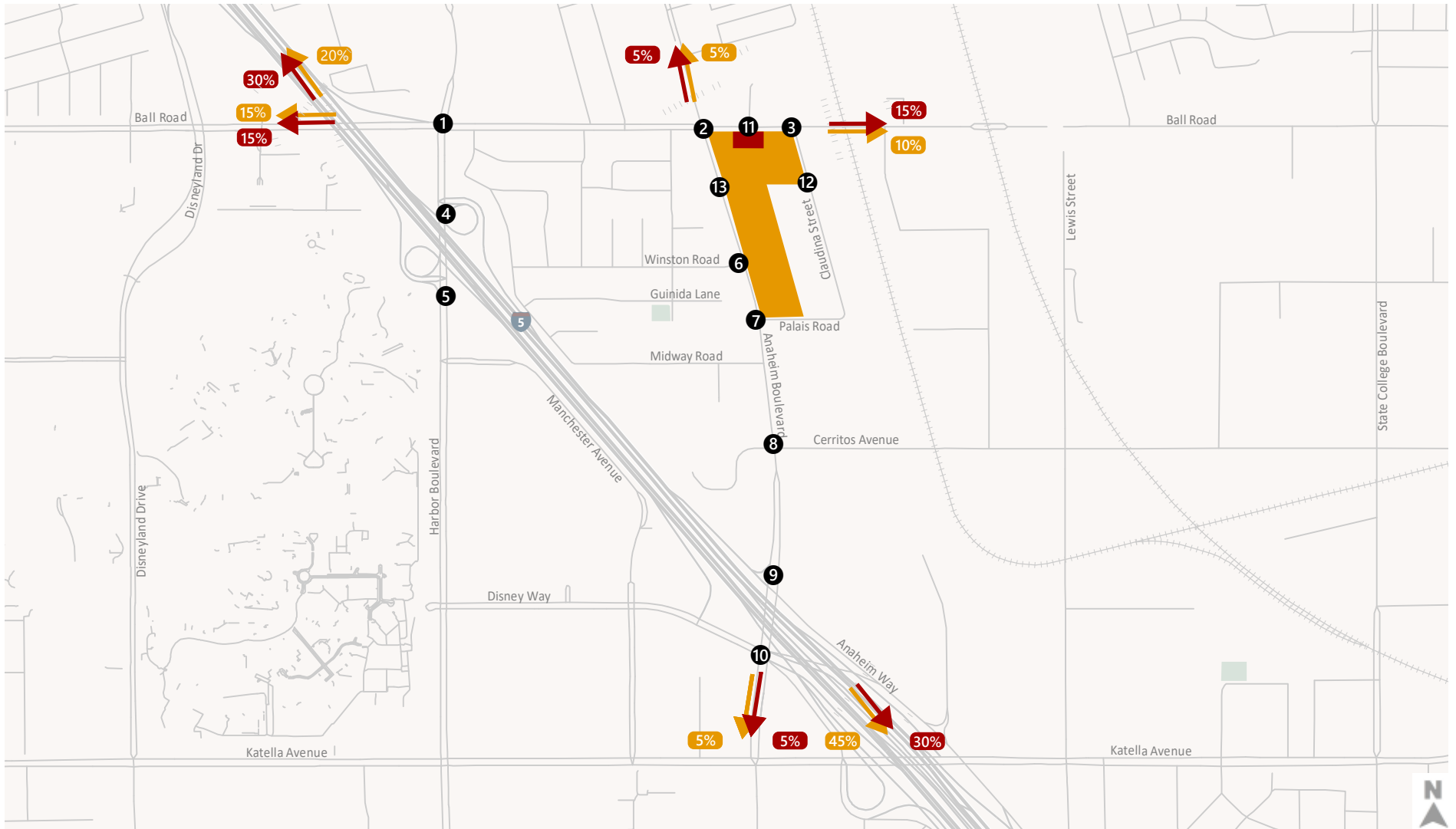
Notes:

1.KSF = 1,000 square feet, DUs = Dwelling Units

2. Sources: Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021)

3.The daily rate for Coffee Shop without Drive-through Window (ITE Code 936) is not available from the Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021). The daily rate of Coffee Shop with Drive-through Window (ITE Code 937) was applied to estimate the daily trips.

4.The pass-by reduction rate for Coffee Shop without Drive-through Window (ITE Code 936) is not available from the Trip Generation Manual 11th Edition (Institute of Transportation Engineers, 2021). The PM peak period pass-by reduction rate of High-Turnover (Sit Down) Restaurant (ITE Code 932) was applied to pass-by trip reduction. Pass-by percentages used for the daily, AM peak hour and PM peak hour are 10%, 43% and 43%, respectively.



- Study Intersections
- Residential Project Site
- Residential Project Trips
- Retail Project Site
- Retail Project Trips
- ++++ Railroad



Figure 4-1

Project Trip Distribution

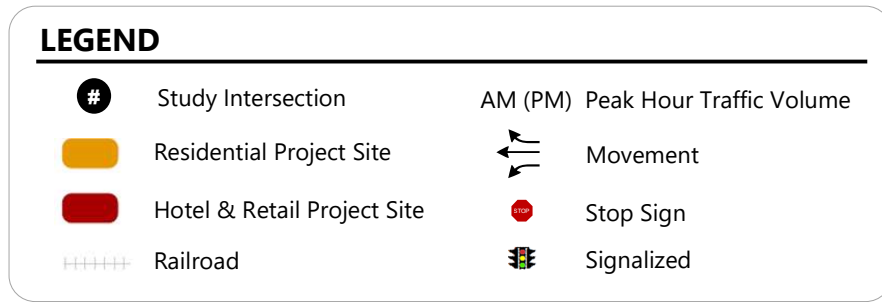
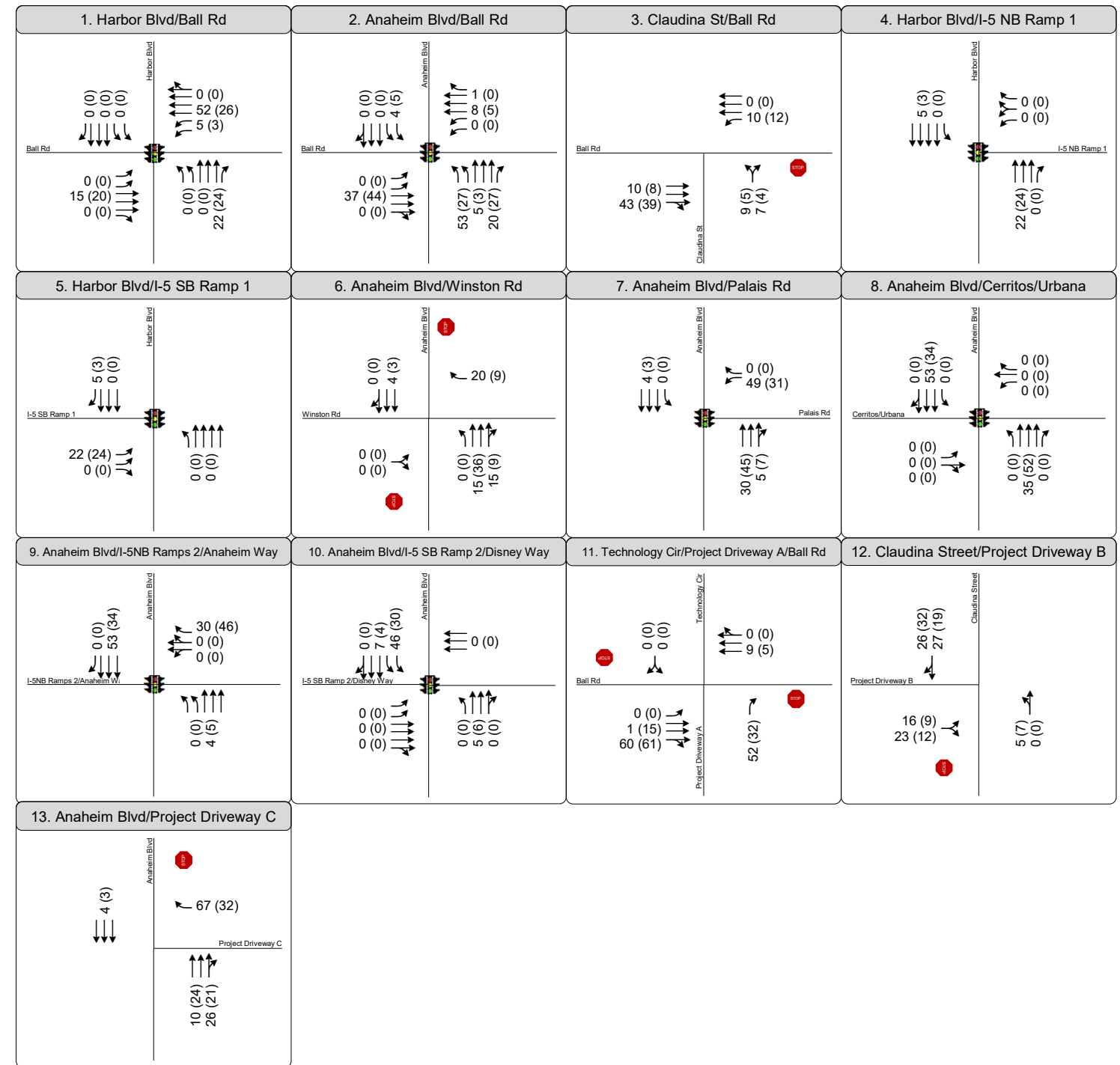
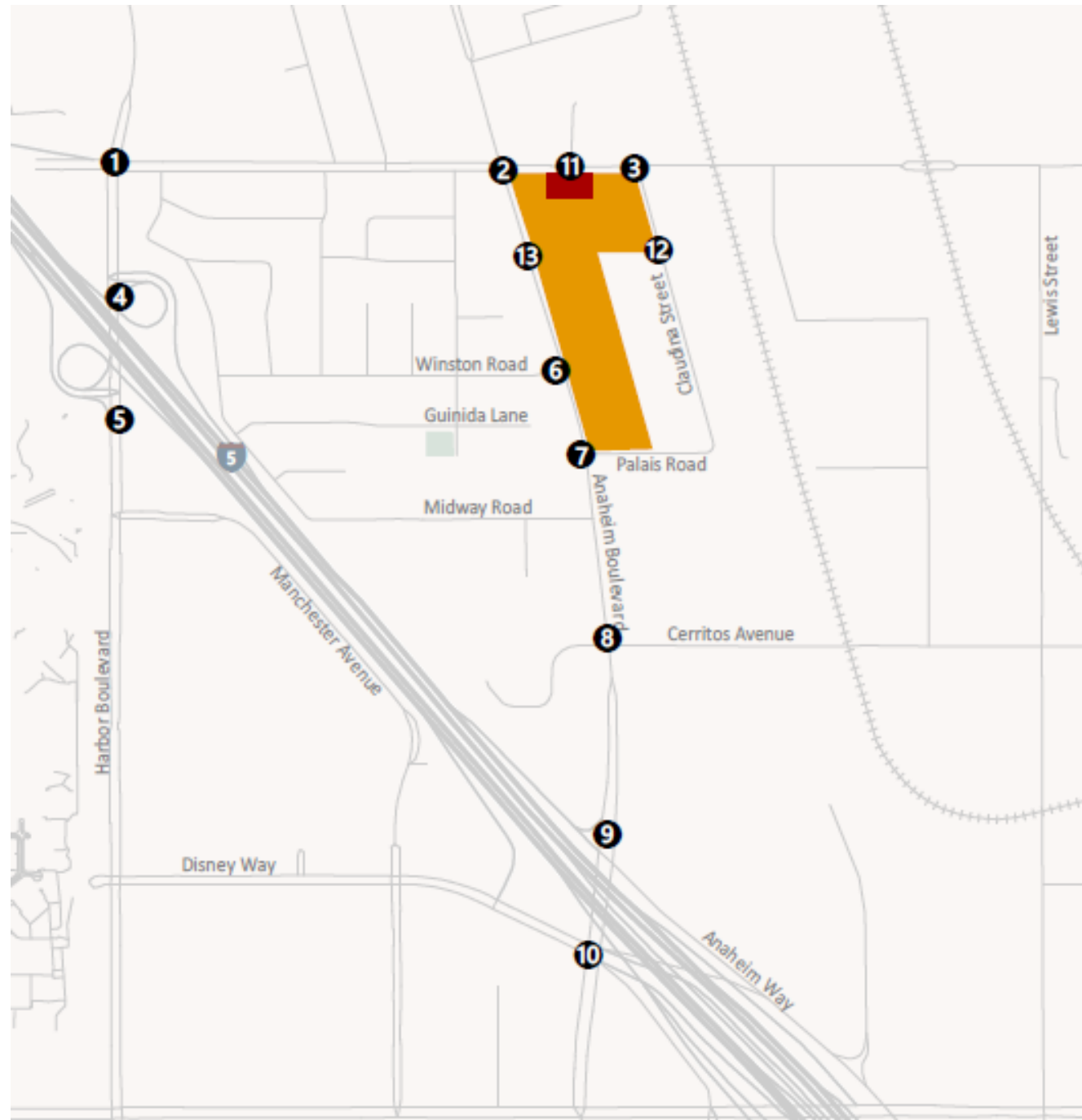


Figure 4-2

Project Only Peak Hour Traffic Volumes and Lane Configuration





5. Level of Service (LOS) Analysis

The results discussed in this section of the report were analyzed using the PTV Vistro 2022 software program and are in accordance with the methodologies described in Chapter 2 per the *City of Anaheim Criteria for Preparation of Traffic Impact Studies*.

Existing (2021) Conditions

This section analyzes Existing (2021) conditions and compares the LOS results to the Existing (2021) Plus Approved Plus Project conditions.

Traffic Forecasts

Existing traffic volumes, lane configurations, and signal timings were used to evaluate operations at the study intersections for existing AM and PM peak hour conditions. **Figure 3-1** presents the existing traffic volumes.

A list of approved projects was collected through the Andy's Map website and confirmed by the Anaheim City staff. The list includes residential, industrial, commercial, and office land uses that are expected to be implemented within a 2-mile radius of the Project site prior to the buildout date of the Project. Trip generation rates were applied for each approved project from *Trip Generation, 11th Edition*, and the trips were assigned to the study area based on professional judgement, and knowledge of the land uses and their typical peak hour travel patterns. **Appendix B** includes the full list of approved development projects and their corresponding land use, size, and trip generation assumed to be in place by Opening Year (2024).

Traffic volumes for Existing (2021) Plus Approved Plus Project conditions were developed by adding approved projects trip assignment and Project trips to the Existing (2021) conditions volumes. The peak hour turning movement volumes and lane configuration for Existing (2021) Plus Approved Plus Project conditions are shown on **Figure 5-1**.

Intersection Operations

The intersection LOS results are presented in **Table 5-1A** and **Table 5-1B** separated by LOS analysis methodology. Detailed intersection LOS worksheets are presented in **Appendix C**.



Table 5-1A: Existing (2021) LOS Summary - ICU Method

Intersection	Control	Peak Hour	Existing (2021)		Existing (2021) Plus Approved Plus Project		Does the increase in V/C meet the criteria for improvements?
			V/C	LOS	V/C	LOS	
1. Harbor Boulevard & Ball Road	Signal	AM	0.660	B	0.670	B	No
		PM	0.740	C	0.774	C	No
2. Anaheim Boulevard & Ball Road	Signal	AM	0.444	A	0.497	A	No
		PM	0.562	A	0.630	B	No
7. Anaheim Boulevard & Palais Road	Signal	AM	0.249	A	0.285	A	No
		PM	0.325	A	0.362	A	No
8. Anaheim Boulevard & Cerritos Avenue/Urbana Street	Signal	AM	0.418	A	0.437	A	No
		PM	0.652	B	0.684	B	No



Table 5-1B: Existing (2021) LOS Summary - HCM Method

Intersection	Control	Peak Hour	Existing (2021)		Existing (2021) Plus Approved Plus Project	
			Delay	LOS	Delay	LOS
3. Claudina Street & Ball Road	TWSC	AM	22.30	C	27.45	D
		PM	21.71	C	28.23	D
4*. I-5 Northbound Ramps & Harbor Boulevard	Signal	AM	11.41	B	11.53	B
		PM	12.24	B	12.54	B
5*. I-5 Southbound Ramps & Harbor Boulevard	Signal	AM	9.32	A	10.04	B
		PM	10.57	B	11.16	B
6. Anaheim Boulevard & Winston Road/Project Driveway D	TWSC	AM	41.56	E	45.45	E
		PM	71.48	F	83.33	F
9. Anaheim Boulevard & I-5 Northbound On- Ramp /Anaheim Way	Signal	AM	14.32	B	15.08	B
		PM	19.20	B	20.43	C
10. Anaheim Boulevard & I-5 Southbound On- Ramp/Disney Way	Signal	AM	25.30	C	26.10	C
		PM	27.29	C	28.38	C
11. Technology Circle/Project Driveway A and Ball Road	TWSC	AM	22.44	C	27.87	D
		PM	50.45	F	65.32	F
12. Claudina Street & Project Driveway B	TWSC	AM	NA	NA	9.53	A
		PM	NA	NA	9.51	A
13. Anaheim Boulevard and Project Driveway C	TWSC	AM	NA	NA	12.00	B
		PM	NA	NA	15.57	C

Notes:

1. Signal = signalized intersection; TWSC = Two-Way Stop-Controlled.
2. Signalized intersection Volume to Capacity (V/C) is calculated using the ICU methodology.
3. Delay operations are reported as worst movement delay for unsignalized intersections calculated using HCM 6th methodology.
4. ">120" is reported for highly congested movements where more than 120 seconds is reported.
5. Significance criteria is documented in Table 2-2.
6. Significance criteria is not applicable to intersections analyzed using HCM Methodology.
7. **Bold** symbolizes unacceptable LOS.
8. Intersection with "*" are CMP intersections and evaluated based on the CMP LOS criteria.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

As shown above, all study intersections operate acceptable under Existing (2021) scenarios, except:

- Anaheim Boulevard & Winston Road/Project Driveway D: LOS E in AM peak hour and LOS F in PM peak hour under Existing (2021) and Existing (2021) Plus Approved Plus Project conditions



- Technology Circle/Project Driveway A and Ball Road: LOS F in PM peak hour under Existing (2021) and Existing (2021) Plus Approved Plus Project conditions

To demonstrate the influence of the addition of Project traffic, **Table 5-1C** and **Table 5-1D** present the delay and LOS by approach for the driveway intersections. As shown in the tables, the Project traffic would not bring the LOS to a less than acceptable grade at the major approaches.

Table 5-1C: Existing (2021) LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	Existing (2021)							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	15.22	C	10.87	B	41.56	E	11.00	B
		PM	17.49	C	16.96	C	71.48	F	64.06	F
11. Technology Circle/Project Driveway A and Ball Road	E/W	AM	NA	NA	22.44	C	16.74	C	0.00	A
		PM	NA	NA	50.45	F	21.72	C	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA

Notes:

1. N/S stand s for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. ">120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

Table 5-1D: Existing (2021) Plus Approved Plus Project LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	Existing (2021) Plus Approved Plus Project							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	15.67	C	0.00	A	45.45	E	11.43	B
		PM	17.92	C	0.00	A	83.33	F	15.88	C
11. Technology Circle/Project Driveway A and Ball Road	N/S	AM	16.16	C	27.87	D	27.07	C	0.00	A
		PM	15.80	C	65.32	F	25.27	D	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	7.48	A	0.00	A	9.53	A	NA	NA
		PM	7.44	A	0.00	A	9.51	A	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	12.00	B
		PM	0.00	A	0.00	A	NA	NA	15.57	C

Notes:

1. N/S stand s for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. "> 120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

Roadway Segment Operations

Roadway capacity analysis results are summarized in **Table 5-2**. As shown in Table 5-2, all five study roadway segments operate at acceptable level under Existing (2021) conditions and Existing (2021) Plus Approved Plus Project conditions.



Table 5-2: Existing (2021) Conditions Roadway Segment LOS Summary

Segment	Existing (2021)				Existing (2021) Plus Approved Plus Project			
	Capacity	ADT	V/C	LOS	Capacity	ADT	V/C	LOS
1. Anaheim Boulevard north of Ball Road	56,300	24,967	0.443	A	56,300	26,547	0.472	A
2. Anaheim Boulevard south of Ball Road	56,300	25,059	0.445	A	56,300	26,634	0.473	A
3. Anaheim Boulevard between Cerritos Ave and I-5	56,300	33,479	0.595	A	56,300	35,754	0.635	B
4. Ball Road east of Anaheim Boulevard	56,300	34,671	0.616	B	56,300	39,345	0.699	B
5. Ball Road east of Harbor Boulevard	56,300	34,996	0.622	B	56,300	40,719	0.723	C

Source: Fehr & Peers, 2022

Off-Ramp Queuing Analysis

The off-ramp queuing analysis were performed for the I-5 northbound and southbound off-ramp intersections at Harbor Boulevard. As shown in **Table 5-3**, the Project doesn't add two or more car length to the ramp queue in the peak hour that would extend into the freeway mainline under the Existing (2021) Plus Approved Plus Project conditions. Therefore, further traffic safety impacts review is not required at these two off-ramp intersections.

Table 5-3: Existing Turn Movement 95th Percentile Queues

Intersection	Turning Movement	Storage Length (feet)	Peak Hour	Existing (2021)		Existing (2021) Plus Approved Plus Project		Is the safety assessment required?
				feet/lane	vehicle/lane	feet/lane	vehicle/lane	
4. I-5 Northbound Ramps & Harbor Boulevard	WBL	1,290	AM	55	2	55	2	No
			PM	32	1	32	1	No
	WBR	1,290	AM	171	7	176	7	No
			PM	180	7	187	7	No
5. I-5 Southbound Ramps & Harbor Boulevard	EBL	1,290	AM	45	2	61	2	No
			PM	76	3	99	4	No
	EBR	1,290	AM	105	4	113	5	No
			PM	154	6	160	6	No

Notes:

1. Storage length was set to off-ramp length as this analysis aimed to determine if the ramp queue would extend into the freeway mainline.

Source:

1. Interim Local Development Intergovernmental Review Safety Practitioners Guidance Appendix A: Freeway Queueing Analysis (December 2020)
2. Fehr & Peers, 2022

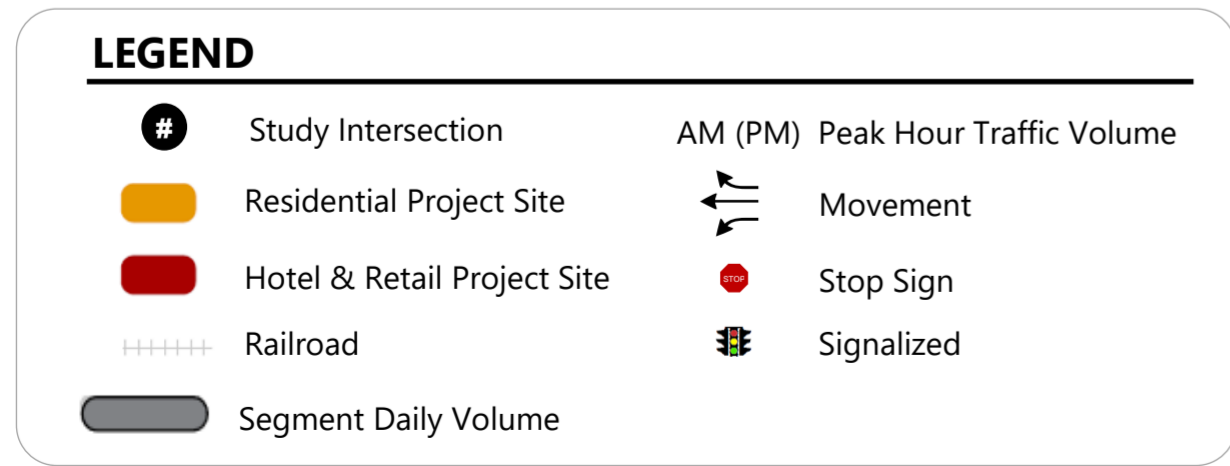
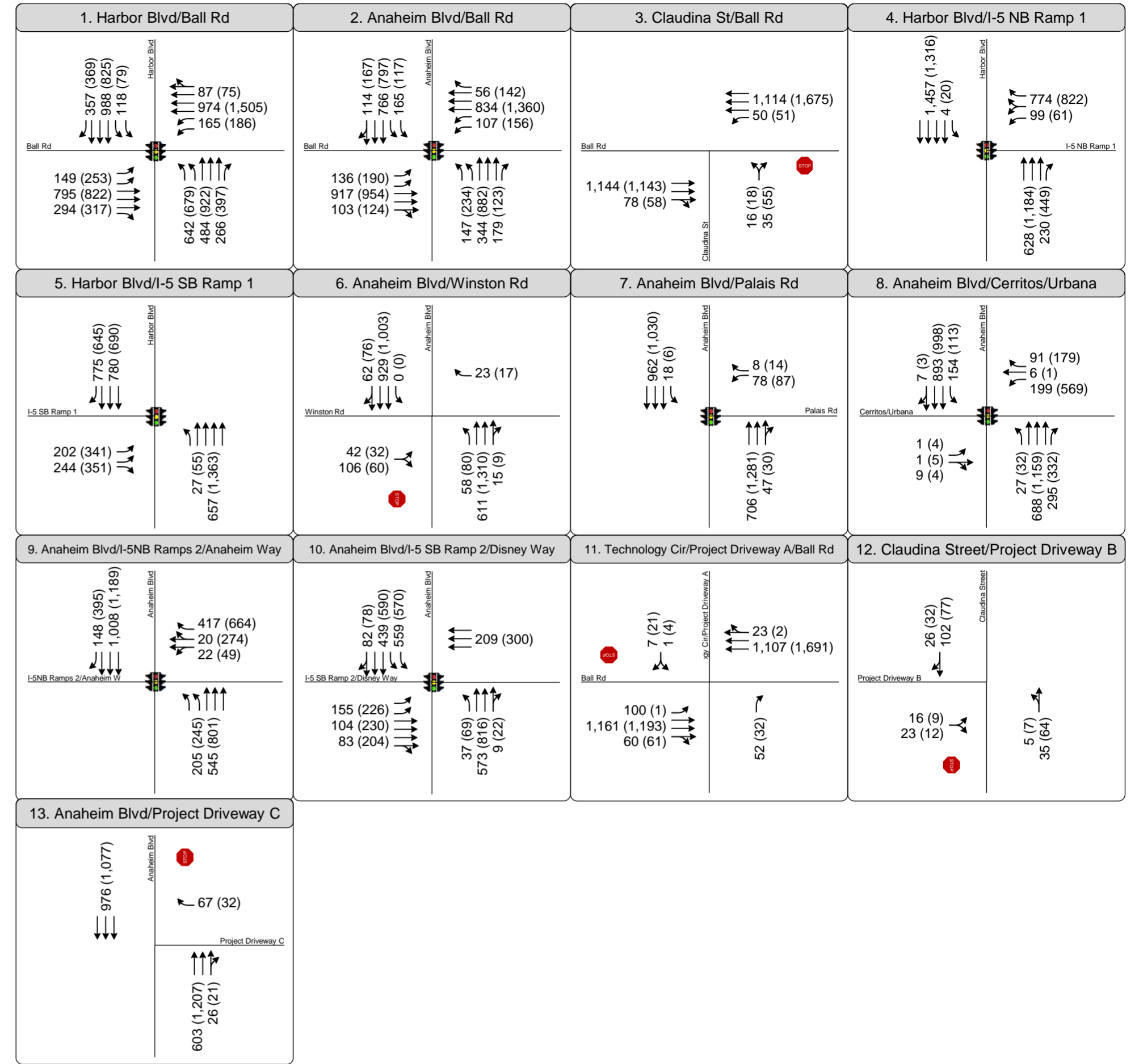
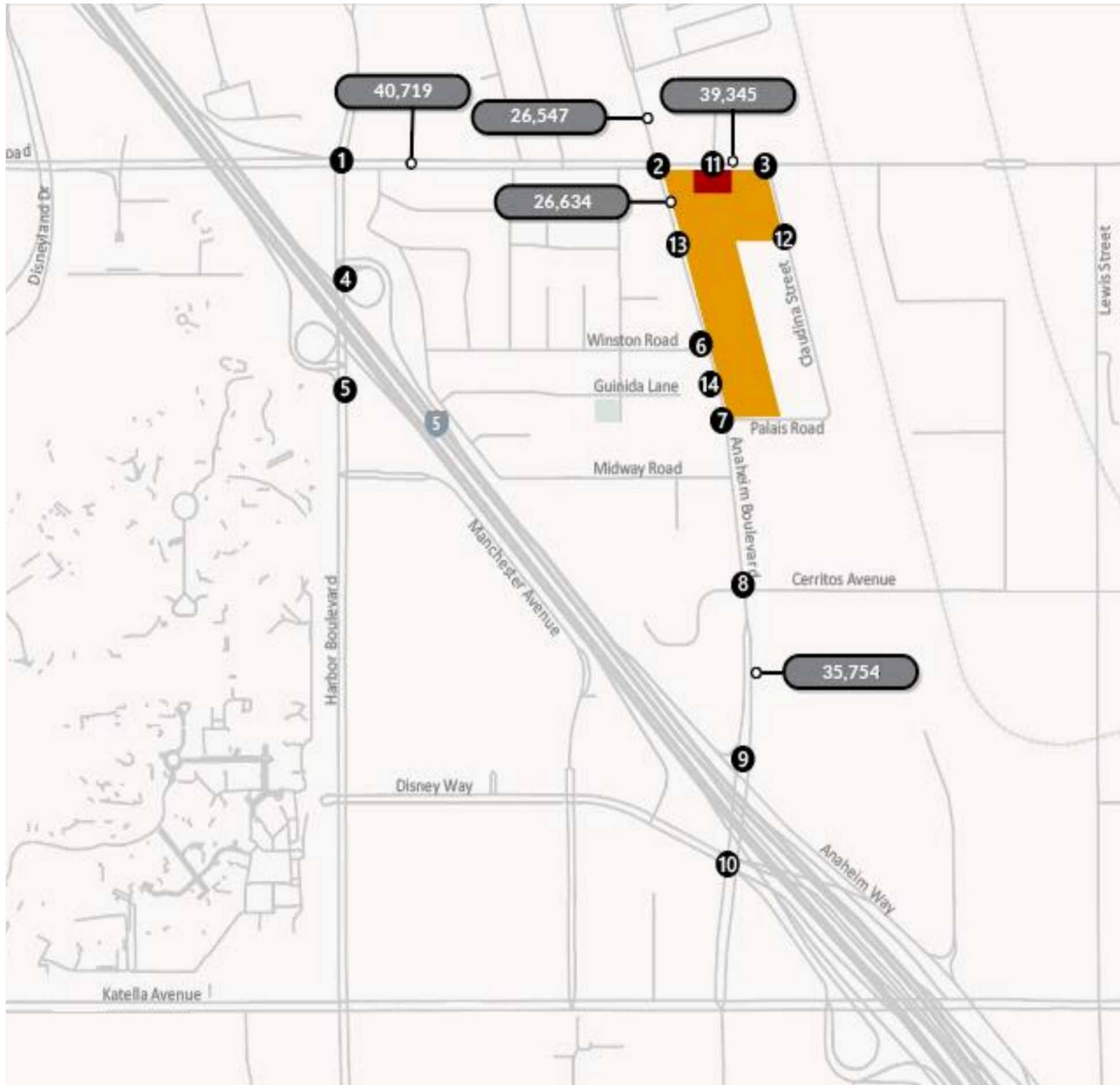


Figure 5-1
Existing (2021) Plus Approved Plus Project Peak Hour Traffic Volumes and Lane Configuration



Opening Year (2024) Conditions

This section analyzes Opening Year (2024) conditions and compares the LOS results with and without the Project.

Traffic Forecasts

Traffic volumes for this scenario were developed by growing the Existing (2021) volumes by annual growth rates calculated from the existing counts and General Plan Development (2035) Without Project conditions. The trips from approved projects were then added to the Opening Year (2024) forecasts to represent the Opening Year (2024) Without Project conditions. Traffic volumes for Opening Year (2024) With Project conditions were developed by adding Project trips to the Opening Year (2024) Without Project volumes.

Intersection Operations

The peak hour turning movement volumes for Opening Year (2024) Without Project and Opening Year (2024) With Project conditions are shown on **Figure 5-2** and **Figure 5-3**. The LOS results are presented in **Table 5-4A** and **Table 5-4B** separated by LOS analysis methodology. Appendix C provides detailed intersection LOS worksheets.

Table 5-4A: Opening Year (2024) LOS Summary - ICU Method

Intersection	Control	Peak Hour	Opening Year (2024) Without Project		Opening Year (2024) With Project		Does the increase in V/C meet the criteria for improvements?
			V/C	LOS	V/C	LOS	
1. Harbor Boulevard & Ball Road	Signal	AM	0.708	C	0.709	C	No
		PM	0.796	C	0.800	D	No
2. Anaheim Boulevard & Ball Road	Signal	AM	0.500	A	0.523	A	No
		PM	0.641	B	0.650	B	No
7. Anaheim Boulevard & Palais Road	Signal	AM	0.268	A	0.297	A	No
		PM	0.344	A	0.372	A	No
8. Anaheim Boulevard & Cerritos Avenue/Urbana Street	Signal	AM	0.461	A	0.461	A	No
		PM	0.697	B	0.707	C	No



Table 5-4B: Opening Year (2024) LOS Summary - HCM Method

Intersection	Control	Peak Hour	Opening Year (2024) Without Project		Opening Year (2024) With Project	
			Delay	LOS	Delay	LOS
3. Claudina Street & Ball Road	TWSC	AM	27.28	D	29.99	D
		PM	27.87	D	29.96	D
4*. I-5 Northbound Ramps & Harbor Boulevard	Signal	AM	11.83	B	11.82	B
		PM	12.83	B	12.85	B
5*. I-5 Southbound Ramps & Harbor Boulevard	Signal	AM	10.23	B	10.40	B
		PM	11.24	B	11.37	B
6. Anaheim Boulevard & Winston Road/Project Driveway D	TWSC	AM	56.76	F	57.96	F
		PM	95.02	F	102.90	F
9. Anaheim Boulevard & I-5 Northbound On- Ramp /Anaheim Way	Signal	AM	14.96	B	15.51	B
		PM	20.44	C	21.11	C
10. Anaheim Boulevard & I-5 Southbound On-Ramp/Disney Way	Signal	AM	26.24	C	26.70	C
		PM	28.49	C	28.92	C
11. Technology Circle/Project Driveway A and Ball Road	TWSC	AM	29.60	D	30.18	D
		PM	71.23	F	71.80	F
12. Claudina Street & Project Driveway B	TWSC	AM	NA	NA	9.57	A
		PM	NA	NA	9.54	A
13. Anaheim Boulevard and Project Driveway C	TWSC	AM	NA	NA	12.22	B
		PM	NA	NA	15.96	C

Notes:

1. Signal = signalized intersection; TWSC = Two-Way Stop-Controlled.
2. Signalized intersection Volume to Capacity (V/C) is calculated using the ICU methodology.
3. Delay operations are reported as worst movement delay for unsignalized intersections calculated using HCM 6th methodology.
4. ">120" is reported for highly congested movements where more than 120 seconds is reported.
5. Significance criteria is documented in Table 2-2.
6. Significance criteria is not applicable to intersections analyzed using HCM Methodology.
7. **Bold** symbolizes unacceptable LOS.
8. Intersection with "*" are CMP intersections and evaluated based on the CMP LOS criteria.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

As shown above, all study intersections operate acceptable under Opening Year (2024) conditions, except:

- Anaheim Boulevard & Winston Road/Project Driveway D: LOS F in AM and PM peak hour under Opening Year (2024) Without Project and Opening Year (2024) With Project conditions



- Technology Circle/Project Driveway A and Ball Road: LOS F in PM peak hour under Opening Year (2024) Without Project and Opening Year (2024) With Project conditions

Table 5-4C and **Table 5-4D** present the delay and LOS by approach for the driveway intersections. As shown in the tables, the Project traffic would not bring the LOS to a worse grade at the major approaches.

Table 5-4C: Opening Year Without Project (2024) LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	Opening Year Without Project (2024)							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	16.65	C	11.25	B	56.76	F	11.25	B
		PM	18.81	C	18.29	C	95.02	F	78.00	F
11. Technology Circle/Project Driveway A and Ball Road	E/W	AM	NA	NA	29.60	D	21.84	C	0.00	A
		PM	NA	NA	71.23	F	26.58	D	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA

Notes:

1. N/S stand s for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. "> 120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022



Table 5-4D: Opening Year (2024) With Project LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	Opening Year (2024) With Project							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	16.71	C	0.00	A	57.96	F	11.62	B
		PM	18.87	C	0.00	A	102.90	F	16.30	C
11. Technology Circle/Project Driveway A and Ball Road	E/W	AM	16.18	C	30.18	D	22.10	C	0.00	A
		PM	15.59	C	71.80	F	26.71	D	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	7.49	A	0.00	A	9.57	A	NA	NA
		PM	7.45	A	0.00	A	9.54	A	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	12.22	B
		PM	0.00	A	0.00	A	NA	NA	15.96	C

Notes:

1. N/S stand s for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. ">120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

Roadway Segment Operations

Roadway capacity analysis results are summarized in **Table 5-5**. As shown in Table 5-5, all five study roadway segments operate at acceptable level under Opening Year (2024) Without Project Conditions and Opening Year (2024) With Project Conditions.



Table 5-5: Opening Year (2024) Conditions Roadway Segment LOS Summary

Segment	Opening Year (2024) Without Project				Opening Year (2024) With Project			
	Capacity	ADT	V/C	LOS	Capacity	ADT	V/C	LOS
1. Anaheim Boulevard north of Ball Road	56,300	29,177	0.518	A	56,300	29,315	0.521	A
2. Anaheim Boulevard south of Ball Road	56,300	28,499	0.506	A	56,300	29,412	0.522	A
3. Anaheim Boulevard between Cerritos Ave and I-5	56,300	38,132	0.677	B	56,300	39,465	0.701	C
4. Ball Road east of Anaheim Boulevard	56,300	39,863	0.708	C	56,300	40,830	0.725	C
5. Ball Road east of Harbor Boulevard	56,300	41,190	0.732	C	56,300	42,218	0.750	C

Source: Fehr & Peers, 2022

Off-Ramp Queuing Analysis

The off-ramp queuing analysis were performed for the I-5 northbound and southbound off-ramp intersections at Harbor Boulevard. As shown in **Table 5-6**, the Project doesn't add two or more car length to the ramp queue in the peak hour that would extend into the freeway mainline under the Opening Year (2024) conditions. Therefore, further traffic safety impacts review is not required at these two off-ramp intersections.

Table 5-6: Opening Year Turn Movement 95th Percentile Queues

Intersection	Turning Movement	Storage Length (feet)	Peak Hour	Opening Year (2024) Without Project		Opening Year (2024) With Project		Is the safety assessment required?
				feet/lane	vehicle/lane	feet/lane	vehicle/lane	
4. I-5 Northbound Ramps & Harbor Boulevard	WBL	1,290	AM	57	2	57	2	No
			PM	33	1	33	1	No
	WBR	1,290	AM	187	7	187	7	No
			PM	193	8	193	8	No
5. I-5 Southbound Ramps & Harbor Boulevard	EBL	1,290	AM	56	2	63	3	No
			PM	94	4	102	4	No
	EBR	1,290	AM	119	5	119	5	No
			PM	165	7	165	7	No

Notes:

1. Storage length was set to off-ramp length as this analysis aimed to determine if the ramp queue would extend into the freeway mainline.

Source:

1. Interim Local Development Intergovernmental Review Safety Practitioners Guidance Appendix A: Freeway Queuing Analysis (December 2020)

2. Fehr & Peers, 2022



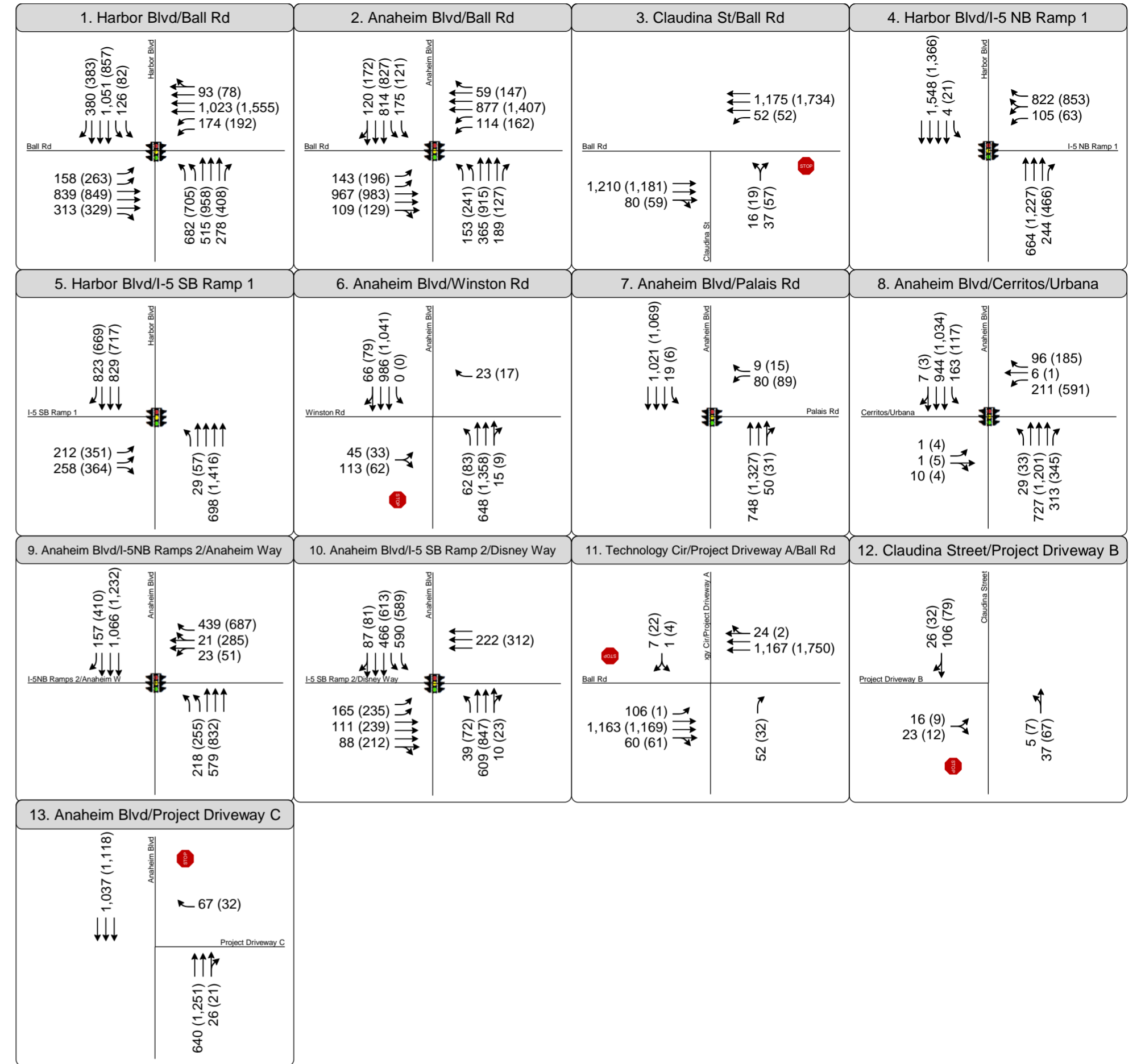
1. Harbor Blvd/Ball Rd 	2. Anaheim Blvd/Ball Rd 	3. Claudina St/Ball Rd 	4. Harbor Blvd/I-5 NB Ramp 1
5. Harbor Blvd/I-5 SB Ramp 1 	6. Anaheim Blvd/Winston Rd 	7. Anaheim Blvd/Palais Rd 	8. Anaheim Blvd/Cerritos/Urbana
9. Anaheim Blvd/I-5NB Ramps 2/Anaheim Way 	10. Anaheim Blvd/I-5 SB Ramp 2/Disney Way 	11. Technology Cir/Project Driveway A/Ball Rd 	

LEGEND

- # Study Intersection
- Orange Box Residential Project Site
- Red Box Hotel & Retail Project Site
- Grey Box Segment Daily Volume
- AM (PM) Peak Hour Traffic Volume
- Arrow Movement
- Red Circle with Stop Sign Stop Sign
- Signalized Icon Signalized
- Grey Line with Cross-ticks Railroad



Figure 5-2
Opening Year (2024) Without Project Conditions Peak Hour Traffic Volumes and Lane Configuration



LEGEND

- # Study Intersection
- Residential Project Site
- Hotel & Retail Project Site
- Railroad
- Segment Daily Volume
- AM (PM) Peak Hour Traffic Volume
- Movement
- Stop Sign
- Signalized



Figure 5-3
Opening Year (2024) With Project Conditions Peak Hour Traffic Volumes and Lane Configuration



General Plan Development (2035) Conditions

This section analyzes General Plan Development (2035) Traffic conditions and compares the LOS results with and without the Project. This scenario represents buildout conditions in Anaheim, consistent with the buildout of the City's General Plan everywhere except at the Project area.

Traffic Forecasts

Traffic volumes for these scenarios were provided by the City's on-call consultant and are consistent with the growth in the Anaheim Transportation Analysis Model (ATAM) for the year 2035. Peak hour turning movement volumes were provided for the 11 existing intersections after incorporating the Project land uses in the Anaheim Transportation Analysis Model (ATAM) for the year 2035. The Project trip assignment for the new proposed driveway intersections were then added to produce a full General Plan Development (2035) With Project conditions.

Intersection Operations

The General Plan Development (2035) Without Project Conditions peak hour volumes were used to calculate LOS for the study intersections during each peak hour. The findings of the analysis are presented in **Table 5-7A** and **Table 5-7B** separated by LOS analysis methodology. Detailed intersection LOS worksheets are presented in Appendix C.



Table 5-7A: General Plan Development (2035) LOS Summary - ICU Method

Intersection	Control	Peak Hour	General Plan Development (2035) LOS Without Project		General Plan Development (2035) With Project LOS		Does the increase in V/C meet the criteria for improvements?
			V/C	LOS	V/C	LOS	
1. Harbor Boulevard & Ball Road	Signal	AM	0.844	D	0.842	D	No
		PM	0.809	D	0.803	D	No
2. Anaheim Boulevard & Ball Road	Signal	AM	0.574	A	0.566	A	No
		PM	0.630	B	0.627	B	No
7. Anaheim Boulevard & Palais Road	Signal	AM	0.361	A	0.362	A	No
		PM	0.465	A	0.437	A	No
8. Anaheim Boulevard & Cerritos Avenue/Urbana Street	Signal	AM	0.794	C	0.801	D	No
		PM	0.722	C	0.704	C	No



Table 5-7B: General Plan Development (2035) LOS Summary - HCM Method

Intersection	Control	Peak Hour	General Plan Development (2035) LOS Without Project		General Plan Development (2035) With Project LOS	
			Delay	LOS	Delay	LOS
3. Claudina Street & Ball Road	TWSC	AM	29.35	D	25.91	D
		PM	25.73	D	23.35	C
4*. I-5 Northbound Ramps & Harbor Boulevard	Signal	AM	21.72	C	21.03	C
		PM	31.30	C	30.68	C
5*. I-5 Southbound Ramps & Harbor Boulevard	Signal	AM	11.51	B	11.40	B
		PM	10.43	B	10.28	B
6. Anaheim Boulevard & Winston Road/Project Driveway D	TWSC	AM	> 120	F	> 120	F
		PM	> 120	F	> 120	F
9. Anaheim Boulevard & I-5 Northbound On- Ramp /Anaheim Way	Signal	AM	14.40	B	14.38	B
		PM	23.68	C	23.57	C
10. Anaheim Boulevard & I-5 Southbound On-Ramp/Disney Way	Signal	AM	26.56	C	26.33	C
		PM	34.19	C	34.06	C
11. Technology Circle/Project Driveway A and Ball Road	TWSC	AM	19.89	C	21.35	C
		PM	45.54	E	45.27	E
12. Claudina Street & Project Driveway B	TWSC	AM	NA	NA	9.11	A
		PM	NA	NA	9.14	A
13. Anaheim Boulevard and Project Driveway C	TWSC	AM	NA	NA	12.17	B
		PM	NA	NA	19.63	C

Notes:

1. Signal = signalized intersection; TWSC = Two-Way Stop-Controlled.
2. Signalized intersection Volume to Capacity (V/C) is calculated using the ICU methodology.
3. Delay operations are reported as worst movement delay for unsignalized intersections calculated using HCM 6th methodology.
4. "> 120" is reported for highly congested movements where more than 120 seconds is reported.
5. Significance criteria is documented in Table 2-2.
6. Significance criteria is not applicable to intersections analyzed using HCM Methodology.
7. **Bold** symbolizes unacceptable LOS.
8. Intersection with "*" are CMP intersections and evaluated based on the CMP LOS criteria.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

As shown above, all study intersections operate acceptable under General Plan Development (2035) conditions, except:

- Anaheim Boulevard & Winston Road/Project Driveway D: LOS F in AM and PM peak hour under General Plan Development (2035) Without Project and General Plan Development (2035) With Project conditions
- Technology Circle/Project Driveway A and Ball Road: LOS E in PM peak hour under General Plan Development (2035) Without Project and General Plan Development (2035) With Project conditions

Table 5-7C and **Table 5-7D** present the delay and LOS by approach for the driveway intersections. As shown in the tables, the Project traffic would not bring the LOS to a worse grade at the major approaches.

Table 5-7C: General Plan Development (2035) Without Project LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	General Plan Development (2035) Without Project							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	59.01	F	10.28	B	>120	F	0.00	A
		PM	26.09	D	28.07	D	>120	F	>120	F
11. Technology Circle/Project Driveway A and Ball Road	E/W	AM	NA	NA	19.89	C	15.27	C	0.00	A
		PM	NA	NA	45.54	E	20.31	C	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	NA	NA
		PM	0.00	A	0.00	A	NA	NA	NA	NA

Notes:

1. N/S stand s for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. ">120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

Table 5-7D: General Plan Development (2035) With Project LOS Summary - Driveway Intersections

Intersection	Major Street Direction	Peak Hour	General Plan Development (2035) With Project							
			Northbound		Southbound		Eastbound		Westbound	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6. Anaheim Boulevard & Winston Road/Project Driveway D	N/S	AM	59.88	F	0.00	A	>120	F	10.65	B
		PM	24.89	C	0.00	A	>120	F	19.43	C
11. Technology Circle/Project Driveway A and Ball Road	E/W	AM	15.59	C	21.35	C	15.42	C	0.00	A
		PM	13.81	B	45.27	E	20.24	C	0.00	A
12. Claudina Street & Project Driveway B	N/S	AM	7.33	A	0.00	A	9.11	A	NA	NA
		PM	7.32	A	0.00	A	9.14	A	NA	NA
13. Anaheim Boulevard and Project Driveway C	N/S	AM	0.00	A	0.00	A	NA	NA	12.17	B
		PM	0.00	A	0.00	A	NA	NA	19.63	C

Notes:

1. N/S stands for Northbound/Southbound direction, and E/W stands for the Eastbound/Westbound direction.
2. Delay operations are reported as worst movement delay for each approach of unsignalized driveway intersections calculated using HCM 6th methodology.
3. ">120" is reported for highly congested movements where more than 120 seconds is reported.
4. Significance criteria is documented in Table 2-2.
5. **Bold** symbolizes unacceptable LOS.

Source:

1. City of Anaheim Criteria for Preparation of Traffic Impact Studies
2. Fehr & Peers, 2022

Roadway Segment Operations

Roadway capacity analysis results are summarized in **Table 5-8**. As shown in Table 5-8, four of the five study roadway segments operate at acceptable level under General Plan Development (2035) With Project Conditions. Segments operate at unacceptable LOS are:

- Anaheim Boulevard between Cerritos Ave and I-5: LOS D under both General Plan Development (2035) Without Project conditions and General Plan Development (2035) With Project conditions. The addition of the Project traffic doesn't degrade the segment LOS under the General Plan Development (2035) Without Project conditions to a worse LOS.
- Ball Road east of Harbor Boulevard: LOS D under General Plan Development (2035) Without Project conditions. Since the Project proposes a General Plan Amendment to re-designate the Project site from General Commercial to Mixed-Use Medium Density, less traffic is forecast on this segment



which brings the segment LOS to acceptable level under General Plan Development (2035) With Project conditions.

Table 5-8: General Plan Development (2035) Conditions Roadway Segment LOS Summary

Segment	General Plan Development (2035) Without Project				General Plan Development (2035) With Project			
	Capacity	ADT	V/C	LOS	Capacity	ADT	V/C	LOS
1. Anaheim Boulevard north of Ball Road	56,300	39,000	0.693	B	56,300	38,700	0.687	B
2. Anaheim Boulevard south of Ball Road	56,300	36,500	0.648	B	56,300	35,700	0.634	B
3. Anaheim Boulevard between Cerritos Ave and I-5	56,300	49,700	0.883	D	56,300	48,400	0.860	D
4. Ball Road east of Anaheim Boulevard	56,300	38,200	0.679	B	56,300	38,200	0.679	B
5. Ball Road east of Harbor Boulevard	56,300	45,200	0.803	D	56,300	44,200	0.785	C

Notes:

1. **Bold** symbolizes unacceptable LOS.

Source: Fehr & Peers, 2022

Off-Ramp Queuing Analysis

The off-ramp queuing analysis were performed for the I-5 northbound and southbound off-ramp intersections at Harbor Boulevard. As shown in **Table 5-9**, the Project doesn't add two or more car length to the ramp queue in the peak hour that would extend into the freeway mainline under the General Plan Development (2035) conditions. Therefore, further traffic safety impacts review is not required at these two off-ramp intersections.



Table 5-9: General Plan Development Turn Movement 95th Percentile Queues

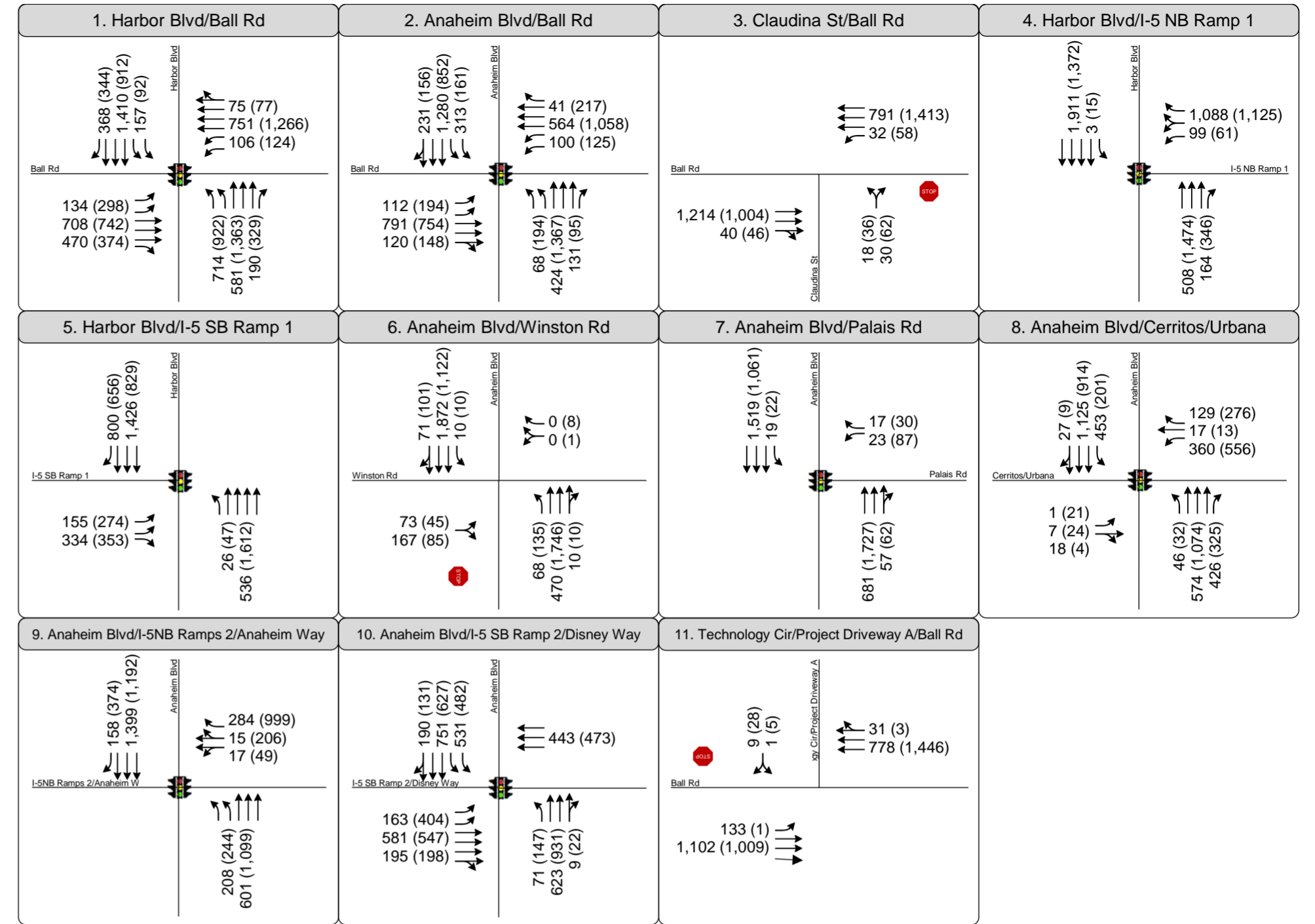
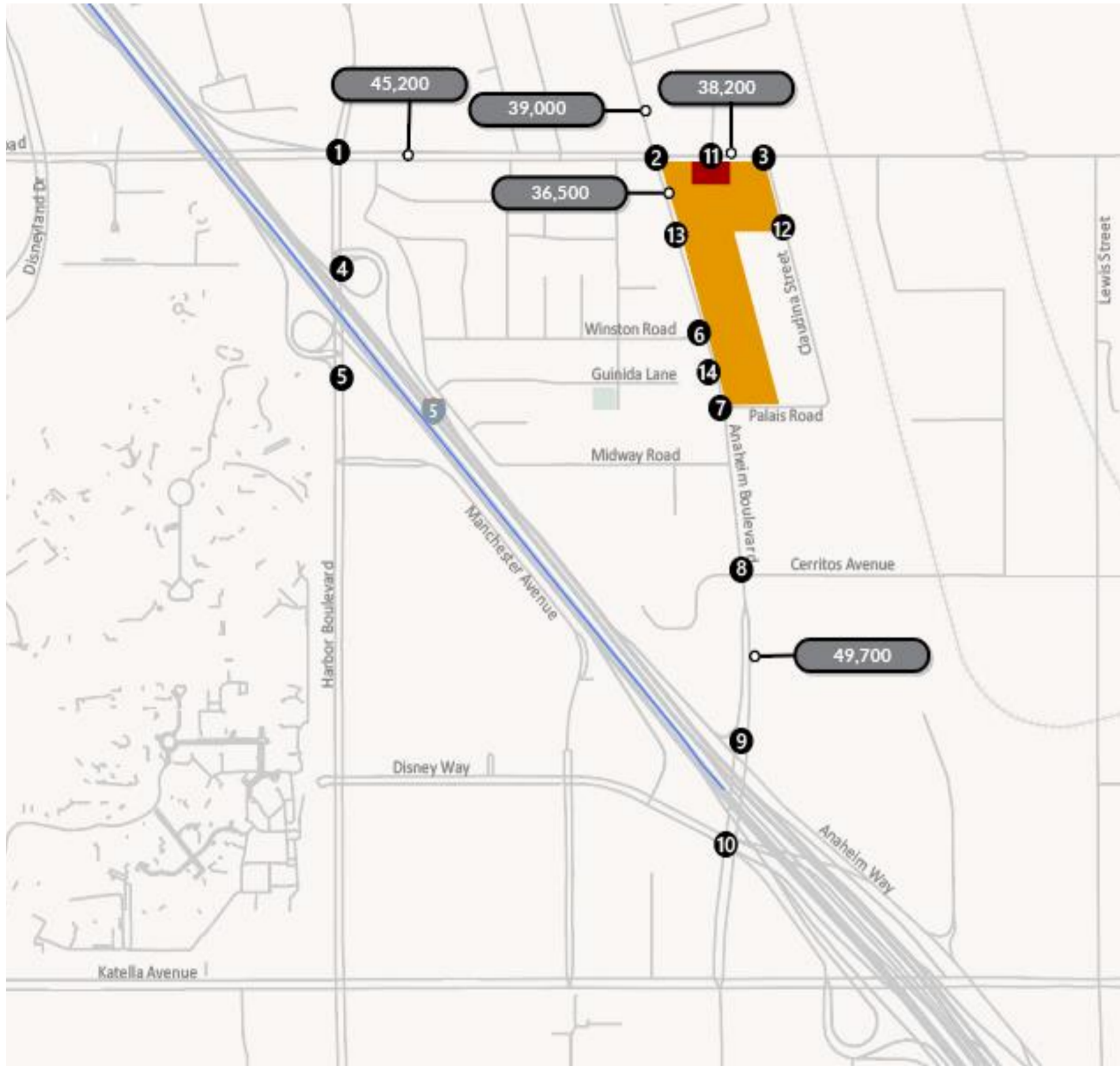
Intersection	Turning Movement	Storage Length (feet)	Peak Hour	General Plan Development (2035) Without Project		General Plan Development (2035) With Project		Is the safety assessment required?
				feet/lane	vehicle/lane	feet/lane	vehicle/lane	
				4. I-5 Northbound Ramps & Harbor Boulevard	WBL	1,290	AM		51	2	51	2	No
PM	31	1	31				1	No
WBR	1,290	AM	366		15	355	14	No
		PM	530		21	516	21	No
5. I-5 Southbound Ramps & Harbor Boulevard	EBL	1,290	AM	43	2	43	2	No
			PM	78	3	79	3	No
	EBR	1,290	AM	153	6	149	6	No
			PM	161	6	156	6	No

Notes:

- Storage length was set to off-ramp length as this analysis aimed to determine if the ramp queue would extend into the freeway mainline.

Source:

- Interim Local Development Intergovernmental Review Safety Practitioners Guidance Appendix A: Freeway Queueing Analysis (December 2020)
- Fehr & Peers, 2022



LEGEND

- # Study Intersection
- Residential Project Site
- Hotel & Retail Project Site
- +++++ Railroad
- Segment Daily Volume
- AM (PM) Peak Hour Traffic Volume
- Movement
- Stop Sign
- Signalized



Figure 5-4
General Plan Development (2035) Without Project Conditions Peak Hour Traffic Volumes and Lane Configuration



1. Harbor Blvd/Ball Rd 	2. Anaheim Blvd/Ball Rd 	3. Claudina St/Ball Rd 	4. Harbor Blvd/I-5 NB Ramp 1
5. Harbor Blvd/I-5 SB Ramp 1 	6. Anaheim Blvd/Winston Rd 	7. Anaheim Blvd/Palais Rd 	8. Anaheim Blvd/Cerritos/Urbana
9. Anaheim Blvd/I-5NB Ramps 2/Anaheim Way 	10. Anaheim Blvd/I-5 SB Ramp 2/Disney Way 	11. Technology Cir/Project Driveway A/Ball Rd 	12. Claudina Street/Project Driveway B
13. Anaheim Blvd/Project Driveway C 			

LEGEND

- # Study Intersection
- Residential Project Site
- Hotel & Retail Project Site
- +++++ Railroad
- Segment Daily Volume
- AM (PM) Peak Hour Traffic Volume
- Movement
- Stop Sign
- Signalized



Figure 5-5
General Plan Development (2035) With Project Conditions Peak Hour Traffic Volumes and Lane Configuration



Discussion

This section discusses the potential improvements for the intersections and roadway segments operate at unacceptable LOS.

Anaheim Boulevard at Winston Road/Project Driveway D

The intersection of Anaheim Boulevard at Winston Road/Project Driveway D is forecast to operate at LOS E or F with or without the Project in all scenarios during AM and PM peak hours. The LOS E or F is based on the worst-case movement delay associated with the eastbound left-turn from Winston Road to Anaheim Boulevard. The overall intersection operates at acceptable LOS. The high delay is associated with the high volume of northbound and southbound through movements and the delay calculation related to presumed gap acceptance or ability to safely make a left-turn.

Potential improvements were considered that would improve traffic conditions at the intersection. Signalization of the intersection would provide acceptable LOS but would need to meet traffic signal warrants. Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrants were evaluated for this intersection. Peak hour signal warrants² are met at this intersection even under Existing (2021) Conditions. Signal warrant worksheets are presented in **Appendix D**. However, given the short spacing of adjacent intersections, traffic signal is not recommended at this location.

Technology Circle/Project Driveway A at Ball Road

The intersection of Technology Circle/Project Driveway A at Ball Road is also forecast to operate at LOS E or F with or without the Project in all scenarios during PM peak hour. Similar to the Anaheim Boulevard and Winston Road/Project Driveway D intersection, the unacceptable LOS is based on the worst-case movement delay associated with southbound left-turn from Technology Circle to Ball Road. The overall intersection operates at acceptable LOS. The high delay is associated with the high volume of eastbound and westbound through movements and the delay calculation related to presumed gap acceptance or ability to safely make

² Traffic Signal Warrant Disclaimer: This analysis is intended to examine the general correlation between the planned level of future development and the need to install new traffic signals. It estimates future development-generated traffic compared against a sub-set of the standard traffic signal warrants recommended in the Federal Highway Administration *Manual on Uniform Traffic Control Devices* and associated State guidelines. This analysis should not serve as the only basis for deciding whether and when to install a signal. To reach such a decision, the full set of warrants should be investigated based on field-measured, rather than forecast, traffic data and a thorough study of traffic and roadway conditions by an experienced engineer. Furthermore, the decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data, and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization.



a left-turn. This intersection doesn't meet peak hour signal warrants³ since the side-street turning volumes are not high enough under any study scenario. Signal warrant worksheets are presented in Appendix D.

Anaheim Boulevard between Cerritos Ave and I-5

Anaheim Boulevard between Cerritos Ave and I-5 is forecast to operate at LOS D with or without the Project under the General Plan Development (2035) scenarios. It should be noted that the Project improves the V/C as compared to the General Plan Development (2035) Without Project conditions. To improve operations, an additional travel lane is required in each direction. The corridor is currently built out to General Plan capacity and would require right-of-way acquisition by the City. The roadway is also under Caltrans jurisdiction, and the City of Anaheim cannot guarantee that the improvements will be implemented.

³ Refer to the same Traffic Signal Warrant Disclaimer in footnote 7.



6. On-Site Circulation and Site Access Review

This chapter provides an assessment of site access and internal circulation for vehicles, pedestrians, bicycles, and transit based on the conceptual site plan presented previously in Figure 1-1.

Four driveways would provide vehicular access to the Project:

- Technology Circle/Project Driveway A and Ball Road (proposed driveway): Project driveway A will allow eastbound right-turn inbound trips and northbound right-turn outbound trips.
- Claudina Street Project Driveway B (future intersection/proposed driveway): Project driveway B will allow both northbound left-turn and southbound right-turn inbound trips and eastbound left-turn and right-turn outbound trips.
- Anaheim Boulevard and Project Driveway C (future intersection/proposed driveway): Project driveway C will allow northbound right-turn inbound trips and westbound right-turn outbound trips.
- Anaheim Boulevard and Winston Road/Project Driveway D (proposed driveway): Project driveway D will allow northbound right-turn inbound trips and westbound right-turn outbound trips. The existing southbound left-turn movement will be eliminated.

As presented in Chapter 5, based on the worst-case movement delay in accordance with the HCM 6th method for side-street stop controlled intersections, the Technology Circle/Project Driveway A and Ball Road intersection and Anaheim Boulevard and Winston Road/Project Driveway D intersection would operate deficiently under all with Project conditions due to the conflict between the existing side-street left-turn and major street through movements. All inbound/outbound traffic accessing the driveways operates at an acceptable LOS. Travelers are not expected to experience substantial delay when accessing the site in a vehicle. Therefore, the proposed driveways would be sufficient to serve the Project.

Curbside sidewalks are provided on Anaheim Boulevard and Ball Road along the Project site frontage. The Project will provide a pedestrian path internally between the residential units, recreational amenity area and retail stores. It is recommended to have marked pedestrian crosswalks on the proposed driveways and sidewalks along Claudina Street.

Anaheim Boulevard and Ball Road both provide Class II bike facilities under the existing conditions. The City proposes future Class II facilities extension on Anaheim Boulevard to the south and Ball Road to the east and west which will close the bike lane gap near the Project site (*Anaheim General Plan – Circulation Element, adopted in May 2004 and revised in July 2020, and Bicycle Master Plan, May 2017*). Bicycle parking



is not currently identified on the site plan and should be included consistent with Anaheim Municipal Code requirements.

Two transit routes serve the Project site. Route 46 has stops on Ball Road and Route 47 has stops on Anaheim Boulevard. The closest bus stop to the Project site is located on Ball Road approximately 130 feet east of the intersection of Anaheim Boulevard and Ball Road. The Project is not expected to conflict with the existing bus stops or bus route or degrade transit circulation or access to transit.



7. Active Transportation and Public Transit Impact Analysis

Potential impacts to public transit, pedestrian facilities and travel, and bicycle facilities and travel were evaluated.

Active Transportation Analysis

The following roadways in the study area have proposed bike facilities per the *Anaheim General Plan – Circulation Element (Adopted in May 2004 and revised in July 2020)* and *Bicycle Master Plan (May 2017)*:

- Anaheim Boulevard between Cerritos Avenue and southern City boundary (Class II)
- Ball Road between Lemon Street and Anaheim Boulevard (Class II)
- Ball Road between Claudina Street to eastern City Boundary (Class II)

Sidewalks are currently provided on Anaheim Boulevard and Ball Road along the Project site frontage, and striped crosswalks are provided at the signalized intersections. There are no planned changes to sidewalks or pedestrian infrastructure in the study area.

The Project site plan presented in Figure 1-1 shows no change to the proposed or existing bike facilities and the sidewalks along the Project frontage, and no change to the existing crosswalks at the adjacent intersections.

The Project does not conflict with adopted policies, plans, or programs regarding bicycle, or pedestrian facilities, or otherwise decreases the performance⁴ or safety of such facilities. Therefore, the Project would result in a **less-than-significant impact** related to active transportation.

Public Transit Analysis

The potential impact to transit service or facilities was evaluated based on whether the proposed project would physically disrupt an existing facility/service or interfere with the implementation of a planned

⁴ Per the OPR Technical Advisory, decrease of performance does not include increase in users.



facility/service. In addition, the proposed Project was evaluated to determine if it would create potential conflicts with applicable policies, plans, or programs (as defined in the regulatory setting above) supporting transit such that the conflict could reduce transit trips or increase conflicts with other modes.

A review of the Project description did not identify any disruption to existing transit facilities. New transit trips are anticipated to be generated by the Project, but the Project would not modify transit stop locations or change transit headways. Additional transit ridership demand could increase boarding and alighting activity at existing bus stops and transit terminals located near the Project site.

The Project is consistent with the adopted plans regarding bicycle and pedestrian infrastructure and is not expected to decrease the performance or safety of these facilities. Therefore, the Project is considered to have a ***less than significant impact*** on public transit.

Appendix A: Traffic Counts

INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Thu, Oct 28, 21

LOCATION:
NORTH & SOUTH:
EAST & WEST:

Anaheim
Harbor
Ball

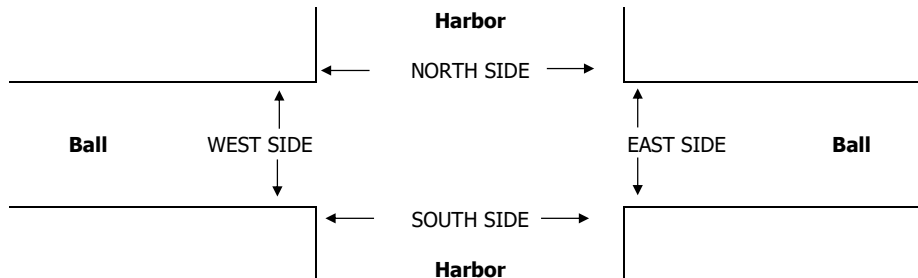
PROJECT #:
LOCATION #:
CONTROL:

SC3156
93
SIGNAL

NOTES:	AM PM MD OTHER OTHER	◀ W E ▶	▲ N S ▼
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Harbor			Harbor			Ball			Ball			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

AM	7:00 AM	131	98	55	20	190	62	18	124	57	36	173	8	972
	7:15 AM	149	112	38	20	259	73	42	181	79	34	162	14	1,163
	7:30 AM	165	103	41	24	249	113	33	180	67	39	247	29	1,290
	7:45 AM	169	134	59	40	237	79	39	189	72	28	180	28	1,254
	8:00 AM	154	134	53	34	241	91	35	146	74	40	175	16	1,193
	8:15 AM	167	114	67	16	218	85	23	147	74	36	191	15	1,153
	8:30 AM	156	108	48	25	169	74	32	145	62	20	195	12	1,046
	8:45 AM	182	118	64	21	163	82	26	141	52	25	199	14	1,087
	VOLUMES	1,273	921	425	200	1,726	659	248	1,253	537	258	1,522	136	9,158
	APPROACH %	49%	35%	16%	8%	67%	25%	12%	61%	26%	13%	79%	7%	
APP/DEPART	2,619	/	1,289	2,585	/	2,537	2,038	/	1,903	1,916	/	3,429	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	637	483	191	118	986	356	149	696	292	141	764	87	4,900	
APPROACH %	49%	37%	15%	8%	68%	24%	13%	61%	26%	14%	77%	9%		
PEAK HR FACTOR	0.905			0.946			0.941			0.787			0.950	
APP/DEPART	1,311	/	711	1,460	/	1,428	1,137	/	1,016	992	/	1,745	0	
PM	4:00 PM	192	175	71	20	191	96	60	195	72	22	328	13	1,435
	4:15 PM	219	187	66	19	153	85	54	158	64	39	310	19	1,373
	4:30 PM	186	225	66	30	194	80	67	172	74	43	313	20	1,470
	4:45 PM	170	206	61	15	209	83	72	180	80	42	287	22	1,427
	5:00 PM	151	253	72	12	205	91	52	153	81	34	376	17	1,497
	5:15 PM	168	236	89	22	216	114	61	183	77	34	317	16	1,533
	5:30 PM	165	250	92	22	167	76	73	148	72	34	270	20	1,389
	5:45 PM	167	213	73	22	146	66	55	181	75	26	329	22	1,375
	VOLUMES	1,418	1,745	590	162	1,481	691	494	1,370	595	274	2,530	149	11,499
	APPROACH %	38%	46%	16%	7%	63%	30%	20%	56%	24%	9%	86%	5%	
APP/DEPART	3,753	/	2,358	2,334	/	2,349	2,459	/	2,157	2,953	/	4,635	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	675	920	288	79	824	368	252	688	312	153	1,293	75	5,927	
APPROACH %	36%	49%	15%	6%	65%	29%	20%	55%	25%	10%	85%	5%		
PEAK HR FACTOR	0.955			0.903			0.943			0.891			0.967	
APP/DEPART	1,883	/	1,231	1,271	/	1,296	1,252	/	1,072	1,521	/	2,328	0	



INTERSECTION TURNING MOVEMENT COUNTS

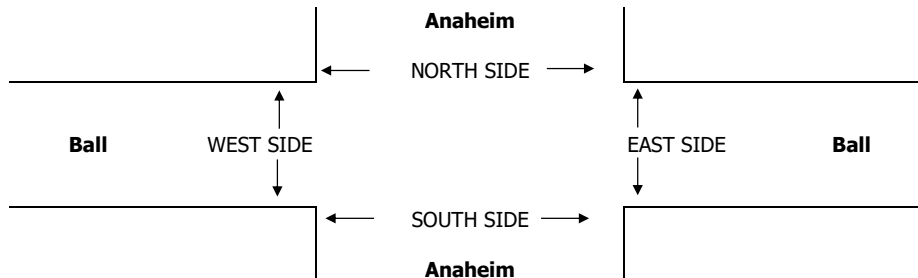
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Anaheim Ball	PROJECT #: SC3156 LOCATION #: 119 CONTROL: SIGNAL
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NOTES:	AM	PM	MD	OTHER	OTHER	▲ N	◀ W	E ▶	S ▼
--------	----	----	----	-------	-------	--------	-----	-----	--------

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			Ball			Ball			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	2	3	1	2	3	0	2	3	0	2	3	1	

AM	7:00 AM	17	80	22	30	165	15	21	133	16	28	153	14	694
	7:15 AM	15	70	23	37	163	15	32	209	21	23	183	10	801
	7:30 AM	26	77	64	55	213	21	23	163	21	40	184	16	903
	7:45 AM	14	101	38	37	189	30	28	223	33	17	170	14	894
	8:00 AM	36	78	31	31	183	27	26	185	18	26	136	15	792
	8:15 AM	19	86	22	28	137	29	39	170	19	27	173	14	763
	8:30 AM	36	99	21	20	139	26	37	139	24	31	168	20	760
	8:45 AM	16	80	14	26	129	27	33	172	34	30	192	18	771
	VOLUMES	179	671	235	264	1,318	190	239	1,394	186	222	1,359	121	6,378
	APPROACH %	16%	62%	22%	15%	74%	11%	13%	77%	10%	13%	80%	7%	
APP/DEPART	1,085	/	951	1,772	/	1,719	1,819	/	1,895	1,702	/	1,813	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	91	326	156	160	748	93	109	780	93	106	673	55	3,390	
APPROACH %	16%	57%	27%	16%	75%	9%	11%	79%	9%	13%	81%	7%		
PEAK HR FACTOR	0.858			0.866			0.864			0.869			0.939	
APP/DEPART	573	/	452	1,001	/	943	982	/	1,097	834	/	898	0	
PM	4:00 PM	53	200	41	23	212	27	35	179	27	39	227	47	1,110
	4:15 PM	55	176	28	24	157	29	54	163	33	54	333	34	1,140
	4:30 PM	43	198	25	27	173	38	42	186	41	36	270	30	1,109
	4:45 PM	55	202	25	35	190	30	25	177	19	41	298	37	1,134
	5:00 PM	57	254	24	23	185	26	47	172	22	42	324	43	1,219
	5:15 PM	32	202	20	26	231	36	35	219	41	34	304	31	1,211
	5:30 PM	52	260	31	26	157	22	41	181	26	40	233	34	1,103
	5:45 PM	58	255	20	28	155	31	33	145	30	48	244	23	1,070
	VOLUMES	405	1,747	214	212	1,460	239	312	1,422	239	334	2,233	279	9,096
	APPROACH %	17%	74%	9%	11%	76%	13%	16%	72%	12%	12%	78%	10%	
APP/DEPART	2,366	/	2,289	1,911	/	2,034	1,973	/	1,835	2,846	/	2,938	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	187	856	94	111	779	130	149	754	123	153	1,196	141	4,673	
APPROACH %	16%	75%	8%	11%	76%	13%	15%	73%	12%	10%	80%	9%		
PEAK HR FACTOR	0.849			0.870			0.869			0.911			0.958	
APP/DEPART	1,137	/	1,126	1,020	/	1,059	1,026	/	950	1,490	/	1,538	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Wed, Apr 6, 22

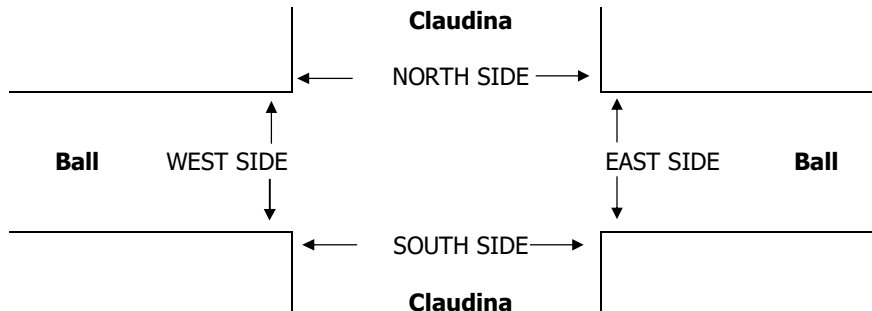
LOCATION: Anaheim
NORTH & SOUTH: Claudina
EAST & WEST: Ball

PROJECT #: SC3356
LOCATION #: 1
CONTROL: STOP N

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Claudina			Claudina			Ball			Ball			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	0	X	0	X	X	X	X	3	0	0	3	X	

AM	7:00 AM	3	0	6	0	0	0	0	207	11	7	191	0	425
	7:15 AM	0	0	9	0	0	0	0	244	8	8	253	0	522
	7:30 AM	2	0	5	0	0	0	0	257	11	10	254	0	539
	7:45 AM	1	0	5	0	0	0	0	249	5	6	188	0	454
	8:00 AM	4	0	8	0	0	0	0	281	11	9	264	0	577
	8:15 AM	2	0	9	0	0	0	0	211	6	1	218	0	447
	8:30 AM	2	0	10	0	0	0	0	208	6	10	267	0	503
	8:45 AM	5	0	9	0	0	0	0	176	2	10	217	0	419
	VOLUMES	19	0	61	0	0	0	0	1,833	60	61	1,852	0	3,890
	APPROACH %	24%	0%	76%	0%	0%	0%	0%	97%	3%	3%	97%	0%	
APP/DEPART	80	/	0	0	/	121	1,893	/	1,898	1,917	/	1,871	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	7	0	27	0	0	0	0	1,031	35	33	959	0	2,092	
APPROACH %	21%	0%	79%	0%	0%	0%	0%	97%	3%	3%	97%	0%		
PEAK HR FACTOR	0.708			0.000			0.913			0.908			0.906	
APP/DEPART	34	/	0	0	/	68	1,066	/	1,058	992	/	966	0	
PM	4:00 PM	5	0	13	0	0	0	0	222	10	11	324	0	585
	4:15 PM	1	0	11	0	0	0	0	245	0	7	369	0	633
	4:30 PM	4	0	14	0	0	0	0	281	4	11	391	0	705
	4:45 PM	1	0	7	0	0	0	0	225	2	7	337	0	579
	5:00 PM	5	0	11	0	0	0	0	244	6	13	398	0	677
	5:15 PM	3	0	13	0	0	0	0	226	7	7	387	0	643
	5:30 PM	0	0	10	0	0	0	0	221	1	11	294	0	537
	5:45 PM	1	0	5	0	0	0	0	209	2	8	315	0	540
	VOLUMES	20	0	84	0	0	0	0	1,873	32	75	2,815	0	4,901
	APPROACH %	19%	0%	81%	0%	0%	0%	0%	98%	2%	3%	97%	0%	
APP/DEPART	104	/	0	0	/	107	1,907	/	1,957	2,890	/	2,837	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	13	0	45	0	0	0	0	976	19	38	1,513	0	2,605	
APPROACH %	22%	0%	78%	0%	0%	0%	0%	98%	2%	2%	98%	0%		
PEAK HR FACTOR	0.806			0.000			0.874			0.943			0.924	
APP/DEPART	58	/	0	0	/	57	996	/	1,021	1,551	/	1,527	0	



INTERSECTION TURNING MOVEMENT COUNTS

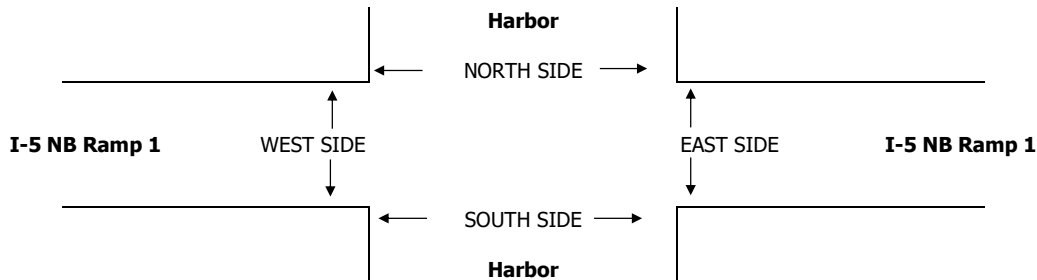
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Harbor I-5 NB Ramp 1	PROJECT #: LOCATION #: CONTROL:	SC3156 94 SIGNAL
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NOTES:	AM		▲ N	
	PM		◀ W	E ▶
	MD		S	
	OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Harbor			Harbor			I-5 NB Ramp 1			I-5 NB Ramp 1			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

AM	7:00 AM	0	116	61	4	281	0	0	0	0	23	0	155	640
	7:15 AM	0	152	66	1	374	0	0	0	0	19	0	172	784
	7:30 AM	0	131	35	1	365	0	0	0	0	28	0	200	760
	7:45 AM	0	135	60	1	352	0	0	0	0	26	0	208	782
	8:00 AM	0	152	58	1	338	0	0	0	0	26	0	172	747
	8:15 AM	0	171	44	4	331	0	0	0	0	26	0	190	766
	8:30 AM	0	145	73	1	263	0	0	0	0	30	0	186	698
	8:45 AM	0	164	71	2	237	0	0	0	0	27	0	194	695
	VOLUMES	0	1,166	468	15	2,541	0	0	0	0	205	0	1,477	5,872
	APPROACH %	0%	71%	29%	1%	99%	0%	0%	0%	0%	12%	0%	88%	
APP/DEPART	1,634	/	2,643	2,556	/	2,746	0	/	483	1,682	/	0	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	570	219	4	1,429	0	0	0	0	99	0	752	3,073	
APPROACH %	0%	72%	28%	0%	100%	0%	0%	0%	0%	12%	0%	88%		
PEAK HR FACTOR	0.905			0.955			0.000			0.909			0.980	
APP/DEPART	789	/	1,322	1,433	/	1,528	0	/	223	851	/	0	0	
PM	4:00 PM	0	279	108	4	287	0	0	0	15	0	197	890	
	4:15 PM	0	254	100	5	277	0	0	0	24	0	203	863	
	4:30 PM	0	272	107	6	312	0	0	0	20	0	219	936	
	4:45 PM	0	253	102	3	314	0	0	0	12	0	188	872	
	5:00 PM	0	296	104	8	303	0	0	0	12	0	195	918	
	5:15 PM	0	280	128	3	348	0	0	0	17	0	188	964	
	5:30 PM	0	331	115	4	280	0	0	0	13	0	173	916	
	5:45 PM	0	264	103	7	233	0	0	0	20	0	196	823	
	VOLUMES	0	2,229	867	40	2,354	0	0	0	0	133	0	1,559	7,182
	APPROACH %	0%	72%	28%	2%	98%	0%	0%	0%	0%	8%	0%	92%	
APP/DEPART	3,096	/	3,788	2,394	/	2,487	0	/	907	1,692	/	0	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	0	1,101	441	20	1,277	0	0	0	0	61	0	790	3,690	
APPROACH %	0%	71%	29%	2%	98%	0%	0%	0%	0%	7%	0%	93%		
PEAK HR FACTOR	0.945			0.924			0.000			0.890			0.957	
APP/DEPART	1,542	/	1,891	1,297	/	1,338	0	/	461	851	/	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

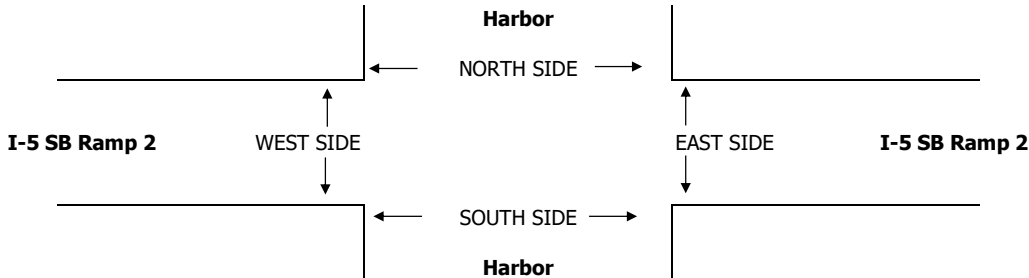
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Harbor I-5 SB Ramp 2	PROJECT #: LOCATION #: CONTROL:	SC3156 95 SIGNAL
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NOTES:	AM		▲ N	
	PM			
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Harbor			Harbor			I-5 SB Ramp 2			I-5 SB Ramp 2			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	4	X	X	3	1	2	X	1	X	X	X	

AM	7:00 AM	7	138	0	0	140	162	40	0	48	0	0	0	535
	7:15 AM	5	182	0	0	173	220	36	0	51	0	0	0	667
	7:30 AM	10	133	0	0	195	198	34	0	47	0	0	0	617
	7:45 AM	4	156	0	0	204	174	39	0	60	0	0	0	637
	8:00 AM	8	169	0	0	204	159	41	0	68	0	0	0	649
	8:15 AM	4	170	0	0	212	145	45	0	63	0	0	0	639
	8:30 AM	8	181	0	0	175	118	37	0	68	0	0	0	587
	8:45 AM	14	182	0	0	156	106	55	0	82	0	0	0	595
	VOLUMES	60	1,311	0	0	1,459	1,282	327	0	487	0	0	0	4,926
	APPROACH %	4%	96%	0%	0%	53%	47%	40%	0%	60%	0%	0%	0%	
APP/DEPART	1,371	/	1,638	2,741	/	1,946	814	/	0	0	/	1,342	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	27	640	0	0	776	751	150	0	226	0	0	0	2,570	
APPROACH %	4%	96%	0%	0%	51%	49%	40%	0%	60%	0%	0%	0%		
PEAK HR FACTOR	0.892			0.971			0.862			0.000			0.963	
APP/DEPART	667	/	790	1,527	/	1,002	376	/	0	0	/	778	0	
PM	4:00 PM	17	332	0	0	163	138	56	0	76	0	0	0	782
	4:15 PM	15	303	0	0	174	126	52	0	105	0	0	0	775
	4:30 PM	17	331	0	0	178	153	48	0	71	0	0	0	798
	4:45 PM	14	303	0	0	176	149	52	0	75	0	0	0	769
	5:00 PM	11	332	0	0	162	152	69	0	87	0	0	0	813
	5:15 PM	13	344	0	0	194	170	65	0	72	0	0	0	858
	5:30 PM	17	370	0	0	152	141	78	0	104	0	0	0	862
	5:45 PM	11	307	0	0	140	112	62	0	92	0	0	0	724
	VOLUMES	115	2,622	0	0	1,339	1,141	482	0	682	0	0	0	6,384
	APPROACH %	4%	96%	0%	0%	54%	46%	41%	0%	59%	0%	0%	0%	
APP/DEPART	2,739	/	3,105	2,481	/	2,023	1,164	/	0	0	/	1,256	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	55	1,349	0	0	684	612	264	0	338	0	0	0	3,303	
APPROACH %	4%	96%	0%	0%	53%	47%	44%	0%	56%	0%	0%	0%		
PEAK HR FACTOR	0.908			0.890			0.827			0.000			0.958	
APP/DEPART	1,405	/	1,613	1,296	/	1,023	602	/	0	0	/	667	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Wed, Nov 17, 21

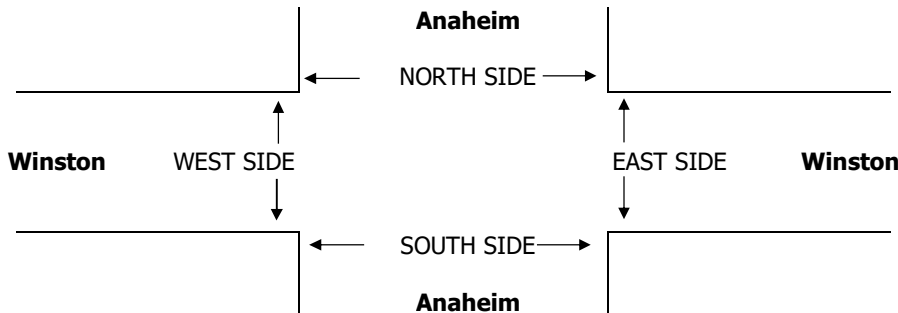
LOCATION: Anaheim
NORTH & SOUTH: Anaheim
EAST & WEST: Winston

PROJECT #: SC
LOCATION #: 17
CONTROL: STOP E/W

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			Winston			Winston			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	0	3	0	0	1	0	0	1	0	

AM	7:00 AM	5	106	0	1	202	5	5	0	22	0	0	4	350
	7:15 AM	8	117	2	0	214	13	7	0	19	0	0	1	381
	7:30 AM	9	139	0	0	265	9	16	0	21	0	0	0	459
	7:45 AM	9	146	0	3	214	17	10	0	14	0	0	2	415
	8:00 AM	19	140	0	2	210	17	6	0	32	0	0	1	427
	8:15 AM	21	153	2	3	207	19	10	0	39	0	0	0	454
	8:30 AM	30	141	1	3	188	26	9	0	37	0	0	2	437
	8:45 AM	19	114	2	0	173	13	6	0	38	0	0	2	367
	VOLUMES	120	1,056	7	12	1,673	119	69	0	222	0	0	12	3,290
	APPROACH %	10%	89%	1%	1%	93%	7%	24%	0%	76%	0%	0%	100%	
APP/DEPART	1,183	/	1,137	1,804	/	1,899	291	/	19	12	/	235	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	58	578	2	8	896	62	42	0	106	0	0	3	1,755	
APPROACH %	9%	91%	0%	1%	93%	6%	28%	0%	72%	0%	0%	100%		
PEAK HR FACTOR	0.906			0.881			0.755			0.375			0.956	
APP/DEPART	638	/	623	966	/	1,004	148	/	10	3	/	118	0	
PM	4:00 PM	21	212	4	2	221	8	9	0	5	0	0	0	482
	4:15 PM	17	277	2	0	227	20	4	0	16	0	0	3	566
	4:30 PM	14	282	2	2	243	10	9	0	19	1	0	10	592
	4:45 PM	20	270	0	0	236	15	9	0	19	1	0	4	574
	5:00 PM	19	323	2	0	246	19	6	0	16	0	0	2	633
	5:15 PM	24	307	0	0	272	22	10	0	11	0	0	1	647
	5:30 PM	17	329	1	1	225	20	7	0	14	0	0	1	615
	5:45 PM	12	299	2	0	212	11	8	0	15	0	0	1	560
	VOLUMES	144	2,299	13	5	1,882	125	62	0	115	2	0	22	4,669
	APPROACH %	6%	94%	1%	0%	94%	6%	35%	0%	65%	8%	0%	92%	
APP/DEPART	2,456	/	2,384	2,012	/	2,004	177	/	17	24	/	264	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	80	1,229	3	1	979	76	32	0	60	1	0	8	2,469	
APPROACH %	6%	94%	0%	0%	93%	7%	35%	0%	65%	11%	0%	89%		
PEAK HR FACTOR	0.945			0.898			0.821			0.450			0.954	
APP/DEPART	1,312	/	1,269	1,056	/	1,043	92	/	4	9	/	153	0	



INTERSECTION TURNING MOVEMENT COUNTS

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

DATE:
Wed, Apr 6, 22

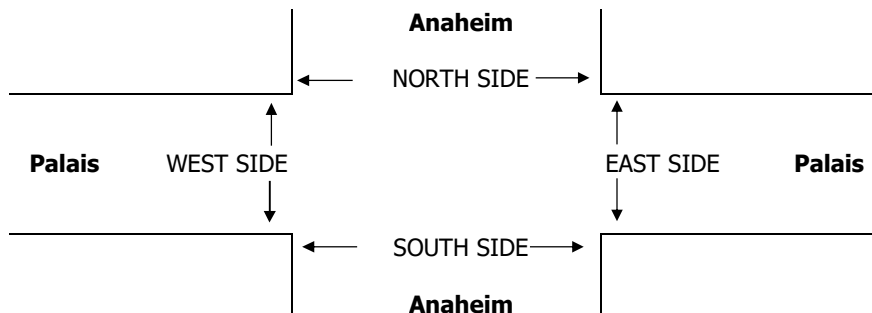
LOCATION: Anaheim
NORTH & SOUTH: Anaheim
EAST & WEST: Palais

PROJECT #: SC3356
LOCATION #: 2
CONTROL: SIGNAL

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

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			Palais			Palais			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	X	3	0	1	3	X	X	X	X	1	X	1	

AM	7:00 AM	0	120	8	1	190	0	0	0	0	8	0	3	330
	7:15 AM	0	141	9	1	223	0	0	0	0	11	0	2	387
	7:30 AM	0	161	9	2	266	0	0	0	0	14	0	2	454
	7:45 AM	0	166	8	8	246	0	0	0	0	8	0	3	439
	8:00 AM	0	164	13	6	209	0	0	0	0	4	0	3	399
	8:15 AM	0	167	12	2	208	0	0	0	0	3	0	0	392
	8:30 AM	0	150	12	0	189	0	0	0	0	6	0	3	360
	8:45 AM	0	133	14	4	174	0	0	0	0	6	0	5	336
	VOLUMES	0	1,202	85	24	1,705	0	0	0	0	60	0	21	3,097
	APPROACH %	0%	93%	7%	1%	99%	0%	0%	0%	0%	74%	0%	26%	
APP/DEPART	1,287	/	1,225	1,729	/	1,765	0	/	107	81	/	0	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	658	42	18	929	0	0	0	0	29	0	8	1,684	
APPROACH %	0%	94%	6%	2%	98%	0%	0%	0%	0%	78%	0%	22%		
PEAK HR FACTOR	0.978			0.883			0.000			0.578			0.927	
APP/DEPART	700	/	667	947	/	958	0	/	59	37	/	0	0	
PM	4:00 PM	0	297	10	0	238	0	0	0	0	16	0	9	570
	4:15 PM	0	269	12	4	220	0	0	0	0	10	0	8	523
	4:30 PM	0	273	6	6	258	0	0	0	0	10	0	6	559
	4:45 PM	0	259	5	1	250	0	0	0	0	17	0	0	532
	5:00 PM	0	293	6	1	251	0	0	0	0	22	0	5	578
	5:15 PM	0	295	6	2	272	0	0	0	0	11	0	2	588
	5:30 PM	0	344	6	2	233	0	0	0	0	6	0	7	598
	5:45 PM	0	284	2	4	205	0	0	0	0	14	0	3	512
	VOLUMES	0	2,314	53	20	1,927	0	0	0	0	106	0	40	4,460
	APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	73%	0%	27%	
APP/DEPART	2,367	/	2,358	1,947	/	2,033	0	/	69	146	/	0	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	1,191	23	6	1,006	0	0	0	0	56	0	14	2,296	
APPROACH %	0%	98%	2%	1%	99%	0%	0%	0%	0%	80%	0%	20%		
PEAK HR FACTOR	0.867			0.923			0.000			0.648			0.960	
APP/DEPART	1,214	/	1,206	1,012	/	1,062	0	/	28	70	/	0	0	



INTERSECTION TURNING MOVEMENT COUNTS

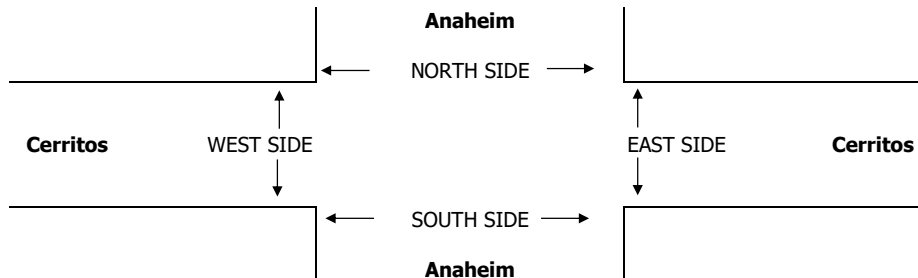
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Anaheim Cerritos	PROJECT #: SC3156 LOCATION #: 120 CONTROL: SIGNAL
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NOTES:	AM		▲ N	
	PM			
	MD	← W		E →
	OTHER		S	
	OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			Cerritos - Urbana			Cerritos - Urbana			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	1	1	3	0	0	1	0	1	1	1	

AM	7:00 AM	17	108	52	21	205	3	0	1	1	42	6	10	466
	7:15 AM	9	127	55	17	249	3	0	1	0	24	1	23	509
	7:30 AM	6	103	34	24	244	0	2	1	3	49	4	13	483
	7:45 AM	8	148	86	46	241	2	0	0	2	32	3	16	584
	8:00 AM	5	160	74	29	208	2	0	0	0	46	1	24	549
	8:15 AM	7	156	55	38	178	1	1	1	3	65	1	18	524
	8:30 AM	7	143	68	29	181	2	0	0	4	47	1	25	507
	8:45 AM	2	153	64	26	186	4	2	0	4	51	0	11	503
	VOLUMES	61	1,098	488	230	1,692	17	5	4	17	356	17	140	4,125
	APPROACH %	4%	67%	30%	12%	87%	1%	19%	15%	65%	69%	3%	27%	
APP/DEPART	1,647	/	1,242	1,939	/	2,102	26	/	722	513	/	59	0	
BEGIN PEAK HR	7:45 AM													
VOLUMES	27	607	283	142	808	7	1	1	9	190	6	83	2,164	
APPROACH %	3%	66%	31%	15%	84%	1%	9%	9%	82%	68%	2%	30%		
PEAK HR FACTOR	0.947			0.828			0.550			0.830			0.926	
APP/DEPART	917	/	691	957	/	1,025	11	/	426	279	/	22	0	
PM	4:00 PM	8	215	78	19	263	1	1	2	5	122	3	51	768
	4:15 PM	13	223	63	29	217	0	1	1	0	112	0	35	694
	4:30 PM	10	220	80	18	236	0	0	1	2	119	1	56	743
	4:45 PM	11	244	88	31	222	0	1	2	4	139	1	43	786
	5:00 PM	8	266	69	19	256	1	0	0	0	138	0	53	810
	5:15 PM	7	264	76	32	216	1	0	3	0	141	0	26	766
	5:30 PM	6	300	92	19	220	1	3	0	0	138	0	41	820
	5:45 PM	12	226	75	25	205	0	0	0	2	110	0	39	694
	VOLUMES	75	1,958	621	192	1,835	4	6	9	13	1,019	5	344	6,081
	APPROACH %	3%	74%	23%	9%	90%	0%	21%	32%	46%	74%	0%	25%	
APP/DEPART	2,654	/	2,308	2,031	/	2,939	28	/	822	1,368	/	12	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	32	1,074	325	101	914	3	4	5	4	556	1	163	3,182	
APPROACH %	2%	75%	23%	10%	90%	0%	31%	38%	31%	77%	0%	23%		
PEAK HR FACTOR	0.899			0.922			0.464			0.942			0.970	
APP/DEPART	1,431	/	1,241	1,018	/	1,506	13	/	431	720	/	4	0	



INTERSECTION TURNING MOVEMENT COUNTS

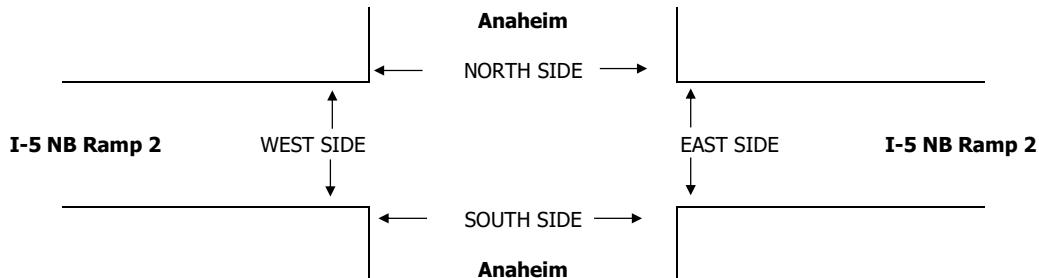
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Anaheim I-5 NB Ramp 2	PROJECT #: LOCATION #: CONTROL:	SC3156 121 SIGNAL
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NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			I-5 NB Ramp 2 -Anaheim Way			I-5 NB Ramp 2 -Anaheim Way			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	

AM	7:00 AM	46	113	0	0	206	20	0	0	0	1	4	67	457
	7:15 AM	42	129	0	0	260	25	0	0	0	4	9	64	533
	7:30 AM	61	78	0	0	251	28	0	0	0	2	4	68	492
	7:45 AM	58	154	0	0	224	34	0	0	0	5	7	95	577
	8:00 AM	48	145	0	0	237	34	0	0	0	8	5	90	567
	8:15 AM	38	153	0	0	206	48	0	0	0	7	4	87	543
	8:30 AM	46	139	0	0	195	36	0	0	0	3	5	68	492
	8:45 AM	39	154	0	0	207	39	0	0	0	2	6	62	509
	VOLUMES	378	1,065	0	0	1,786	264	0	0	0	32	44	601	4,171
	APPROACH %	26%	74%	0%	0%	87%	13%	0%	0%	0%	5%	6%	89%	
APP/DEPART	1,443	/	1,667	2,051	/	1,818	0	/	0	677	/	686	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	205	530	0	0	918	144	0	0	0	22	20	340	2,179	
APPROACH %	28%	72%	0%	0%	86%	14%	0%	0%	0%	6%	5%	89%		
PEAK HR FACTOR	0.867			0.952			0.000			0.893			0.944	
APP/DEPART	735	/	870	1,062	/	940	0	/	0	382	/	369	0	
PM	4:00 PM	47	177	0	0	285	90	0	0	0	29	41	103	772
	4:15 PM	43	158	0	0	279	73	0	0	0	18	36	116	723
	4:30 PM	50	188	0	0	301	85	0	0	0	37	43	126	830
	4:45 PM	56	183	0	0	269	97	0	0	0	18	51	160	834
	5:00 PM	64	189	0	0	273	106	0	0	0	13	62	129	836
	5:15 PM	60	179	0	0	301	91	0	0	0	8	91	148	878
	5:30 PM	65	237	0	0	255	96	0	0	0	10	70	149	882
	5:45 PM	59	163	0	0	226	74	0	0	0	11	71	143	747
	VOLUMES	444	1,474	0	0	2,189	712	0	0	0	144	465	1,074	6,505
	APPROACH %	23%	77%	0%	0%	75%	25%	0%	0%	0%	9%	28%	64%	
APP/DEPART	1,920	/	2,549	2,902	/	2,335	0	/	0	1,683	/	1,621	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	245	788	0	0	1,098	390	0	0	0	49	274	586	3,432	
APPROACH %	24%	76%	0%	0%	74%	26%	0%	0%	0%	5%	30%	64%		
PEAK HR FACTOR	0.856			0.950			0.000			0.920			0.973	
APP/DEPART	1,034	/	1,375	1,489	/	1,148	0	/	0	909	/	909	0	



INTERSECTION TURNING MOVEMENT COUNTS

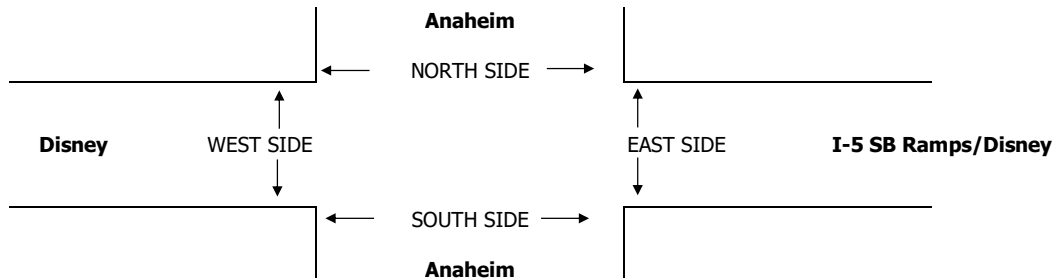
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: Thu, Oct 28, 21	LOCATION: NORTH & SOUTH: EAST & WEST:	Anaheim Anaheim I-5 SB Ramps/Disney	PROJECT #: LOCATION #: CONTROL:	SC3156 122 SIGNAL
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NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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LANES:	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			TOTAL
	Anaheim			Anaheim			Disney			I-5 SB Ramps - Disney			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
	1	3	0	2	2.5	0.5	2	3.5	0.5	X	3	0	

AM	7:00 AM	6	122	1	131	51	24	37	14	21	0	45	0	452
	7:15 AM	7	144	1	120	128	16	25	39	16	0	56	2	554
	7:30 AM	10	111	3	115	112	26	29	23	22	0	59	0	510
	7:45 AM	9	170	2	123	87	18	43	25	20	0	48	0	545
	8:00 AM	11	137	3	122	101	22	53	17	25	0	46	0	537
	8:15 AM	11	149	2	84	111	18	40	21	36	0	48	0	520
	8:30 AM	10	134	6	102	68	27	46	28	22	0	78	0	521
	8:45 AM	9	140	2	83	100	26	53	20	33	0	53	1	520
	VOLUMES	73	1,107	20	880	758	177	326	187	195	0	433	3	4,159
	APPROACH %	6%	92%	2%	48%	42%	10%	46%	26%	28%	0%	99%	1%	
APP/DEPART	1,200	/	1,449	1,815	/	969	708	/	1,074	436	/	667	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	37	562	9	480	428	82	150	104	83	0	209	2	2,146	
APPROACH %	6%	92%	1%	48%	43%	8%	45%	31%	25%	0%	99%	1%		
PEAK HR FACTOR	0.840			0.938			0.887			0.894			0.968	
APP/DEPART	608	/	718	990	/	521	337	/	589	211	/	318	0	
PM	4:00 PM	10	159	6	138	151	22	63	61	34	0	80	2	726
	4:15 PM	13	161	3	142	138	16	39	72	43	0	68	2	697
	4:30 PM	15	171	3	116	199	23	63	41	43	0	71	1	746
	4:45 PM	16	187	8	125	142	20	49	69	41	0	66	1	724
	5:00 PM	15	197	6	124	148	14	57	40	56	0	90	0	747
	5:15 PM	16	176	2	121	164	24	60	50	49	0	75	0	737
	5:30 PM	22	244	6	119	125	20	57	71	58	0	69	0	791
	5:45 PM	9	164	3	94	123	21	55	49	32	0	69	1	620
	VOLUMES	116	1,459	37	979	1,190	160	443	453	356	0	588	7	5,788
	APPROACH %	7%	91%	2%	42%	51%	7%	35%	36%	28%	0%	99%	1%	
APP/DEPART	1,612	/	1,925	2,329	/	1,570	1,252	/	1,453	595	/	840	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	69	804	22	489	579	78	223	230	204	0	300	1	2,999	
APPROACH %	8%	90%	2%	43%	51%	7%	34%	35%	31%	0%	100%	0%		
PEAK HR FACTOR	0.823			0.927			0.883			0.836			0.948	
APP/DEPART	895	/	1,037	1,146	/	798	657	/	732	301	/	432	0	



PEAK HOUR DRIVEWAY TURNING MOVEMENT COUNT

Prepared by: Fehr & Peers

Date: Thursday, May 5, 2022

Weather: Clear

Location: Anaheim

North & South: Technology Circle

East & West: Ball Road

Control: Side-street Stop Controlled

Time	EBL	WBR	SBL	SBR
7:00am-8:00am	100	23	1	7
4:30pm-5:30pm	1	2	4	21

01_ADT4 Anaheim north of Ball.

Suhsduhg#e|#DlpWG#OOF##who1#:47#586#::;

AM Period	NB	SB	PM Period	NB	SB	
0:00	38	31	12:00	138	182	
0:15	27	15	12:15	182	189	
0:30	22	19	12:30	152	178	
0:45	25 112	9 74	12:45	164 636	156 705	1341
1:00	15	16	13:00	164	156	
1:15	15	13	13:15	188	186	
1:30	7	15	13:30	166	166	
1:45	19 56	9 53	13:45	195 713	181 689	1402
2:00	8	13	14:00	179	233	
2:15	14	13	14:15	235	169	
2:30	13	16	14:30	204	188	
2:45	15 50	8 50	14:45	239 857	241 831	1688
3:00	9	12	15:00	216	205	
3:15	7	11	15:15	217	184	
3:30	10	25	15:30	254	262	
3:45	17 43	23 71	15:45	237 924	248 899	1823
4:00	14	18	16:00	276	262	
4:15	25	33	16:15	254	210	
4:30	21	61	16:30	262	238	
4:45	26 86	51 163	16:45	257 1049	255 965	2014
5:00	24	66	17:00	338	234	
5:15	39	77	17:15	269	293	
5:30	41	116	17:30	328	205	
5:45	64 168	118 377	17:45	305 1240	214 946	2186
6:00	55	108	18:00	253	216	
6:15	77	129	18:15	257	211	
6:30	77	155	18:30	244	193	
6:45	84 293	165 557	18:45	221 975	162 782	1757
7:00	103	210	19:00	252	161	
7:15	97	230	19:15	176	148	
7:30	121	274	19:30	176	145	
7:45	132 453	256 970	19:45	158 762	157 611	1373
8:00	114	241	20:00	120	121	
8:15	128	194	20:15	117	130	
8:30	139	185	20:30	111	95	
8:45	117 498	182 802	20:45	105 453	100 446	899
9:00	124	161	21:00	116	109	
9:15	122	159	21:15	125	110	
9:30	126	164	21:30	93	91	
9:45	138 510	159 643	21:45	107 441	120 430	871
10:00	119	163	22:00	97	107	
10:15	113	139	22:15	105	86	
10:30	127	178	22:30	76	73	
10:45	153 512	153 633	22:45	97 375	56 322	697
11:00	160	164	23:00	66	62	
11:15	146	159	23:15	65	49	
11:30	138	207	23:30	40	50	
11:45	157 601	196 726	23:45	42 213	41 202	415
Total Vol.	3382	5119	8501	8638	7828	16466
				Daily Totals		Combined
				NB	SB	
				12020	12947	24967
	AM			PM		
Split %	39.8%	60.2%	34.0%	52.5%	47.5%	66.0%
Peak Hour	11:45	7:15	7:15	17:00	16:30	17:00
Volume	629	1001	1465	1240	1020	2186
P.H.F.	0.86	0.91	0.93	0.93	0.87	0.96

ADT2 Anaheim Boulevard between Cerritos Avenue and I-5.

Suhsduhg#e|#DlpWG#OOF##who1#:47#586#::;

AM Period	NB	SB	PM Period	NB	SB	
0:00	42	56	12:00	197	208	
0:15	37	34	12:15	225	228	
0:30	37	26	12:30	238	190	
0:45	28 144	19 135	12:45	239 899	214 840	1739
1:00	28	29	13:00	247	250	
1:15	42	29	13:15	210	268	
1:30	17	29	13:30	241	246	
1:45	25 112	26 113	13:45	307 1005	261 1025	2030
2:00	15	17	14:00	241	246	
2:15	19	17	14:15	233	302	
2:30	25	22	14:30	298	328	
2:45	22 81	35 91	14:45	287 1059	318 1194	2253
3:00	18	14	15:00	281	321	
3:15	16	24	15:15	281	286	
3:30	25	27	15:30	291	332	
3:45	42 101	25 90	15:45	293 1146	350 1289	2435
4:00	34	30	16:00	314	350	
4:15	37	58	16:15	320	330	
4:30	65	63	16:30	319	340	
4:45	110 246	67 218	16:45	337 1290	346 1366	2656
5:00	69	77	17:00	326	362	
5:15	100	110	17:15	352	352	
5:30	113	122	17:30	373	288	
5:45	188 470	149 458	17:45	342 1393	272 1274	2667
6:00	131	175	18:00	311	298	
6:15	138	180	18:15	315	282	
6:30	157	214	18:30	259	248	
6:45	218 644	227 796	18:45	219 1104	303 1131	2235
7:00	198	201	19:00	217	279	
7:15	195	249	19:15	200	220	
7:30	213	277	19:30	177	219	
7:45	240 846	249 976	19:45	173 767	171 889	1656
8:00	241	236	20:00	165	148	
8:15	208	224	20:15	155	176	
8:30	195	214	20:30	135	139	
8:45	213 857	208 882	20:45	143 598	177 640	1238
9:00	193	189	21:00	122	152	
9:15	171	192	21:15	129	163	
9:30	168	227	21:30	129	169	
9:45	197 729	182 790	21:45	149 529	142 626	1155
10:00	169	177	22:00	91	171	
10:15	184	161	22:15	108	117	
10:30	163	160	22:30	105	107	
10:45	244 760	209 707	22:45	98 402	97 492	894
11:00	226	209	23:00	86	78	
11:15	209	209	23:15	54	64	
11:30	216	231	23:30	66	71	
11:45	226 877	232 881	23:45	45 251	53 266	517
Total Vol.	5867	6137	12004	10443	11032	21475
				Daily Totals		Combined
				NB	SB	
				16310	17169	33479
	AM			PM		
Split %	48.9%	51.1%	35.9%	48.6%	51.4%	64.1%
Peak Hour	7:30	7:15	7:15	17:00	16:30	16:45
Volume	902	1011	1900	1393	1400	2736
P.H.F.	0.94	0.91	0.97	0.95	0.97	0.97

05_ADT10 Ball east of Harbor.

Suhsduhg#e|#DlpWG#OOF##who1#:47#586#::;

AM Period	EB		WB		PM Period	EB		WB		
0:00	104		85		12:00	198		252		
0:15	85		49		12:15	195		218		
0:30	67		44		12:30	213		257		
0:45	57	313	40	218	531	12:45	224	830	215 942 1772	
1:00	36		26		13:00	206		232		
1:15	38		31		13:15	209		208		
1:30	33		31		13:30	216		318		
1:45	26	133	23	111	244	13:45	247	878	214 972 1850	
2:00	28		32		14:00	237		282		
2:15	29		28		14:15	239		351		
2:30	30		21		14:30	277		360		
2:45	33	120	25	106	226	14:45	271	1024	318 1311 2335	
3:00	20		28		15:00	262		271		
3:15	19		30		15:15	290		431		
3:30	42		34		15:30	269		295		
3:45	33	114	39	131	245	15:45	262	1083	349 1346 2429	
4:00	21		39		16:00	291		363		
4:15	57		74		16:15	249		368		
4:30	65		87		16:30	270		376		
4:45	100	243	77	277	520	16:45	263	1073	351 1458 2531	
5:00	75		71		17:00	241		427		
5:15	94		118		17:15	298		367		
5:30	141		129		17:30	266		324		
5:45	163	473	139	457	930	17:45	279	1084	377 1495 2579	
6:00	133		145		18:00	233		263		
6:15	192		191		18:15	253		315		
6:30	190		176		18:30	232		288		
6:45	227	742	157	669	1411	18:45	252	970	250 1116 2086	
7:00	202		217		19:00	203		222		
7:15	244		210		19:15	243		197		
7:30	247		315		19:30	217		169		
7:45	289	982	236	978	1960	19:45	193	856	173 761 1617	
8:00	236		231		20:00	199		169		
8:15	234		242		20:15	156		124		
8:30	222		227		20:30	173		122		
8:45	229	921	238	938	1859	20:45	202	730	149 564 1294	
9:00	180		240		21:00	169		130		
9:15	180		254		21:15	184		142		
9:30	183		252		21:30	167		131		
9:45	168	711	233	979	1690	21:45	173	693	123 526 1219	
10:00	177		243		22:00	168		180		
10:15	192		259		22:15	204		143		
10:30	170		240		22:30	210		116		
10:45	147	686	274	1016	1702	22:45	225	807	64 503 1310	
11:00	198		232		23:00	156		105		
11:15	154		221		23:15	175		90		
11:30	183		186		23:30	173		83		
11:45	207	742	245	884	1626	23:45	174	678	74 352 1030	
Total Vol.	6180		6764		12944	10706		11346		22052
						Daily Totals				
						EB	WB	Combined		
						16886	18110	34996		
	AM					PM				
Split %	47.7%	52.3%	37.0%			48.5%	51.5%	63.0%		
Peak Hour	7:15	7:30	7:30			15:15	16:15	16:30		
Volume	1016	1024	2030			1112	1522	2593		
P.H.F.	0.88	0.81	0.90			0.96	0.89	0.97		

Appendix B: Approved Projects

ID	Case Number	Address	Application Name	Use
1	DEV2019-00013	200 W Midway Dr	[DEV2019-00013] ANAHEIM RV PARK	Attached Townhomes
2	DEV2019-00035	1730 S Anaheim Way	[DEV2019-00035] ROSENDIN ELECTRIC	Warehouse
3	DEV2019-00042	2501 E Ball Rd	[DEV2019-00042] NEC BALL & SUNKIST	Commercial
4	DEV2019-00111	1455 S Salvation Pl	[DEV2019-00111] SALVATION ARMY PSH AND SHELTER	Emergency Shelter
5	DEV2019-00161	125 E Ball Rd	[DEV2019-00161] LA QUINTA INN & SUITES	Food Court
				Hotel
6	DEV2019-00168	122 W Broadway	BROADWAY TOWER APARTMENTS	Multifamily Residential
7	DEV2019-00173	1150 W Magic Way	[DEV2019-00173] DISNEYLAND HOTEL TIMESHARE	Timeshare Residential
8	DEV2019-00179	898 W Lincoln Ave	[DEV2019-00179] LINCOLN COLONY APARTMENTS	Multifamily Residential
9	DEV2020-00023	2300 E Winston Rd	[DEV2020-00023] RL CARRIERS ANAHEIM NEW SERVIC	Other
10	DEV2020-00125	2695 E Katella Ave	[DEV2020-00125] OC VIBE	Multifamily Residential
				Commercial
				Office
				Hotel
				Public Park
11	DEV2020-00126	1200 S Phoenix Club Dr	[DEV2020-00126] BALL ROAD MIXED-USE DEV	Commercial
				Multifamily Residential
12	DEV2020-00287	1338 E Katella Ave	A-Town - Development Area B	Multifamily Residential
				Commercial
13	DEV2020-00288	1845 S State College Blvd	A-Town - Development Area E	Multifamily Residential
14	DEV2021-00064	900 E Ball Rd	[DEV2021-00064]	Industrial Warehouse
15	DEV2021-00094	100 S Manchester Ave	ATN Maintenance Facility	Commercial
16	DEV2021-00125	270 E Palais Rd	[DEV2021-00125] 270 PALAIS INDUSTRIAL BLDG	Industrial
17	DEV2021-00131	Tract 17703	A-Town - Development Area F	Single Family Residential
18	DEV2021-00215	1844 S Haster St	Katella Gateway Anaheim	Hotel
				Retail
				Affordable Housing
				Multifamily Residential
19	DEV2022-00013	375 E Santa Ana St	Lumberyard	Single Family Attached Housing

Appendix C:
LOS
Worksheets

**Intersection Level Of Service Report
Intersection 1: Harbor Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.660

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	637	483	191	118	986	356	149	696	292	141	764	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	637	483	191	118	986	356	149	696	292	141	764	87
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]	168	127	50	31	259	94	39	183	77	37	201	23
Total Analysis Volume [veh/h]	671	508	201	124	1038	375	157	733	307	148	804	92
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.09	0.11	0.03	0.19	0.21	0.04	0.14	0.17	0.04	0.13	0.13
Intersection LOS	B											
Intersection V/C	0.660											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.444

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	91	326	156	160	748	93	109	780	93	106	673	55
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	91	326	156	160	748	93	109	780	93	106	673	55
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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	87	42	43	199	25	29	208	25	28	179	15
Total Analysis Volume [veh/h]	97	347	166	170	797	99	116	831	99	113	717	59
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.06	0.09	0.05	0.16	0.16	0.03	0.17	0.17	0.03	0.13	0.03
Intersection LOS	A											
Intersection V/C	0.444											

**Intersection Level Of Service Report
Intersection 3: Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	22.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.032

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	7	27	1031	35	33	959
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	27	1031	35	33	959
Peak Hour Factor	0.9060	0.9060	0.9060	0.9060	0.9060	0.9060
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	7	284	10	9	265
Total Analysis Volume [veh/h]	8	30	1138	39	36	1058
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.06	0.01	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	22.30	14.63	0.00	0.00	15.89	0.00
Movement LOS	C	B	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.32	0.32	0.00	0.00	0.30	0.00
95th-Percentile Queue Length [ft/ln]	7.93	7.93	0.00	0.00	7.47	0.00
d_A, Approach Delay [s/veh]	16.21		0.00		0.53	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.51					
Intersection LOS	C					

**Intersection Level Of Service Report
Intersection 4: I-5 NB Ramps & Harbor Blvd**

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.394

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↘		↙↑↑↑↑		↙↘↘	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	570	219	4	1429	99	752
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	66	0	0	0	226
Total Hourly Volume [veh/h]	570	153	4	1429	99	526
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	145	39	1	365	25	134
Total Analysis Volume [veh/h]	582	156	4	1458	101	537
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	35	35	0	40	13	13	13
g / C, Green / Cycle	0.53	0.53	0.01	0.62	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.11	0.10	0.00	0.21	0.06	0.17	0.17
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2702	843	14	4199	352	314	314
d1, Uniform Delay [s]	8.09	7.95	32.15	6.02	22.22	25.15	25.15
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.47	3.92	0.22	0.16	2.34	2.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.21	0.18	0.28	0.34	0.28	0.84	0.84
d, Delay for Lane Group [s/veh]	8.27	8.42	36.07	6.24	22.38	27.49	27.49
Lane Group LOS	A	A	D	A	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.19	1.02	0.08	1.78	1.21	3.80	3.80
50th-Percentile Queue Length [ft/ln]	29.76	25.44	1.88	44.38	30.31	95.05	95.05
95th-Percentile Queue Length [veh/ln]	2.14	1.83	0.14	3.20	2.18	6.84	6.84
95th-Percentile Queue Length [ft/ln]	53.57	45.79	3.38	79.88	54.55	171.08	171.08

Movement, Approach, & Intersection Results

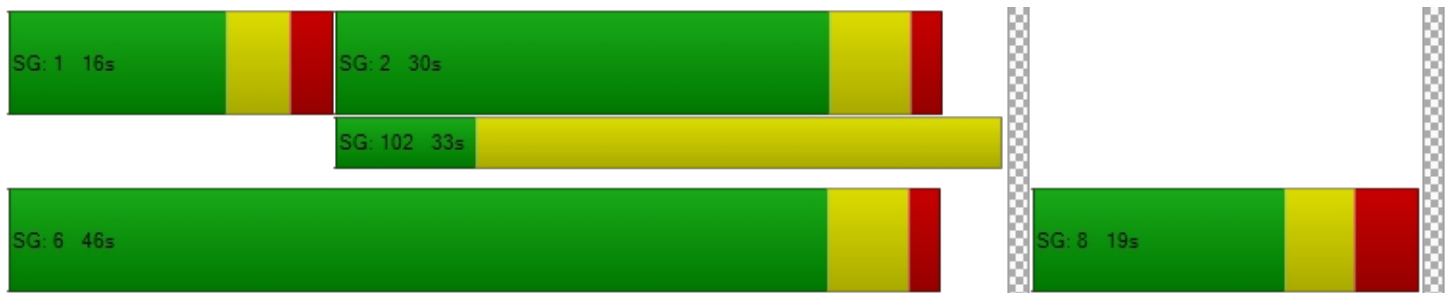
d_M, Delay for Movement [s/veh]	8.27	8.42	36.07	6.24	22.38	27.49
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	8.30		6.32		26.68	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.41					
Intersection LOS	B					
Intersection V/C	0.394					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.740
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	1.994	2.151	2.964
Bicycle LOS	A	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I-5 SB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	9.3
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.467

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	27	640	776	751	150	226
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	225	0	68
Total Hourly Volume [veh/h]	27	640	776	526	150	158
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	166	201	137	39	41
Total Analysis Volume [veh/h]	28	665	806	546	156	164
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	46	40	40	9	9
g / C, Green / Cycle	0.03	0.71	0.61	0.61	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.09	0.15	0.33	0.04	0.10
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	56	4829	3094	966	459	211
d1, Uniform Delay [s]	31.06	3.01	5.93	7.51	25.65	27.24
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	0.06	0.19	2.22	0.15	2.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.13	0.25	0.54	0.33	0.75
d, Delay for Lane Group [s/veh]	33.44	3.06	6.12	9.73	25.80	29.29
Lane Group LOS	C	A	A	A	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	0.39	1.27	3.71	1.00	2.33
50th-Percentile Queue Length [ft/ln]	10.81	9.77	31.63	92.80	24.93	58.23
95th-Percentile Queue Length [veh/ln]	0.78	0.70	2.28	6.68	1.79	4.19
95th-Percentile Queue Length [ft/ln]	19.46	17.58	56.93	167.05	44.87	104.81

Movement, Approach, & Intersection Results

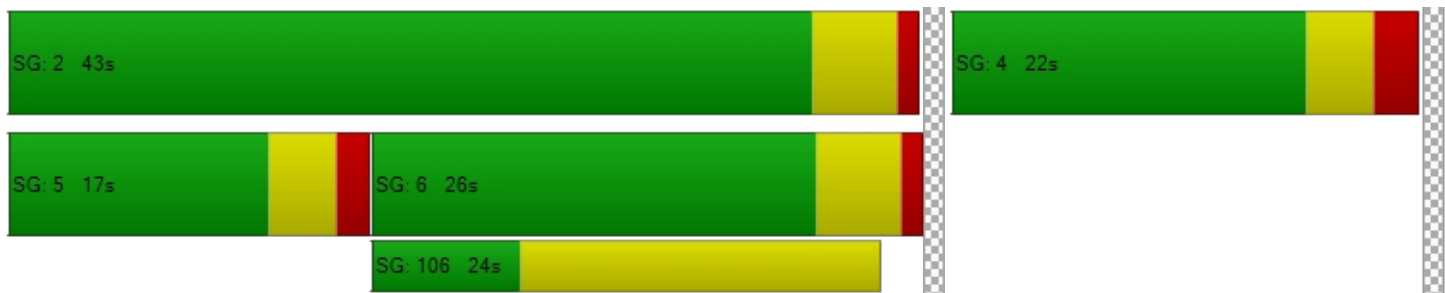
d_M, Delay for Movement [s/veh]	33.44	3.06	6.12	9.73	25.80	29.29
Movement LOS	C	A	A	A	C	C
d_A, Approach Delay [s/veh]	4.29		7.58		27.59	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	9.32					
Intersection LOS	A					
Intersection V/C	0.467					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.641
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.835	2.399	1.560
Bicycle LOS	A	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	41.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.278

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	58	578	2	8	896	62	42	0	106	0	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	578	2	8	896	62	42	0	106	0	0	3
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	0.9560	1.0000	0.9560	1.0000	1.0000	0.9560
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]	15	151	1	2	234	16	11	0	28	0	0	1
Total Analysis Volume [veh/h]	61	605	2	8	937	65	44	0	111	0	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.14	0.01	0.00	0.01	0.01	0.00	0.28	0.00	0.23	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	15.22	0.00	0.00	10.87	0.00	0.00	41.56	0.00	25.65	27.86	0.00	11.00
Movement LOS	C	A	A	B	A	A	E		D	D		B
95th-Percentile Queue Length [veh/ln]	0.49	0.00	0.00	0.04	0.00	0.00	3.00	0.00	3.00	0.02	0.00	0.02
95th-Percentile Queue Length [ft/ln]	12.32	0.00	0.00	0.98	0.00	0.00	75.00	0.00	75.00	0.38	0.00	0.38
d_A, Approach Delay [s/veh]	1.38			0.09			30.17			11.00		
Approach LOS	A			A			D			B		
d_I, Intersection Delay [s/veh]	3.12											
Intersection LOS	E											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.249

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	658	42	18	929	29	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	658	42	18	929	29	8
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	177	11	5	251	8	2
Total Analysis Volume [veh/h]	710	45	19	1002	31	9
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.14	0.01	0.18	0.02	0.00
Intersection LOS	A					
Intersection V/C	0.249					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.418

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔↔↔			↔↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	27	607	283	142	808	7	1	1	9	190	6	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	607	283	142	808	7	1	1	9	190	6	83
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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	164	76	38	218	2	0	0	2	51	2	22
Total Analysis Volume [veh/h]	29	656	306	153	873	8	1	1	10	205	6	90
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.12	0.17	0.08	0.16	0.16	0.00	0.01	0.01	0.11	0.00	0.05
Intersection LOS	A											
Intersection V/C	0.418											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	14.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.339

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	205	530	0	0	918	144	0	0	0	22	20	340
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	43	0	0	0	0	0	102
Total Hourly Volume [veh/h]	205	530	0	0	918	101	0	0	0	22	20	238
Peak Hour Factor	0.9440	0.9440	1.0000	1.0000	0.9440	0.9440	1.0000	1.0000	1.0000	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	140	0	0	243	27	0	0	0	6	5	63
Total Analysis Volume [veh/h]	217	561	0	0	972	107	0	0	0	23	21	252
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	58	58	58	58		58	58	58
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	36	21	21		10	10	10
g / C, Green / Cycle	0.17	0.62	0.36	0.36		0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.18	0.06		0.02	0.08	0.07
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	573	3180	1812	566		310	246	270
d1, Uniform Delay [s]	21.59	4.60	14.77	12.93		20.58	21.91	21.73
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.81	0.05	0.47	0.32		0.42	3.16	2.42
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.36	0.17	0.51	0.18		0.14	0.48	0.44
d, Delay for Lane Group [s/veh]	22.40	4.65	15.25	13.25		21.00	25.07	24.15
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.20	0.60	2.81	0.84		0.46	1.50	1.45
50th-Percentile Queue Length [ft/ln]	29.92	15.05	70.33	21.01		11.51	37.40	36.28
95th-Percentile Queue Length [veh/ln]	2.15	1.08	5.06	1.51		0.83	2.69	2.61
95th-Percentile Queue Length [ft/ln]	53.86	27.09	126.59	37.81		20.73	67.32	65.30

Movement, Approach, & Intersection Results

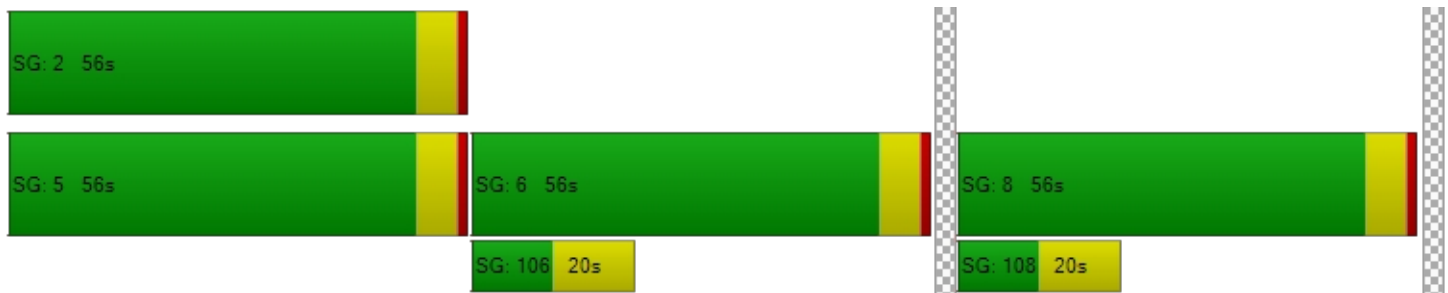
d_M, Delay for Movement [s/veh]	22.40	4.65	0.00	0.00	15.25	13.25	0.00	0.00	0.00	21.00	21.00	24.61
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	9.60				15.05		0.00		24.07			
Approach LOS	A				B		A		C			
d_I, Intersection Delay [s/veh]	14.32											
Intersection LOS	B											
Intersection V/C	0.339											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	14.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	16.82	16.82	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.940	1.865	0.000
Crosswalk LOS	F	C	A	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1716	1716	0	1716
d_b, Bicycle Delay [s]	0.59	0.59	29.14	0.59
I_b,int, Bicycle LOS Score for Intersection	1.964	2.144	4.132	1.875
Bicycle LOS	A	B	D	A

Sequence

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



Intersection Level Of Service Report

Intersection 10: Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	25.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.343

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	37	562	9	480	428	82	150	104	83	0	209	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	25	0	0	25	0	0	0
Total Hourly Volume [veh/h]	37	562	6	480	428	57	150	104	58	0	209	0
Peak Hour Factor	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	1.0000	0.9680	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	145	2	124	111	15	39	27	15	0	54	0
Total Analysis Volume [veh/h]	38	581	6	496	442	59	155	107	60	0	216	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	71	71	71	71	71	71	71	71	71	71
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	5	13	13	15	23	23	10	25	25	10
g / C, Green / Cycle	0.07	0.18	0.18	0.21	0.32	0.32	0.13	0.36	0.36	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.10	0.14	0.09	0.09	0.04	0.02	0.04	0.04
s, saturation flow rate [veh/h]	1781	3560	1860	3459	3560	1760	3459	5094	1589	5094
c, Capacity [veh/h]	131	643	336	729	1130	559	462	1814	566	705
d1, Uniform Delay [s]	31.21	26.73	26.73	25.77	18.26	18.27	27.96	15.08	15.33	27.58
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.48	1.79	3.43	2.19	0.30	0.60	0.87	0.03	0.17	0.50
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
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	0.28	0.58	0.58	0.66	0.29	0.29	0.32	0.06	0.10	0.30
d, Delay for Lane Group [s/veh]	33.69	28.51	30.16	27.96	18.55	18.87	28.82	15.11	15.50	28.08
Lane Group LOS	C	C	C	C	B	B	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.66	2.88	3.17	3.70	1.90	1.94	1.15	0.34	0.60	1.04
50th-Percentile Queue Length [ft/ln]	16.61	72.12	79.32	92.57	47.39	48.39	28.84	8.61	15.11	26.07
95th-Percentile Queue Length [veh/ln]	1.20	5.19	5.71	6.66	3.41	3.48	2.08	0.62	1.09	1.88
95th-Percentile Queue Length [ft/ln]	29.91	129.81	142.77	166.62	85.30	87.11	51.91	15.50	27.20	46.93

Movement, Approach, & Intersection Results

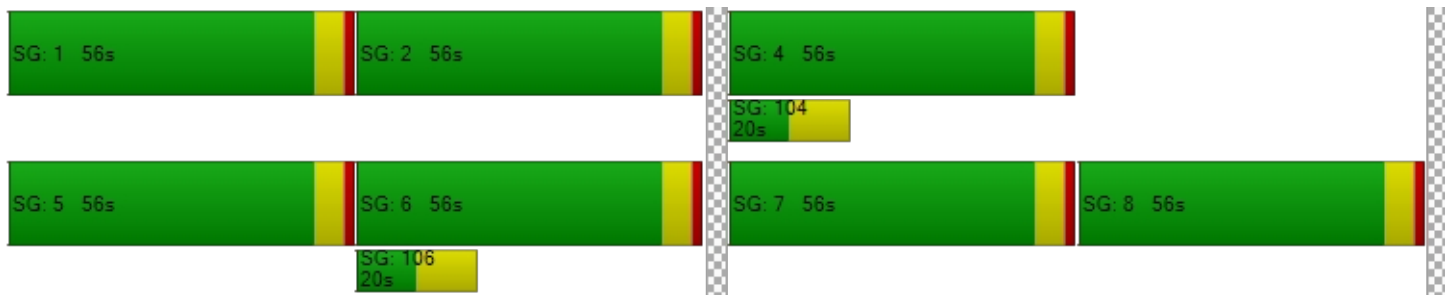
d_M, Delay for Movement [s/veh]	33.69	29.07	30.16	27.96	18.63	18.87	28.82	15.11	15.50	0.00	28.08	0.00
Movement LOS	C	C	C	C	B	B	C	B	B		C	
d_A, Approach Delay [s/veh]	29.36			23.29			21.77			28.08		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	25.30											
Intersection LOS	C											
Intersection V/C	0.343											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	22.94	0.00	22.94	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.763	0.000	2.952	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1406	1406	1406	1406
d_b, Bicycle Delay [s]	3.14	3.14	3.14	3.14
I_b,int, Bicycle LOS Score for Intersection	1.894	2.104	1.699	1.675
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	22.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.005

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶↷			↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	1	0	7	100	996	0	0	943	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1	0	7	100	996	0	0	943	23
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	2	26	262	0	0	248	6
Total Analysis Volume [veh/h]	0	0	0	1	0	7	105	1048	0	0	993	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.02	0.25	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.12	22.44	0.00	13.13	16.74	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	C		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.06	0.00	0.06	0.97	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.55	0.00	1.55	24.32	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.12		14.30			1.53			0.00			
Approach LOS	B		B			A			A			
d_I, Intersection Delay [s/veh]	0.86											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.740

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	675	920	288	79	824	368	252	688	312	153	1293	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	675	920	288	79	824	368	252	688	312	153	1293	75
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
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]	175	238	74	20	213	95	65	178	81	40	334	19
Total Analysis Volume [veh/h]	698	951	298	82	852	381	261	711	323	158	1337	78
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.18	0.17	0.02	0.16	0.22	0.07	0.13	0.18	0.05	0.20	0.20
Intersection LOS	C											
Intersection V/C	0.740											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.562

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	187	856	94	111	779	130	149	754	123	153	1196	141
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	187	856	94	111	779	130	149	754	123	153	1196	141
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	49	223	25	29	203	34	39	197	32	40	312	37
Total Analysis Volume [veh/h]	195	894	98	116	813	136	156	787	128	160	1248	147
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.17	0.06	0.03	0.18	0.18	0.04	0.17	0.17	0.05	0.23	0.08
Intersection LOS	A											
Intersection V/C	0.562											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.054

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	13	45	976	19	38	1513
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	45	976	19	38	1513
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	12	264	5	10	409
Total Analysis Volume [veh/h]	14	49	1056	21	41	1637
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.10	0.01	0.00	0.10	0.02
d_M, Delay for Movement [s/veh]	21.71	14.89	0.00	0.00	15.12	0.00
Movement LOS	C	B	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.55	0.55	0.00	0.00	0.32	0.00
95th-Percentile Queue Length [ft/ln]	13.75	13.75	0.00	0.00	8.00	0.00
d_A, Approach Delay [s/veh]	16.42		0.00		0.37	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.421

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1101	441	20	1277	61	790
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	132	0	0	0	237
Total Hourly Volume [veh/h]	1101	309	20	1277	61	553
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	288	81	5	334	16	144
Total Analysis Volume [veh/h]	1150	323	21	1334	64	578
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	33	33	2	40	13	13	13
g / C, Green / Cycle	0.50	0.50	0.03	0.61	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.22	0.19	0.01	0.19	0.03	0.17	0.17
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2553	797	53	4148	365	326	326
d1, Uniform Delay [s]	10.35	10.07	31.04	6.08	21.32	24.93	24.93
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.53	1.43	1.65	0.19	0.08	2.44	2.44
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.43	0.39	0.38	0.31	0.17	0.85	0.85
d, Delay for Lane Group [s/veh]	10.88	11.50	32.68	6.28	21.40	27.37	27.37
Lane Group LOS	B	B	C	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.88	2.57	0.32	1.60	0.72	4.00	4.00
50th-Percentile Queue Length [ft/ln]	72.04	64.34	7.91	39.90	18.01	99.91	99.91
95th-Percentile Queue Length [veh/ln]	5.19	4.63	0.57	2.87	1.30	7.19	7.19
95th-Percentile Queue Length [ft/ln]	129.67	115.82	14.24	71.81	32.42	179.84	179.84

Movement, Approach, & Intersection Results

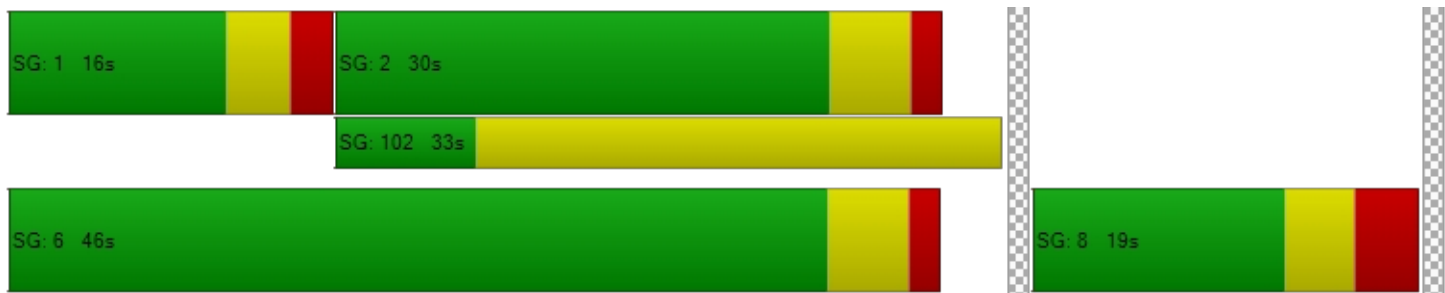
d_M, Delay for Movement [s/veh]	10.88	11.50	32.68	6.28	21.40	27.37
Movement LOS	B	B	C	A	C	C
d_A, Approach Delay [s/veh]	11.02		6.68		26.78	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.24					
Intersection LOS	B					
Intersection V/C	0.421					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.823
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.408	2.095	2.964
Bicycle LOS	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.6
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.475

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	55	1349	684	612	264	338
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	184	0	101
Total Hourly Volume [veh/h]	55	1349	684	428	264	237
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	352	178	112	69	62
Total Analysis Volume [veh/h]	57	1408	714	447	276	247
Presence of On-Street Parking	Yes	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	43	35	35	12	12
g / C, Green / Cycle	0.05	0.66	0.54	0.54	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.13	0.27	0.08	0.15
s, saturation flow rate [veh/h]	1603	6792	5094	1589	3459	1589
c, Capacity [veh/h]	80	4488	2743	856	632	291
d1, Uniform Delay [s]	30.46	4.68	8.02	9.50	23.57	25.59
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.85	0.17	0.22	2.10	0.16	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.30	0.25	0.50	0.42	0.82
d, Delay for Lane Group [s/veh]	34.31	4.85	8.24	11.60	23.74	27.78
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	1.32	1.43	3.55	1.68	3.43
50th-Percentile Queue Length [ft/ln]	22.20	33.02	35.68	88.75	42.11	85.78
95th-Percentile Queue Length [veh/ln]	1.60	2.38	2.57	6.39	3.03	6.18
95th-Percentile Queue Length [ft/ln]	39.97	59.44	64.23	159.75	75.80	154.41

Movement, Approach, & Intersection Results

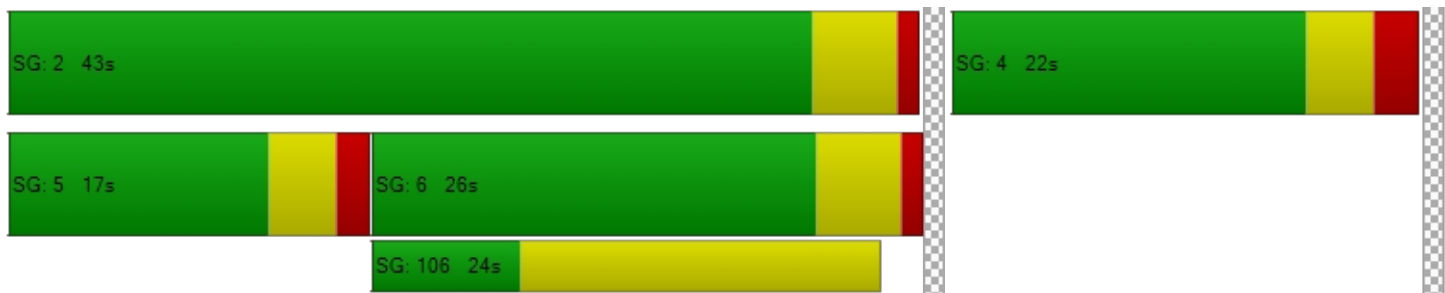
d_M, Delay for Movement [s/veh]	34.31	4.85	8.24	11.60	23.74	27.78
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	6.01		9.53		25.65	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.57					
Intersection LOS	B					
Intersection V/C	0.475					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.714
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.139	2.272	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	71.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.388

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	80	1229	3	1	979	76	32	0	60	1	0	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	1229	3	1	979	76	32	0	60	1	0	8
Peak Hour Factor	0.9540	0.9540	1.0000	1.0000	0.9540	0.9540	0.9540	1.0000	0.9540	1.0000	1.0000	0.9540
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]	21	322	1	0	257	20	8	0	16	0	0	2
Total Analysis Volume [veh/h]	84	1288	3	1	1026	80	34	0	63	1	0	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.22	0.01	0.00	0.00	0.01	0.00	0.39	0.00	0.14	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	17.49	0.00	0.00	16.96	0.00	0.00	71.48	0.00	36.26	64.06	0.00	15.28
Movement LOS	C	A	A	C	A	A	F		E	F		C
95th-Percentile Queue Length [veh/ln]	0.83	0.00	0.00	0.01	0.00	0.00	3.14	0.00	3.14	0.12	0.00	0.12
95th-Percentile Queue Length [ft/ln]	20.70	0.00	0.00	0.25	0.00	0.00	78.52	0.00	78.52	2.94	0.00	2.94
d_A, Approach Delay [s/veh]	1.07			0.02			48.51			20.70		
Approach LOS	A			A			E			C		
d_I, Intersection Delay [s/veh]	2.46											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.325

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1191	23	6	1006	56	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1191	23	6	1006	56	14
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	310	6	2	262	15	4
Total Analysis Volume [veh/h]	1241	24	6	1048	58	15
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.24	0.24	0.00	0.20	0.03	0.01
Intersection LOS	A					
Intersection V/C	0.325					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.652

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐⇐			⇐⇐⇐⇐			⇐⇐			⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	32	1074	325	101	914	3	4	5	4	556	1	163
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1074	325	101	914	3	4	5	4	556	1	163
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
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	277	84	26	236	1	1	1	1	143	0	42
Total Analysis Volume [veh/h]	33	1107	335	104	942	3	4	5	4	573	1	168
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.21	0.19	0.06	0.18	0.18	0.00	0.01	0.01	0.33	0.00	0.10
Intersection LOS	B											
Intersection V/C	0.652											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	19.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.453

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	245	788	0	0	1098	390	0	0	0	49	274	586
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	117	0	0	0	0	0	176
Total Hourly Volume [veh/h]	245	788	0	0	1098	273	0	0	0	49	274	410
Peak Hour Factor	0.9730	0.9730	1.0000	1.0000	0.9730	0.9730	1.0000	1.0000	1.0000	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	202	0	0	282	70	0	0	0	13	70	105
Total Analysis Volume [veh/h]	252	810	0	0	1128	281	0	0	0	50	282	421
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	76	76	76	76		76	76	76
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	46	30	30		18	18	18
g / C, Green / Cycle	0.13	0.61	0.40	0.40		0.23	0.23	0.23
(v / s)_i Volume / Saturation Flow Rate	0.07	0.15	0.22	0.17		0.15	0.15	0.15
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1853	1496	1589
c, Capacity [veh/h]	453	3095	2027	633		435	351	373
d1, Uniform Delay [s]	30.97	6.94	17.60	16.67		26.17	26.20	26.21
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.16	0.09	0.48	1.00		3.23	4.07	3.85
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.25	0.54	0.43		0.63	0.63	0.63
d, Delay for Lane Group [s/veh]	33.13	7.03	18.08	17.67		29.40	30.27	30.06
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.14	1.63	4.57	3.34		4.44	3.69	3.90
50th-Percentile Queue Length [ft/ln]	53.61	40.82	114.28	83.51		110.91	92.23	97.61
95th-Percentile Queue Length [veh/ln]	3.86	2.94	8.08	6.01		7.89	6.64	7.03
95th-Percentile Queue Length [ft/ln]	96.50	73.47	201.94	150.32		197.26	166.02	175.69

Movement, Approach, & Intersection Results

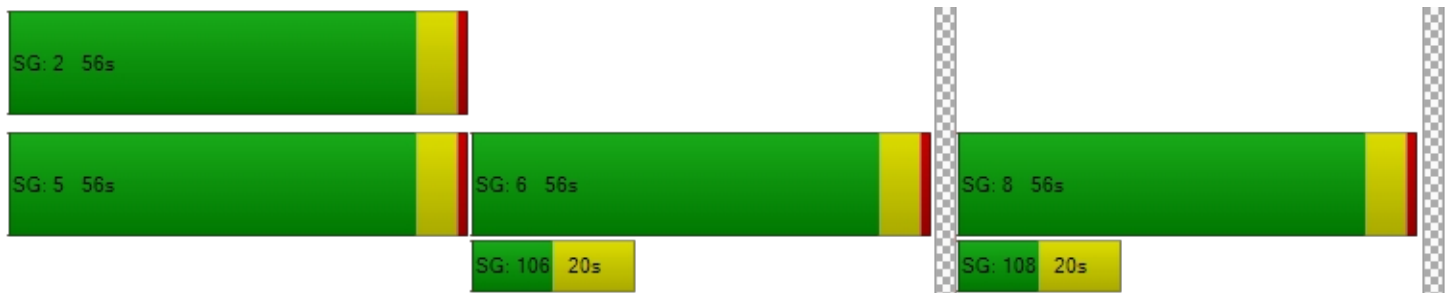
d_M, Delay for Movement [s/veh]	33.13	7.03	0.00	0.00	18.08	17.67	0.00	0.00	0.00	29.40	29.55	30.14
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	13.22				18.00		0.00		29.87			
Approach LOS	B				B		A		C			
d_I, Intersection Delay [s/veh]	19.20											
Intersection LOS	B											
Intersection V/C	0.453											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	14.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	25.29	25.29	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	3.212	2.145	0.000
Crosswalk LOS	F	C	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1316	1316	0	1316
d_b, Bicycle Delay [s]	4.45	4.45	38.00	4.45
I_b,int, Bicycle LOS Score for Intersection	2.128	2.378	4.132	2.310
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	27.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	69	804	22	489	579	78	223	230	204	0	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	23	0	0	61	0	0	0
Total Hourly Volume [veh/h]	69	804	15	489	579	55	223	230	143	0	300	0
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	1.0000	0.9480	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	212	4	129	153	15	59	61	38	0	79	0
Total Analysis Volume [veh/h]	73	848	16	516	611	58	235	243	151	0	316	0
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	79	79	79	79	79	79	79	79	79	79
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	19	19	16	28	28	10	26	26	10
g / C, Green / Cycle	0.10	0.24	0.24	0.21	0.35	0.35	0.13	0.33	0.33	0.13
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.15	0.14	0.12	0.12	0.06	0.05	0.09	0.06
s, saturation flow rate [veh/h]	1781	3560	1853	3459	3560	1788	3459	5094	1589	5094
c, Capacity [veh/h]	176	858	446	713	1240	623	433	1662	519	641
d1, Uniform Delay [s]	33.56	26.98	26.98	29.16	19.15	19.15	32.51	18.88	19.81	32.27
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.03	1.63	3.14	2.53	0.35	0.69	2.04	0.08	0.61	1.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.63	0.63	0.69	0.34	0.34	0.52	0.14	0.28	0.47
d, Delay for Lane Group [s/veh]	36.60	28.61	30.13	31.69	19.49	19.84	34.56	18.96	20.42	33.41
Lane Group LOS	D	C	C	C	B	B	C	B	C	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.35	4.52	4.90	4.35	2.75	2.83	2.05	0.95	1.93	1.78
50th-Percentile Queue Length [ft/ln]	33.78	112.94	122.40	108.74	68.87	70.85	51.26	23.86	48.29	44.62
95th-Percentile Queue Length [veh/ln]	2.43	8.00	8.52	7.77	4.96	5.10	3.69	1.72	3.48	3.21
95th-Percentile Queue Length [ft/ln]	60.81	200.09	213.12	194.25	123.96	127.53	92.27	42.95	86.92	80.31

Movement, Approach, & Intersection Results

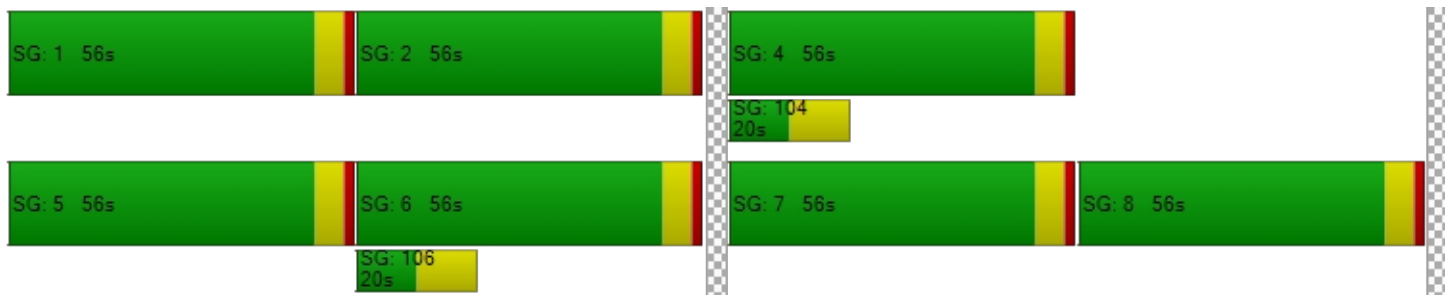
d_M, Delay for Movement [s/veh]	36.60	29.11	30.13	31.69	19.59	19.84	34.56	18.96	20.42	0.00	33.41	0.00
Movement LOS	D	C	C	C	B	B	C	B	C		C	
d_A, Approach Delay [s/veh]	29.71			24.87			25.15			33.41		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	27.29											
Intersection LOS	C											
Intersection V/C	0.433											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.91	0.00	26.91	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.866	0.000	3.065	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1260	1260	1260	1260
d_b, Bicycle Delay [s]	5.43	5.43	5.43	5.43
I_b,int, Bicycle LOS Score for Intersection	2.052	2.190	1.831	1.725
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	50.5
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.048

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↻			↵			↵↻↻			↻↻↻		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	4	0	21	1	958	0	0	1524	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	4	0	21	1	958	0	0	1524	2
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	6	0	252	0	0	401	1
Total Analysis Volume [veh/h]	0	0	0	4	0	22	1	1008	0	0	1604	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.07	0.00	0.01	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	12.90	50.45	0.00	19.38	21.72	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	F		C	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.40	0.00	0.40	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	10.04	0.00	10.04	0.35	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	12.90			24.35			0.02			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.25											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type: Signalized
Analysis Method: ICU 1
Analysis Period: 1 hour

Delay (sec / veh): -
Level Of Service: B
Volume to Capacity (v/c): 0.670

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	642	484	266	118	988	357	149	795	294	165	974	87
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	642	484	266	118	988	357	149	795	294	165	974	87
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]	169	127	70	31	260	94	39	209	77	43	256	23
Total Analysis Volume [veh/h]	676	509	280	124	1040	376	157	837	309	174	1025	92
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.19	0.09	0.16	0.03	0.19	0.21	0.04	0.16	0.17	0.05	0.16	0.16
Intersection LOS	B											
Intersection V/C	0.670											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: A
 Volume to Capacity (v/c): 0.497

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	147	344	179	165	766	114	136	917	103	107	834	56
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	147	344	179	165	766	114	136	917	103	107	834	56
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	92	48	44	204	30	36	244	27	28	222	15
Total Analysis Volume [veh/h]	157	366	191	176	816	121	145	977	110	114	888	60
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.07	0.11	0.05	0.17	0.17	0.04	0.20	0.20	0.03	0.16	0.03
Intersection LOS	A											
Intersection V/C	0.497											

Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	27.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.087

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	16	35	1144	78	50	1114
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	35	1144	78	50	1114
Peak Hour Factor	0.9060	0.9060	0.9060	0.9060	0.9060	0.9060
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	10	316	22	14	307
Total Analysis Volume [veh/h]	18	39	1263	86	55	1230
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.09	0.01	0.00	0.16	0.01
d_M, Delay for Movement [s/veh]	27.45	17.43	0.00	0.00	19.09	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.66	0.66	0.00	0.00	0.58	0.00
95th-Percentile Queue Length [ft/ln]	16.46	16.46	0.00	0.00	14.62	0.00
d_A, Approach Delay [s/veh]	20.57		0.00		0.82	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.404

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	628	230	4	1457	99	774
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	69	0	0	0	232
Total Hourly Volume [veh/h]	628	161	4	1457	99	542
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	160	41	1	372	25	138
Total Analysis Volume [veh/h]	641	164	4	1487	101	553
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	34	34	0	40	13	13	13
g / C, Green / Cycle	0.53	0.53	0.01	0.61	0.20	0.20	0.20
(v / s)_i Volume / Saturation Flow Rate	0.12	0.10	0.00	0.21	0.06	0.17	0.17
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2679	836	14	4168	360	322	322
d1, Uniform Delay [s]	8.36	8.15	32.15	6.20	21.97	25.01	25.01
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.51	3.92	0.23	0.15	2.39	2.39
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.19	0.28	0.35	0.27	0.84	0.84
d, Delay for Lane Group [s/veh]	8.56	8.67	36.07	6.43	22.12	27.40	27.40
Lane Group LOS	A	A	D	A	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.35	1.09	0.08	1.86	1.20	3.92	3.92
50th-Percentile Queue Length [ft/ln]	33.75	27.35	1.88	46.49	30.07	97.88	97.88
95th-Percentile Queue Length [veh/ln]	2.43	1.97	0.14	3.35	2.17	7.05	7.05
95th-Percentile Queue Length [ft/ln]	60.75	49.22	3.38	83.68	54.13	176.18	176.18

Movement, Approach, & Intersection Results

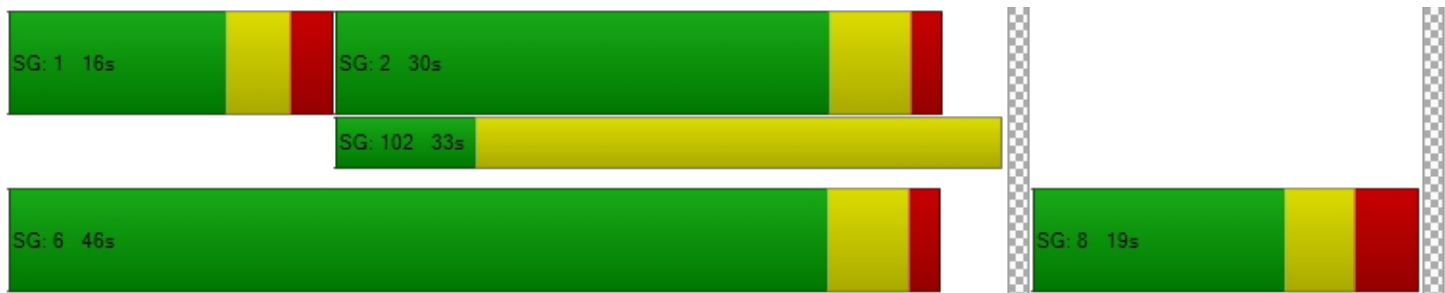
d_M, Delay for Movement [s/veh]	8.56	8.67	36.07	6.43	22.12	27.40
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	8.59		6.51		26.58	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.53					
Intersection LOS	B					
Intersection V/C	0.404					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.758
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.032	2.162	3.000
Bicycle LOS	B	B	C

Sequence




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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.486

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	27	657	780	775	202	244
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	233	0	73
Total Hourly Volume [veh/h]	27	657	780	542	202	171
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	171	202	141	52	44
Total Analysis Volume [veh/h]	28	682	810	563	210	178
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	46	39	39	9	9
g / C, Green / Cycle	0.03	0.70	0.60	0.60	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.15	0.34	0.06	0.11
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	56	4767	3048	951	490	225
d1, Uniform Delay [s]	31.06	3.21	6.21	7.98	25.51	26.92
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	0.06	0.20	2.50	0.21	2.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.14	0.26	0.57	0.41	0.76
d, Delay for Lane Group [s/veh]	33.44	3.27	6.42	10.48	25.72	28.93
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.43	0.43	1.32	4.06	1.35	2.51
50th-Percentile Queue Length [ft/ln]	10.81	10.81	33.12	101.39	33.68	62.68
95th-Percentile Queue Length [veh/ln]	0.78	0.78	2.38	7.30	2.42	4.51
95th-Percentile Queue Length [ft/ln]	19.46	19.46	59.61	182.50	60.62	112.83

Movement, Approach, & Intersection Results

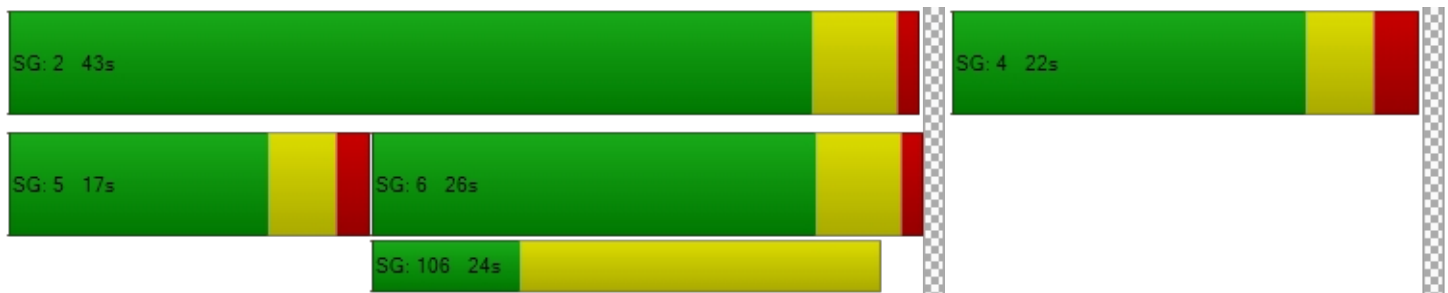
d_M, Delay for Movement [s/veh]	33.44	3.27	6.42	10.48	25.72	28.93
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	4.46		8.08		27.19	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.04					
Intersection LOS	B					
Intersection V/C	0.486					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.670
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.842	2.415	1.560
Bicycle LOS	A	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	45.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.298

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	58	611	15	0	929	62	42	0	106	0	0	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	58	611	15	0	929	62	42	0	106	0	0	23
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	0.9560	1.0000	0.9560	1.0000	1.0000	0.9560
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]	15	160	4	0	243	16	11	0	28	0	0	6
Total Analysis Volume [veh/h]	61	639	15	0	972	65	44	0	111	0	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.15	0.01	0.00	0.00	0.01	0.00	0.30	0.00	0.24	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	15.67	0.00	0.00	0.00	0.00	0.00	45.45	0.00	27.96	0.00	0.00	11.43
Movement LOS	C	A	A		A	A	E		D			B
95th-Percentile Queue Length [veh/ln]	0.51	0.00	0.00	0.00	0.00	0.00	3.31	0.00	3.31	0.00	0.00	0.12
95th-Percentile Queue Length [ft/ln]	12.86	0.00	0.00	0.00	0.00	0.00	82.64	0.00	82.64	0.00	0.00	3.08
d_A, Approach Delay [s/veh]	1.33		0.00		32.93		11.43					
Approach LOS	A		A		D		B					
d_I, Intersection Delay [s/veh]	3.27											
Intersection LOS	E											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.285

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	706	47	18	962	78	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	706	47	18	962	78	8
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	190	13	5	259	21	2
Total Analysis Volume [veh/h]	762	51	19	1038	84	9
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.15	0.01	0.19	0.05	0.00
Intersection LOS	A					
Intersection V/C	0.285					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.437

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔↔↔			↔↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	27	688	295	154	893	7	1	1	9	199	6	91
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	688	295	154	893	7	1	1	9	199	6	91
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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	186	80	42	241	2	0	0	2	54	2	25
Total Analysis Volume [veh/h]	29	743	319	166	964	8	1	1	10	215	6	98
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.13	0.17	0.09	0.18	0.18	0.00	0.01	0.01	0.12	0.00	0.05
Intersection LOS	A											
Intersection V/C	0.437											

Intersection Level Of Service Report

Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	15.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.376

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	205	545	0	0	1008	148	0	0	0	22	20	417
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	44	0	0	0	0	0	125
Total Hourly Volume [veh/h]	205	545	0	0	1008	104	0	0	0	22	20	292
Peak Hour Factor	0.9440	0.9440	1.0000	1.0000	0.9440	0.9440	1.0000	1.0000	1.0000	0.9440	0.9440	0.9440
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	144	0	0	267	28	0	0	0	6	5	77
Total Analysis Volume [veh/h]	217	577	0	0	1068	110	0	0	0	23	21	309
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	61	61	61	61		61	61	61
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	39	24	24		10	10	10
g / C, Green / Cycle	0.16	0.64	0.38	0.38		0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.11	0.20	0.07		0.02	0.10	0.09
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	547	3254	1952	609		303	241	264
d1, Uniform Delay [s]	23.20	4.50	14.60	12.53		21.91	23.81	23.57
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	0.91	0.05	0.45	0.28		0.44	5.30	3.87
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.17	0.52	0.17		0.14	0.61	0.55
d, Delay for Lane Group [s/veh]	24.11	4.55	15.06	12.81		22.35	29.11	27.43
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.30	0.64	3.19	0.87		0.50	2.09	2.00
50th-Percentile Queue Length [ft/ln]	32.38	15.91	79.74	21.83		12.40	52.17	49.97
95th-Percentile Queue Length [veh/ln]	2.33	1.15	5.74	1.57		0.89	3.76	3.60
95th-Percentile Queue Length [ft/ln]	58.28	28.63	143.53	39.29		22.31	93.90	89.95

Movement, Approach, & Intersection Results

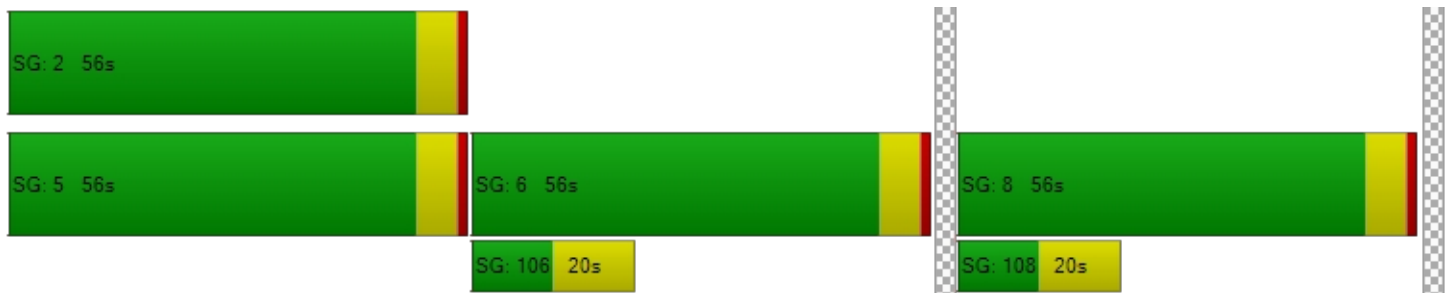
d_M, Delay for Movement [s/veh]	24.11	4.55	0.00	0.00	15.06	12.81	0.00	0.00	0.00	22.35	22.35	28.27
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	9.90				14.85		0.00		27.53			
Approach LOS	A				B		A		C			
d_I, Intersection Delay [s/veh]	15.08											
Intersection LOS	B											
Intersection V/C	0.376											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0		14.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		18.31		18.31		0.00	
I_p,int, Pedestrian LOS Score for Intersection	0.000		2.975		1.871		0.000	
Crosswalk LOS	F		C		A		F	
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1628		1628		0		1628	
d_b, Bicycle Delay [s]	1.06		1.06		30.71		1.06	
I_b,int, Bicycle LOS Score for Intersection	1.972		2.195		4.132		1.938	
Bicycle LOS	A		B		D		A	

Sequence

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






Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	26.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.369

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	37	573	9	559	439	82	155	104	83	0	209	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	25	0	0	25	0	0	0
Total Hourly Volume [veh/h]	37	573	6	559	439	57	155	104	58	0	209	0
Peak Hour Factor	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	1.0000	0.9680	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	148	2	144	113	15	40	27	15	0	54	0
Total Analysis Volume [veh/h]	38	592	6	577	454	59	160	107	60	0	216	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	74	74	74	74	74	74	74	74	74	74
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	5	13	13	18	26	26	10	25	25	10
g / C, Green / Cycle	0.07	0.18	0.18	0.24	0.34	0.34	0.13	0.34	0.34	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.16	0.09	0.09	0.04	0.02	0.04	0.04
s, saturation flow rate [veh/h]	1781	3560	1860	3459	3560	1762	3459	5094	1589	5094
c, Capacity [veh/h]	129	641	335	819	1226	607	446	1741	543	675
d1, Uniform Delay [s]	32.77	28.08	28.09	25.92	17.69	17.70	29.64	16.50	16.78	29.29
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	1.88	3.62	2.17	0.25	0.51	0.99	0.03	0.18	0.55
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.29	0.59	0.59	0.68	0.27	0.27	0.35	0.06	0.11	0.31
d, Delay for Lane Group [s/veh]	35.34	29.97	31.70	28.09	17.94	18.21	30.63	16.53	16.96	29.84
Lane Group LOS	D	C	C	C	B	B	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.70	3.12	3.42	4.48	1.95	1.99	1.27	0.38	0.66	1.11
50th-Percentile Queue Length [ft/ln]	17.50	77.92	85.59	111.94	48.86	49.69	31.78	9.41	16.49	27.81
95th-Percentile Queue Length [veh/ln]	1.26	5.61	6.16	7.95	3.52	3.58	2.29	0.68	1.19	2.00
95th-Percentile Queue Length [ft/ln]	31.51	140.26	154.07	198.69	87.95	89.45	57.21	16.94	29.69	50.06

Movement, Approach, & Intersection Results

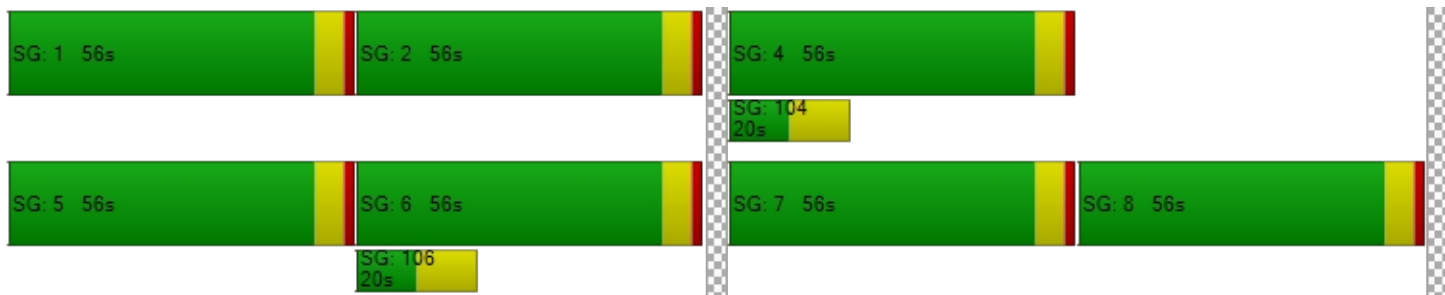
d_M, Delay for Movement [s/veh]	35.34	30.55	31.70	28.09	18.00	18.21	30.63	16.53	16.96	0.00	29.84	0.00
Movement LOS	D	C	C	C	B	B	C	B	B		C	
d_A, Approach Delay [s/veh]	30.85			23.36			23.50			29.84		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.10											
Intersection LOS	C											
Intersection V/C	0.369											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.56	0.00	24.56	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.769	0.000	2.955	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1343	1343	1343	1343
d_b, Bicycle Delay [s]	4.02	4.02	4.02	4.02
I_b,int, Bicycle LOS Score for Intersection	1.900	2.154	1.701	1.675
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.006

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↷			↶			↷↷↶			↷↶		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	52	1	0	7	100	1161	60	0	1107	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	52	1	0	7	100	1161	60	0	1107	23
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	14	0	0	2	26	306	16	0	291	6
Total Analysis Volume [veh/h]	0	0	55	1	0	7	105	1222	63	0	1165	23
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.14	0.01	0.00	0.02	0.30	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	16.16	27.87	0.00	14.24	20.07	0.00	0.00	0.00	0.00	0.00
Movement LOS			C	D		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.48	0.07	0.00	0.07	1.24	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	12.05	1.82	0.00	1.82	31.11	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.16		15.94			1.52		0.00				
Approach LOS	C		C			A		A				
d_I, Intersection Delay [s/veh]	1.18											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

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

Volumes

Name	Claudina St					
Base Volume Input [veh/h]	5	35	102	26	16	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	35	102	26	16	23
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	9	27	7	4	6
Total Analysis Volume [veh/h]	5	37	107	27	17	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.48	0.00	0.00	0.00	9.53	9.03
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.26	0.26	0.00	0.00	3.44	3.44
d_A, Approach Delay [s/veh]	0.93		0.00		9.23	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.92					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C

Control Type:	Two-way stop	Delay (sec / veh):	12.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	603	26	0	976	0	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	603	26	0	976	0	67
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	7	0	257	0	18
Total Analysis Volume [veh/h]	635	27	0	1027	0	71
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.00
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.76
d_A, Approach Delay [s/veh]	0.00		0.00		12.00	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.774

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	679	922	397	79	825	369	253	822	317	186	1505	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	679	922	397	79	825	369	253	822	317	186	1505	75
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
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]	176	238	103	20	213	95	65	213	82	48	389	19
Total Analysis Volume [veh/h]	702	953	411	82	853	382	262	850	328	192	1556	78
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.18	0.23	0.02	0.16	0.22	0.07	0.16	0.19	0.05	0.23	0.23
Intersection LOS	C											
Intersection V/C	0.774											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: B
 Volume to Capacity (v/c): 0.630

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	234	882	123	117	797	167	190	954	124	156	1360	142
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	234	882	123	117	797	167	190	954	124	156	1360	142
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	61	230	32	31	208	44	50	249	32	41	355	37
Total Analysis Volume [veh/h]	244	921	128	122	832	174	198	996	129	163	1420	148
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.17	0.07	0.03	0.19	0.19	0.06	0.21	0.21	0.05	0.27	0.08
Intersection LOS	B											
Intersection V/C	0.630											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	28.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.097

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	18	55	1143	58	51	1675
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	55	1143	58	51	1675
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	15	309	16	14	453
Total Analysis Volume [veh/h]	19	60	1237	63	55	1813
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	Yes		
Number of Storage Spaces in Median	5	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.14	0.01	0.00	0.16	0.02
d_M, Delay for Movement [s/veh]	28.23	18.26	0.00	0.00	18.76	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.95	0.95	0.00	0.00	0.58	0.00
95th-Percentile Queue Length [ft/ln]	23.73	23.73	0.00	0.00	14.55	0.00
d_A, Approach Delay [s/veh]	20.72		0.00		0.55	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.82					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	12.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.445

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1184	449	20	1316	61	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	135	0	0	0	247
Total Hourly Volume [veh/h]	1184	314	20	1316	61	575
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	309	82	5	344	16	150
Total Analysis Volume [veh/h]	1237	328	21	1375	64	601
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	32	32	2	39	14	14	14
g / C, Green / Cycle	0.50	0.50	0.03	0.61	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.23	0.20	0.01	0.19	0.03	0.18	0.18
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2521	787	53	4105	377	336	336
d1, Uniform Delay [s]	10.84	10.36	31.04	6.33	20.99	24.74	24.74
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.63	1.52	1.65	0.21	0.07	2.51	2.51
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.47	0.40	0.38	0.32	0.16	0.86	0.86
d, Delay for Lane Group [s/veh]	11.47	11.88	32.68	6.53	21.06	27.26	27.26
Lane Group LOS	B	B	C	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.23	2.68	0.32	1.70	0.71	4.15	4.15
50th-Percentile Queue Length [ft/ln]	80.80	66.98	7.91	42.60	17.82	103.83	103.83
95th-Percentile Queue Length [veh/ln]	5.82	4.82	0.57	3.07	1.28	7.48	7.48
95th-Percentile Queue Length [ft/ln]	145.44	120.56	14.24	76.69	32.08	186.89	186.89

Movement, Approach, & Intersection Results

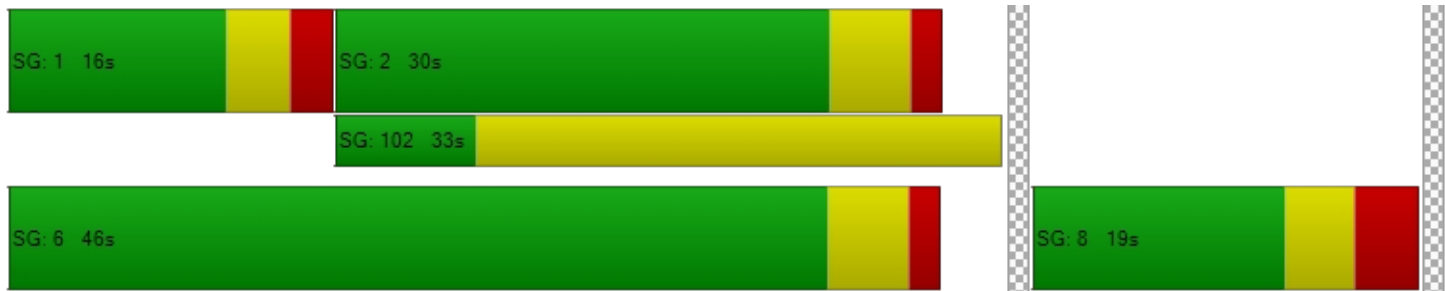
d_M, Delay for Movement [s/veh]	11.47	11.88	32.68	6.53	21.06	27.26
Movement LOS	B	B	C	A	C	C
d_A, Approach Delay [s/veh]	11.55		6.93		26.66	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.54					
Intersection LOS	B					
Intersection V/C	0.445					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.849
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.458	2.111	3.017
Bicycle LOS	B	B	C

Sequence




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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.492

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	55	1363	690	645	341	351
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	194	0	105
Total Hourly Volume [veh/h]	55	1363	690	451	341	246
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	14	356	180	118	89	64
Total Analysis Volume [veh/h]	57	1423	720	471	356	257
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	43	35	35	12	12
g / C, Green / Cycle	0.05	0.66	0.53	0.53	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.20	0.14	0.28	0.10	0.15
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	89	4444	2710	846	654	301
d1, Uniform Delay [s]	30.35	4.87	8.26	9.97	23.78	25.36
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	0.18	0.23	2.42	0.24	2.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.31	0.25	0.53	0.52	0.82
d, Delay for Lane Group [s/veh]	32.93	5.05	8.48	12.39	24.02	27.50
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.86	1.39	1.47	3.92	2.21	3.55
50th-Percentile Queue Length [ft/ln]	21.58	34.71	36.84	98.07	55.26	88.66
95th-Percentile Queue Length [veh/ln]	1.55	2.50	2.65	7.06	3.98	6.38
95th-Percentile Queue Length [ft/ln]	38.84	62.48	66.32	176.53	99.46	159.59

Movement, Approach, & Intersection Results

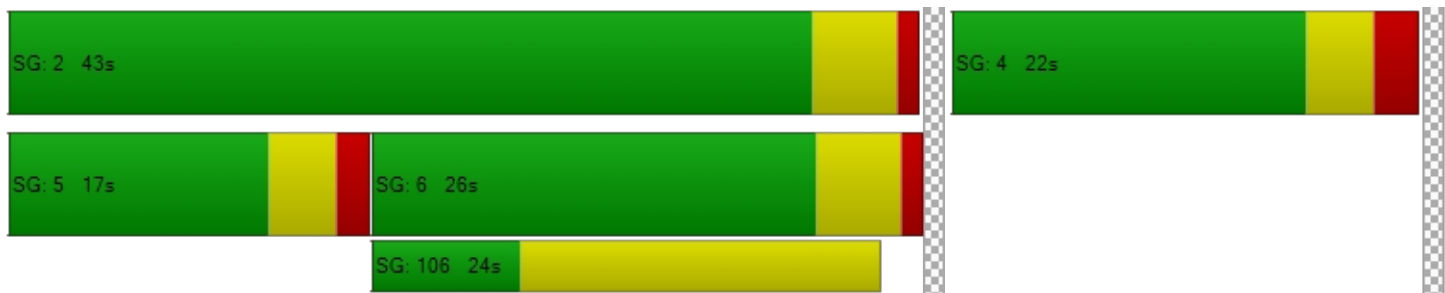
d_M, Delay for Movement [s/veh]	32.93	5.05	8.48	12.39	24.02	27.50
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	6.13		10.03		25.48	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	11.16					
Intersection LOS	B					
Intersection V/C	0.492					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.748
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.145	2.294	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	83.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.433

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	80	1310	9	0	1003	76	32	0	60	0	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	1310	9	0	1003	76	32	0	60	0	0	17
Peak Hour Factor	0.9540	0.9540	1.0000	1.0000	0.9540	0.9540	0.9540	1.0000	0.9540	1.0000	1.0000	0.9540
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]	21	343	2	0	263	20	8	0	16	0	0	4
Total Analysis Volume [veh/h]	84	1373	9	0	1051	80	34	0	63	0	0	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.22	0.01	0.00	0.00	0.01	0.00	0.43	0.00	0.14	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	17.92	0.00	0.00	0.00	0.00	0.00	83.33	0.00	43.27	0.00	0.00	15.88
Movement LOS	C	A	A		A	A	F		E			C
95th-Percentile Queue Length [veh/ln]	0.86	0.00	0.00	0.00	0.00	0.00	3.69	0.00	3.69	0.00	0.00	0.15
95th-Percentile Queue Length [ft/ln]	21.42	0.00	0.00	0.00	0.00	0.00	92.19	0.00	92.19	0.00	0.00	3.85
d_A, Approach Delay [s/veh]	1.02		0.00		57.20		15.88					
Approach LOS	A		A		F		C					
d_I, Intersection Delay [s/veh]	2.69											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.362

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1281	30	6	1030	87	14
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1281	30	6	1030	87	14
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	334	8	2	268	23	4
Total Analysis Volume [veh/h]	1334	31	6	1073	91	15
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.26	0.00	0.20	0.05	0.01
Intersection LOS	A					
Intersection V/C	0.362					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.684

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	32	1159	332	113	998	3	4	5	4	569	1	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1159	332	113	998	3	4	5	4	569	1	179
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
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	299	86	29	257	1	1	1	1	147	0	46
Total Analysis Volume [veh/h]	33	1195	342	116	1029	3	4	5	4	587	1	185
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.23	0.20	0.07	0.20	0.20	0.00	0.01	0.01	0.33	0.00	0.11
Intersection LOS	B											
Intersection V/C	0.684											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.483

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	245	801	0	0	1189	395	0	0	0	49	274	664
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	119	0	0	0	0	0	199
Total Hourly Volume [veh/h]	245	801	0	0	1189	276	0	0	0	49	274	465
Peak Hour Factor	0.9730	0.9730	1.0000	1.0000	0.9730	0.9730	1.0000	1.0000	1.0000	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	206	0	0	305	71	0	0	0	13	70	119
Total Analysis Volume [veh/h]	252	823	0	0	1222	284	0	0	0	50	282	478
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	82	82	82	82		82	82	82
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	50	34	34		20	20	20
g / C, Green / Cycle	0.12	0.61	0.41	0.41		0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.23	0.17		0.16	0.16	0.16
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1855	1471	1589
c, Capacity [veh/h]	422	3103	2108	658		453	359	388
d1, Uniform Delay [s]	33.94	7.41	18.33	17.01		27.81	27.84	27.84
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	2.72	0.09	0.51	0.91		3.47	4.42	4.10
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.26	0.56	0.42		0.65	0.66	0.66
d, Delay for Lane Group [s/veh]	36.66	7.51	18.84	17.92		31.28	32.26	31.94
Lane Group LOS	D	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.38	1.85	5.37	3.57		5.23	4.27	4.58
50th-Percentile Queue Length [ft/ln]	59.39	46.25	134.22	89.27		130.78	106.65	114.42
95th-Percentile Queue Length [veh/ln]	4.28	3.33	9.17	6.43		8.98	7.65	8.09
95th-Percentile Queue Length [ft/ln]	106.91	83.26	229.22	160.69		224.56	191.34	202.14

Movement, Approach, & Intersection Results

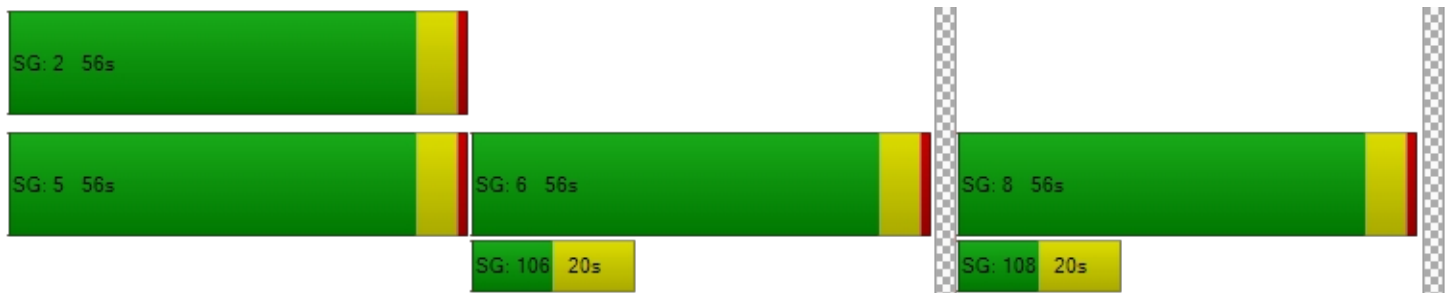
d_M, Delay for Movement [s/veh]	36.66	7.51	0.00	0.00	18.84	17.92	0.00	0.00	0.00	31.28	31.38	32.07
Movement LOS	D	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	14.34				18.67		0.00		31.79			
Approach LOS	B				B		A		C			
d_I, Intersection Delay [s/veh]	20.43											
Intersection LOS	C											
Intersection V/C	0.483											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0		14.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		28.04		28.04		0.00	
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.250		2.151		0.000	
Crosswalk LOS	F		C		B		F	
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1224		1224		0		1224	
d_b, Bicycle Delay [s]	6.14		6.14		40.84		6.14	
I_b,int, Bicycle LOS Score for Intersection	2.135		2.431		4.132		2.374	
Bicycle LOS	B		B		D		B	

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	28.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.459

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	69	816	22	570	590	78	226	230	204	0	300	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	23	0	0	61	0	0	0
Total Hourly Volume [veh/h]	69	816	15	570	590	55	226	230	143	0	300	0
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	1.0000	0.9480	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	215	4	150	156	15	60	61	38	0	79	0
Total Analysis Volume [veh/h]	73	861	16	601	622	58	238	243	151	0	316	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	83	83	83	83	83	83	83	83	83	83
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	20	20	19	31	31	10	26	26	10
g / C, Green / Cycle	0.10	0.24	0.24	0.23	0.38	0.38	0.12	0.31	0.31	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.15	0.15	0.16	0.12	0.12	0.07	0.05	0.09	0.06
s, saturation flow rate [veh/h]	1781	3560	1853	3459	3560	1790	3459	5094	1589	5094
c, Capacity [veh/h]	171	855	445	804	1340	674	413	1586	495	611
d1, Uniform Delay [s]	35.41	28.43	28.44	29.39	18.43	18.43	34.57	20.69	21.71	34.29
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.27	1.72	3.31	2.51	0.29	0.58	2.42	0.09	0.68	1.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.64	0.64	0.71	0.32	0.32	0.55	0.14	0.29	0.49
d, Delay for Lane Group [s/veh]	38.68	30.15	31.75	31.89	18.72	19.01	36.99	20.78	22.39	35.61
Lane Group LOS	D	C	C	C	B	B	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.43	4.87	5.27	5.27	2.82	2.89	2.22	1.04	2.10	1.90
50th-Percentile Queue Length [ft/ln]	35.80	121.79	131.86	131.87	70.39	72.21	55.59	26.01	52.62	47.62
95th-Percentile Queue Length [veh/ln]	2.58	8.49	9.04	9.04	5.07	5.20	4.00	1.87	3.79	3.43
95th-Percentile Queue Length [ft/ln]	64.44	212.29	226.02	226.04	126.69	129.97	100.06	46.83	94.72	85.72

Movement, Approach, & Intersection Results

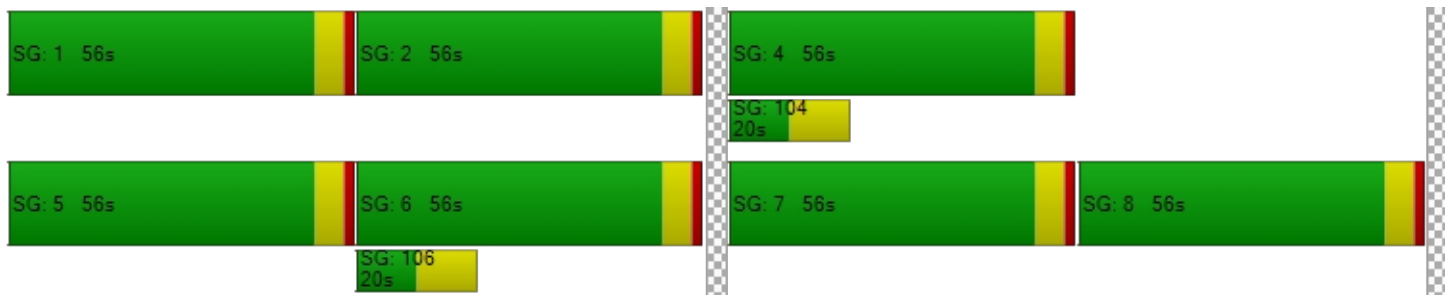
d_M, Delay for Movement [s/veh]	38.68	30.68	31.75	31.89	18.80	19.01	36.99	20.78	22.39	0.00	35.61	0.00
Movement LOS	D	C	C	C	B	B	D	C	C		D	
d_A, Approach Delay [s/veh]	31.31			24.95			27.28			35.61		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	28.38											
Intersection LOS	C											
Intersection V/C	0.459											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.79	0.00	28.79	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.872	0.000	3.068	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1202	1202	1202	1202
d_b, Bicycle Delay [s]	6.63	6.63	6.63	6.63
I_b,int, Bicycle LOS Score for Intersection	2.058	2.241	1.832	1.725
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	65.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.063

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↻			↻			↻			↻		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	32	4	0	21	1	1193	61	0	1691	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	32	4	0	21	1	1193	61	0	1691	2
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	8	1	0	6	0	314	16	0	445	1
Total Analysis Volume [veh/h]	0	0	34	4	0	22	1	1256	64	0	1780	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.06	0.00	0.08	0.01	0.01	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	15.80	65.32	0.00	22.17	25.27	0.00	0.00	0.00	0.00	0.00
Movement LOS			C	F		C	D	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.29	0.50	0.00	0.50	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.19	12.46	0.00	12.46	0.42	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.80		29.07		0.02		0.00					
Approach LOS	C		D		A		A					
d_I, Intersection Delay [s/veh]	0.42											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name	Claudina St					
	7	64	77	32	9	12
Base Volume Input [veh/h]	7	64	77	32	9	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	64	77	32	9	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	17	20	8	2	3
Total Analysis Volume [veh/h]	7	67	81	34	9	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.44	0.00	0.00	0.00	9.51	8.83
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.36	0.36	0.00	0.00	1.80	1.80
d_A, Approach Delay [s/veh]	0.73		0.00		9.12	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.21					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C

Control Type:	Two-way stop	Delay (sec / veh):	15.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.086

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	1207	21	0	1077	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1207	21	0	1077	0	32
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	318	6	0	283	0	8
Total Analysis Volume [veh/h]	1271	22	0	1134	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.57
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.03
d_A, Approach Delay [s/veh]	0.00		0.00		15.57	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.708

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	682	515	256	126	1051	380	158	824	313	169	971	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	682	515	256	126	1051	380	158	824	313	169	971	93
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]	179	136	67	33	277	100	42	217	82	44	256	24
Total Analysis Volume [veh/h]	718	542	269	133	1106	400	166	867	329	178	1022	98
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.10	0.15	0.04	0.21	0.22	0.05	0.16	0.18	0.05	0.16	0.16
Intersection LOS	C											
Intersection V/C	0.708											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.500

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	100	360	169	171	814	120	143	930	109	114	869	58
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	360	169	171	814	120	143	930	109	114	869	58
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	27	96	45	46	217	32	38	248	29	30	231	15
Total Analysis Volume [veh/h]	106	383	180	182	867	128	152	990	116	121	925	62
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.07	0.10	0.05	0.18	0.18	0.04	0.20	0.20	0.03	0.17	0.03
Intersection LOS	A											
Intersection V/C	0.500											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	27.3
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	7	30	1200	37	42	1175
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	30	1200	37	42	1175
Peak Hour Factor	0.9060	0.9060	0.9060	0.9060	0.9060	0.9060
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	8	331	10	12	324
Total Analysis Volume [veh/h]	8	33	1325	41	46	1297
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.08	0.01	0.00	0.14	0.01
d_M, Delay for Movement [s/veh]	27.28	16.35	0.00	0.00	18.94	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.41	0.41	0.00	0.00	0.49	0.00
95th-Percentile Queue Length [ft/ln]	10.31	10.31	0.00	0.00	12.15	0.00
d_A, Approach Delay [s/veh]	18.42		0.00		0.65	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.59					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.428

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	642	244	4	1543	105	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	73	0	0	0	247
Total Hourly Volume [veh/h]	642	171	4	1543	105	575
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	164	44	1	394	27	147
Total Analysis Volume [veh/h]	655	174	4	1574	107	587
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	34	34	0	39	14	14	14
g / C, Green / Cycle	0.52	0.52	0.01	0.60	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.13	0.11	0.00	0.23	0.06	0.18	0.18
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2631	821	14	4103	377	337	337
d1, Uniform Delay [s]	8.72	8.54	32.15	6.61	21.52	24.73	24.73
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.58	3.92	0.26	0.15	2.49	2.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.24	0.21	0.28	0.38	0.28	0.85	0.85
d, Delay for Lane Group [s/veh]	8.94	9.12	36.07	6.87	21.67	27.22	27.22
Lane Group LOS	A	A	D	A	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.43	1.21	0.08	2.09	1.26	4.15	4.15
50th-Percentile Queue Length [ft/ln]	35.70	30.17	1.88	52.25	31.52	103.73	103.73
95th-Percentile Queue Length [veh/ln]	2.57	2.17	0.14	3.76	2.27	7.47	7.47
95th-Percentile Queue Length [ft/ln]	64.26	54.31	3.38	94.06	56.73	186.72	186.72

Movement, Approach, & Intersection Results

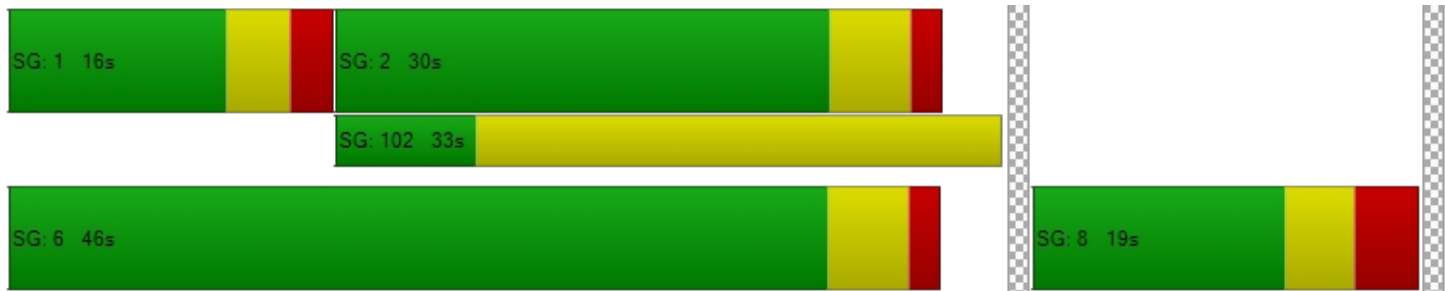
d_M, Delay for Movement [s/veh]	8.94	9.12	36.07	6.87	21.67	27.22
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	8.98		6.95		26.36	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.83					
Intersection LOS	B					
Intersection V/C	0.428					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.799
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.047	2.198	3.089
Bicycle LOS	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.514

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	29	698	829	818	190	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	245	0	77
Total Hourly Volume [veh/h]	29	698	829	573	190	181
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	181	215	149	49	47
Total Analysis Volume [veh/h]	30	725	861	595	197	188
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	45	39	39	10	10
g / C, Green / Cycle	0.03	0.70	0.59	0.59	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.16	0.36	0.05	0.11
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	59	4727	3009	939	511	235
d1, Uniform Delay [s]	30.99	3.36	6.52	8.54	25.07	26.73
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.35	0.07	0.23	2.99	0.17	2.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.15	0.28	0.61	0.37	0.77
d, Delay for Lane Group [s/veh]	33.34	3.43	6.75	11.53	25.23	28.80
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.46	0.48	1.47	4.60	1.25	2.65
50th-Percentile Queue Length [ft/ln]	11.57	12.09	36.78	115.03	31.26	66.29
95th-Percentile Queue Length [veh/ln]	0.83	0.87	2.65	8.12	2.25	4.77
95th-Percentile Queue Length [ft/ln]	20.83	21.77	66.20	202.98	56.27	119.32

Movement, Approach, & Intersection Results

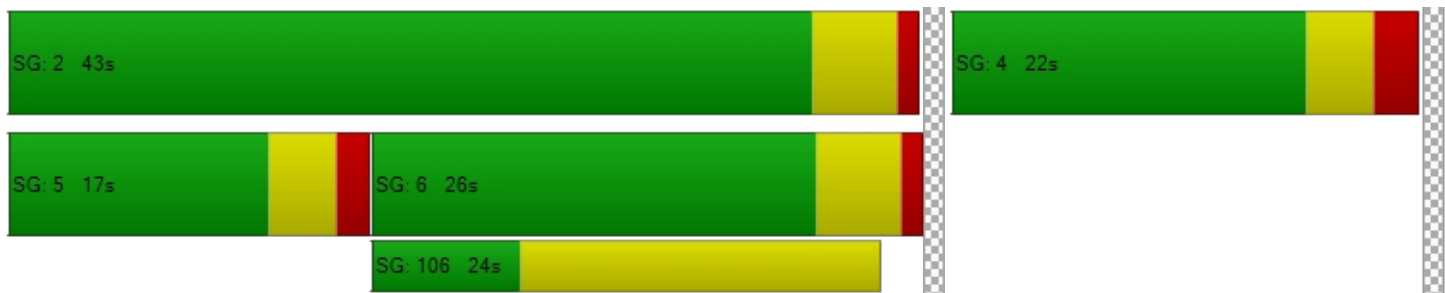
d_M, Delay for Movement [s/veh]	33.34	3.43	6.75	11.53	25.23	28.80
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	4.62		8.70		26.97	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.23					
Intersection LOS	B					
Intersection V/C	0.514					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.686
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.859	2.465	1.560
Bicycle LOS	A	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	56.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.360

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	62	633	2	9	982	66	45	0	113	0	0	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	633	2	9	982	66	45	0	113	0	0	3
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	0.9560	1.0000	0.9560	1.0000	1.0000	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	166	1	2	257	17	12	0	30	0	0	1
Total Analysis Volume [veh/h]	65	662	2	9	1027	69	47	0	118	0	0	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.17	0.01	0.00	0.02	0.01	0.00	0.36	0.00	0.27	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	16.65	0.00	0.00	11.25	0.00	0.00	56.76	0.00	36.41	33.00	0.00	11.25
Movement LOS	C	A	A	B	A	A	F		E	D		B
95th-Percentile Queue Length [veh/ln]	0.60	0.00	0.00	0.05	0.00	0.00	4.56	0.00	4.56	0.02	0.00	0.02
95th-Percentile Queue Length [ft/ln]	14.99	0.00	0.00	1.17	0.00	0.00	114.06	0.00	114.06	0.39	0.00	0.39
d_A, Approach Delay [s/veh]	1.48			0.10			42.21			11.25		
Approach LOS	A			A			E			B		
d_I, Intersection Delay [s/veh]	4.09											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.268

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	718	45	19	1017	31	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	718	45	19	1017	31	9
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	194	12	5	274	8	2
Total Analysis Volume [veh/h]	775	49	20	1097	33	10
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.15	0.01	0.20	0.02	0.01
Intersection LOS	A					
Intersection V/C	0.268					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.461

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔↔			↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	29	692	313	163	891	7	1	1	10	211	6	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	692	313	163	891	7	1	1	10	211	6	96
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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	187	85	44	241	2	0	0	3	57	2	26
Total Analysis Volume [veh/h]	31	747	338	176	962	8	1	1	11	228	6	104
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.14	0.18	0.10	0.18	0.18	0.00	0.01	0.01	0.12	0.00	0.06
Intersection LOS	A											
Intersection V/C	0.461											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	15.0
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.379

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	218	575	0	0	1013	157	0	0	0	23	21	409
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	47	0	0	0	0	0	123
Total Hourly Volume [veh/h]	218	575	0	0	1013	110	0	0	0	23	21	286
Peak Hour Factor	0.9440	0.9440	1.0000	1.0000	0.9440	0.9440	1.0000	1.0000	1.0000	0.9440	0.9440	0.9440
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]	58	152	0	0	268	29	0	0	0	6	6	76
Total Analysis Volume [veh/h]	231	609	0	0	1073	117	0	0	0	24	22	303
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	62	62	62	62		62	62	62
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	40	24	24		10	10	10
g / C, Green / Cycle	0.16	0.64	0.39	0.39		0.16	0.16	0.16
(v / s)_i Volume / Saturation Flow Rate	0.06	0.11	0.20	0.07		0.02	0.10	0.09
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	549	3269	1965	613		298	237	260
d1, Uniform Delay [s]	23.30	4.46	14.53	12.50		22.11	23.95	23.71
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.00	0.05	0.45	0.30		0.48	5.32	3.88
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.18	0.52	0.18		0.15	0.60	0.55
d, Delay for Lane Group [s/veh]	24.30	4.52	14.98	12.80		22.60	29.27	27.60
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.39	0.67	3.20	0.92		0.52	2.05	1.97
50th-Percentile Queue Length [ft/ln]	34.67	16.68	79.98	23.11		13.11	51.36	49.21
95th-Percentile Queue Length [veh/ln]	2.50	1.20	5.76	1.66		0.94	3.70	3.54
95th-Percentile Queue Length [ft/ln]	62.41	30.03	143.96	41.60		23.59	92.45	88.58

Movement, Approach, & Intersection Results

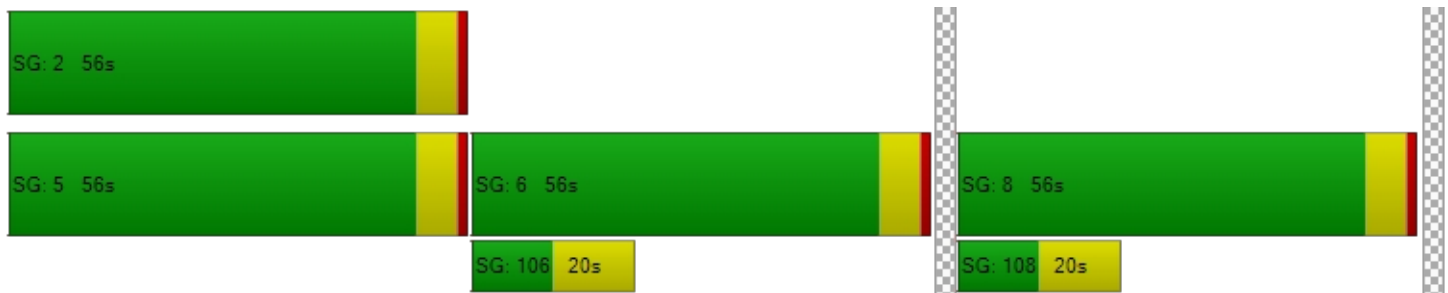
d_M, Delay for Movement [s/veh]	24.30	4.52	0.00	0.00	14.98	12.80	0.00	0.00	0.00	22.60	22.60	28.43
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	9.96		14.77			0.00			27.65			
Approach LOS	A		B			A			C			
d_I, Intersection Delay [s/veh]	14.96											
Intersection LOS	B											
Intersection V/C	0.379											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0			14.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00		18.36			18.36			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000		2.985			1.882			0.000		
Crosswalk LOS	F		C			A			F		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1625		1625			0			1625		
d_b, Bicycle Delay [s]	1.08		1.08			30.77			1.08		
I_b,int, Bicycle LOS Score for Intersection	1.996		2.203			4.132			1.933		
Bicycle LOS	A		B			D			A		

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	26.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.377

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵|↵|↵			↵|↵|↵			↵|↵|↵|↵			|↵|↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	39	604	10	544	459	87	165	111	88	0	222	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	26	0	0	26	0	0	0
Total Hourly Volume [veh/h]	39	604	7	544	459	61	165	111	62	0	222	0
Peak Hour Factor	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	1.0000	0.9680	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	156	2	140	119	16	43	29	16	0	57	0
Total Analysis Volume [veh/h]	40	624	7	562	474	63	170	115	64	0	229	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	75	75	75	75	75	75	75	75	75	75
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	6	14	14	17	26	26	10	26	26	10
g / C, Green / Cycle	0.07	0.19	0.19	0.23	0.34	0.34	0.13	0.34	0.34	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.16	0.10	0.10	0.05	0.02	0.04	0.04
s, saturation flow rate [veh/h]	1781	3560	1859	3459	3560	1760	3459	5094	1589	5094
c, Capacity [veh/h]	134	671	350	798	1226	606	447	1738	542	673
d1, Uniform Delay [s]	32.85	27.88	27.89	26.37	17.90	17.91	29.91	16.67	16.97	29.58
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.57	1.84	3.54	2.22	0.27	0.55	1.09	0.03	0.20	0.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.29	0.60	0.60	0.68	0.28	0.28	0.37	0.06	0.11	0.33
d, Delay for Lane Group [s/veh]	35.42	29.72	31.42	28.59	18.17	18.45	30.99	16.70	17.16	30.19
Lane Group LOS	D	C	C	C	B	B	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.74	3.29	3.61	4.42	2.08	2.11	1.37	0.41	0.71	1.20
50th-Percentile Queue Length [ft/ln]	18.49	82.27	90.20	110.39	51.96	52.78	34.23	10.16	17.85	29.89
95th-Percentile Queue Length [veh/ln]	1.33	5.92	6.49	7.86	3.74	3.80	2.46	0.73	1.28	2.15
95th-Percentile Queue Length [ft/ln]	33.28	148.09	162.36	196.54	93.52	95.01	61.61	18.28	32.12	53.80

Movement, Approach, & Intersection Results

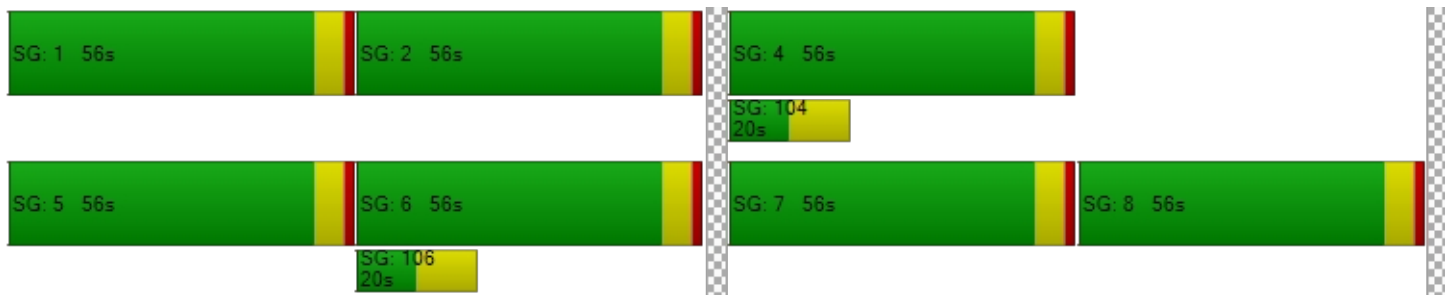
d_M, Delay for Movement [s/veh]	35.42	30.29	31.42	28.59	18.24	18.45	30.99	16.70	17.16	0.00	30.19	0.00
Movement LOS	D	C	C	C	B	B	C	B	B		C	
d_A, Approach Delay [s/veh]	30.61			23.54			23.76			30.19		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.24											
Intersection LOS	C											
Intersection V/C	0.377											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	24.79	0.00	24.79	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.779	0.000	2.962	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1334	1334	1334	1334
d_b, Bicycle Delay [s]	4.16	4.16	4.16	4.16
I_b,int, Bicycle LOS Score for Intersection	1.919	2.159	1.710	1.682
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	29.6
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶|||↷			|||↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	1	0	7	106	1162	0	0	1158	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1	0	7	106	1162	0	0	1158	24
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	2	28	306	0	0	305	6
Total Analysis Volume [veh/h]	0	0	0	1	0	7	112	1223	0	0	1219	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.01	0.00	0.02	0.33	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	14.20	29.60	0.00	14.62	21.84	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	D		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.08	0.00	0.08	1.47	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.91	0.00	1.91	36.75	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.20			16.49			1.83			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	1.00											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.796

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	705	958	384	82	857	383	263	829	329	189	1529	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	705	958	384	82	857	383	263	829	329	189	1529	78
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
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]	182	248	99	21	222	99	68	214	85	49	395	20
Total Analysis Volume [veh/h]	729	991	397	85	886	396	272	857	340	195	1581	81
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.19	0.23	0.02	0.17	0.23	0.08	0.16	0.19	0.06	0.24	0.24
Intersection LOS	C											
Intersection V/C	0.796											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.641

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	214	912	100	116	827	172	196	939	129	162	1402	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	214	912	100	116	827	172	196	939	129	162	1402	147
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	238	26	30	216	45	51	245	34	42	366	38
Total Analysis Volume [veh/h]	223	952	104	121	863	180	205	980	135	169	1463	153
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.18	0.06	0.03	0.20	0.20	0.06	0.21	0.21	0.05	0.27	0.09
Intersection LOS	B											
Intersection V/C	0.641											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.077

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	14	53	1173	20	40	1734
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	14	53	1173	20	40	1734
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	14	317	5	11	469
Total Analysis Volume [veh/h]	15	57	1269	22	43	1877
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.14	0.01	0.00	0.13	0.02
d_M, Delay for Movement [s/veh]	27.87	17.57	0.00	0.00	18.07	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.82	0.82	0.00	0.00	0.43	0.00
95th-Percentile Queue Length [ft/ln]	20.43	20.43	0.00	0.00	10.86	0.00
d_A, Approach Delay [s/veh]	19.73		0.00		0.41	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.67					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	12.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.457

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↗		↖↑↑↑↑		↖↗↖	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1203	466	21	1363	63	853
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	140	0	0	0	256
Total Hourly Volume [veh/h]	1203	326	21	1363	63	597
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	314	85	5	356	16	156
Total Analysis Volume [veh/h]	1257	341	22	1424	66	624
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	32	32	2	39	14	14	14
g / C, Green / Cycle	0.49	0.49	0.03	0.60	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.24	0.21	0.01	0.20	0.04	0.19	0.19
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2484	775	55	4063	388	346	346
d1, Uniform Delay [s]	11.21	10.77	30.98	6.58	20.68	24.57	24.57
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	1.68	1.61	0.22	0.07	2.59	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.42	0.38	0.34	0.16	0.86	0.86
d, Delay for Lane Group [s/veh]	11.89	12.45	32.59	6.81	20.76	27.16	27.16
Lane Group LOS	B	B	C	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.38	2.88	0.33	1.83	0.73	4.31	4.31
50th-Percentile Queue Length [ft/ln]	84.39	71.93	8.28	45.74	18.24	107.78	107.78
95th-Percentile Queue Length [veh/ln]	6.08	5.18	0.60	3.29	1.31	7.72	7.72
95th-Percentile Queue Length [ft/ln]	151.91	129.48	14.91	82.33	32.83	192.91	192.91

Movement, Approach, & Intersection Results

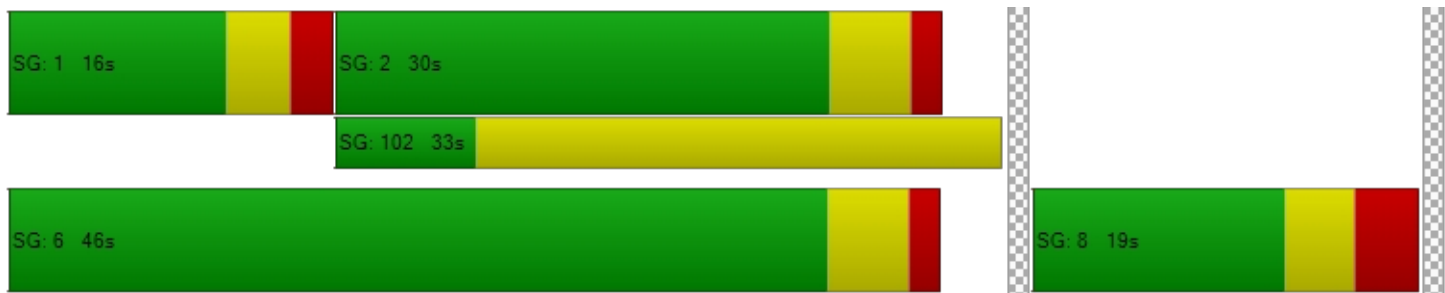
d_M, Delay for Movement [s/veh]	11.89	12.45	32.59	6.81	20.76	27.16
Movement LOS	B	B	C	A	C	C
d_A, Approach Delay [s/veh]	12.01		7.20		26.55	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.83					
Intersection LOS	B					
Intersection V/C	0.457					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.876
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.478	2.131	3.071
Bicycle LOS	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.509

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	57	1416	717	666	327	364
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	200	0	109
Total Hourly Volume [veh/h]	57	1416	717	466	327	255
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	370	187	122	85	67
Total Analysis Volume [veh/h]	59	1478	748	486	341	266
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	42	34	34	13	13
g / C, Green / Cycle	0.05	0.65	0.53	0.53	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.14	0.29	0.09	0.16
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	91	4409	2679	836	672	309
d1, Uniform Delay [s]	30.32	5.07	8.53	10.37	23.37	25.21
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.63	0.19	0.25	2.70	0.20	2.20
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.32	0.27	0.56	0.49	0.83
d, Delay for Lane Group [s/veh]	32.96	5.26	8.77	13.07	23.58	27.40
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	1.50	1.57	4.21	2.09	3.67
50th-Percentile Queue Length [ft/ln]	22.37	37.48	39.32	105.29	52.29	91.86
95th-Percentile Queue Length [veh/ln]	1.61	2.70	2.83	7.58	3.76	6.61
95th-Percentile Queue Length [ft/ln]	40.27	67.46	70.78	189.43	94.12	165.35

Movement, Approach, & Intersection Results

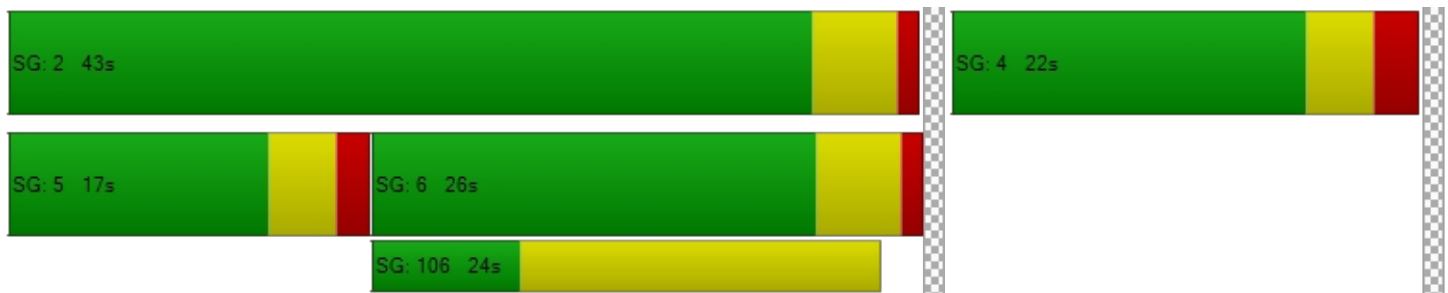
d_M, Delay for Movement [s/veh]	32.96	5.26	8.77	13.07	23.58	27.40
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	6.33		10.46		25.25	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	11.24					
Intersection LOS	B					
Intersection V/C	0.509					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.759
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.167	2.320	1.560
Bicycle LOS	B	B	A

Sequence

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







Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	95.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.476

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	83	1322	3	1	1038	79	33	0	62	1	0	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1322	3	1	1038	79	33	0	62	1	0	8
Peak Hour Factor	0.9540	0.9540	1.0000	1.0000	0.9540	0.9540	0.9540	1.0000	0.9540	1.0000	1.0000	0.9540
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	346	1	0	272	21	9	0	16	0	0	2
Total Analysis Volume [veh/h]	87	1386	3	1	1088	83	35	0	65	1	0	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.24	0.01	0.00	0.00	0.01	0.00	0.48	0.00	0.15	0.02	0.00	0.02
d_M, Delay for Movement [s/veh]	18.81	0.00	0.00	18.29	0.00	0.00	95.02	0.00	52.04	78.00	0.00	16.17
Movement LOS	C	A	A	C	A	A	F		F	F		C
95th-Percentile Queue Length [veh/ln]	0.95	0.00	0.00	0.01	0.00	0.00	4.39	0.00	4.39	0.14	0.00	0.14
95th-Percentile Queue Length [ft/ln]	23.72	0.00	0.00	0.28	0.00	0.00	109.78	0.00	109.78	3.38	0.00	3.38
d_A, Approach Delay [s/veh]	1.11			0.02			66.97			23.04		
Approach LOS	A			A			F			C		
d_I, Intersection Delay [s/veh]	3.10											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.344

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1282	24	6	1066	58	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1282	24	6	1066	58	15
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	334	6	2	278	15	4
Total Analysis Volume [veh/h]	1335	25	6	1110	60	16
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.26	0.26	0.00	0.21	0.03	0.01
Intersection LOS	A					
Intersection V/C	0.344					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.697

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	33	1149	345	117	1000	3	4	5	4	591	1	185
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1149	345	117	1000	3	4	5	4	591	1	185
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
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	296	89	30	258	1	1	1	1	152	0	48
Total Analysis Volume [veh/h]	34	1185	356	121	1031	3	4	5	4	609	1	191
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.23	0.20	0.07	0.20	0.20	0.00	0.01	0.01	0.35	0.00	0.11
Intersection LOS	B											
Intersection V/C	0.697											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	20.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.486

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	255	827	0	0	1198	410	0	0	0	51	285	641
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	123	0	0	0	0	0	192
Total Hourly Volume [veh/h]	255	827	0	0	1198	287	0	0	0	51	285	449
Peak Hour Factor	0.9730	0.9730	1.0000	1.0000	0.9730	0.9730	1.0000	1.0000	1.0000	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	212	0	0	308	74	0	0	0	13	73	115
Total Analysis Volume [veh/h]	262	850	0	0	1231	295	0	0	0	52	293	461
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	82	82	82	82		82	82	82
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	50	34	34		20	20	20
g / C, Green / Cycle	0.12	0.61	0.42	0.42		0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.24	0.18		0.16	0.16	0.16
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1854	1486	1589
c, Capacity [veh/h]	420	3115	2125	663		449	360	385
d1, Uniform Delay [s]	34.25	7.40	18.26	17.05		28.04	28.07	28.07
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.04	0.10	0.51	0.96		3.50	4.41	4.14
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.27	0.56	0.43		0.65	0.66	0.66
d, Delay for Lane Group [s/veh]	37.29	7.50	18.77	18.00		31.54	32.48	32.21
Lane Group LOS	D	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.51	1.92	5.42	3.74		5.24	4.31	4.58
50th-Percentile Queue Length [ft/ln]	62.65	47.95	135.40	93.56		130.89	107.68	114.58
95th-Percentile Queue Length [veh/ln]	4.51	3.45	9.23	6.74		8.99	7.71	8.09
95th-Percentile Queue Length [ft/ln]	112.78	86.30	230.82	168.42		224.70	192.77	202.35

Movement, Approach, & Intersection Results

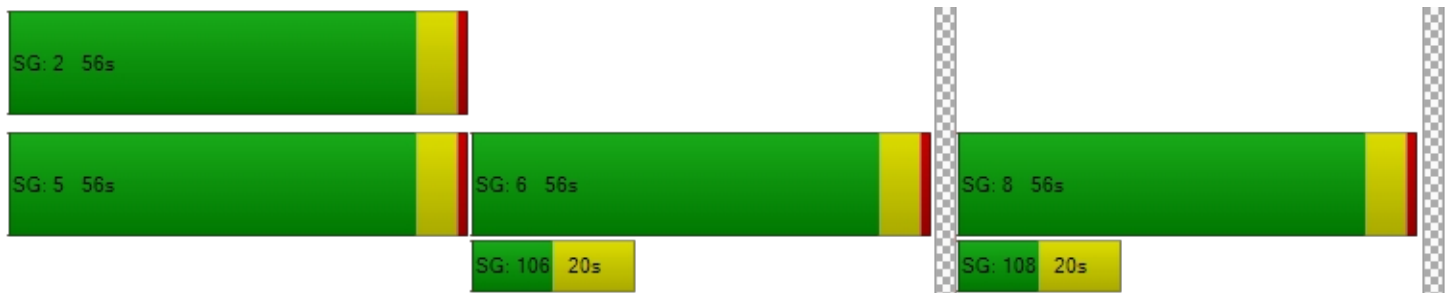
d_M, Delay for Movement [s/veh]	37.29	7.50	0.00	0.00	18.77	18.00	0.00	0.00	0.00	31.54	31.68	32.32
Movement LOS	D	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	14.52				18.62		0.00		32.04			
Approach LOS	B				B		A		C			
d_I, Intersection Delay [s/veh]	20.44											
Intersection LOS	C											
Intersection V/C	0.486											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0		14.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		28.23		28.23		0.00	
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.260		2.169		0.000	
Crosswalk LOS	F		C		B		F	
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1218		1218		0		1218	
d_b, Bicycle Delay [s]	6.27		6.27		41.04		6.27	
I_b,int, Bicycle LOS Score for Intersection	2.155		2.444		4.132		2.366	
Bicycle LOS	B		B		D		B	

Sequence

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




Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	28.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.466

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	72	841	23	559	609	81	235	239	212	0	312	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	24	0	0	64	0	0	0
Total Hourly Volume [veh/h]	72	841	16	559	609	57	235	239	148	0	312	0
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	1.0000	0.9480	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	222	4	147	161	15	62	63	39	0	82	0
Total Analysis Volume [veh/h]	76	887	17	590	642	60	248	252	156	0	329	0
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	84	84	84	84	84	84	84	84	84	84
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	21	21	19	31	31	10	26	26	10
g / C, Green / Cycle	0.10	0.25	0.25	0.23	0.38	0.38	0.12	0.31	0.31	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.16	0.12	0.12	0.07	0.05	0.09	0.06
s, saturation flow rate [veh/h]	1781	3560	1852	3459	3560	1789	3459	5094	1589	5094
c, Capacity [veh/h]	174	877	456	788	1342	674	412	1581	493	609
d1, Uniform Delay [s]	35.50	28.21	28.22	29.73	18.54	18.55	34.82	20.87	21.93	34.54
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.39	1.70	3.27	2.56	0.31	0.61	2.67	0.09	0.72	1.43
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	0.64	0.64	0.71	0.33	0.33	0.57	0.15	0.30	0.51
d, Delay for Lane Group [s/veh]	38.89	29.91	31.49	32.29	18.85	19.15	37.49	20.96	22.65	35.97
Lane Group LOS	D	C	C	C	B	B	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.50	5.02	5.43	5.22	2.93	3.01	2.34	1.09	2.20	2.00
50th-Percentile Queue Length [ft/ln]	37.55	125.55	135.79	130.48	73.28	75.17	58.45	27.28	55.06	50.00
95th-Percentile Queue Length [veh/ln]	2.70	8.70	9.25	8.97	5.28	5.41	4.21	1.96	3.96	3.60
95th-Percentile Queue Length [ft/ln]	67.59	217.43	231.34	224.15	131.91	135.30	105.21	49.10	99.11	90.00

Movement, Approach, & Intersection Results

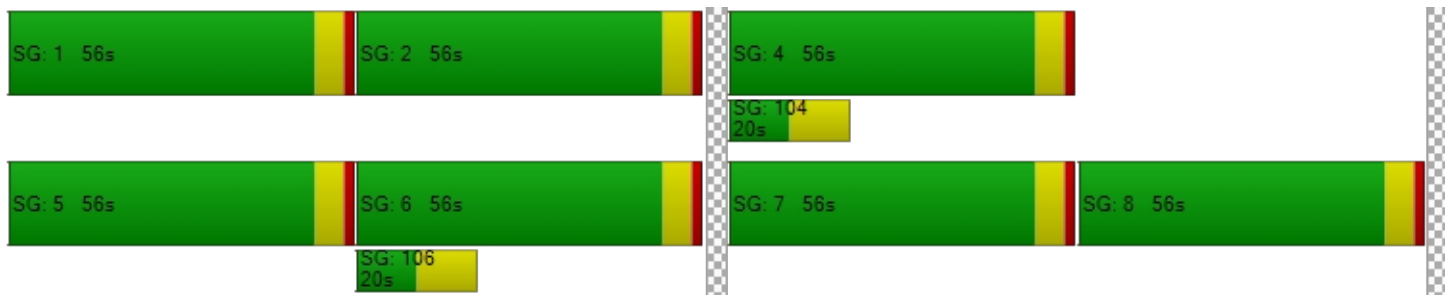
d_M, Delay for Movement [s/veh]	38.89	30.43	31.49	32.29	18.93	19.15	37.49	20.96	22.65	0.00	35.97	0.00
Movement LOS	D	C	C	C	B	B	D	C	C		D	
d_A, Approach Delay [s/veh]	31.11			25.04			27.61			35.97		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	28.49											
Intersection LOS	C											
Intersection V/C	0.466											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	28.95	0.00	28.95	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.882	0.000	3.078	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1197	1197	1197	1197
d_b, Bicycle Delay [s]	6.74	6.74	6.74	6.74
I_b,int, Bicycle LOS Score for Intersection	2.074	2.247	1.843	1.731
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	71.2
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.069

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶|↷|↷			|↷|↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	4	0	22	1	1154	0	0	1745	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	4	0	22	1	1154	0	0	1745	2
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	6	0	304	0	0	459	1
Total Analysis Volume [veh/h]	0	0	0	4	0	23	1	1215	0	0	1837	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.07	0.00	0.09	0.01	0.01	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	14.14	71.23	0.00	23.31	26.58	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	F		C	D	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.55	0.00	0.55	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	13.81	0.00	13.81	0.45	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.14			30.68			0.02			0.00		
Approach LOS	B			D			A			A		
d_I, Intersection Delay [s/veh]	0.28											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.709

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	682	515	278	126	1051	380	158	839	313	174	1023	93
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	682	515	278	126	1051	380	158	839	313	174	1023	93
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]	179	136	73	33	277	100	42	221	82	46	269	24
Total Analysis Volume [veh/h]	718	542	293	133	1106	400	166	883	329	183	1077	98
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.10	0.16	0.04	0.21	0.22	0.05	0.16	0.18	0.05	0.16	0.16
Intersection LOS	C											
Intersection V/C	0.709											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: A
 Volume to Capacity (v/c): 0.523

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	153	365	189	175	814	120	143	967	109	114	877	59
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	153	365	189	175	814	120	143	967	109	114	877	59
Peak Hour Factor	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390	0.9390
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]	41	97	50	47	217	32	38	257	29	30	233	16
Total Analysis Volume [veh/h]	163	389	201	186	867	128	152	1030	116	121	934	63
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.07	0.11	0.05	0.18	0.18	0.04	0.21	0.21	0.03	0.17	0.03
Intersection LOS	A											
Intersection V/C	0.523											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.096

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	16	37	1210	80	52	1175
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	16	37	1210	80	52	1175
Peak Hour Factor	0.9060	0.9060	0.9060	0.9060	0.9060	0.9060
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	10	334	22	14	324
Total Analysis Volume [veh/h]	18	41	1336	88	57	1297
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.10	0.10	0.01	0.00	0.18	0.01
d_M, Delay for Movement [s/veh]	29.99	18.51	0.00	0.00	20.59	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.74	0.74	0.00	0.00	0.67	0.00
95th-Percentile Queue Length [ft/ln]	18.62	18.62	0.00	0.00	16.80	0.00
d_A, Approach Delay [s/veh]	21.98		0.00		0.87	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.87					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.8
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.429

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	664	244	4	1548	105	822
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	73	0	0	0	247
Total Hourly Volume [veh/h]	664	171	4	1548	105	575
Peak Hour Factor	0.9800	0.9800	0.9800	0.9800	0.9800	0.9800
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	169	44	1	395	27	147
Total Analysis Volume [veh/h]	678	174	4	1580	107	587
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	34	34	0	39	14	14	14
g / C, Green / Cycle	0.52	0.52	0.01	0.60	0.21	0.21	0.21
(v / s)_i Volume / Saturation Flow Rate	0.13	0.11	0.00	0.23	0.06	0.18	0.18
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2631	821	14	4103	377	337	337
d1, Uniform Delay [s]	8.77	8.54	32.15	6.62	21.52	24.73	24.73
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.23	0.58	3.92	0.27	0.15	2.49	2.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.25	0.21	0.28	0.38	0.28	0.85	0.85
d, Delay for Lane Group [s/veh]	9.00	9.12	36.07	6.88	21.67	27.22	27.22
Lane Group LOS	A	A	D	A	C	C	C
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.48	1.21	0.08	2.10	1.26	4.15	4.15
50th-Percentile Queue Length [ft/ln]	37.11	30.17	1.88	52.47	31.52	103.73	103.73
95th-Percentile Queue Length [veh/ln]	2.67	2.17	0.14	3.78	2.27	7.47	7.47
95th-Percentile Queue Length [ft/ln]	66.80	54.31	3.38	94.45	56.73	186.72	186.72

Movement, Approach, & Intersection Results

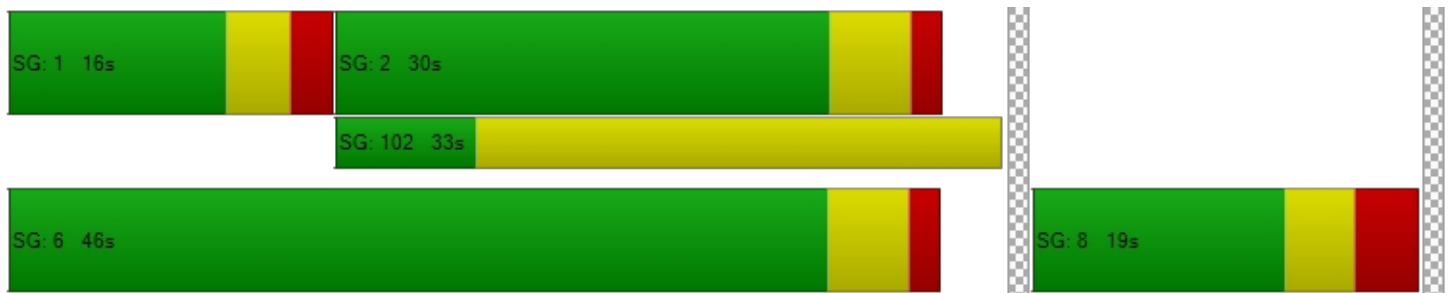
d_M, Delay for Movement [s/veh]	9.00	9.12	36.07	6.88	21.67	27.22
Movement LOS	A	A	D	A	C	C
d_A, Approach Delay [s/veh]	9.02		6.96		26.36	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	11.82					
Intersection LOS	B					
Intersection V/C	0.429					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.799
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.059	2.200	3.089
Bicycle LOS	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.516

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	29	698	829	823	212	258
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	247	0	77
Total Hourly Volume [veh/h]	29	698	829	576	212	181
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	181	215	150	55	47
Total Analysis Volume [veh/h]	30	725	861	598	220	188
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	45	39	39	10	10
g / C, Green / Cycle	0.03	0.70	0.59	0.59	0.15	0.15
(v / s)_i Volume / Saturation Flow Rate	0.02	0.10	0.16	0.36	0.06	0.11
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	59	4724	3007	938	512	235
d1, Uniform Delay [s]	30.99	3.37	6.54	8.58	25.21	26.71
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.35	0.07	0.23	3.04	0.20	2.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.15	0.28	0.61	0.41	0.77
d, Delay for Lane Group [s/veh]	33.34	3.43	6.76	11.62	25.41	28.74
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.46	0.49	1.47	4.65	1.40	2.65
50th-Percentile Queue Length [ft/ln]	11.57	12.13	36.84	116.28	35.12	66.21
95th-Percentile Queue Length [veh/ln]	0.83	0.87	2.65	8.19	2.53	4.77
95th-Percentile Queue Length [ft/ln]	20.83	21.83	66.31	204.70	63.21	119.18

Movement, Approach, & Intersection Results

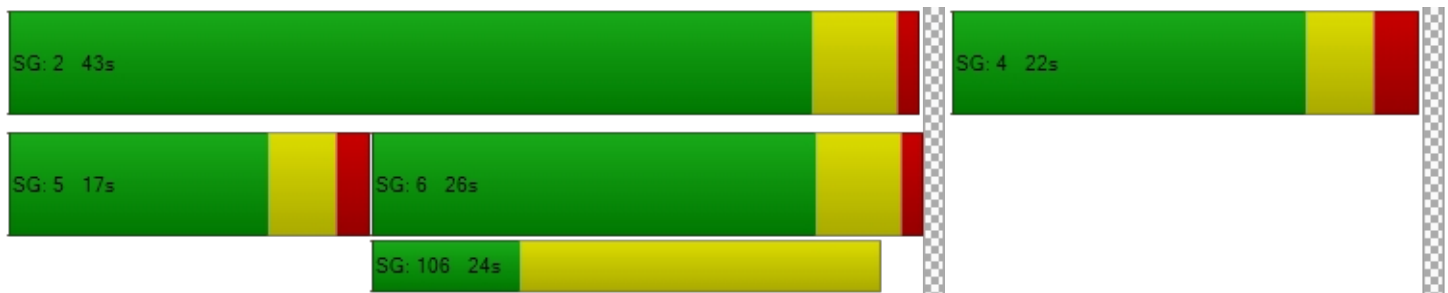
d_M, Delay for Movement [s/veh]	33.34	3.43	6.76	11.62	25.41	28.74
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	4.63		8.75		26.95	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.40					
Intersection LOS	B					
Intersection V/C	0.516					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.692
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.859	2.468	1.560
Bicycle LOS	A	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	58.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.365

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	62	648	15	0	986	66	45	0	113	0	0	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	62	648	15	0	986	66	45	0	113	0	0	23
Peak Hour Factor	0.9560	0.9560	1.0000	1.0000	0.9560	0.9560	0.9560	1.0000	0.9560	1.0000	1.0000	0.9560
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	169	4	0	258	17	12	0	30	0	0	6
Total Analysis Volume [veh/h]	65	678	15	0	1031	69	47	0	118	0	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.17	0.01	0.00	0.00	0.01	0.00	0.37	0.00	0.27	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	16.71	0.00	0.00	0.00	0.00	0.00	57.96	0.00	37.22	0.00	0.00	11.62
Movement LOS	C	A	A		A	A	F		E			B
95th-Percentile Queue Length [veh/ln]	0.60	0.00	0.00	0.00	0.00	0.00	4.66	0.00	4.66	0.00	0.00	0.13
95th-Percentile Queue Length [ft/ln]	15.07	0.00	0.00	0.00	0.00	0.00	116.53	0.00	116.53	0.00	0.00	3.17
d_A, Approach Delay [s/veh]	1.43		0.00		43.13		11.62					
Approach LOS	A		A		E		B					
d_I, Intersection Delay [s/veh]	4.15											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.297

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	748	50	19	1021	80	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	748	50	19	1021	80	9
Peak Hour Factor	0.9270	0.9270	0.9270	0.9270	0.9270	0.9270
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	202	13	5	275	22	2
Total Analysis Volume [veh/h]	807	54	20	1101	86	10
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.16	0.01	0.20	0.05	0.01
Intersection LOS	A					
Intersection V/C	0.297					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.461

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↔↔↔↔			↔↔↔↔			↔↔			↔↔		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	29	727	313	163	944	7	1	1	10	211	6	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	29	727	313	163	944	7	1	1	10	211	6	96
Peak Hour Factor	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260	0.9260
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	196	85	44	255	2	0	0	3	57	2	26
Total Analysis Volume [veh/h]	31	785	338	176	1019	8	1	1	11	228	6	104
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.14	0.18	0.10	0.19	0.19	0.00	0.01	0.01	0.12	0.00	0.06
Intersection LOS	A											
Intersection V/C	0.461											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.397

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	218	579	0	0	1066	157	0	0	0	23	21	439
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	47	0	0	0	0	0	132
Total Hourly Volume [veh/h]	218	579	0	0	1066	110	0	0	0	23	21	307
Peak Hour Factor	0.9440	0.9440	1.0000	1.0000	0.9440	0.9440	1.0000	1.0000	1.0000	0.9440	0.9440	0.9440
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]	58	153	0	0	282	29	0	0	0	6	6	81
Total Analysis Volume [veh/h]	231	613	0	0	1129	117	0	0	0	24	22	325
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	64	64	64	64		64	64	64
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	41	26	26		11	11	11
g / C, Green / Cycle	0.15	0.64	0.40	0.40		0.17	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.06	0.11	0.21	0.07		0.02	0.11	0.10
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	527	3279	2030	633		310	246	271
d1, Uniform Delay [s]	24.74	4.62	14.77	12.54		22.77	24.85	24.59
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.11	0.05	0.45	0.28		0.44	5.55	4.01
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.18	0.53	0.17		0.14	0.62	0.57
d, Delay for Lane Group [s/veh]	25.86	4.67	15.22	12.82		23.21	30.40	28.60
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.48	0.73	3.52	0.95		0.55	2.32	2.22
50th-Percentile Queue Length [ft/ln]	37.06	18.14	88.07	23.82		13.67	57.92	55.45
95th-Percentile Queue Length [veh/ln]	2.67	1.31	6.34	1.71		0.98	4.17	3.99
95th-Percentile Queue Length [ft/ln]	66.70	32.65	158.53	42.87		24.60	104.25	99.81

Movement, Approach, & Intersection Results

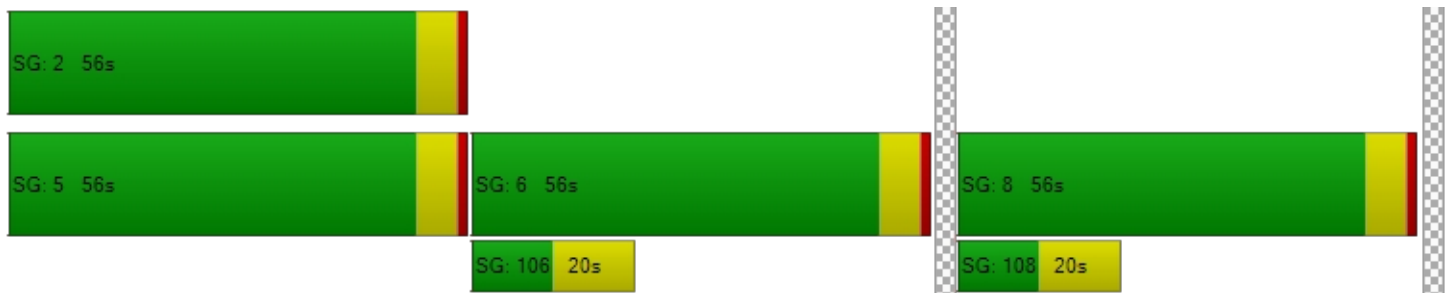
d_M, Delay for Movement [s/veh]	25.86	4.67	0.00	0.00	15.22	12.82	0.00	0.00	0.00	23.21	23.21	29.50
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.47				14.99		0.00		28.72			
Approach LOS	B				B		A		C			
d_I, Intersection Delay [s/veh]	15.51											
Intersection LOS	B											
Intersection V/C	0.397											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0		14.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		19.70		19.70		0.00	
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.002		1.885		0.000	
Crosswalk LOS	F		C		A		F	
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1554		1554		0		1554	
d_b, Bicycle Delay [s]	1.60		1.60		32.18		1.60	
I_b,int, Bicycle LOS Score for Intersection	1.998		2.232		4.132		1.958	
Bicycle LOS	A		B		D		A	

Sequence

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




Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	26.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.391

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	39	609	10	590	466	87	165	111	88	0	222	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	26	0	0	26	0	0	0
Total Hourly Volume [veh/h]	39	609	7	590	466	61	165	111	62	0	222	0
Peak Hour Factor	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	0.9680	1.0000	0.9680	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	10	157	2	152	120	16	43	29	16	0	57	0
Total Analysis Volume [veh/h]	40	629	7	610	481	63	170	115	64	0	229	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	6	14	14	19	28	28	10	26	26	10
g / C, Green / Cycle	0.07	0.19	0.19	0.25	0.36	0.36	0.13	0.33	0.33	0.13
(v / s)_i Volume / Saturation Flow Rate	0.02	0.11	0.11	0.17	0.10	0.10	0.05	0.02	0.04	0.04
s, saturation flow rate [veh/h]	1781	3560	1859	3459	3560	1762	3459	5094	1589	5094
c, Capacity [veh/h]	132	669	349	850	1280	633	437	1695	529	656
d1, Uniform Delay [s]	33.77	28.69	28.69	26.43	17.56	17.56	30.90	17.54	17.85	30.59
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.62	1.90	3.65	2.21	0.25	0.50	1.16	0.03	0.21	0.65
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.29	0.60	0.61	0.69	0.28	0.28	0.38	0.07	0.12	0.34
d, Delay for Lane Group [s/veh]	36.40	30.59	32.34	28.64	17.80	18.06	32.06	17.57	18.06	31.24
Lane Group LOS	D	C	C	C	B	B	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	0.76	3.43	3.76	4.89	2.11	2.14	1.42	0.43	0.75	1.24
50th-Percentile Queue Length [ft/ln]	19.04	85.72	93.92	122.28	52.86	53.60	35.46	10.67	18.74	30.98
95th-Percentile Queue Length [veh/ln]	1.37	6.17	6.76	8.52	3.81	3.86	2.55	0.77	1.35	2.23
95th-Percentile Queue Length [ft/ln]	34.27	154.30	169.06	212.96	95.14	96.48	63.83	19.20	33.72	55.76

Movement, Approach, & Intersection Results

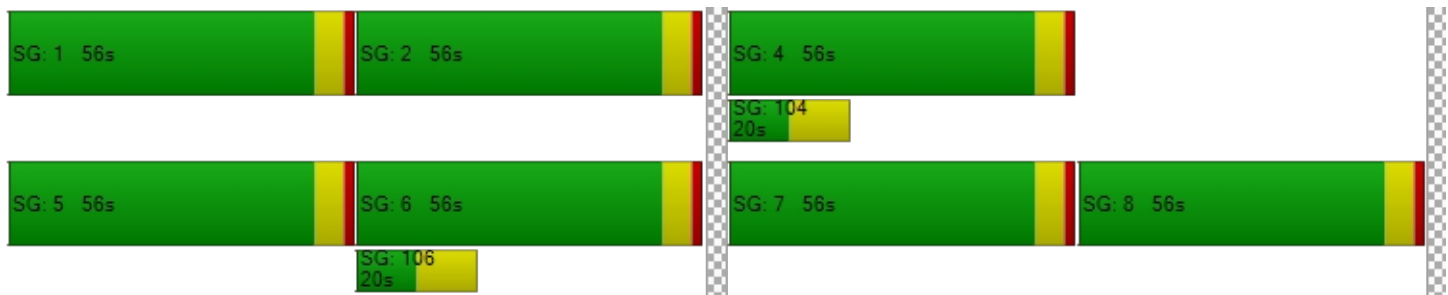
d_M, Delay for Movement [s/veh]	36.40	31.17	32.34	28.64	17.87	18.06	32.06	17.57	18.06	0.00	31.24	0.00
Movement LOS	D	C	C	C	B	B	C	B	B		C	
d_A, Approach Delay [s/veh]	31.50			23.57			24.74			31.24		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.70											
Intersection LOS	C											
Intersection V/C	0.391											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.75	0.00	25.75	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.783	0.000	2.964	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	1300	1300	1300
d_b, Bicycle Delay [s]	4.72	4.72	4.72	4.72
I_b,int, Bicycle LOS Score for Intersection	1.922	2.188	1.710	1.682
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	30.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.007

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↻			↻			↻			↻		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	52	1	0	7	106	1163	60	0	1167	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	52	1	0	7	106	1163	60	0	1167	24
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	14	0	0	2	28	306	16	0	307	6
Total Analysis Volume [veh/h]	0	0	55	1	0	7	112	1224	63	0	1228	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.14	0.01	0.00	0.02	0.34	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	16.18	30.18	0.00	14.69	22.10	0.00	0.00	0.00	0.00	0.00
Movement LOS			C	D		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.48	0.08	0.00	0.08	1.49	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	12.07	1.94	0.00	1.94	37.30	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.18		16.63			1.76		0.00				
Approach LOS	C		C			A		A				
d_I, Intersection Delay [s/veh]	1.29											
Intersection LOS	D											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.6
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.019

Intersection Setup

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

Volumes

Name	Claudina St					
	5	37	106	26	16	23
Base Volume Input [veh/h]	5	37	106	26	16	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	37	106	26	16	23
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	10	28	7	4	6
Total Analysis Volume [veh/h]	5	39	112	27	17	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.49	0.00	0.00	0.00	9.57	9.05
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.14	0.14
95th-Percentile Queue Length [ft/ln]	0.26	0.26	0.00	0.00	3.46	3.46
d_A, Approach Delay [s/veh]	0.89		0.00		9.26	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.87					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.118

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	640	26	0	1037	0	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	640	26	0	1037	0	67
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	168	7	0	273	0	18
Total Analysis Volume [veh/h]	674	27	0	1092	0	71
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.22
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.40
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	10.06
d_A, Approach Delay [s/veh]	0.00		0.00		12.22	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.46					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.800

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	705	958	408	82	857	383	263	849	329	192	1555	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	705	958	408	82	857	383	263	849	329	192	1555	78
Peak Hour Factor	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670	0.9670
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]	182	248	105	21	222	99	68	219	85	50	402	20
Total Analysis Volume [veh/h]	729	991	422	85	886	396	272	878	340	199	1608	81
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.19	0.24	0.02	0.17	0.23	0.08	0.17	0.19	0.06	0.24	0.24
Intersection LOS	D											
Intersection V/C	0.800											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.650

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	241	915	127	121	827	172	196	983	129	162	1407	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	915	127	121	827	172	196	983	129	162	1407	147
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	63	239	33	32	216	45	51	257	34	42	367	38
Total Analysis Volume [veh/h]	252	955	133	126	863	180	205	1026	135	169	1469	153
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.07	0.18	0.07	0.04	0.20	0.20	0.06	0.22	0.22	0.05	0.28	0.09
Intersection LOS	B											
Intersection V/C	0.650											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.108

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	19	57	1181	59	52	1734
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	19	57	1181	59	52	1734
Peak Hour Factor	0.9240	0.9240	0.9240	0.9240	0.9240	0.9240
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	5	15	320	16	14	469
Total Analysis Volume [veh/h]	21	62	1278	64	56	1877
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.15	0.01	0.00	0.17	0.02
d_M, Delay for Movement [s/veh]	29.96	19.17	0.00	0.00	19.56	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	1.06	1.06	0.00	0.00	0.63	0.00
95th-Percentile Queue Length [ft/ln]	26.47	26.47	0.00	0.00	15.70	0.00
d_A, Approach Delay [s/veh]	21.87		0.00		0.57	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.86					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	12.9
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.462

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1227	466	21	1366	63	853
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	140	0	0	0	256
Total Hourly Volume [veh/h]	1227	326	21	1366	63	597
Peak Hour Factor	0.9570	0.9570	0.9570	0.9570	0.9570	0.9570
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	321	85	5	357	16	156
Total Analysis Volume [veh/h]	1282	341	22	1427	66	624
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	32	32	2	39	14	14	14
g / C, Green / Cycle	0.49	0.49	0.03	0.60	0.22	0.22	0.22
(v / s)_i Volume / Saturation Flow Rate	0.24	0.21	0.01	0.20	0.04	0.19	0.19
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2484	775	55	4063	388	346	346
d1, Uniform Delay [s]	11.28	10.77	30.98	6.59	20.68	24.57	24.57
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.71	1.68	1.61	0.22	0.07	2.59	2.59
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.49	0.42	0.38	0.34	0.16	0.86	0.86
d, Delay for Lane Group [s/veh]	11.98	12.45	32.59	6.81	20.76	27.16	27.16
Lane Group LOS	B	B	C	A	C	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.47	2.88	0.33	1.83	0.73	4.31	4.31
50th-Percentile Queue Length [ft/ln]	86.66	71.93	8.28	45.87	18.24	107.78	107.78
95th-Percentile Queue Length [veh/ln]	6.24	5.18	0.60	3.30	1.31	7.72	7.72
95th-Percentile Queue Length [ft/ln]	155.99	129.48	14.91	82.56	32.83	192.91	192.91

Movement, Approach, & Intersection Results

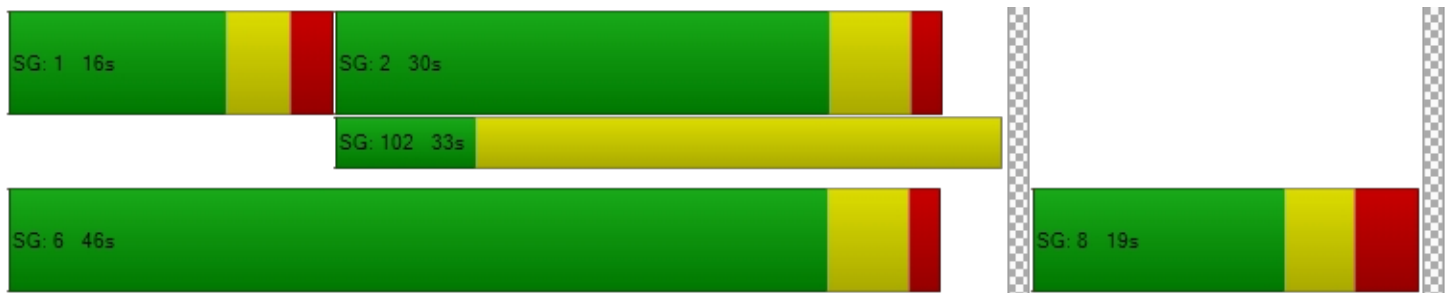
d_M, Delay for Movement [s/veh]	11.98	12.45	32.59	6.81	20.76	27.16
Movement LOS	B	B	C	A	C	C
d_A, Approach Delay [s/veh]	12.08		7.20		26.55	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	12.85					
Intersection LOS	B					
Intersection V/C	0.462					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.876
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.491	2.132	3.071
Bicycle LOS	B	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.510

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	←↑↑↑↑		↑↑↑↔		←↔↔	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	57	1416	717	669	351	364
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	201	0	109
Total Hourly Volume [veh/h]	57	1416	717	468	351	255
Peak Hour Factor	0.9580	0.9580	0.9580	0.9580	0.9580	0.9580
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	15	370	187	122	92	67
Total Analysis Volume [veh/h]	59	1478	748	489	366	266
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	42	34	34	13	13
g / C, Green / Cycle	0.05	0.65	0.53	0.53	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.21	0.14	0.29	0.10	0.16
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	91	4407	2678	836	673	309
d1, Uniform Delay [s]	30.32	5.08	8.54	10.40	23.54	25.19
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.63	0.19	0.25	2.73	0.23	2.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.32	0.27	0.56	0.52	0.82
d, Delay for Lane Group [s/veh]	32.96	5.27	8.78	13.13	23.77	27.36
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.89	1.50	1.57	4.24	2.26	3.67
50th-Percentile Queue Length [ft/ln]	22.37	37.54	39.37	106.10	56.56	91.77
95th-Percentile Queue Length [veh/ln]	1.61	2.70	2.83	7.62	4.07	6.61
95th-Percentile Queue Length [ft/ln]	40.27	67.58	70.86	190.57	101.81	165.19

Movement, Approach, & Intersection Results

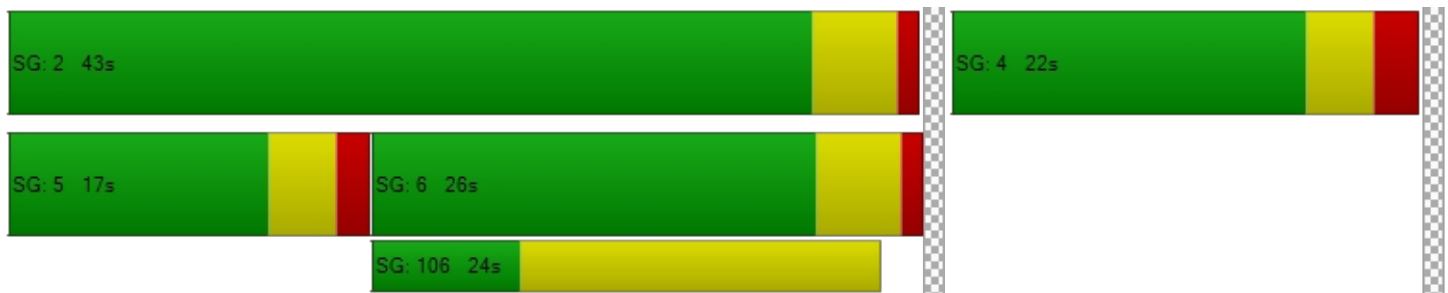
d_M, Delay for Movement [s/veh]	32.96	5.27	8.78	13.13	23.77	27.36
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	6.34		10.50		25.28	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	11.37					
Intersection LOS	B					
Intersection V/C	0.510					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.765
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.167	2.322	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	102.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.499

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	83	1358	9	0	1041	79	33	0	62	0	0	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1358	9	0	1041	79	33	0	62	0	0	17
Peak Hour Factor	0.9540	0.9540	1.0000	1.0000	0.9540	0.9540	0.9540	1.0000	0.9540	1.0000	1.0000	0.9540
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	356	2	0	273	21	9	0	16	0	0	4
Total Analysis Volume [veh/h]	87	1423	9	0	1091	83	35	0	65	0	0	18
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.24	0.01	0.00	0.00	0.01	0.00	0.50	0.00	0.15	0.00	0.00	0.05
d_M, Delay for Movement [s/veh]	18.87	0.00	0.00	0.00	0.00	0.00	102.90	0.00	57.36	0.00	0.00	16.30
Movement LOS	C	A	A		A	A	F		F			C
95th-Percentile Queue Length [veh/ln]	0.95	0.00	0.00	0.00	0.00	0.00	4.75	0.00	4.75	0.00	0.00	0.16
95th-Percentile Queue Length [ft/ln]	23.83	0.00	0.00	0.00	0.00	0.00	118.64	0.00	118.64	0.00	0.00	4.00
d_A, Approach Delay [s/veh]	1.08		0.00		73.18		16.30					
Approach LOS	A		A		F		C					
d_I, Intersection Delay [s/veh]	3.28											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.372

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1327	31	6	1069	89	15
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1327	31	6	1069	89	15
Peak Hour Factor	0.9600	0.9600	0.9600	0.9600	0.9600	0.9600
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	346	8	2	278	23	4
Total Analysis Volume [veh/h]	1382	32	6	1114	93	16
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.27	0.00	0.21	0.05	0.01
Intersection LOS	A					
Intersection V/C	0.372					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.707

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵↵↵			↵↵↵			↵↵			↵↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	33	1201	345	117	1034	3	4	5	4	591	1	185
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	33	1201	345	117	1034	3	4	5	4	591	1	185
Peak Hour Factor	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700	0.9700
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	310	89	30	266	1	1	1	1	152	0	48
Total Analysis Volume [veh/h]	34	1238	356	121	1066	3	4	5	4	609	1	191
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.24	0.20	0.07	0.20	0.20	0.00	0.01	0.01	0.35	0.00	0.11
Intersection LOS	C											
Intersection V/C	0.707											

Intersection Level Of Service Report
Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.500

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	←|↑|↑|↑			↑|↑|↑						↑|↑|↑		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	255	832	0	0	1232	410	0	0	0	51	285	687
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	123	0	0	0	0	0	206
Total Hourly Volume [veh/h]	255	832	0	0	1232	287	0	0	0	51	285	481
Peak Hour Factor	0.9730	0.9730	1.0000	1.0000	0.9730	0.9730	1.0000	1.0000	1.0000	0.9730	0.9730	0.9730
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	214	0	0	317	74	0	0	0	13	73	124
Total Analysis Volume [veh/h]	262	855	0	0	1266	295	0	0	0	52	293	494
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	85	85	85	85		85	85	85
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	52	36	36		21	21	21
g / C, Green / Cycle	0.12	0.61	0.42	0.42		0.25	0.25	0.25
(v / s)_i Volume / Saturation Flow Rate	0.07	0.16	0.24	0.18		0.17	0.17	0.17
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1855	1472	1589
c, Capacity [veh/h]	408	3105	2144	669		462	367	396
d1, Uniform Delay [s]	35.65	7.73	18.77	17.36		28.69	28.71	28.71
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	3.39	0.10	0.52	0.93		3.57	4.53	4.21
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.27	0.57	0.43		0.67	0.67	0.67
d, Delay for Lane Group [s/veh]	39.04	7.83	19.29	18.30		32.26	33.24	32.92
Lane Group LOS	D	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.62	2.04	5.80	3.86		5.66	4.61	4.94
50th-Percentile Queue Length [ft/ln]	65.53	51.06	145.04	96.44		141.55	115.22	123.56
95th-Percentile Queue Length [veh/ln]	4.72	3.68	9.75	6.94		9.56	8.13	8.59
95th-Percentile Queue Length [ft/ln]	117.96	91.91	243.80	173.59		239.11	203.24	214.71

Movement, Approach, & Intersection Results

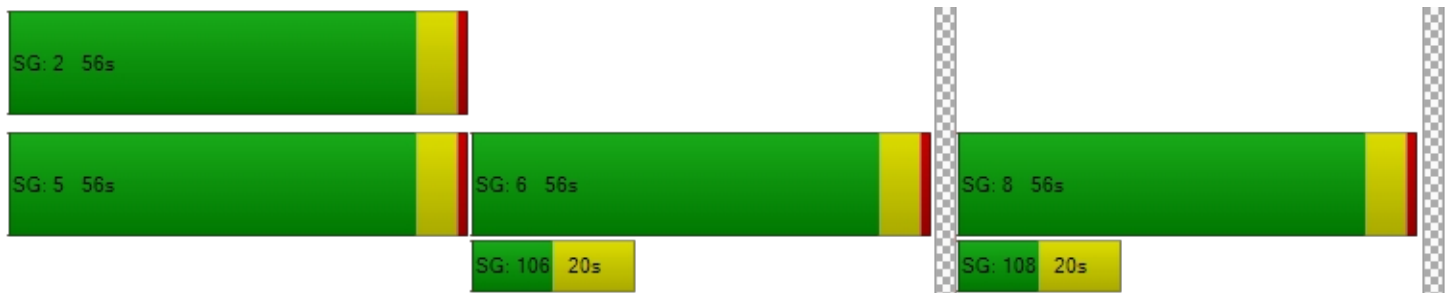
d_M, Delay for Movement [s/veh]	39.04	7.83	0.00	0.00	19.29	18.30	0.00	0.00	0.00	32.26	32.36	33.05
Movement LOS	D	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	15.15		19.11		0.00		32.77					
Approach LOS	B		B		A		C					
d_I, Intersection Delay [s/veh]	21.11											
Intersection LOS	C											
Intersection V/C	0.500											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	14.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	29.52	29.52	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	3.276	2.171	0.000
Crosswalk LOS	F	C	B	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1180	1180	0	1180
d_b, Bicycle Delay [s]	7.12	7.12	42.36	7.12
I_b,int, Bicycle LOS Score for Intersection	2.157	2.463	4.132	2.404
Bicycle LOS	B	B	D	B

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.476

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	72	847	23	589	613	81	235	239	212	0	312	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	24	0	0	64	0	0	0
Total Hourly Volume [veh/h]	72	847	16	589	613	57	235	239	148	0	312	0
Peak Hour Factor	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	0.9480	1.0000	0.9480	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	223	4	155	162	15	62	63	39	0	82	0
Total Analysis Volume [veh/h]	76	893	17	621	647	60	248	252	156	0	329	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	85	85	85	85	85	85	85	85	85	85
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	21	21	20	33	33	10	26	26	10
g / C, Green / Cycle	0.10	0.25	0.25	0.24	0.39	0.39	0.12	0.31	0.31	0.12
(v / s)_i Volume / Saturation Flow Rate	0.04	0.16	0.16	0.17	0.13	0.13	0.07	0.05	0.09	0.06
s, saturation flow rate [veh/h]	1781	3560	1852	3459	3560	1790	3459	5094	1589	5094
c, Capacity [veh/h]	172	877	456	821	1380	694	405	1553	484	598
d1, Uniform Delay [s]	36.25	28.78	28.78	29.85	18.26	18.27	35.64	21.60	22.70	35.35
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.50	1.73	3.33	2.56	0.29	0.57	2.84	0.10	0.76	1.52
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
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	0.65	0.65	0.72	0.32	0.32	0.58	0.15	0.31	0.52
d, Delay for Lane Group [s/veh]	39.75	30.51	32.12	32.41	18.55	18.84	38.47	21.70	23.46	36.87
Lane Group LOS	D	C	C	C	B	B	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.54	5.18	5.60	5.59	2.95	3.03	2.40	1.13	2.28	2.05
50th-Percentile Queue Length [ft/ln]	38.41	129.39	139.89	139.70	73.85	75.68	59.97	28.18	56.88	51.27
95th-Percentile Queue Length [veh/ln]	2.77	8.91	9.47	9.46	5.32	5.45	4.32	2.03	4.10	3.69
95th-Percentile Queue Length [ft/ln]	69.13	222.66	236.87	236.62	132.92	136.23	107.94	50.73	102.38	92.29

Movement, Approach, & Intersection Results

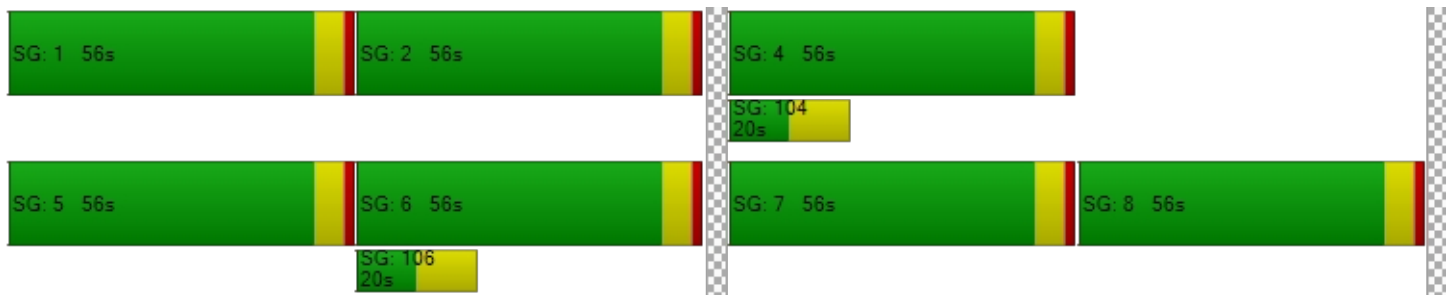
d_M, Delay for Movement [s/veh]	39.75	31.04	32.12	32.41	18.63	18.84	38.47	21.70	23.46	0.00	36.87	0.00
Movement LOS	D	C	C	C	B	B	D	C	C		D	
d_A, Approach Delay [s/veh]	31.73			25.09			28.46			36.87		
Approach LOS	C			C			C			D		
d_I, Intersection Delay [s/veh]	28.92											
Intersection LOS	C											
Intersection V/C	0.476											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	29.70	0.00	29.70	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.884	0.000	3.079	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1175	1175	1175	1175
d_b, Bicycle Delay [s]	7.24	7.24	7.24	7.24
I_b,int, Bicycle LOS Score for Intersection	2.078	2.265	1.843	1.731
Bicycle LOS	B	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	71.8
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.070

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↱			↵			↵↱↱			↱↱		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	32	4	0	22	1	1169	61	0	1750	2
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	32	4	0	22	1	1169	61	0	1750	2
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	8	1	0	6	0	308	16	0	461	1
Total Analysis Volume [veh/h]	0	0	34	4	0	23	1	1231	64	0	1842	2
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.09	0.07	0.00	0.09	0.01	0.01	0.00	0.00	0.02	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	15.59	71.80	0.00	23.42	26.71	0.00	0.00	0.00	0.00	0.00
Movement LOS			C	F		C	D	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.28	0.56	0.00	0.56	0.02	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	7.05	13.90	0.00	13.90	0.45	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.59		30.86				0.02		0.00			
Approach LOS	C		D				A		A			
d_I, Intersection Delay [s/veh]	0.44											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.5
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.011

Intersection Setup

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

Volumes

Name	Northbound		Claudina St		Eastbound	
Base Volume Input [veh/h]	7	67	79	32	9	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	67	79	32	9	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	18	21	8	2	3
Total Analysis Volume [veh/h]	7	71	83	34	9	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.45	0.00	0.00	0.00	9.54	8.84
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.36	0.36	0.00	0.00	1.81	1.81
d_A, Approach Delay [s/veh]	0.70		0.00		9.14	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.18					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C

Control Type:	Two-way stop	Delay (sec / veh):	16.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.089

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	1251	21	0	1118	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1251	21	0	1118	0	32
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	329	6	0	294	0	8
Total Analysis Volume [veh/h]	1317	22	0	1177	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	15.96
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.29
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	7.29
d_A, Approach Delay [s/veh]	0.00		0.00		15.96	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.21					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.844

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	714	581	190	157	1410	368	134	708	470	106	751	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	714	581	190	157	1410	368	134	708	470	106	751	75
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]	188	153	50	41	371	97	35	186	124	28	198	20
Total Analysis Volume [veh/h]	752	612	200	165	1484	387	141	745	495	112	791	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.11	0.11	0.05	0.28	0.22	0.04	0.14	0.28	0.03	0.12	0.12
Intersection LOS	D											
Intersection V/C	0.844											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: A
 Volume to Capacity (v/c): 0.574

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	68	424	131	313	1280	231	112	791	120	100	564	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	424	131	313	1280	231	112	791	120	100	564	41
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]	18	112	34	82	337	61	29	208	32	26	148	11
Total Analysis Volume [veh/h]	72	446	138	329	1347	243	118	833	126	105	594	43
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.08	0.08	0.09	0.30	0.30	0.03	0.18	0.18	0.03	0.11	0.02
Intersection LOS	A											
Intersection V/C	0.574											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	29.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.106

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	18	30	1214	40	32	791
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	18	30	1214	40	32	791
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]	5	8	319	11	8	208
Total Analysis Volume [veh/h]	19	32	1278	42	34	833
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.08	0.01	0.00	0.11	0.01
d_M, Delay for Movement [s/veh]	29.35	18.09	0.00	0.00	18.71	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.69	0.69	0.00	0.00	0.36	0.00
95th-Percentile Queue Length [ft/ln]	17.21	17.21	0.00	0.00	9.12	0.00
d_A, Approach Delay [s/veh]	22.32		0.00		0.73	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	21.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↑		←↑↑↑↑		←↑↑↑	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	508	164	3	1911	99	1088
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	49	0	0	0	326
Total Hourly Volume [veh/h]	508	115	3	1911	99	762
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]	134	30	1	503	26	201
Total Analysis Volume [veh/h]	535	121	3	2012	104	802
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	32	32	0	38	16	16	16
g / C, Green / Cycle	0.49	0.49	0.01	0.58	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.00	0.28	0.06	0.24	0.24
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2504	781	11	3924	424	379	379
d1, Uniform Delay [s]	9.36	9.09	32.24	8.09	20.03	24.83	24.83
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.07	0.07
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.40	4.45	0.44	0.10	40.07	40.07
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.15	0.26	0.49	0.23	1.01	1.01
d, Delay for Lane Group [s/veh]	9.55	9.48	36.69	8.53	20.14	64.91	64.91
Lane Group LOS	A	A	D	A	C	F	F
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.19	0.84	0.06	3.13	1.13	9.52	9.52
50th-Percentile Queue Length [ft/ln]	29.65	21.00	1.47	78.30	28.25	237.89	237.89
95th-Percentile Queue Length [veh/ln]	2.13	1.51	0.11	5.64	2.03	14.62	14.62
95th-Percentile Queue Length [ft/ln]	53.37	37.80	2.65	140.95	50.85	365.58	365.58

Movement, Approach, & Intersection Results

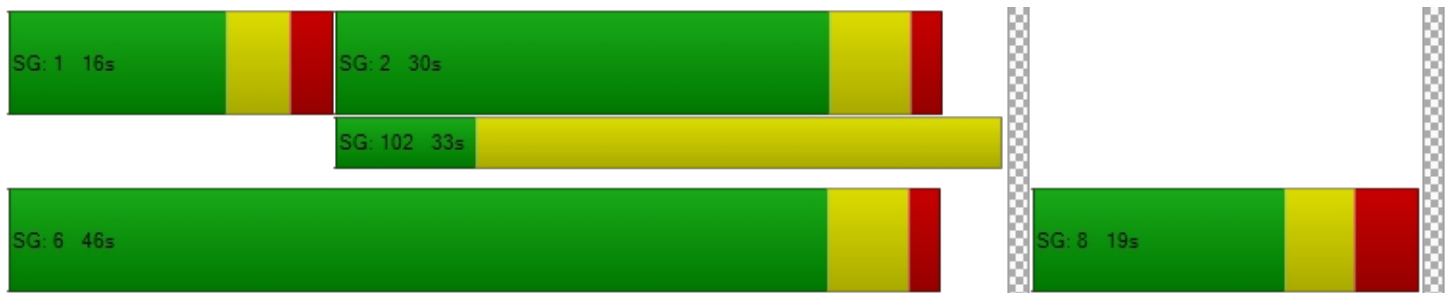
d_M, Delay for Movement [s/veh]	9.55	9.48	36.69	8.53	20.14	64.91
Movement LOS	A	A	D	A	C	F
d_A, Approach Delay [s/veh]	9.53		8.57		59.76	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	21.72					
Intersection LOS	C					
Intersection V/C	0.546					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.962
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	1.929	2.349	3.518
Bicycle LOS	A	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	26	536	1426	800	155	334
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	240	0	100
Total Hourly Volume [veh/h]	26	536	1426	560	155	234
Peak Hour Factor	0.9630	0.9630	0.9630	0.9630	0.9630	0.9630
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	139	370	145	40	61
Total Analysis Volume [veh/h]	27	557	1481	582	161	243
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	43	37	37	12	12
g / C, Green / Cycle	0.03	0.66	0.56	0.56	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.28	0.35	0.04	0.15
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	55	4511	2860	893	620	285
d1, Uniform Delay [s]	31.10	3.99	8.71	9.68	22.99	25.75
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.41	0.05	0.63	3.38	0.08	2.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.12	0.50	0.63	0.25	0.82
d, Delay for Lane Group [s/veh]	33.50	4.05	9.33	13.06	23.07	28.05
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.42	0.45	3.33	4.98	0.96	3.41
50th-Percentile Queue Length [ft/ln]	10.43	11.15	83.24	124.55	24.00	85.15
95th-Percentile Queue Length [veh/ln]	0.75	0.80	5.99	8.64	1.73	6.13
95th-Percentile Queue Length [ft/ln]	18.78	20.07	149.83	216.06	43.19	153.26

Movement, Approach, & Intersection Results

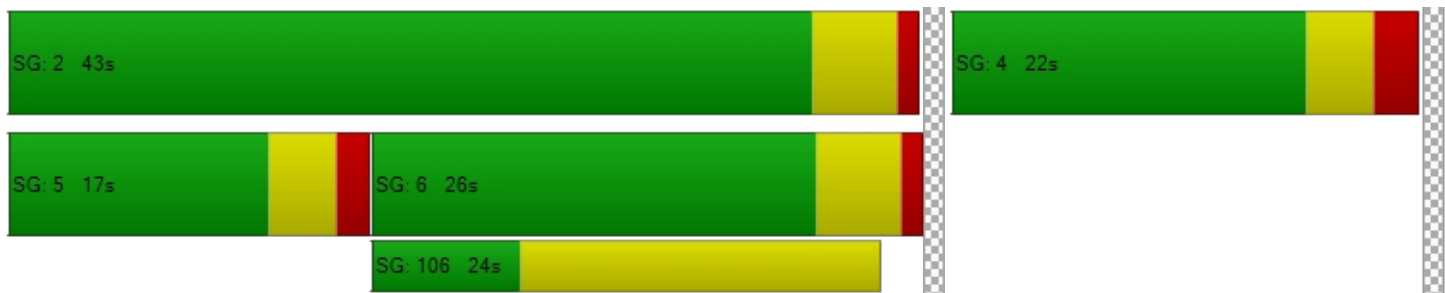
d_M, Delay for Movement [s/veh]	33.50	4.05	9.33	13.06	23.07	28.05
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	5.41		10.38		26.06	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	11.51					
Intersection LOS	B					
Intersection V/C	0.539					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.723
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.791	2.784	1.560
Bicycle LOS	A	C	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	4,818.6
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	2.787

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	68	470	10	10	1872	71	73	0	167	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	470	10	10	1872	71	73	0	167	0	0	0
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	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]	18	124	3	3	493	19	19	0	44	0	0	0
Total Analysis Volume [veh/h]	72	495	10	10	1971	75	77	0	176	0	0	0
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.51	0.00	0.00	0.01	0.02	0.00	2.79	0.00	0.77	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	59.01	0.00	0.00	10.28	0.00	0.00	4818.6	0.00	4697.8	178.99	0.00	10.55
Movement LOS	F	A	A	B	A	A	F		F	F		B
95th-Percentile Queue Length [veh/ln]	2.86	0.00	0.00	0.04	0.00	0.00	90.26	0.00	90.26	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	71.46	0.00	0.00	1.10	0.00	0.00	2256.3	0.00	2256.3	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	7.32			0.05			4734.58			94.77		
Approach LOS	A			A			F			F		
d_I, Intersection Delay [s/veh]	416.06											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.361

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	681	57	19	1519	23	17
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	681	57	19	1519	23	17
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]	179	15	5	400	6	4
Total Analysis Volume [veh/h]	717	60	20	1599	24	18
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.14	0.01	0.30	0.01	0.01
Intersection LOS	A					
Intersection V/C	0.361					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐⇐			⇐⇐⇐⇐			⇐⇐			⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	46	574	426	453	1125	27	1	7	18	360	17	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	46	574	426	453	1125	27	1	7	18	360	17	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]	12	151	112	119	296	7	0	2	5	95	4	34
Total Analysis Volume [veh/h]	48	604	448	477	1184	28	1	7	19	379	18	136
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.11	0.25	0.27	0.23	0.23	0.00	0.01	0.01	0.21	0.01	0.08
Intersection LOS	C											
Intersection V/C	0.794											

Intersection Level Of Service Report

Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	208	601	0	0	1399	158	0	0	0	17	15	284
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	47	0	0	0	0	0	85
Total Hourly Volume [veh/h]	208	601	0	0	1399	111	0	0	0	17	15	199
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	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]	55	158	0	0	368	29	0	0	0	4	4	52
Total Analysis Volume [veh/h]	219	633	0	0	1473	117	0	0	0	18	16	209
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	75	75	75	75		75	75	75
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	53	37	37		10	10	10
g / C, Green / Cycle	0.13	0.71	0.50	0.50		0.13	0.13	0.13
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.27	0.07		0.02	0.07	0.06
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	456	3607	2529	789		241	192	211
d1, Uniform Delay [s]	30.17	3.64	13.15	10.25		28.82	30.41	30.21
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.53	0.05	0.41	0.17		0.53	4.67	3.53
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.46	0.17	0.55	0.14		0.13	0.52	0.47
d, Delay for Lane Group [s/veh]	31.70	3.68	13.56	10.43		29.35	35.08	33.74
Lane Group LOS	C	A	B	B		C	D	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.76	0.69	4.85	0.92		0.51	1.80	1.75
50th-Percentile Queue Length [ft/ln]	43.93	17.33	121.32	23.02		12.72	45.04	43.74
95th-Percentile Queue Length [veh/ln]	3.16	1.25	8.47	1.66		0.92	3.24	3.15
95th-Percentile Queue Length [ft/ln]	79.08	31.20	211.65	41.44		22.90	81.08	78.73

Movement, Approach, & Intersection Results

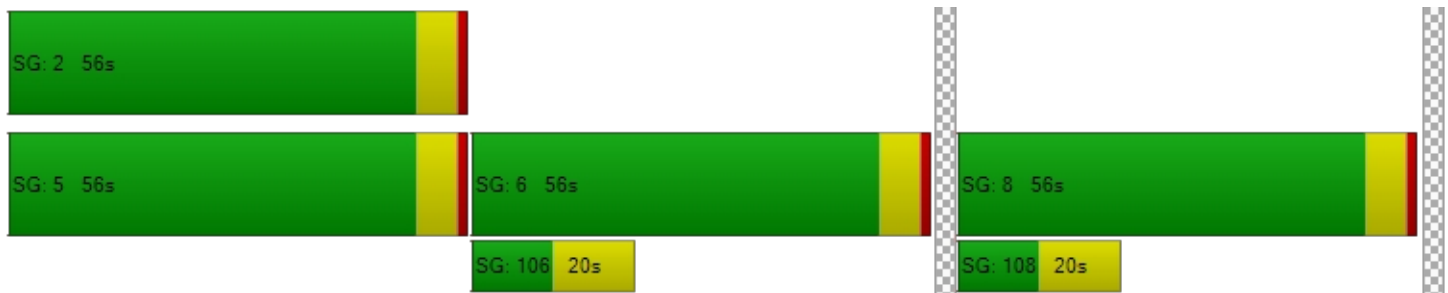
d_M, Delay for Movement [s/veh]	31.70	3.68	0.00	0.00	13.56	10.43	0.00	0.00	0.00	29.35	29.35	34.41
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.89				13.33		0.00		33.71			
Approach LOS	B				B		A		C			
d_I, Intersection Delay [s/veh]	14.40											
Intersection LOS	B											
Intersection V/C	0.420											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	14.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	24.86	24.86	0.00
I_p,int, Pedestrian LOS Score for Intersection	0.000	3.044	1.887	0.000
Crosswalk LOS	F	C	A	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1331	1331	0	1331
d_b, Bicycle Delay [s]	4.20	4.20	37.56	4.20
I_b,int, Bicycle LOS Score for Intersection	2.005	2.416	4.132	1.820
Bicycle LOS	B	B	D	A

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	26.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.420

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	71	623	9	531	751	190	163	581	195	0	443	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	57	0	0	59	0	0	0
Total Hourly Volume [veh/h]	71	623	6	531	751	133	163	581	136	0	443	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	164	2	140	198	35	43	153	36	0	117	0
Total Analysis Volume [veh/h]	75	656	6	559	791	140	172	612	143	0	466	0
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	77	77	77	77	77	77	77	77	77	77
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	15	15	17	24	24	10	27	27	12
g / C, Green / Cycle	0.10	0.19	0.19	0.22	0.31	0.31	0.13	0.35	0.35	0.15
(v / s)_i Volume / Saturation Flow Rate	0.04	0.12	0.12	0.15	0.17	0.17	0.05	0.11	0.11	0.09
s, saturation flow rate [veh/h]	1781	3560	1861	3459	3560	1730	3459	5094	1650	5094
c, Capacity [veh/h]	181	679	355	773	1113	541	433	1803	584	772
d1, Uniform Delay [s]	32.65	28.78	28.78	27.66	22.03	22.03	31.19	18.11	18.19	30.61
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.97	1.90	3.64	2.35	0.86	1.76	1.16	0.20	0.64	1.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.39	0.61	0.61	0.69	0.53	0.53	0.38	0.30	0.31	0.57
d, Delay for Lane Group [s/veh]	35.61	30.68	32.42	30.01	22.89	23.79	32.35	18.31	18.83	32.06
Lane Group LOS	D	C	C	C	C	C	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.35	3.52	3.86	4.52	4.31	4.32	1.41	2.19	2.29	2.55
50th-Percentile Queue Length [ft/ln]	33.73	88.07	96.47	113.04	107.76	108.11	35.35	54.78	57.17	63.87
95th-Percentile Queue Length [veh/ln]	2.43	6.34	6.95	8.01	7.72	7.73	2.55	3.94	4.12	4.60
95th-Percentile Queue Length [ft/ln]	60.72	158.53	173.65	200.22	192.88	193.36	63.64	98.60	102.91	114.97

Movement, Approach, & Intersection Results

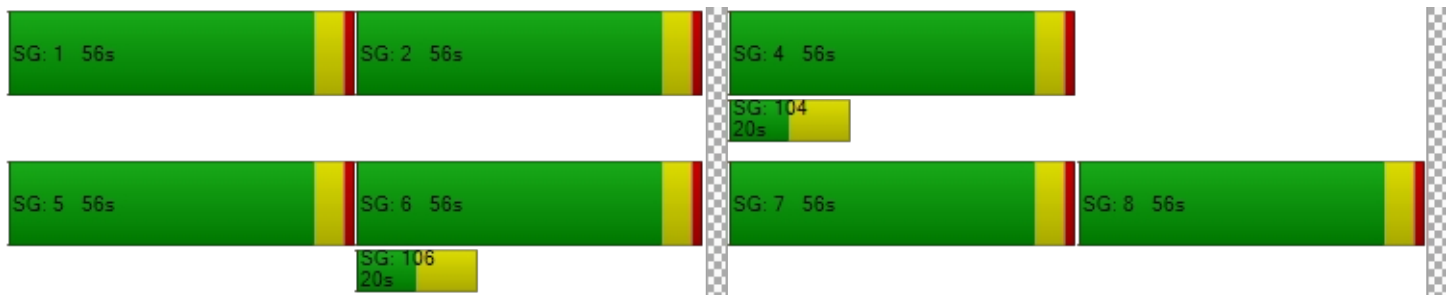
d_M, Delay for Movement [s/veh]	35.61	31.26	32.42	30.01	23.07	23.79	32.35	18.35	18.83	0.00	32.06	0.00
Movement LOS	D	C	C	C	C	C	C	B	B		C	
d_A, Approach Delay [s/veh]	31.72			25.74			21.02			32.06		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.56											
Intersection LOS	C											
Intersection V/C	0.420											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	26.01	0.00	26.01	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.854	0.000	3.129	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1290	1290	1290	1290
d_b, Bicycle Delay [s]	4.88	4.88	4.88	4.88
I_b,int, Bicycle LOS Score for Intersection	1.946	2.369	1.947	1.803
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	19.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶|||↷			|||↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	1	0	9	133	1102	0	0	778	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1	0	9	133	1102	0	0	778	31
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	2	35	290	0	0	205	8
Total Analysis Volume [veh/h]	0	0	0	1	0	9	140	1160	0	0	819	31
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.02	0.28	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.79	19.89	0.00	12.25	15.27	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	C		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.07	0.00	0.07	1.13	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	1.67	0.00	1.67	28.28	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.79			13.01			1.64			0.00		
Approach LOS	B			B			A			A		
d_I, Intersection Delay [s/veh]	1.05											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.809

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	922	1363	329	92	912	344	298	742	374	124	1266	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	922	1363	329	92	912	344	298	742	374	124	1266	77
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]	243	359	87	24	240	91	78	195	98	33	333	20
Total Analysis Volume [veh/h]	971	1435	346	97	960	362	314	781	394	131	1333	81
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.27	0.19	0.03	0.18	0.20	0.09	0.15	0.22	0.04	0.20	0.20
Intersection LOS	D											
Intersection V/C	0.809											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: B
 Volume to Capacity (v/c): 0.630

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	194	1367	95	161	852	156	194	754	148	125	1058	217
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	194	1367	95	161	852	156	194	754	148	125	1058	217
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]	51	360	25	42	224	41	51	198	39	33	278	57
Total Analysis Volume [veh/h]	204	1439	100	169	897	164	204	794	156	132	1114	228
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.27	0.06	0.05	0.20	0.20	0.06	0.18	0.18	0.04	0.21	0.13
Intersection LOS	B											
Intersection V/C	0.630											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	25.7
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.159

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	36	62	1004	46	58	1413
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	36	62	1004	46	58	1413
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	16	264	12	15	372
Total Analysis Volume [veh/h]	38	65	1057	48	61	1487
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	Yes		
Number of Storage Spaces in Median	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.16	0.15	0.01	0.00	0.16	0.01
d_M, Delay for Movement [s/veh]	25.73	18.33	0.00	0.00	16.53	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	1.30	1.30	0.00	0.00	0.56	0.00
95th-Percentile Queue Length [ft/ln]	32.43	32.43	0.00	0.00	13.88	0.00
d_A, Approach Delay [s/veh]	21.05		0.00		0.65	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.15					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	31.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.572

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↑↑↑↗		↖↑↑↑↑		↖↗↖	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1474	346	15	1372	61	1125
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	104	0	0	0	338
Total Hourly Volume [veh/h]	1474	242	15	1372	61	787
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]	388	64	4	361	16	207
Total Analysis Volume [veh/h]	1552	255	16	1444	64	828
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	31	31	1	38	16	16	16
g / C, Green / Cycle	0.47	0.47	0.02	0.58	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.29	0.15	0.01	0.20	0.03	0.25	0.25
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2416	754	42	3924	424	379	379
d1, Uniform Delay [s]	12.68	10.63	31.34	7.29	19.59	24.83	24.83
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.16	1.13	1.89	0.25	0.06	87.45	87.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.61	0.32	0.36	0.35	0.14	1.04	1.04
d, Delay for Lane Group [s/veh]	13.84	11.76	33.23	7.53	19.65	112.29	112.29
Lane Group LOS	B	B	C	A	B	F	F
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.68	2.06	0.24	2.02	0.68	14.50	14.50
50th-Percentile Queue Length [ft/ln]	116.96	51.51	6.06	50.39	17.01	362.49	362.49
95th-Percentile Queue Length [veh/ln]	8.23	3.71	0.44	3.63	1.22	21.20	21.20
95th-Percentile Queue Length [ft/ln]	205.64	92.71	10.91	90.70	30.61	530.10	530.10

Movement, Approach, & Intersection Results

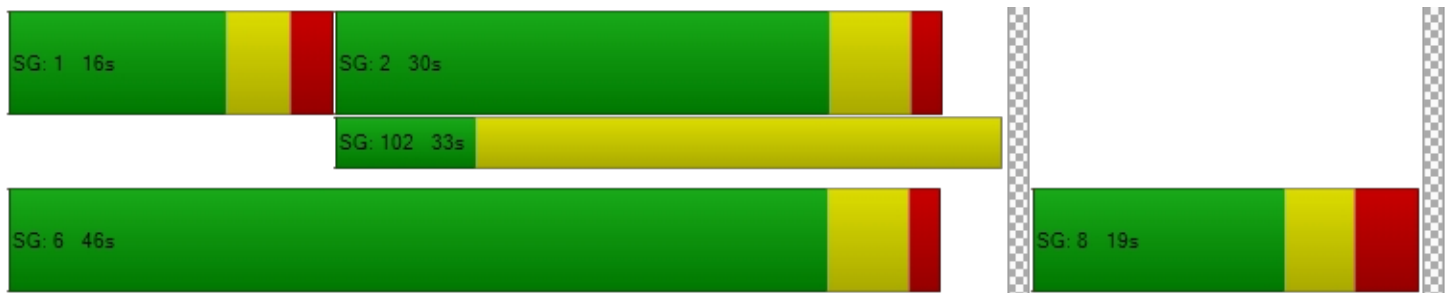
d_M, Delay for Movement [s/veh]	13.84	11.76	33.23	7.53	19.65	112.29
Movement LOS	B	B	C	A	B	F
d_A, Approach Delay [s/veh]	13.55		7.81		105.62	
Approach LOS	B		A		F	
d_I, Intersection Delay [s/veh]	31.30					
Intersection LOS	C					
Intersection V/C	0.572					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.034
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.561	2.132	3.517
Bicycle LOS	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.493

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	47	1612	829	656	274	353
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	197	0	106
Total Hourly Volume [veh/h]	47	1612	829	459	274	247
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]	12	424	218	121	72	65
Total Analysis Volume [veh/h]	49	1697	873	483	288	260
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	43	35	35	12	12
g / C, Green / Cycle	0.04	0.66	0.54	0.54	0.19	0.19
(v / s)_i Volume / Saturation Flow Rate	0.03	0.24	0.16	0.29	0.08	0.16
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	82	4446	2734	853	653	300
d1, Uniform Delay [s]	30.49	5.10	8.36	9.84	23.30	25.40
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.40	0.23	0.29	2.45	0.16	2.22
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.58	0.36	0.30	0.54	0.42	0.82
d, Delay for Lane Group [s/veh]	32.90	5.33	8.64	12.28	23.46	27.61
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.74	1.72	1.80	3.96	1.74	3.57
50th-Percentile Queue Length [ft/ln]	18.45	43.01	45.05	99.05	43.42	89.25
95th-Percentile Queue Length [veh/ln]	1.33	3.10	3.24	7.13	3.13	6.43
95th-Percentile Queue Length [ft/ln]	33.21	77.42	81.08	178.28	78.16	160.65

Movement, Approach, & Intersection Results

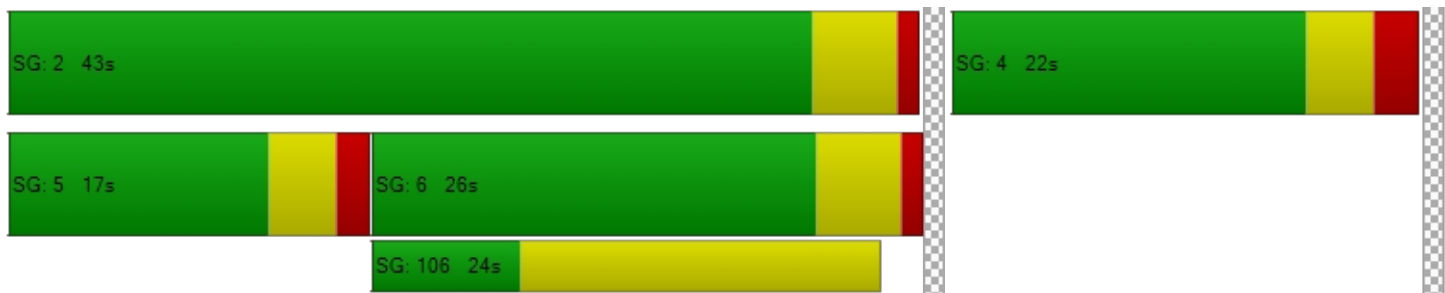
d_M, Delay for Movement [s/veh]	32.90	5.33	8.64	12.28	23.46	27.61
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	6.11		9.94		25.43	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.43					
Intersection LOS	B					
Intersection V/C	0.493					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.735
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.244	2.376	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	1,494.9
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.476

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	135	1746	10	10	1122	101	45	0	85	1	0	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	135	1746	10	10	1122	101	45	0	85	1	0	8
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	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]	36	459	3	3	295	27	12	0	22	0	0	2
Total Analysis Volume [veh/h]	142	1838	10	10	1181	106	47	0	89	1	0	8
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
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	0.44	0.02	0.00	0.06	0.01	0.00	1.48	0.00	0.23	0.07	0.00	0.03
d_M, Delay for Movement [s/veh]	26.09	0.00	0.00	28.07	0.00	0.00	1494.8	0.00	1386.3	248.18	0.00	23.68
Movement LOS	D	A	A	D	A	A	F		F	F		C
95th-Percentile Queue Length [veh/ln]	2.32	0.00	0.00	0.19	0.00	0.00	32.79	0.00	32.79	0.32	0.00	0.32
95th-Percentile Queue Length [ft/ln]	57.98	0.00	0.00	4.79	0.00	0.00	819.76	0.00	819.76	8.12	0.00	8.12
d_A, Approach Delay [s/veh]	1.86			0.23			1423.93			48.63		
Approach LOS	A			A			F			E		
d_I, Intersection Delay [s/veh]	58.03											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.465

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1727	62	22	1061	87	30
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1727	62	22	1061	87	30
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]	454	16	6	279	23	8
Total Analysis Volume [veh/h]	1818	65	23	1117	92	32
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.35	0.35	0.01	0.21	0.05	0.02
Intersection LOS	A					
Intersection V/C	0.465					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.722

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐⇐			⇐⇐⇐⇐			⇐⇐			⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	32	1074	325	201	914	9	21	24	4	556	13	276
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1074	325	201	914	9	21	24	4	556	13	276
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	283	86	53	241	2	6	6	1	146	3	73
Total Analysis Volume [veh/h]	34	1131	342	212	962	9	22	25	4	585	14	291
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.21	0.19	0.12	0.18	0.18	0.01	0.02	0.02	0.33	0.01	0.16
Intersection LOS	C											
Intersection V/C	0.722											

Intersection Level Of Service Report

Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	23.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.564

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	244	1099	0	0	1192	374	0	0	0	49	206	999
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	112	0	0	0	0	0	300
Total Hourly Volume [veh/h]	244	1099	0	0	1192	262	0	0	0	49	206	699
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	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]	64	289	0	0	314	69	0	0	0	13	54	184
Total Analysis Volume [veh/h]	257	1157	0	0	1255	276	0	0	0	52	217	736
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	94	94	94	94		94	94	94
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	52	36	36		30	30	30
g / C, Green / Cycle	0.11	0.55	0.38	0.38		0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.22	0.23	0.16		0.14	0.24	0.22
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1852	1446	1589
c, Capacity [veh/h]	376	2825	1948	608		589	460	506
d1, Uniform Delay [s]	40.32	11.93	23.49	21.55		25.43	28.91	28.10
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.08	0.19	0.67	1.04		1.08	5.63	3.66
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.39	0.61	0.43		0.43	0.76	0.69
d, Delay for Lane Group [s/veh]	44.41	12.12	24.17	22.58		26.50	34.54	31.76
Lane Group LOS	D	B	C	C		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.87	4.04	6.89	4.27		4.40	7.30	6.91
50th-Percentile Queue Length [ft/ln]	71.65	100.97	172.22	106.69		109.94	182.48	172.73
95th-Percentile Queue Length [veh/ln]	5.16	7.27	11.19	7.66		7.84	11.73	11.22
95th-Percentile Queue Length [ft/ln]	128.96	181.75	279.83	191.39		195.92	293.25	280.50

Movement, Approach, & Intersection Results

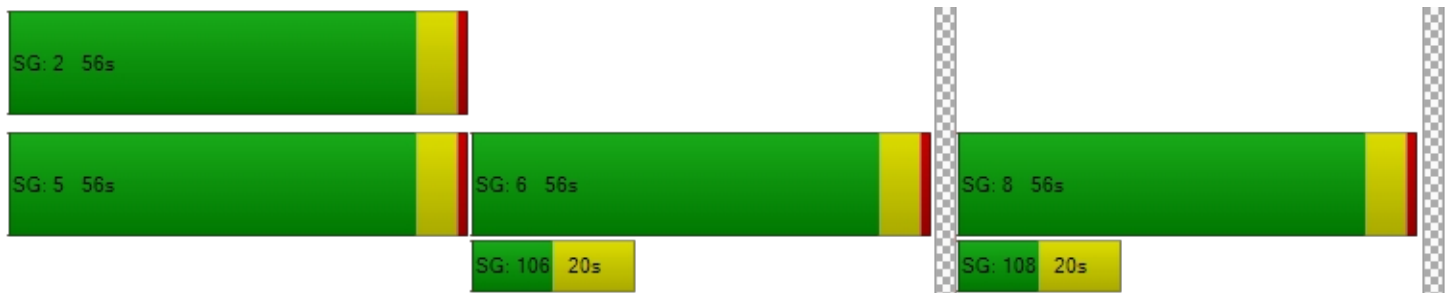
d_M, Delay for Movement [s/veh]	44.41	12.12	0.00	0.00	24.17	22.58	0.00	0.00	0.00	26.50	26.50	33.15
Movement LOS	D	B			C	C				C	C	C
d_A, Approach Delay [s/veh]	17.99		23.88			0.00			31.37			
Approach LOS	B		C			A			C			
d_I, Intersection Delay [s/veh]	23.68											
Intersection LOS	C											
Intersection V/C	0.564											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0			14.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00		34.13			34.13			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.347			2.115			0.000		
Crosswalk LOS	F		C			B			F		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1062		1062			0			1062		
d_b, Bicycle Delay [s]	10.36		10.36			47.09			10.36		
I_b,int, Bicycle LOS Score for Intersection	2.298		2.421			4.132			2.594		
Bicycle LOS	B		B			D			B		

Sequence

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




Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	147	931	22	482	627	131	404	547	198	0	473	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	39	0	0	59	0	0	0
Total Hourly Volume [veh/h]	147	931	15	482	627	92	404	547	139	0	473	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	245	4	127	165	24	106	144	37	0	124	0
Total Analysis Volume [veh/h]	155	980	16	507	660	97	425	576	146	0	498	0
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 major street	0		0		0		0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0		0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0		0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0		0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0		0		0		0	
Bicycle Volume [bicycles/h]	0		0		0		0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	98	98	98	98	98	98	98	98	98	98
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	25	25	19	33	33	16	36	36	14
g / C, Green / Cycle	0.11	0.26	0.26	0.19	0.34	0.34	0.16	0.37	0.37	0.15
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.14	0.14	0.14	0.12	0.10	0.10	0.09
s, saturation flow rate [veh/h]	1781	3560	1855	3459	3560	1750	3459	5094	1634	5094
c, Capacity [veh/h]	193	910	474	661	1203	592	566	1887	605	743
d1, Uniform Delay [s]	42.61	33.03	33.03	37.41	24.93	24.94	38.96	21.70	21.76	39.57
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.21	1.97	3.77	3.38	0.46	0.94	3.64	0.17	0.54	1.96
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.68	0.68	0.73	0.40	0.40	0.71	0.27	0.28	0.64
d, Delay for Lane Group [s/veh]	55.81	34.99	36.80	40.79	25.40	25.88	42.60	21.87	22.30	41.54
Lane Group LOS	E	C	D	D	C	C	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.11	6.73	7.25	5.62	4.24	4.26	4.79	2.72	2.75	3.65
50th-Percentile Queue Length [ft/ln]	102.71	168.21	181.30	140.51	106.06	106.48	119.86	68.08	68.87	91.13
95th-Percentile Queue Length [veh/ln]	7.40	10.98	11.67	9.51	7.62	7.64	8.39	4.90	4.96	6.56
95th-Percentile Queue Length [ft/ln]	184.88	274.57	291.72	237.71	190.51	191.10	209.63	122.54	123.97	164.03

Movement, Approach, & Intersection Results

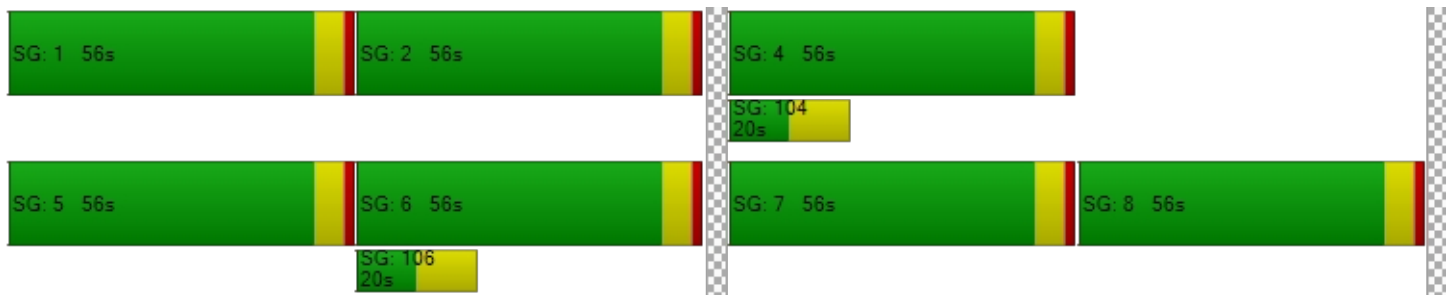
d_M, Delay for Movement [s/veh]	55.81	35.59	36.80	40.79	25.51	25.88	42.60	21.89	22.30	0.00	41.54	0.00
Movement LOS	E	D	D	D	C	C	D	C	C		D	
d_A, Approach Delay [s/veh]	38.33			31.67			29.62			41.54		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	34.19											
Intersection LOS	C											
Intersection V/C	0.540											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.11	0.00	36.11	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.918	0.000	3.174	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1018	1018	1018	1018
d_b, Bicycle Delay [s]	11.84	11.84	11.84	11.84
I_b,int, Bicycle LOS Score for Intersection	2.165	2.242	2.034	1.820
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	45.5
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.053

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶|||↷			|||↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	0	5	0	28	1	1009	0	0	1446	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	5	0	28	1	1009	0	0	1446	3
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	1	0	7	0	266	0	0	381	1
Total Analysis Volume [veh/h]	0	0	0	5	0	29	1	1062	0	0	1522	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.20	45.54	0.00	18.95	20.31	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	E		C	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.49	0.00	0.49	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	12.30	0.00	12.30	0.32	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.20			22.98			0.02			0.00		
Approach LOS	B			C			A			A		
d_I, Intersection Delay [s/veh]	0.31											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.842

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	709	579	187	146	1432	363	139	692	462	106	754	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	709	579	187	146	1432	363	139	692	462	106	754	75
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]	187	152	49	38	377	96	37	182	122	28	198	20
Total Analysis Volume [veh/h]	746	609	197	154	1507	382	146	728	486	112	794	79
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.11	0.11	0.04	0.28	0.21	0.04	0.14	0.27	0.03	0.12	0.12
Intersection LOS	D											
Intersection V/C	0.842											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.566

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	68	435	129	290	1243	238	111	742	162	96	561	41
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	435	129	290	1243	238	111	742	162	96	561	41
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]	18	114	34	76	327	63	29	195	43	25	148	11
Total Analysis Volume [veh/h]	72	458	136	305	1308	251	117	781	171	101	591	43
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.09	0.08	0.09	0.29	0.29	0.03	0.18	0.18	0.03	0.11	0.02
Intersection LOS	A											
Intersection V/C	0.566											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	25.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.064

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	12	26	1148	28	25	776
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	12	26	1148	28	25	776
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	3	7	302	7	7	204
Total Analysis Volume [veh/h]	13	27	1208	29	26	817
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	Yes		
Number of Storage Spaces in Median	5	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.06	0.07	0.01	0.00	0.08	0.01
d_M, Delay for Movement [s/veh]	25.91	16.15	0.00	0.00	17.14	0.00
Movement LOS	D	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.45	0.45	0.00	0.00	0.25	0.00
95th-Percentile Queue Length [ft/ln]	11.23	11.23	0.00	0.00	6.31	0.00
d_A, Approach Delay [s/veh]	19.23		0.00		0.53	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.58					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.546

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	502	164	3	1912	99	1086
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	49	0	0	0	326
Total Hourly Volume [veh/h]	502	115	3	1912	99	760
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]	132	30	1	503	26	200
Total Analysis Volume [veh/h]	528	121	3	2013	104	800
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	32	32	0	38	16	16	16
g / C, Green / Cycle	0.49	0.49	0.01	0.58	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.10	0.07	0.00	0.28	0.06	0.24	0.24
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2504	781	11	3924	424	379	379
d1, Uniform Delay [s]	9.35	9.09	32.24	8.09	20.03	24.83	24.83
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.07	0.07
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.18	0.40	4.45	0.44	0.10	37.03	37.03
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.20	0.15	0.26	0.49	0.23	1.00	1.00
d, Delay for Lane Group [s/veh]	9.53	9.48	36.69	8.53	20.14	61.86	61.86
Lane Group LOS	A	A	D	A	C	F	F
Critical Lane Group	No	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.17	0.84	0.06	3.13	1.13	9.20	9.20
50th-Percentile Queue Length [ft/ln]	29.26	21.00	1.47	78.36	28.25	229.88	229.88
95th-Percentile Queue Length [veh/ln]	2.11	1.51	0.11	5.64	2.03	14.20	14.20
95th-Percentile Queue Length [ft/ln]	52.67	37.80	2.65	141.05	50.85	354.89	354.89

Movement, Approach, & Intersection Results

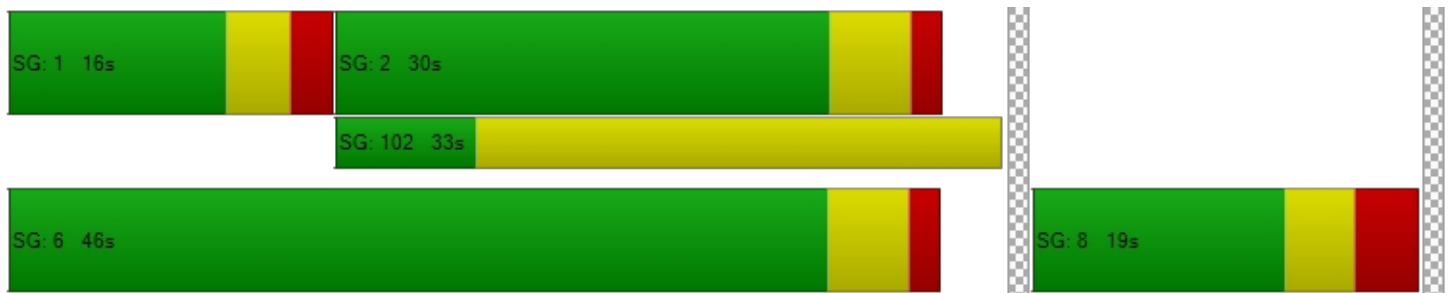
d_M, Delay for Movement [s/veh]	9.53	9.48	36.69	8.53	20.14	61.86
Movement LOS	A	A	D	A	C	F
d_A, Approach Delay [s/veh]	9.52		8.57		57.05	
Approach LOS	A		A		E	
d_I, Intersection Delay [s/veh]	21.03					
Intersection LOS	C					
Intersection V/C	0.546					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.961
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	1.926	2.350	3.515
Bicycle LOS	A	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	11.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.539

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	26	528	1422	809	155	326
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	243	0	98
Total Hourly Volume [veh/h]	26	528	1422	566	155	228
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]	7	139	374	149	41	60
Total Analysis Volume [veh/h]	27	556	1497	596	163	240
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	2.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	2	44	37	37	11	11
g / C, Green / Cycle	0.03	0.67	0.57	0.57	0.17	0.17
(v / s)_i Volume / Saturation Flow Rate	0.01	0.08	0.28	0.36	0.04	0.14
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	55	4536	2879	898	608	279
d1, Uniform Delay [s]	31.10	3.90	8.55	9.58	23.19	25.86
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.41	0.05	0.61	3.40	0.08	2.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.12	0.49	0.63	0.25	0.82
d, Delay for Lane Group [s/veh]	33.50	3.95	9.16	12.97	23.27	28.14
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.42	0.43	3.27	5.00	0.97	3.32
50th-Percentile Queue Length [ft/ln]	10.43	10.73	81.77	125.06	24.14	83.04
95th-Percentile Queue Length [veh/ln]	0.75	0.77	5.89	8.67	1.74	5.98
95th-Percentile Queue Length [ft/ln]	18.78	19.31	147.19	216.76	43.44	149.47

Movement, Approach, & Intersection Results

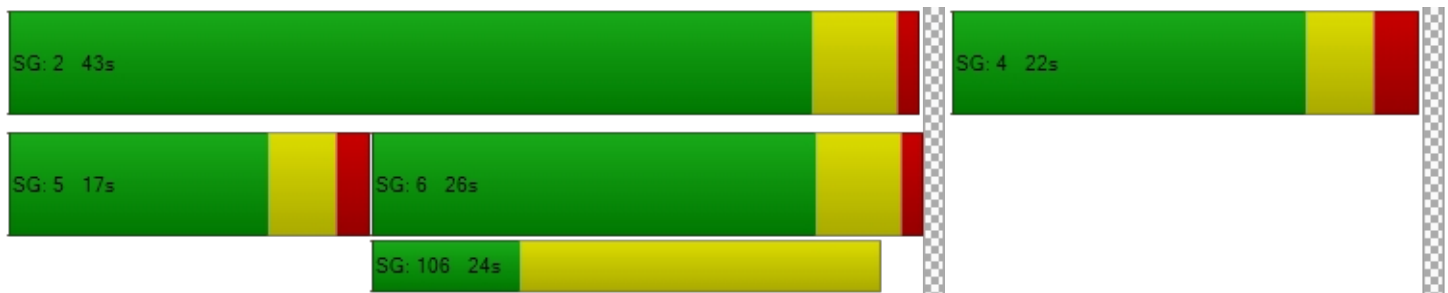
d_M, Delay for Movement [s/veh]	33.50	3.95	9.16	12.97	23.27	28.14
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	5.34		10.25		26.17	
Approach LOS	A		B		C	
d_I, Intersection Delay [s/veh]	11.40					
Intersection LOS	B					
Intersection V/C	0.539					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.721
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	1.788	2.787	1.560
Bicycle LOS	A	C	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	4,874.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	2.814

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	68	447	15	0	1881	69	74	0	167	0	0	20
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	447	15	0	1881	69	74	0	167	0	0	20
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	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]	18	118	4	0	495	18	19	0	44	0	0	5
Total Analysis Volume [veh/h]	72	471	15	0	1980	73	78	0	176	0	0	21
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.51	0.00	0.00	0.00	0.02	0.00	2.81	0.00	0.77	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	59.88	0.00	0.00	0.00	0.00	0.00	4874.2	0.00	4754.1	0.00	0.00	10.65
Movement LOS	F	A	A		A	A	F		F			B
95th-Percentile Queue Length [veh/ln]	2.90	0.00	0.00	0.00	0.00	0.00	90.90	0.00	90.90	0.00	0.00	0.09
95th-Percentile Queue Length [ft/ln]	72.48	0.00	0.00	0.00	0.00	0.00	2272.4	0.00	2272.4	0.00	0.00	2.35
d_A, Approach Delay [s/veh]	7.68		0.00		4791.01		10.65					
Approach LOS	A		A		F		B					
d_I, Intersection Delay [s/veh]	422.81											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.362

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	665	42	21	1525	22	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	665	42	21	1525	22	6
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]	175	11	6	401	6	2
Total Analysis Volume [veh/h]	700	44	22	1605	23	6
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.14	0.14	0.01	0.30	0.01	0.00
Intersection LOS	A					
Intersection V/C	0.362					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐⇐			⇐⇐⇐⇐			⇐⇐			⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	49	551	414	496	1083	25	4	6	16	345	17	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 [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	49	551	414	496	1083	25	4	6	16	345	17	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]	13	145	109	131	285	7	1	2	4	91	4	34
Total Analysis Volume [veh/h]	52	580	436	522	1140	26	4	6	17	363	18	136
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.11	0.24	0.29	0.22	0.22	0.00	0.01	0.01	0.20	0.01	0.08
Intersection LOS	D											
Intersection V/C	0.801											

Intersection Level Of Service Report

Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.408

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	210	578	0	0	1342	158	0	0	0	17	15	278
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	47	0	0	0	0	0	83
Total Hourly Volume [veh/h]	210	578	0	0	1342	111	0	0	0	17	15	195
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	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]	55	152	0	0	353	29	0	0	0	4	4	51
Total Analysis Volume [veh/h]	221	608	0	0	1413	117	0	0	0	18	16	205
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	73	73	73	73		73	73	73
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	51	35	35		10	10	10
g / C, Green / Cycle	0.14	0.70	0.48	0.48		0.14	0.14	0.14
(v / s)_i Volume / Saturation Flow Rate	0.06	0.11	0.26	0.07		0.02	0.07	0.06
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1822	1446	1589
c, Capacity [veh/h]	469	3565	2457	767		248	197	216
d1, Uniform Delay [s]	29.09	3.72	13.31	10.54		27.78	29.26	29.08
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	1.44	0.05	0.41	0.18		0.50	4.13	3.15
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.45	0.16	0.55	0.14		0.13	0.50	0.45
d, Delay for Lane Group [s/veh]	30.53	3.76	13.71	10.72		28.28	33.40	32.23
Lane Group LOS	C	A	B	B		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.71	0.66	4.58	0.92		0.49	1.68	1.64
50th-Percentile Queue Length [ft/ln]	42.64	16.56	114.56	23.03		12.22	42.12	40.96
95th-Percentile Queue Length [veh/ln]	3.07	1.19	8.09	1.66		0.88	3.03	2.95
95th-Percentile Queue Length [ft/ln]	76.74	29.81	202.32	41.46		21.99	75.81	73.73

Movement, Approach, & Intersection Results

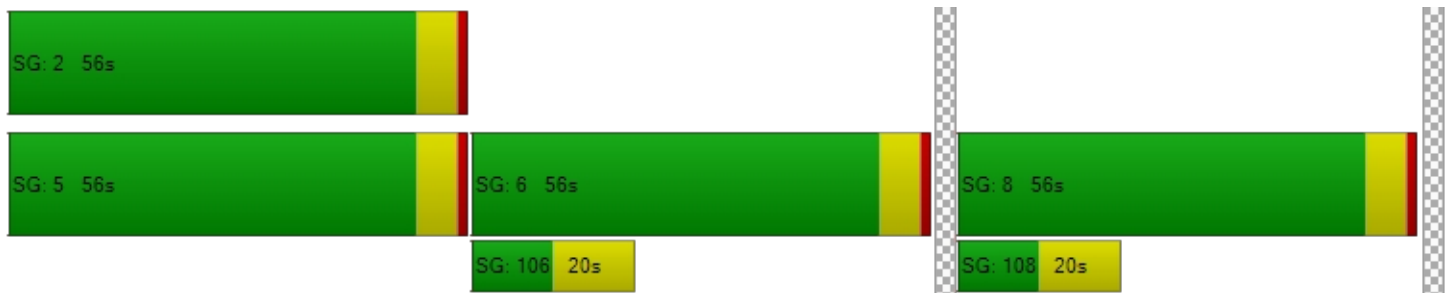
d_M, Delay for Movement [s/veh]	30.53	3.76	0.00	0.00	13.71	10.72	0.00	0.00	0.00	28.28	28.28	32.81
Movement LOS	C	A			B	B				C	C	C
d_A, Approach Delay [s/veh]	10.90				13.48		0.00				32.17	
Approach LOS	B				B		A				C	
d_I, Intersection Delay [s/veh]	14.38											
Intersection LOS	B											
Intersection V/C	0.408											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0		14.0		0.0	
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00		0.00		0.00	
d_p, Pedestrian Delay [s]	0.00		23.84		23.84		0.00	
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.028		1.886		0.000	
Crosswalk LOS	F		C		A		F	
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000		2000		2000	
c_b, Capacity of the bicycle lane [bicycles/h]	1370		1370		0		1370	
d_b, Bicycle Delay [s]	3.62		3.62		36.49		3.62	
I_b,int, Bicycle LOS Score for Intersection	1.993		2.385		4.132		1.815	
Bicycle LOS	A		B		D		A	

Sequence

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



Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.417

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	68	584	9	521	712	182	181	538	191	0	451	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	3	0	0	55	0	0	57	0	0	0
Total Hourly Volume [veh/h]	68	584	6	521	712	127	181	538	134	0	451	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	154	2	137	187	33	48	142	35	0	119	0
Total Analysis Volume [veh/h]	72	615	6	548	749	134	191	566	141	0	475	0
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 major street	0		0			0			0			
v_di, Inbound Pedestrian Volume crossing major street	0		0			0			0			
v_co, Outbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ci, Inbound Pedestrian Volume crossing minor street	0		0			0			0			
v_ab, Corner Pedestrian Volume [ped/h]	0		0			0			0			
Bicycle Volume [bicycles/h]	0		0			0			0			

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	76	76	76	76	76	76	76	76	76	76
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	8	14	14	17	23	23	10	28	28	12
g / C, Green / Cycle	0.10	0.18	0.18	0.22	0.30	0.30	0.13	0.36	0.36	0.15
(v / s)_i Volume / Saturation Flow Rate	0.04	0.11	0.11	0.15	0.16	0.16	0.05	0.10	0.10	0.09
s, saturation flow rate [veh/h]	1781	3560	1860	3459	3560	1729	3459	5094	1640	5094
c, Capacity [veh/h]	179	646	337	765	1074	522	444	1844	594	790
d1, Uniform Delay [s]	32.11	28.72	28.72	27.28	22.13	22.13	30.62	17.25	17.33	29.91
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.83	1.93	3.70	2.32	0.86	1.77	1.29	0.17	0.56	1.40
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
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	0.60	0.60	0.68	0.53	0.53	0.41	0.27	0.28	0.57
d, Delay for Lane Group [s/veh]	34.94	30.65	32.42	29.60	22.99	23.90	31.91	17.42	17.88	31.31
Lane Group LOS	C	C	C	C	C	C	C	B	B	C
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.27	3.26	3.58	4.35	4.05	4.06	1.54	1.96	2.04	2.54
50th-Percentile Queue Length [ft/ln]	31.68	81.60	89.55	108.79	101.21	101.61	38.60	49.10	51.12	63.51
95th-Percentile Queue Length [veh/ln]	2.28	5.88	6.45	7.77	7.29	7.32	2.78	3.54	3.68	4.57
95th-Percentile Queue Length [ft/ln]	57.02	146.88	161.20	194.32	182.17	182.90	69.49	88.39	92.02	114.31

Movement, Approach, & Intersection Results

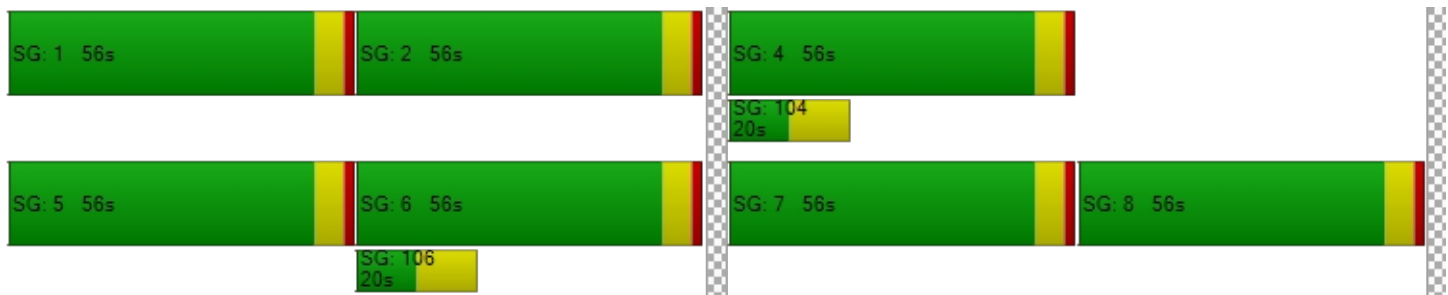
d_M, Delay for Movement [s/veh]	34.94	31.24	32.42	29.60	23.18	23.90	31.91	17.45	17.88	0.00	31.31	0.00
Movement LOS	C	C	C	C	C	C	C	B	B		C	
d_A, Approach Delay [s/veh]	31.64			25.70			20.59			31.31		
Approach LOS	C			C			C			C		
d_I, Intersection Delay [s/veh]	26.33											
Intersection LOS	C											
Intersection V/C	0.417											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	25.39	0.00	25.39	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.839	0.000	3.121	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1312	1312	1312	1312
d_b, Bicycle Delay [s]	4.51	4.51	4.51	4.51
I_b,int, Bicycle LOS Score for Intersection	1.923	2.338	1.935	1.808
Bicycle LOS	A	B	A	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↷			↶			↷↶↷			↷↶↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	52	1	0	9	133	1101	60	0	788	31
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	52	1	0	9	133	1101	60	0	788	31
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	14	0	0	2	35	290	16	0	207	8
Total Analysis Volume [veh/h]	0	0	55	1	0	9	140	1159	63	0	829	31
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.13	0.00	0.00	0.02	0.28	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	15.59	21.35	0.00	12.31	15.42	0.00	0.00	0.00	0.00	0.00
Movement LOS			C	C		B	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.46	0.07	0.00	0.07	1.15	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	11.45	1.71	0.00	1.71	28.71	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.59		13.21			1.59		0.00				
Approach LOS	C		B			A		A				
d_I, Intersection Delay [s/veh]	1.38											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.018

Intersection Setup

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

Volumes

Name	Northbound		Southbound		Eastbound	
Base Volume Input [veh/h]	5	38	27	26	16	23
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	5	38	27	26	16	23
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	10	7	7	4	6
Total Analysis Volume [veh/h]	5	40	28	27	17	24
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.02	0.02
d_M, Delay for Movement [s/veh]	7.33	0.00	0.00	0.00	9.11	8.64
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.24	0.24	0.00	0.00	3.12	3.12
d_A, Approach Delay [s/veh]	0.85		0.00		8.83	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	2.82					
Intersection LOS	A					

**Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C**

Control Type:	Two-way stop	Delay (sec / veh):	12.2
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.118

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	632	26	0	1501	0	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	632	26	0	1501	0	67
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	166	7	0	395	0	18
Total Analysis Volume [veh/h]	665	27	0	1580	0	71
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.02	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	12.17
Movement LOS	A	A		A		B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.40
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.99
d_A, Approach Delay [s/veh]	0.00		0.00		12.17	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.37					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 1: S Harbor Blvd & W Ball Rd

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.803

Intersection Setup

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	0	2	0	1	2	0	1	2	0	1
Entry Pocket Length [ft]	230.00	100.00	100.00	215.00	100.00	215.00	330.00	100.00	190.00	300.00	100.00	300.00
No. of Lanes in Exit Pocket	0	0	0	0	0	1	0	0	1	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	400.00	0.00	0.00	2200.0	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Harbor Blvd			Harbor Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	908	1353	336	93	911	346	292	740	363	115	1258	78
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	908	1353	336	93	911	346	292	740	363	115	1258	78
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]	239	356	88	24	240	91	77	195	96	30	331	21
Total Analysis Volume [veh/h]	956	1424	354	98	959	364	307	779	382	121	1324	82
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.27	0.20	0.03	0.18	0.20	0.09	0.15	0.21	0.03	0.20	0.20
Intersection LOS	D											
Intersection V/C	0.803											

**Intersection Level Of Service Report
Intersection 2: Anaheim Blvd & Ball Rd**

Control Type: Signalized
 Analysis Method: ICU 1
 Analysis Period: 1 hour

Delay (sec / veh): -
 Level Of Service: B
 Volume to Capacity (v/c): 0.627

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	T T T			T T T			T T T			T T T		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	2	0	1	2	0	0	2	0	0	2	0	1
Entry Pocket Length [ft]	315.00	100.00	315.00	325.00	100.00	100.00	260.00	100.00	100.00	155.00	100.00	115.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	183	1341	71	164	846	157	204	768	128	130	1048	215
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	1341	71	164	846	157	204	768	128	130	1048	215
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]	48	353	19	43	223	41	54	202	34	34	276	57
Total Analysis Volume [veh/h]	193	1412	75	173	891	165	215	808	135	137	1103	226
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	3	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.26	0.04	0.05	0.20	0.20	0.06	0.18	0.18	0.04	0.21	0.13
Intersection LOS	B											
Intersection V/C	0.627											

**Intersection Level Of Service Report
Intersection 3: S Claudina St & Ball Rd**

Control Type:	Two-way stop	Delay (sec / veh):	23.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.088

Intersection Setup

Name	Claudina St		Ball Rd		Ball Rd	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Claudina St		Ball Rd		Ball Rd	
Base Volume Input [veh/h]	20	41	1026	14	34	1422
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	20	41	1026	14	34	1422
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]	5	11	270	4	9	374
Total Analysis Volume [veh/h]	21	43	1080	15	36	1497
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	Yes		
Number of Storage Spaces in Median	5	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.09	0.10	0.01	0.00	0.09	0.01
d_M, Delay for Movement [s/veh]	23.35	15.84	0.00	0.00	15.58	0.00
Movement LOS	C	C	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.67	0.67	0.00	0.00	0.30	0.00
95th-Percentile Queue Length [ft/ln]	16.83	16.83	0.00	0.00	7.48	0.00
d_A, Approach Delay [s/veh]	18.30		0.00		0.36	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.64					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 4: I5 NB Ramps & Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	30.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.568

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	200.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 NB Ramps	
Base Volume Input [veh/h]	1457	359	15	1324	61	1121
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	108	0	0	0	336
Total Hourly Volume [veh/h]	1457	251	15	1324	61	785
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]	383	66	4	348	16	207
Total Analysis Volume [veh/h]	1534	264	16	1394	64	826
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major stree	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street [	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor stree	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street [	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	26.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Split	Split
Signal Group	2	0	1	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	Lead	-	Lag	-
Minimum Green [s]	15	0	6	15	7	0
Maximum Green [s]	50	0	25	50	25	0
Amber [s]	4.0	0.0	3.2	4.0	3.5	0.0
All red [s]	1.5	0.0	2.0	1.5	3.0	0.0
Split [s]	30	0	16	46	19	0
Vehicle Extension [s]	4.0	0.0	2.0	4.0	2.0	0.0
Walk [s]	7	0	0	0	0	0
Pedestrian Clearance [s]	26	0	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	3.5	0.0	3.2	3.5	4.5	0.0
Minimum Recall	Yes		No	Yes	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C	R
C, Cycle Length [s]	65	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	5.50	5.50	5.20	5.50	6.50	6.50	6.50
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	3.50	3.50	3.20	3.50	4.50	4.50	4.50
g_i, Effective Green Time [s]	31	31	1	38	16	16	16
g / C, Green / Cycle	0.47	0.47	0.02	0.58	0.24	0.24	0.24
(v / s)_i Volume / Saturation Flow Rate	0.29	0.16	0.01	0.19	0.03	0.25	0.25
s, saturation flow rate [veh/h]	5094	1589	1781	6792	1781	1589	1589
c, Capacity [veh/h]	2416	754	42	3924	424	379	379
d1, Uniform Delay [s]	12.62	10.70	31.34	7.22	19.59	24.83	24.83
k, delay calibration	0.50	0.50	0.04	0.50	0.04	0.08	0.08
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.13	1.19	1.89	0.23	0.06	83.24	83.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.60	0.33	0.36	0.34	0.14	1.04	1.04
d, Delay for Lane Group [s/veh]	13.75	11.89	33.23	7.45	19.65	108.08	108.08
Lane Group LOS	B	B	C	A	B	F	F
Critical Lane Group	Yes	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.60	2.15	0.24	1.93	0.68	14.06	14.06
50th-Percentile Queue Length [ft/ln]	114.98	53.85	6.06	48.18	17.01	351.41	351.41
95th-Percentile Queue Length [veh/ln]	8.12	3.88	0.44	3.47	1.22	20.62	20.62
95th-Percentile Queue Length [ft/ln]	202.91	96.93	10.91	86.73	30.61	515.54	515.54

Movement, Approach, & Intersection Results

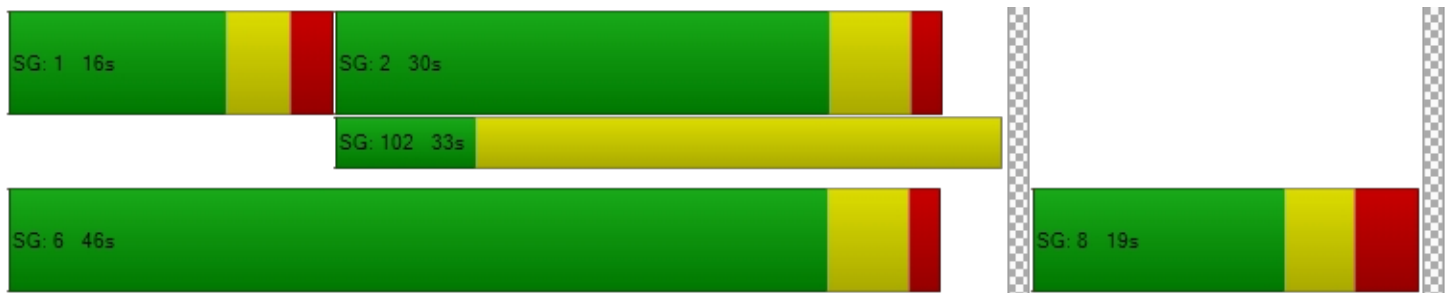
d_M, Delay for Movement [s/veh]	13.75	11.89	33.23	7.45	19.65	108.08
Movement LOS	B	B	C	A	B	F
d_A, Approach Delay [s/veh]	13.48		7.74		101.70	
Approach LOS	B		A		F	
d_I, Intersection Delay [s/veh]	30.68					
Intersection LOS	C					
Intersection V/C	0.568					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	3.034
Crosswalk LOS	F	F	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	753	1244	384
d_b, Bicycle Delay [s]	12.66	4.65	21.25
I_b,int, Bicycle LOS Score for Intersection	2.558	2.112	3.510
Bicycle LOS	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 5: I5 SB Ramps & S Harbor Blvd

Control Type:	Signalized	Delay (sec / veh):	10.3
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.488

Intersection Setup

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	100.00	100.00	110.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	300.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		35.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Harbor Blvd		Harbor Blvd		I-5 SB Ramps	
Base Volume Input [veh/h]	46	1610	814	656	274	343
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	197	0	103
Total Hourly Volume [veh/h]	46	1610	814	459	274	240
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]	12	424	214	121	72	63
Total Analysis Volume [veh/h]	48	1695	857	483	288	253
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0		0		0	
v_di, Inbound Pedestrian Volume crossing major street	0		0		0	
v_co, Outbound Pedestrian Volume crossing minor street	0		0		0	
v_ci, Inbound Pedestrian Volume crossing minor street	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	65
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	22.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Split
Signal Group	5	2	6	0	4	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	Lag	-
Minimum Green [s]	5	20	20	0	7	0
Maximum Green [s]	25	50	50	0	30	0
Amber [s]	3.2	4.0	4.0	0.0	3.2	0.0
All red [s]	1.5	1.0	1.0	0.0	2.0	0.0
Split [s]	17	43	26	0	22	0
Vehicle Extension [s]	2.0	4.0	4.0	0.0	2.0	0.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	17	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	2.7	3.0	3.0	0.0	3.2	0.0
Minimum Recall	No	Yes	Yes		No	
Maximum Recall	No	No	No		No	
Pedestrian Recall	No	No	No		No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R	L	R
C, Cycle Length [s]	65	65	65	65	65	65
L, Total Lost Time per Cycle [s]	4.70	5.00	5.00	5.00	5.20	5.20
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.70	3.00	3.00	3.00	3.20	3.20
g_i, Effective Green Time [s]	3	43	35	35	12	12
g / C, Green / Cycle	0.04	0.66	0.54	0.54	0.18	0.18
(v / s)_i Volume / Saturation Flow Rate	0.03	0.24	0.16	0.29	0.08	0.15
s, saturation flow rate [veh/h]	1781	6792	5094	1589	3459	1589
c, Capacity [veh/h]	80	4475	2759	861	639	294
d1, Uniform Delay [s]	30.51	4.97	8.16	9.63	23.54	25.53
k, delay calibration	0.04	0.50	0.50	0.50	0.04	0.04
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.39	0.23	0.27	2.38	0.17	2.19
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.57	0.36	0.30	0.53	0.43	0.82
d, Delay for Lane Group [s/veh]	32.90	5.20	8.43	12.02	23.71	27.71
Lane Group LOS	C	A	A	B	C	C
Critical Lane Group	Yes	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	0.72	1.68	1.73	3.90	1.75	3.47
50th-Percentile Queue Length [ft/ln]	18.06	41.93	43.35	97.38	43.72	86.80
95th-Percentile Queue Length [veh/ln]	1.30	3.02	3.12	7.01	3.15	6.25
95th-Percentile Queue Length [ft/ln]	32.52	75.47	78.03	175.29	78.69	156.24

Movement, Approach, & Intersection Results

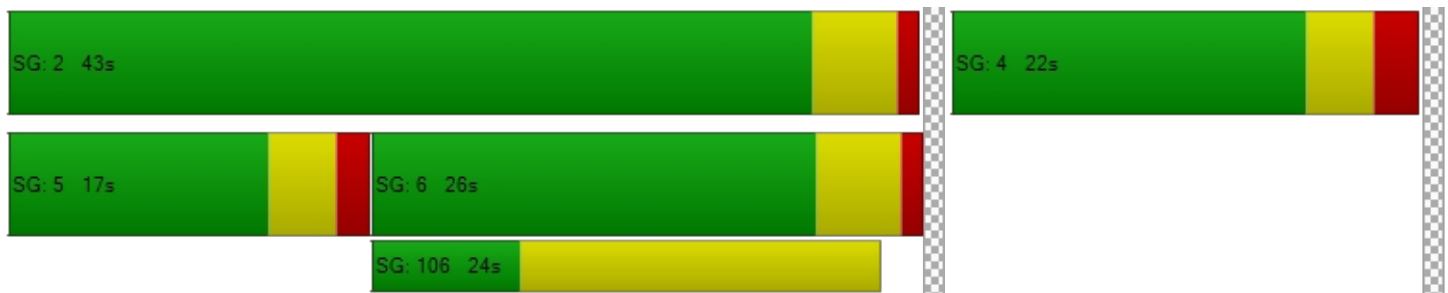
d_M, Delay for Movement [s/veh]	32.90	5.20	8.43	12.02	23.71	27.71
Movement LOS	C	A	A	B	C	C
d_A, Approach Delay [s/veh]	5.97		9.72		25.58	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	10.28					
Intersection LOS	B					
Intersection V/C	0.488					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	22.48
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.729
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1167	645	516
d_b, Bicycle Delay [s]	5.64	14.94	17.92
I_b,int, Bicycle LOS Score for Intersection	2.243	2.368	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 6: Anaheim Blvd & Winston Rd/Project Driveway D

Control Type:	Two-way stop	Delay (sec / veh):	919.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	1 hour	Volume to Capacity (v/c):	1.152

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	70.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Winston Rd			Project Driveway		
Base Volume Input [veh/h]	133	1703	9	0	1101	98	41	0	89	0	0	9
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	133	1703	9	0	1101	98	41	0	89	0	0	9
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000	1.0000	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]	35	448	2	0	290	26	11	0	23	0	0	2
Total Analysis Volume [veh/h]	140	1793	9	0	1159	103	43	0	94	0	0	9
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			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	0.42	0.02	0.00	0.00	0.01	0.00	1.15	0.00	0.23	0.00	0.00	0.03
d_M, Delay for Movement [s/veh]	24.89	0.00	0.00	0.00	0.00	0.00	919.13	0.00	827.39	0.00	0.00	19.43
Movement LOS	C	A	A		A	A	F		F			C
95th-Percentile Queue Length [veh/ln]	2.16	0.00	0.00	0.00	0.00	0.00	25.70	0.00	25.70	0.00	0.00	0.11
95th-Percentile Queue Length [ft/ln]	54.02	0.00	0.00	0.00	0.00	0.00	642.42	0.00	642.42	0.00	0.00	2.70
d_A, Approach Delay [s/veh]	1.79		0.00				856.32			19.43		
Approach LOS	A		A				F			C		
d_I, Intersection Delay [s/veh]	36.07											
Intersection LOS	F											

**Intersection Level Of Service Report
Intersection 7: Anaheim Blvd & Palais Rd**

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.437

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	120.00	100.00	70.00	100.00
No. of Lanes in Exit Pocket	0	1	0	0	0	0
Exit Pocket Length [ft]	0.00	100.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Palais Rd	
Base Volume Input [veh/h]	1703	41	23	1042	54	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1703	41	23	1042	54	12
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]	448	11	6	274	14	3
Total Analysis Volume [veh/h]	1793	43	24	1097	57	13
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive
Signal Group	2	0	0	6	8	0
Auxiliary Signal Groups						
Lead / Lag	-	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.34	0.01	0.20	0.03	0.01
Intersection LOS	A					
Intersection V/C	0.437					

Intersection Level Of Service Report
Intersection 8: Anaheim Blvd & Cerritos Ave/Urbana St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.704

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐⇐			⇐⇐⇐⇐			⇐⇐			⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	205.00	100.00	205.00	120.00	100.00	100.00	50.00	100.00	100.00	170.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Urbana St			Cerritos Ave		
Base Volume Input [veh/h]	32	1074	325	171	914	10	20	22	4	556	14	267
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	32	1074	325	171	914	10	20	22	4	556	14	267
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	283	86	45	241	3	5	6	1	146	4	70
Total Analysis Volume [veh/h]	34	1131	342	180	962	11	21	23	4	585	15	281
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	5.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	0	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.21	0.19	0.10	0.18	0.18	0.01	0.02	0.02	0.33	0.01	0.16
Intersection LOS	C											
Intersection V/C	0.704											

Intersection Level Of Service Report

Intersection 9: Anaheim Blvd & I-5 NB Ramp /Anaheim Way

Control Type:	Signalized	Delay (sec / veh):	23.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.561

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	260.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			30.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No						No		
Crosswalk	No			Yes			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			I-5 NB On Ramp			Anaheim Way		
Base Volume Input [veh/h]	250	1095	0	0	1176	370	0	0	0	52	206	991
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	111	0	0	0	0	0	297
Total Hourly Volume [veh/h]	250	1095	0	0	1176	259	0	0	0	52	206	694
Peak Hour Factor	0.9500	0.9500	1.0000	1.0000	0.9500	0.9500	1.0000	1.0000	1.0000	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]	66	288	0	0	309	68	0	0	0	14	54	183
Total Analysis Volume [veh/h]	263	1153	0	0	1238	273	0	0	0	55	217	731
Presence of On-Street Parking	No		No	No		No				No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Permis	Split	Split	Split
Signal Group	5	2	0	0	6	0	0	0	0	0	0	8	0
Auxiliary Signal Groups													
Lead / Lag	Lead	-	-	-	-	-	-	-	-	-	-	-	-
Minimum Green [s]	10	10	0	0	10	0	0	0	0	0	0	10	0
Maximum Green [s]	50	50	0	0	50	0	0	0	0	0	0	50	0
Amber [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	0	0	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No							No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes			Yes							No	
Maximum Recall	No	No			No							No	
Pedestrian Recall	No	No			No							No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	R		C	C	R
C, Cycle Length [s]	93	93	93	93		93	93	93
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00		6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00		4.00	4.00	4.00
g_i, Effective Green Time [s]	10	52	35	35		30	30	30
g / C, Green / Cycle	0.11	0.55	0.38	0.38		0.32	0.32	0.32
(v / s)_i Volume / Saturation Flow Rate	0.07	0.21	0.23	0.16		0.14	0.24	0.22
s, saturation flow rate [veh/h]	3459	5094	5094	1589		1851	1446	1589
c, Capacity [veh/h]	384	2824	1931	603		588	459	504
d1, Uniform Delay [s]	39.83	11.83	23.44	21.54		25.32	28.67	27.88
k, delay calibration	0.23	0.23	0.23	0.23		0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00
d2, Incremental Delay [s]	4.01	0.19	0.67	1.04		1.11	5.55	3.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00		0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00		1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00		1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.39	0.61	0.43		0.44	0.76	0.69
d, Delay for Lane Group [s/veh]	43.84	12.02	24.12	22.58		26.43	34.22	31.49
Lane Group LOS	D	B	C	C		C	C	C
Critical Lane Group	Yes	No	Yes	No		No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.90	3.98	6.74	4.19		4.42	7.16	6.79
50th-Percentile Queue Length [ft/ln]	72.54	99.42	168.55	104.86		110.53	179.12	169.64
95th-Percentile Queue Length [veh/ln]	5.22	7.16	11.00	7.55		7.87	11.55	11.06
95th-Percentile Queue Length [ft/ln]	130.56	178.95	275.01	188.75		196.74	288.87	276.44

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	43.84	12.02	0.00	0.00	24.12	22.58	0.00	0.00	0.00	26.43	26.43	32.86
Movement LOS	D	B			C	C				C	C	C
d_A, Approach Delay [s/veh]	17.93		23.84			0.00			31.11			
Approach LOS	B		C			A			C			
d_I, Intersection Delay [s/veh]	23.57											
Intersection LOS	C											
Intersection V/C	0.561											

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0		14.0			14.0			0.0		
M_corner, Corner Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00		0.00			0.00			0.00		
d_p, Pedestrian Delay [s]	0.00		33.73			33.73			0.00		
I_p,int, Pedestrian LOS Score for Intersection	0.000		3.340			2.116			0.000		
Crosswalk LOS	F		C			B			F		
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000		2000			2000			2000		
c_b, Capacity of the bicycle lane [bicycles/h]	1071		1071			0			1071		
d_b, Bicycle Delay [s]	10.07		10.07			46.68			10.07		
I_b,int, Bicycle LOS Score for Intersection	2.299		2.410			4.132			2.590		
Bicycle LOS	B		B			D			B		

Sequence

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




Intersection Level Of Service Report

Intersection 10: S Anaheim Blvd & I-5 SB Ramp 2/Disney Way

Control Type:	Signalized	Delay (sec / veh):	34.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.538

Intersection Setup

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	2	0	1	0	0	0
Entry Pocket Length [ft]	210.00	100.00	100.00	100.00	100.00	100.00	180.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00			35.00			35.00			35.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			Yes			No		

Volumes

Name	Anaheim Blvd			Anaheim Blvd			Disney Way			I-5		
Base Volume Input [veh/h]	150	929	22	476	625	128	406	528	195	0	468	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	7	0	0	38	0	0	59	0	0	0
Total Hourly Volume [veh/h]	150	929	15	476	625	90	406	528	136	0	468	0
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	39	244	4	125	164	24	107	139	36	0	123	0
Total Analysis Volume [veh/h]	158	978	16	501	658	95	427	556	143	0	493	0
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 major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Free Running
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Beginning of First Yellow
Permissive Mode	SingleBand
Lost time [s]	3.00

Phasing & Timing

Control Type	Protect	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis	Permis	Permis	Permis
Signal Group	5	2	0	1	6	0	7	4	0	0	8	0
Auxiliary Signal Groups												
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	-	-	-
Minimum Green [s]	10	10	0	10	10	0	10	10	0	0	10	0
Maximum Green [s]	50	50	0	50	50	0	50	50	0	0	50	0
Amber [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
All red [s]	1.0	1.0	0.0	1.0	1.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0
Split [s]	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Extension [s]	5.0	5.0	0.0	5.0	5.0	0.0	5.0	5.0	0.0	0.0	5.0	0.0
Walk [s]	0	0	0	0	10	0	0	10	0	0	0	0
Pedestrian Clearance [s]	0	0	0	0	10	0	0	10	0	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
I2, Clearance Lost Time [s]	4.0	4.0	0.0	4.0	4.0	0.0	4.0	4.0	0.0	0.0	4.0	0.0
Minimum Recall	No	Yes		No	Yes		No	No			No	
Maximum Recall	No	No		No	No		No	No			No	
Pedestrian Recall	No	No		No	No		No	No			No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	L	C	C	L	C	C	C
C, Cycle Length [s]	98	98	98	98	98	98	98	98	98	98
L, Total Lost Time per Cycle [s]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
g_i, Effective Green Time [s]	11	25	25	18	33	33	16	36	36	14
g / C, Green / Cycle	0.11	0.26	0.26	0.19	0.33	0.33	0.16	0.37	0.37	0.14
(v / s)_i Volume / Saturation Flow Rate	0.08	0.17	0.17	0.14	0.13	0.13	0.12	0.10	0.10	0.09
s, saturation flow rate [veh/h]	1781	3560	1855	3459	3560	1752	3459	5094	1632	5094
c, Capacity [veh/h]	197	910	474	655	1190	586	570	1889	605	737
d1, Uniform Delay [s]	42.20	32.79	32.79	37.25	25.03	25.03	38.63	21.45	21.51	39.36
k, delay calibration	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	13.02	1.95	3.74	3.37	0.47	0.96	3.60	0.16	0.51	1.95
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.76	0.68	0.68	0.73	0.40	0.40	0.71	0.26	0.27	0.63
d, Delay for Lane Group [s/veh]	55.22	34.74	36.53	40.61	25.50	25.99	42.23	21.60	22.02	41.31
Lane Group LOS	E	C	D	D	C	C	D	C	C	D
Critical Lane Group	No	No	Yes	Yes	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	4.15	6.66	7.18	5.51	4.21	4.23	4.78	2.60	2.63	3.58
50th-Percentile Queue Length [ft/ln]	103.79	166.45	179.42	137.80	105.22	105.80	119.42	65.06	65.83	89.52
95th-Percentile Queue Length [veh/ln]	7.47	10.89	11.57	9.36	7.57	7.61	8.36	4.68	4.74	6.45
95th-Percentile Queue Length [ft/ln]	186.83	272.25	289.26	234.06	189.34	190.15	209.02	117.11	118.49	161.13

Movement, Approach, & Intersection Results

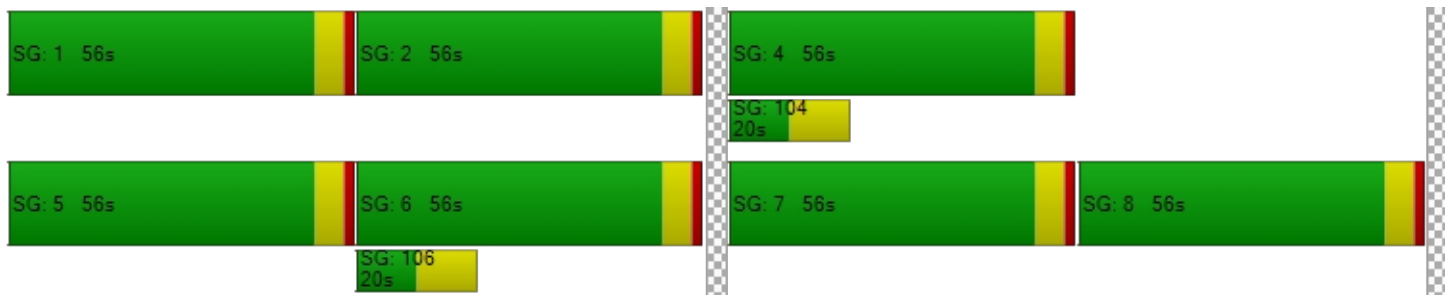
d_M, Delay for Movement [s/veh]	55.22	35.33	36.53	40.61	25.61	25.99	42.23	21.63	22.02	0.00	41.31	0.00
Movement LOS	E	D	D	D	C	C	D	C	C		D	
d_A, Approach Delay [s/veh]	38.07			31.64			29.50			41.31		
Approach LOS	D			C			C			D		
d_I, Intersection Delay [s/veh]	34.06											
Intersection LOS	C											
Intersection V/C	0.538											

Other Modes

g_Walk,mi, Effective Walk Time [s]	14.0	0.0	14.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	35.78	0.00	35.78	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.917	0.000	3.171	0.000
Crosswalk LOS	C	F	C	F
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1025	1025	1025	1025
d_b, Bicycle Delay [s]	11.59	11.59	11.59	11.59
I_b,int, Bicycle LOS Score for Intersection	2.165	2.236	2.025	1.817
Bicycle LOS	B	B	B	A

Sequence

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



Intersection Level Of Service Report

Intersection 11: Technology Cir/Project Driveway A and Ball Rd

Control Type:	Two-way stop	Delay (sec / veh):	45.3
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.052

Intersection Setup

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↶			↷			↶|↷|↷			|↷|↷		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	70.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			40.00			40.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			No		

Volumes

Name	Project Driveway A			Technology Cir			Ball Rd			Ball Rd		
Base Volume Input [veh/h]	0	0	32	5	0	28	1	942	61	0	1442	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	32	5	0	28	1	942	61	0	1442	3
Peak Hour Factor	1.0000	1.0000	0.9500	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	1.0000	0.9500	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	8	1	0	7	0	248	16	0	379	1
Total Analysis Volume [veh/h]	0	0	34	5	0	29	1	992	64	0	1518	3
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	Yes		
Number of Storage Spaces in Median	0	5	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.07	0.05	0.00	0.09	0.00	0.01	0.00	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	13.81	45.27	0.00	18.89	20.24	0.00	0.00	0.00	0.00	0.00
Movement LOS			B	E		C	C	A	A		A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.23	0.49	0.00	0.49	0.01	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	5.86	12.24	0.00	12.24	0.32	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.81		22.89			0.02		0.00				
Approach LOS	B		C			A		A				
d_I, Intersection Delay [s/veh]	0.48											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 12: Claudina St & Project Driveway B

Control Type:	Two-way stop	Delay (sec / veh):	9.1
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.010

Intersection Setup

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

Volumes

Name	Northbound		Claudina St		Eastbound	
Base Volume Input [veh/h]	7	61	16	32	9	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	61	16	32	9	12
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	16	4	8	2	3
Total Analysis Volume [veh/h]	7	64	17	34	9	13
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.32	0.00	0.00	0.00	9.14	8.54
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.34	0.34	0.00	0.00	1.66	1.66
d_A, Approach Delay [s/veh]	0.75		0.00		8.80	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.72					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Anaheim Blvd and Project Driveway C

Control Type:	Two-way stop	Delay (sec / veh):	19.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	1 hour	Volume to Capacity (v/c):	0.115

Intersection Setup

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		No	

Volumes

Name	Anaheim Blvd		Anaheim Blvd		Project Driveway	
Base Volume Input [veh/h]	1595	21	0	1104	0	32
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1595	21	0	1104	0	32
Peak Hour Factor	0.9500	0.9500	1.0000	0.9500	1.0000	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	420	6	0	291	0	8
Total Analysis Volume [veh/h]	1679	22	0	1162	0	34
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

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

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.01	0.00	0.12
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	0.00	0.00	19.63
Movement LOS	A	A		A		C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.39
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	9.72
d_A, Approach Delay [s/veh]	0.00		0.00		19.63	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.23					
Intersection LOS	C					

Appendix D:
Signal Warrants
Worksheets



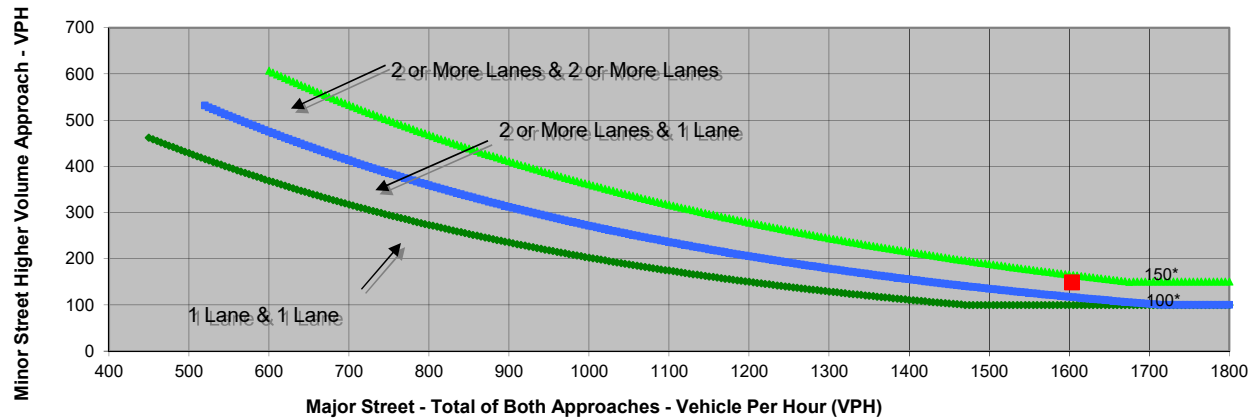
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021)**
 Peak Hour **AM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	58	8	42	0
Through	578	896	0	0
Right	2	62	106	3
Total	638	966	148	3

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	1,604	148	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

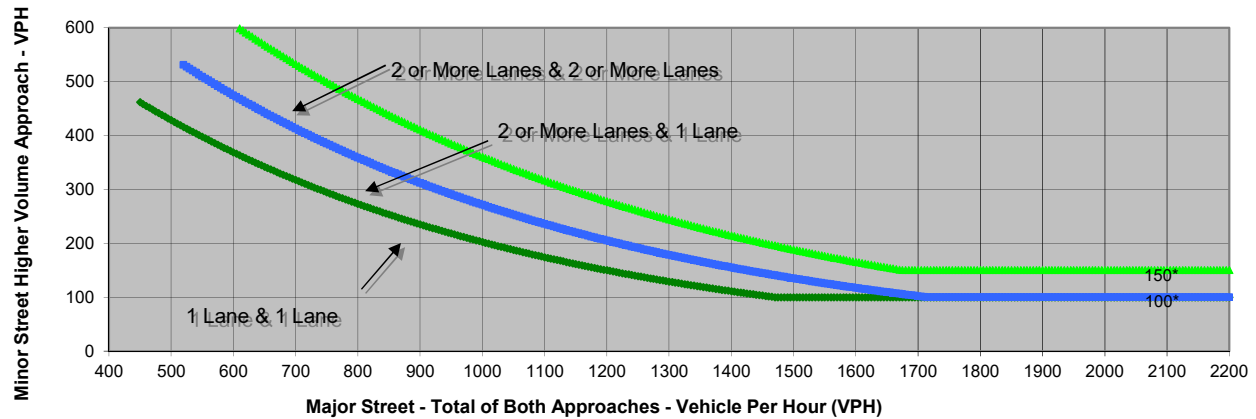
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021)**
 Peak Hour **PM**

	NB	SB	EB	WB
Left	80	1	32	1
Through	1229	979	0	0
Right	3	76	60	8
Total	1,312	1,056	92	9

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,368	92	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

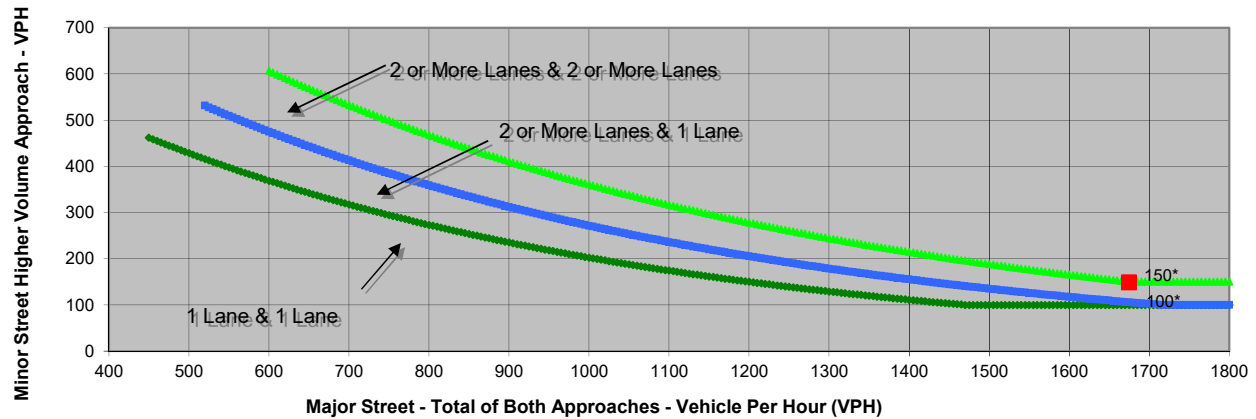
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021) Plus Approved Plus Project**
 Peak Hour **AM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	58	0	42	0
Through	611	929	0	0
Right	15	62	106	23
Total	684	991	148	23

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	1,675	148	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



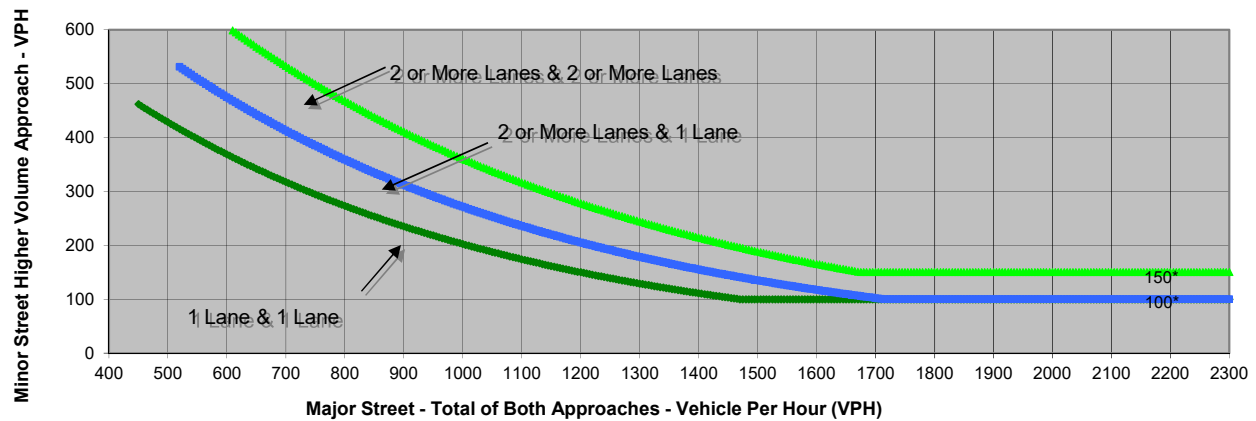
Intersection 6
 Major Street Anaheim Blvd
 Minor Street Winston Rd

Project Anaheim and Ball TIA
 Scenario Existing (2021) Plus Approved Plus Project
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	80	0	32	0
Through	1310	1003	0	0
Right	9	76	60	17
Total	1,399	1,079	92	17

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,478	92	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



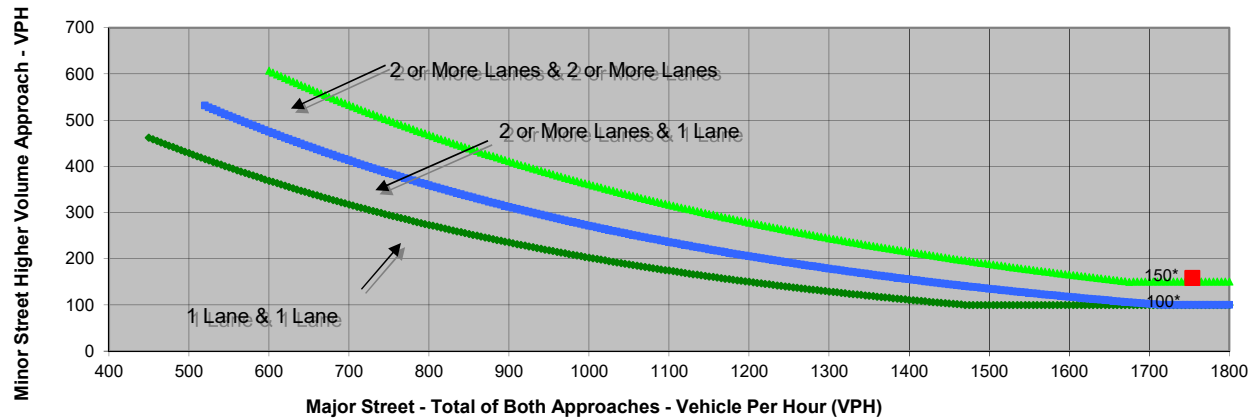
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **Opening Year (2024)**
 Peak Hour **AM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	62	9	45	0
Through	633	982	0	0
Right	2	66	113	3
Total	697	1,057	158	3

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	1,754	158	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



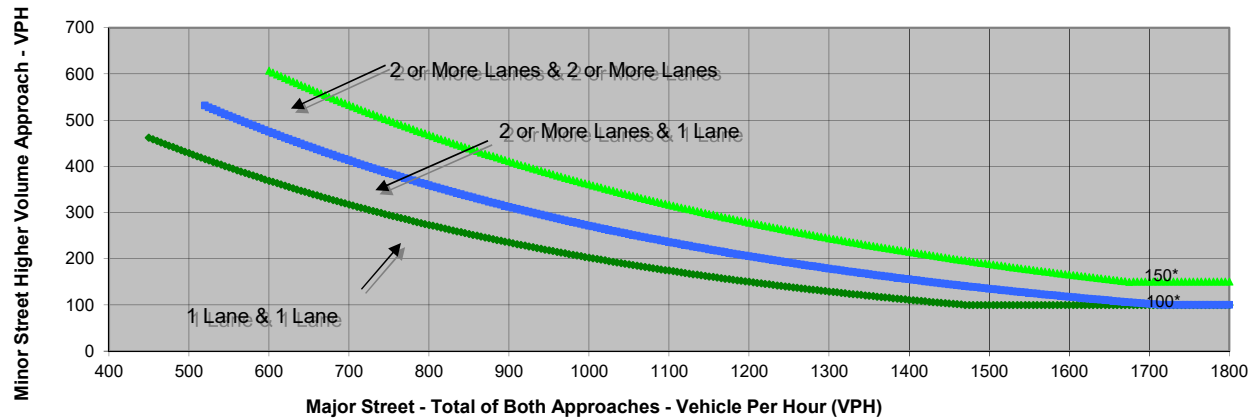
Intersection 6
 Major Street Anaheim Blvd
 Minor Street Winston Rd

Project Anaheim and Ball TIA
 Scenario Opening Year (2024)
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	83	1	33	1
Through	1322	1038	0	0
Right	3	79	62	8
Total	1,408	1,118	95	9

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,526	95	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



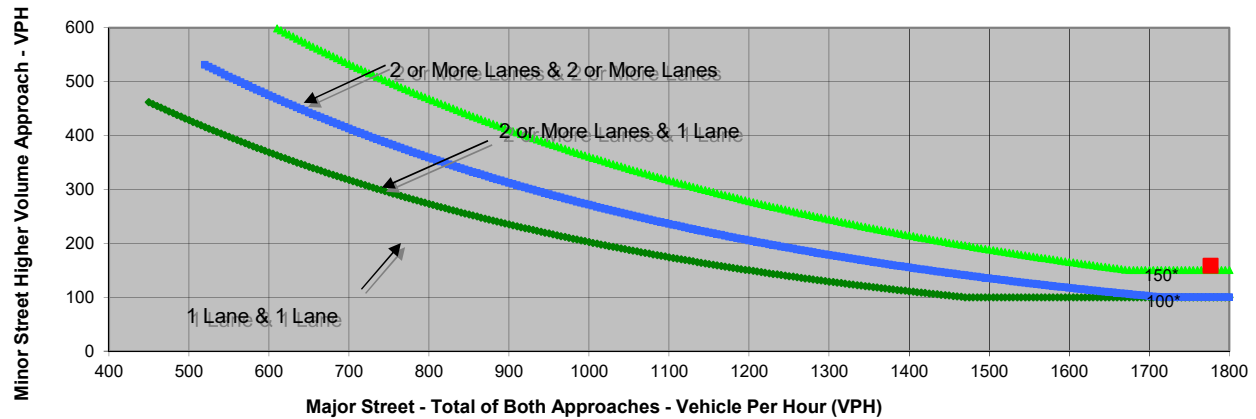
Intersection 6
 Major Street Anaheim Blvd
 Minor Street Winston Rd

Project Anaheim and Ball TIA
 Scenario Opening Year (2024) With Project
 Peak Hour AM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	62	0	45	0
Through	648	986	0	0
Right	15	66	113	23
Total	725	1,052	158	23

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	1,777	158	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



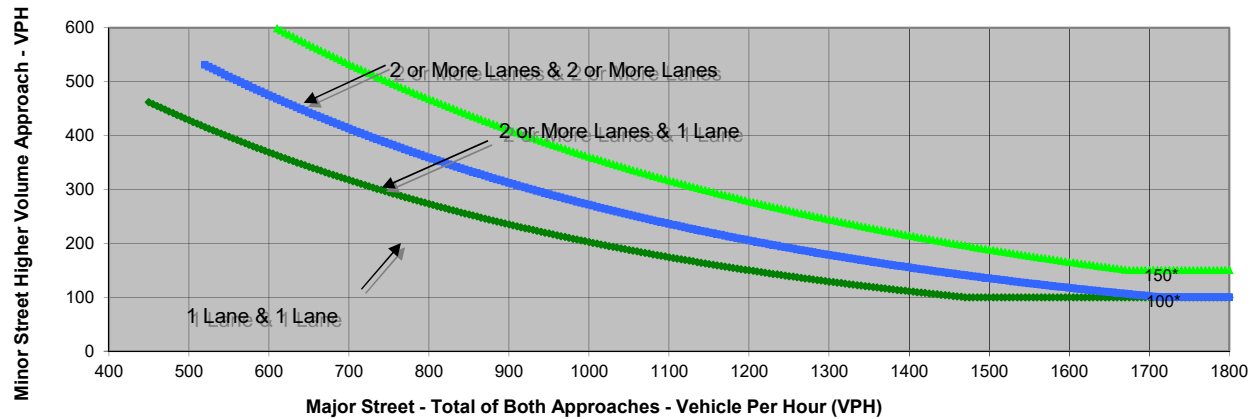
Intersection 6
 Major Street Anaheim Blvd
 Minor Street Winston Rd

Project Anaheim and Ball TIA
 Scenario Opening Year (2024) With Project
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	83	0	33	1
Through	1358	1041	0	0
Right	9	79	62	17
Total	1,450	1,120	95	18

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,570	95	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

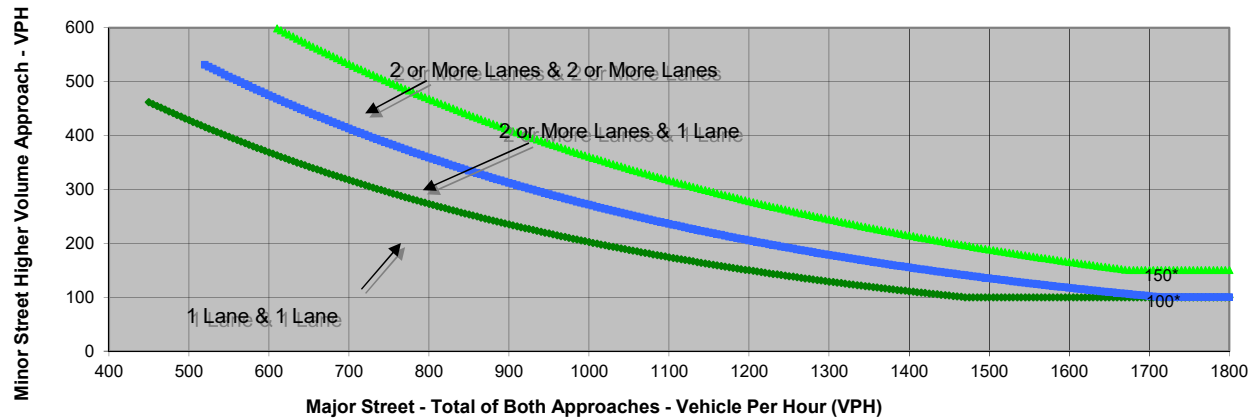
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035)**
 Peak Hour **AM**

	NB	SB	EB	WB
Left	68	10	73	0
Through	470	1872	0	0
Right	10	71	167	0
Total	548	1,953	240	0

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	YES
Traffic Volume (VPH) *	2,501	240	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

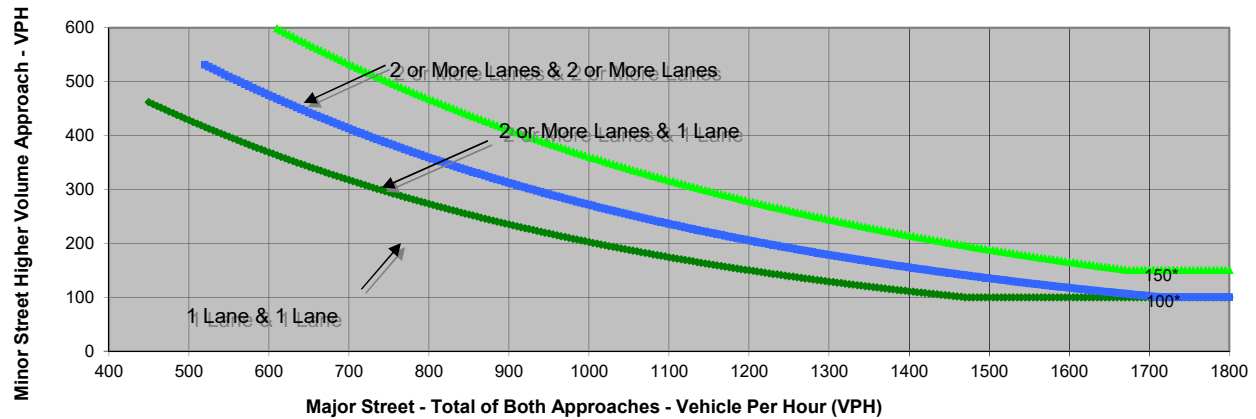
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035)**
 Peak Hour **PM**

	NB	SB	EB	WB
Left	135	10	45	1
Through	1746	1122	0	0
Right	10	101	85	8
Total	1,891	1,233	130	9

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	3,124	130	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

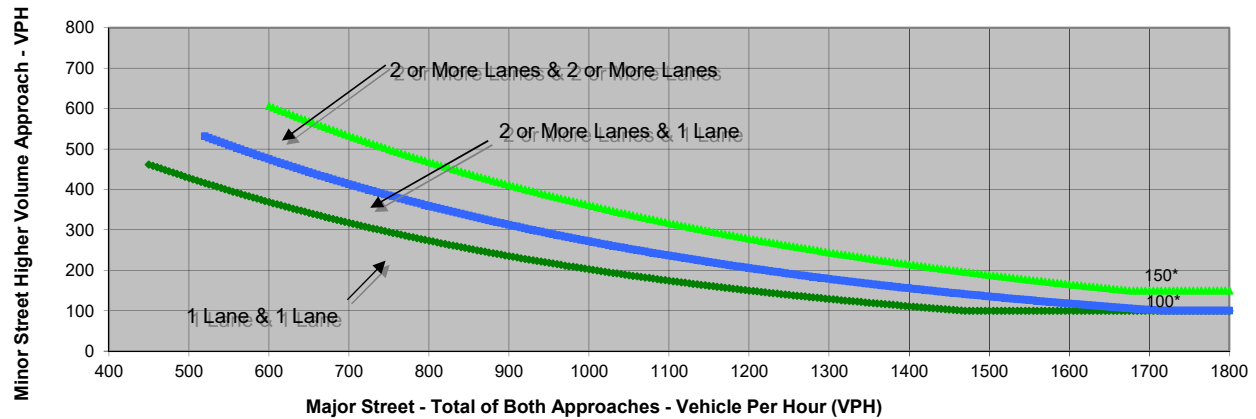
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035) With Project**
 Peak Hour **AM**

	NB	SB	EB	WB
Left	68	0	74	0
Through	447	1881	0	0
Right	15	69	167	20
Total	530	1,950	241	20

x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	2,480	241	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



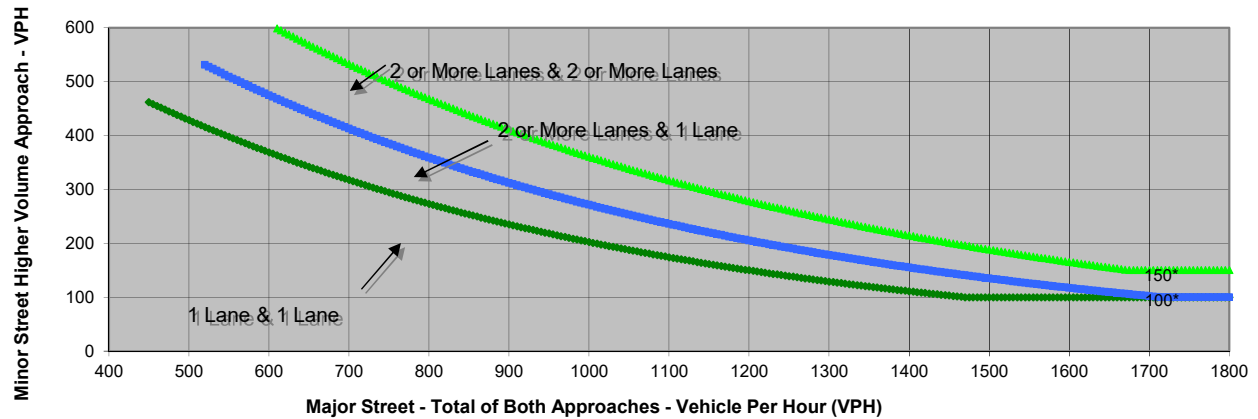
Intersection 6
 Major Street **Anaheim Blvd**
 Minor Street **Winston Rd**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035) With Project**
 Peak Hour **PM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	133	0	41	0
Through	1703	1101	0	0
Right	9	98	89	9
Total	1,845	1,199	130	9

Major Street Direction	
x	North/South
	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Anaheim Blvd	Winston Rd	
Number of Approach Lanes	3	1	<u>YES</u>
Traffic Volume (VPH) *	3,044	130	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

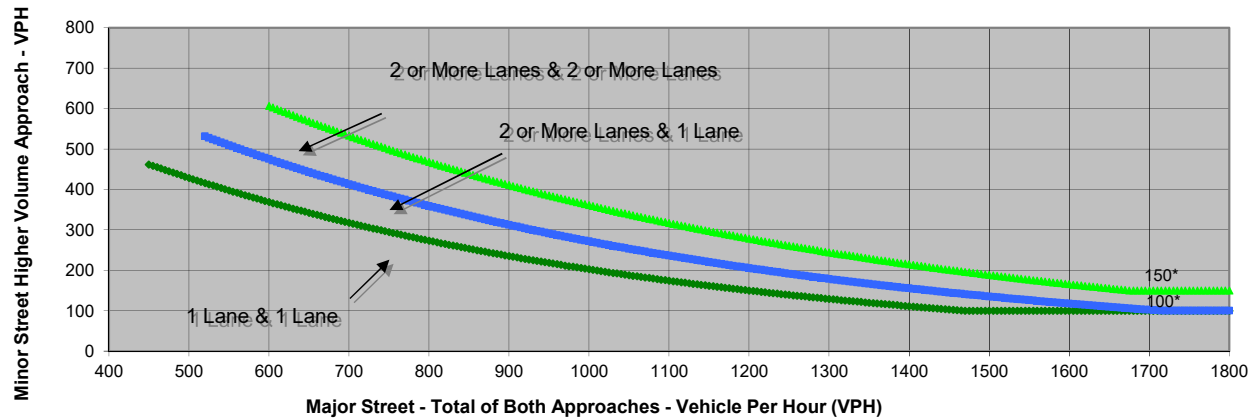
Intersection 11
 Major Street **Ball Rd**
 Minor Street **Project Driveway A**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021)**
 Peak Hour **AM**

	NB	SB	EB	WB
Left	0	1	100	0
Through	0	0	996	943
Right	0	7	0	23
Total	0	8	1,096	966

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,062	8	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

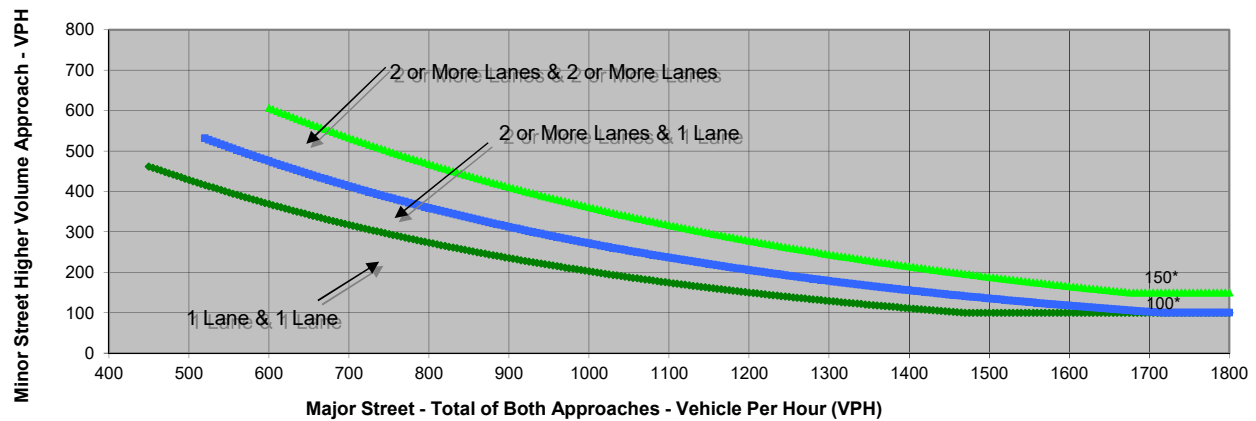
Intersection 11
 Major Street **Ball Rd**
 Minor Street **Project Driveway A**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021)**
 Peak Hour **PM**

	NB	SB	EB	WB
Left	0	4	1	0
Through	0	0	958	1524
Right	0	21	0	2
Total	0	25	959	1,526

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,485	25	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

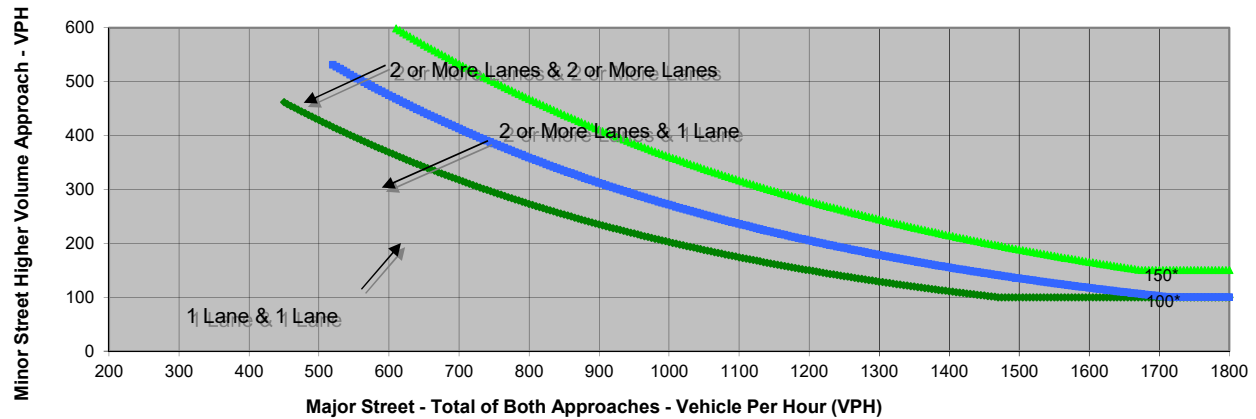
Intersection 11
 Major Street **Ball Rd**
 Minor Street **Project Driveway A**

Project **Anaheim and Ball TIA**
 Scenario **Existing (2021) Plus Approved Plus Project**
 Peak Hour **AM**

	NB	SB	EB	WB
Left	0	1	100	0
Through	0	0	1161	1107
Right	52	7	60	23
Total	52	8	1,321	1,130

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,451	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario Existing (2021) Plus Approved Plus Project
 Peak Hour PM

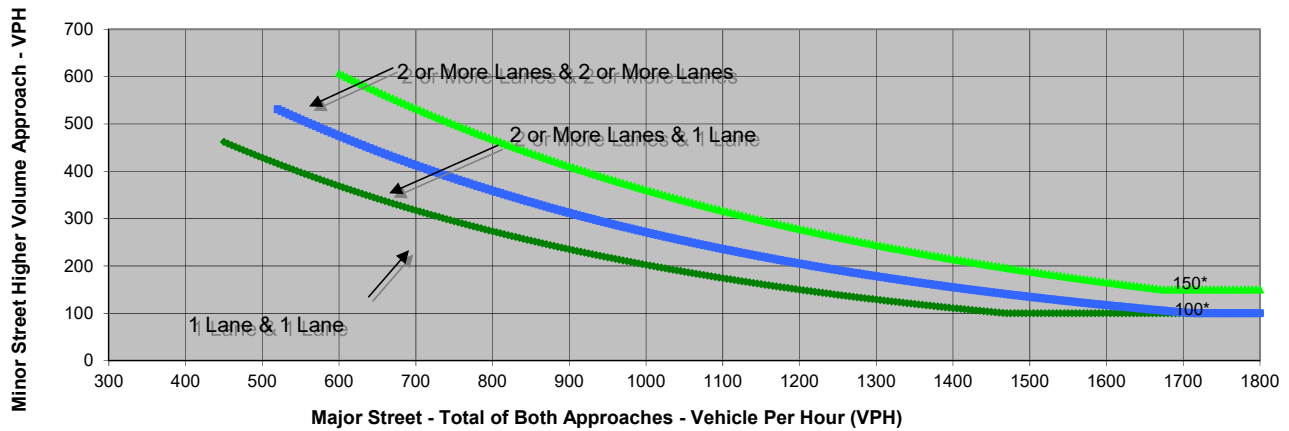
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	4	1	0
Through	0	0	1193	1691
Right	32	21	61	2
Total	32	25	1,255	1,693

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,948	32	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario Opening Year (2024)
 Peak Hour AM

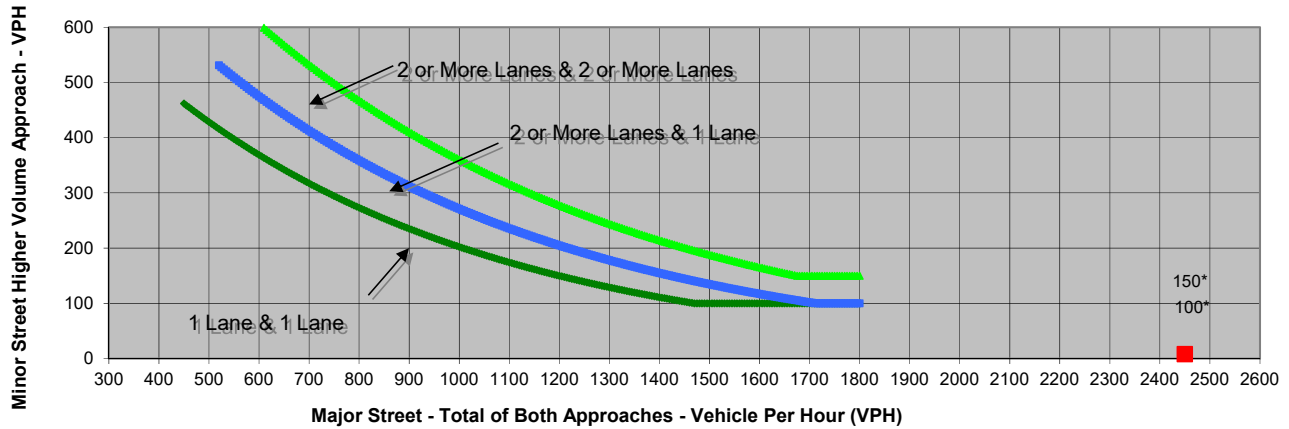
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	106	0
Through	0	0	1162	1158
Right	0	7	0	24
Total	0	8	1,268	1,182

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,450	8	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

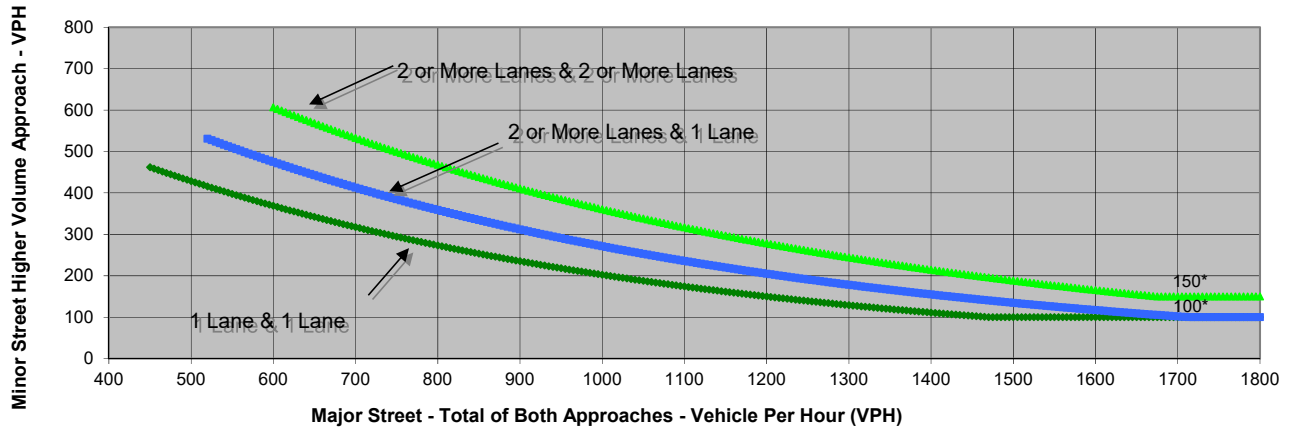
Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario Opening Year (2024)
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	0	4	1	0
Through	0	0	1154	1745
Right	0	22	0	2
Total	0	26	1,155	1,747

Major Street Direction	
	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,902	26	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



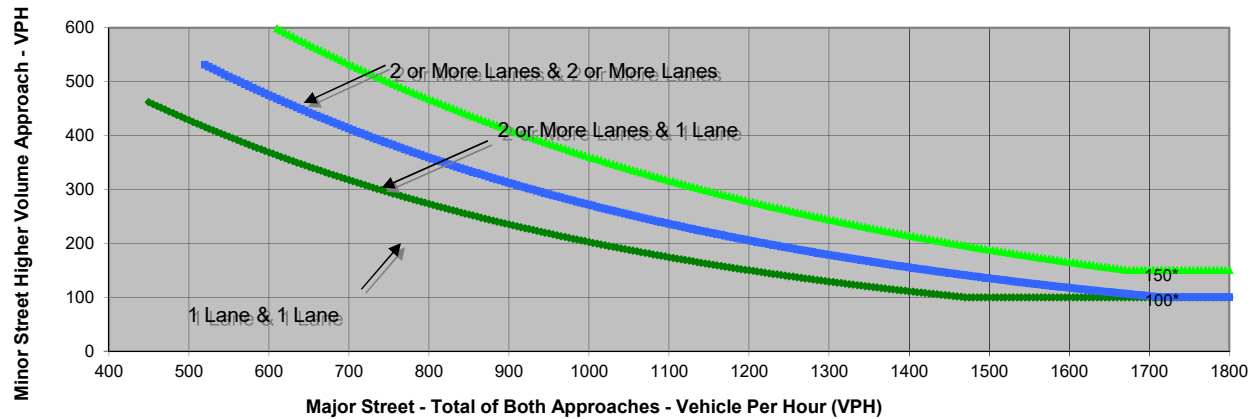
Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario Opening Year (2024) With Project
 Peak Hour AM

Turn Movement Volumes					
	NB	SB	EB	WB	
Left	0	1	106	0	
Through	0	0	1163	1167	
Right	52	7	60	24	
Total	52	8	1,329	1,191	

Major Street Direction	
	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,520	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.



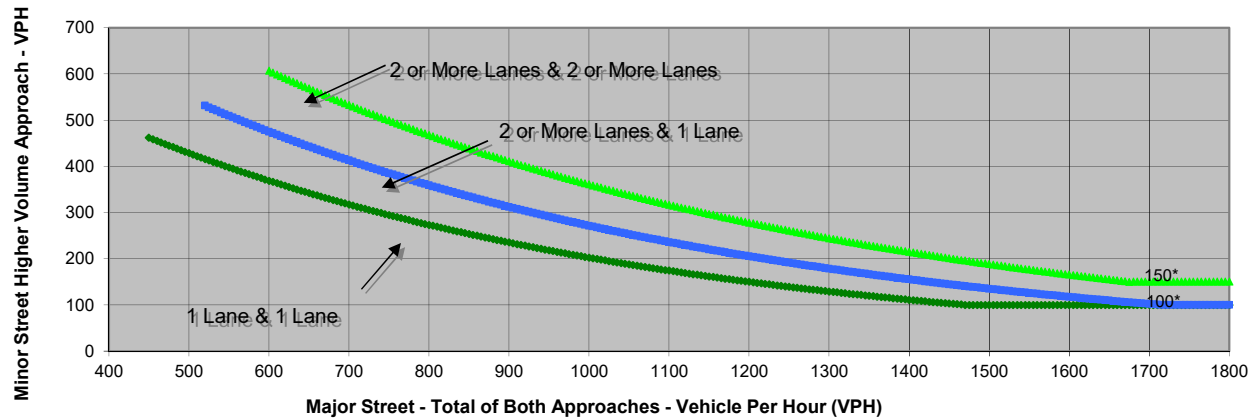
Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario Opening Year (2024) With Project
 Peak Hour PM

Turn Movement Volumes				
	NB	SB	EB	WB
Left	0	4	1	0
Through	0	0	1169	1750
Right	32	22	61	2
Total	32	26	1,231	1,752

Major Street Direction	
	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,983	32	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario General Plan Development (2035)
 Peak Hour AM

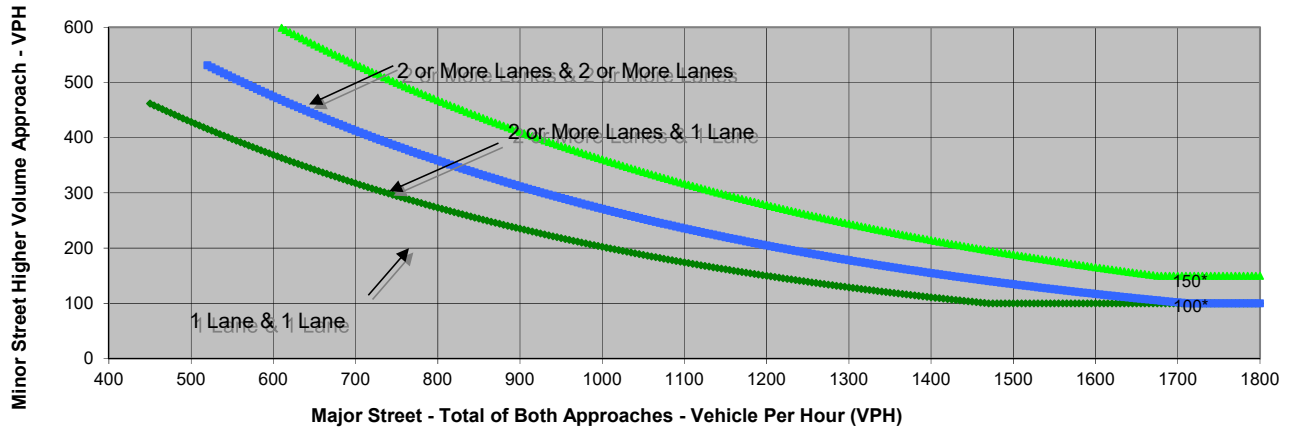
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	1	133	0
Through	0	0	1102	778
Right	0	9	0	31
Total	0	10	1,235	809

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,044	10	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

Intersection 11
 Major Street Ball Rd
 Minor Street Project Driveway A

Project Anaheim and Ball TIA
 Scenario General Plan Development (2035)
 Peak Hour PM

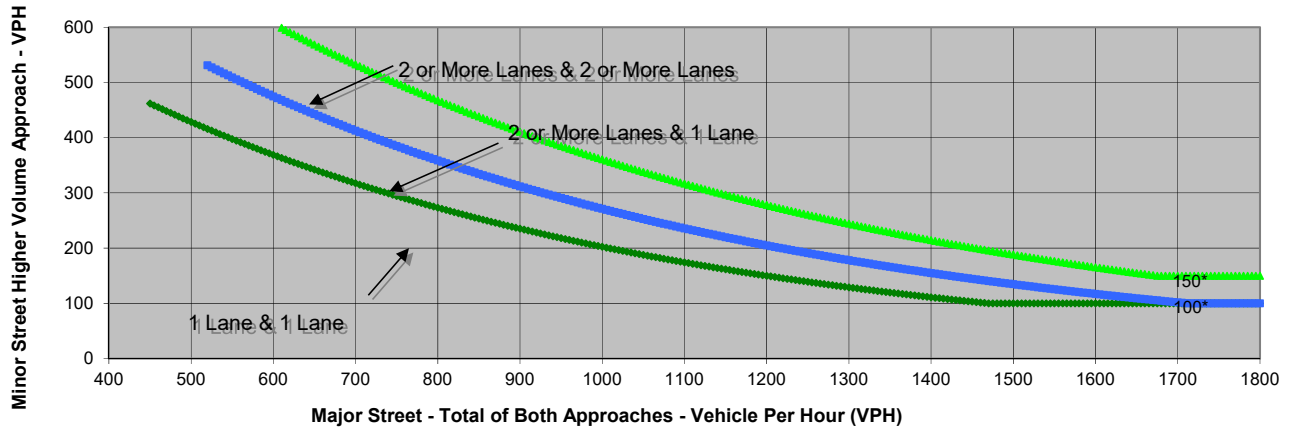
Turn Movement Volumes

	NB	SB	EB	WB
Left	0	5	1	0
Through	0	0	1009	1446
Right	0	28	0	3
Total	0	33	1,010	1,449

Major Street Direction

	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,459	33	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

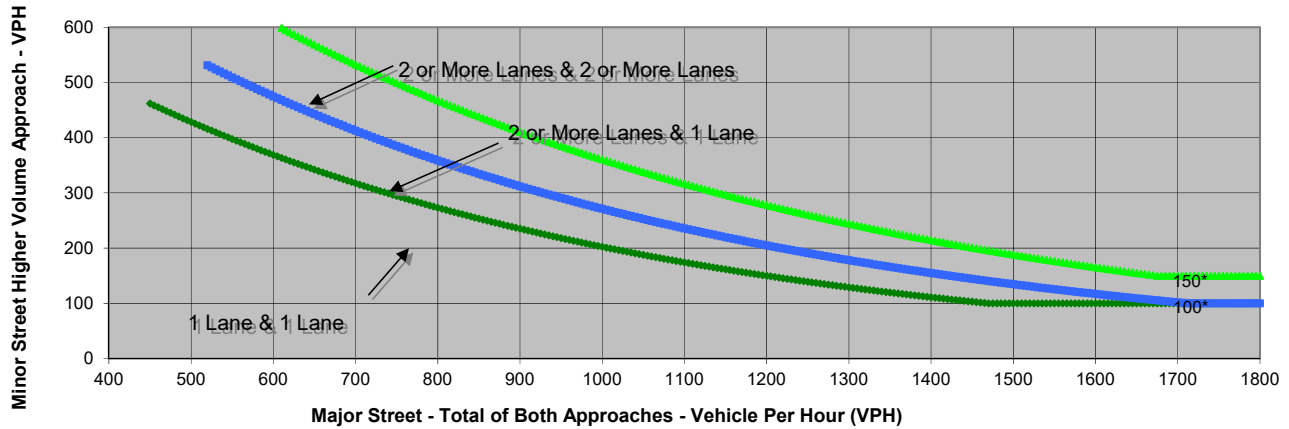
Intersection 11
 Major Street **Ball Rd**
 Minor Street **Project Driveway A**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035) With Project**
 Peak Hour **AM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	0	1	133	0
Through	0	0	1101	788
Right	52	9	60	31
Total	52	10	1,294	819

Major Street Direction	
	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,113	52	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

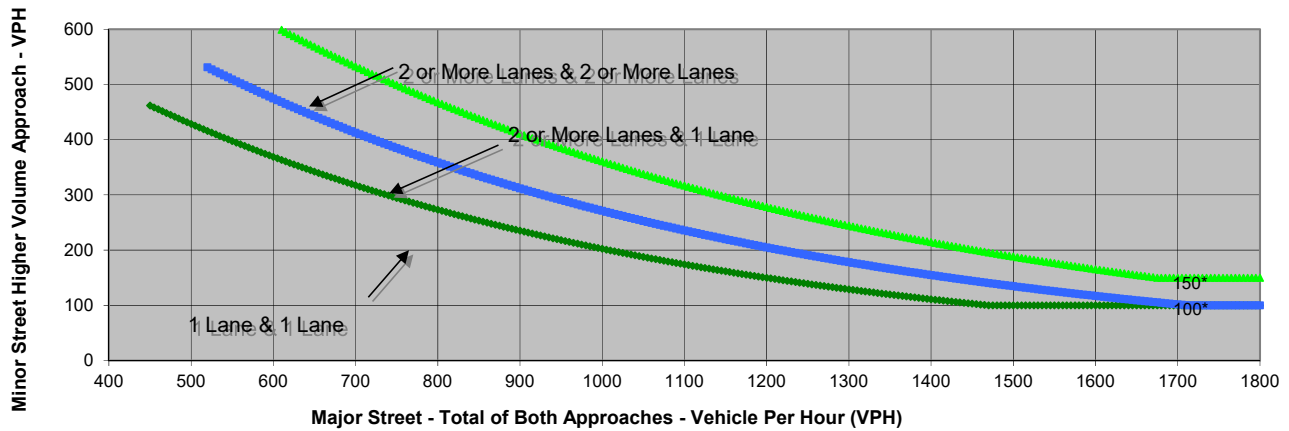
Intersection 11
 Major Street **Ball Rd**
 Minor Street **Project Driveway A**

Project **Anaheim and Ball TIA**
 Scenario **General Plan Development (2035) With Project**
 Peak Hour **PM**

Turn Movement Volumes				
	NB	SB	EB	WB
Left	0	5	1	0
Through	0	0	942	1442
Right	32	28	61	3
Total	32	33	1,004	1,445

Major Street Direction	
	North/South
x	East/West

Figure 4C-3. Warrant 3, Peak Hour



* 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.

Source: California Manual on Uniform Traffic Control Devices, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Ball Rd	Project Driveway A	
Number of Approach Lanes	3	1	<u>NO</u>
Traffic Volume (VPH) *	2,449	33	

* Note: Traffic Volume for Major Street is Total Volume of Both Approaches.
 Traffic Volume for Minor Street is the Volume of High Volume Approach.

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I2: VMT Assessment

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Memorandum

Date: June 23, 2022

To: Vincent Tran, P.E., City of Anaheim

From: Paul Herrmann, P.E.
Biling Liu

Subject: Anaheim Boulevard and Ball Road Mixed-Use Project Vehicle Miles Traveled Screening Assessment

OC21-0845

This technical memorandum documents the Vehicle Miles Traveled (VMT) screening assessment for the Anaheim Boulevard and Ball Road Mixed-Use project (Project) located in City of Anaheim, California. The Project would consist of 249 residential units and 4,500 square feet of retail. The VMT screening assessment completed for this Project follows the screening criteria in the City of Anaheim's adopted *Traffic Impact Analysis Guidelines for California Environmental Quality Act Analysis (2020)* (City's Guidelines). This assessment concludes that the Project can be screened from analysis under the presumption that it will result in a less-than-significant impact related to VMT based on its location in a Transit Priority Area (TPA).

Project Description

The Project is located in the southeast corner of Anaheim Boulevard and Ball Road bounded by Claudina Street to the east and Palais Road to the south in the City of Anaheim, California. The Project site was partially occupied by automotive retail stores prior to 2021 but have since been vacated. The only active land use on the project site is a used car dealer at the northeast corner. The Project proposes a General Plan Amendment to re-designate the Project site from General Commercial to Mixed-Use Medium Density Residential. The Project proposes redevelopment of the site with the following components:

- 213 three-story multi-family dwelling units
- 36 four-story multi-family dwelling units
- 2,250 square feet of fast casual restaurant (no drive-through)
- 2,250 square feet of coffee shop (no drive-through)

The site plan is included as **Attachment A**. Fifteen percent of the residential units are proposed to be affordable housing.

VMT Screening Analysis

Per the City's Guidelines, if the Project satisfies one or more of the criteria described below, a complete VMT impact analysis is not required.

Type 1. Transit Priority Area (TPA) Screening

The Project is located in a TPA, which is defined by areas within a half mile around an existing major transit stop¹ or an existing stop along a high-quality transit corridor². TPAs in Anaheim are shown in Attachment B in the City's Guidelines which is provided as **Figure 1** with the Project location identified. The Orange County Transportation Authority (OCTA) operates Bus Route 47 along Anaheim Boulevard adjacent to the Project. Bus Route 47 services the Project at the "Anaheim Boulevard and Ball Road" stop with headways of 15 minutes in the AM peak period (7:00-9:00 AM) and PM peak period (4:00-6:00 PM).

According to the City's Guidelines, in order to qualify for TPA screening, the Project must satisfy the four requirements below to be presumed to have a less-than-significant impact on VMT:

1. Has a Floor Area Ratio (FAR) of greater than 0.75;
2. Includes less parking for use by residents, customers, or employees of the project than required by the City (if the City requires the project to supply parking);
3. Is consistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
4. Does not replace affordable residential units with a smaller number of moderate or high-income residential units.

1. FAR greater than 0.75

The Project proposes a total Gross Floor Area (GFA) of 468,265 square feet on a 465,150 square foot lot, resulting in a FAR of 1.01. Therefore, the overall Project FAR is greater than 0.75 that satisfies this requirement.

2. Includes less parking than required

The Anaheim Municipal Code [AMC] Section 18.42.030 establishes residential parking ratios for calculating the required number of residential parking spaces, and AMC Section 18.42.040 requires 4 spaces per 1,000 square feet (sf) of general retail sales. As shown in **Table 1**, the Project requires 664 residential parking spaces and 18 non-residential parking spaces.

¹ Pub. Resources Code, § 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

² Pub. Resources Code, § 21155 - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Table 1: Required Parking Spaces

Number of Bedrooms	Minimum Number of Parking Spaces per Unit/KSF	Project	Required Parking Spaces
1 bedroom	2	63 units	126
2 bedrooms	2.25	109 units	245
3 bedrooms	3	77 units	231
Guest	0.25	249 units	62
<i>Residential Subtotal</i>			<u>664</u>
Retail Space	4	4.5 KSF	18
<i>Retail Subtotal</i>			<u>18</u>
<i>Project Total</i>			<u>682</u>

Source: Anaheim Municipal Code

Table 2 compares the number of parking spaces required per the AMC to the number of parking spaces the Project will provide. The Project proposes to provide approximately 435 residential parking spaces and 77 surface lot parking spaces (total of 512), which are fewer than the 664 residential parking spaces determined from Table 1. Although the Project will provide more retail parking spaces than the AMC requires, the total number of parking spaces for the entire project is less than the combined required number of parking spaces.

Table 2: Parking Demand and Supply

Land Use Type	Parking Required per City of Anaheim's Code	Parking Provided
Residential	664	512
Retail	18	20
Total	682	532

Source: Anaheim Municipal Code Section 18.42.030 Residential Parking Requirements

The Project is providing fewer parking spaces than required and therefore satisfies the maximum parking requirement. The Project is taking advantage of a density bonus that allows for fewer parking spaces than the code requires.

3. SCS Consistency

The Project was reviewed against the assumptions in the Southern California Association of Governments (SCAG) 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The land use growth assumptions were reviewed in the Orange County Transportation Analysis Model (OCTAM) version 5.0 which reflects the SCAG 2020 RTP/SCS dataset. These land use growth assumptions are provided in **Table 3**. The Traffic Analysis Zone (TAZ) where the Project is located was reviewed. The growth proposed

by the Project does not exceed the land use growth for the TAZ where the Project is located. The Project is also well within the SCAG 2020 RTP/SCS growth assumptions for the City of Anaheim as a whole. The Project also does not conflict with any SCAG 2020 RTP/SCS roadway network, pedestrian, bicycle, or transit projects. Therefore, the Project is considered consistent with the current SCS.

Table 3: Project Land Use Comparison with SCS

Land Use	Project	OCTAM Growth in Project TAZ 377	OCTAM Growth in City of Anaheim
Household	249	711	19,991
Retail Employment	11	156	10,586

Source: OCTAM Version 5.0, SCAG 2020 RTP/SCS

Notes:

1. The Project proposed retail jobs were estimated using 425 square feet per employee.

4. Replacing Affordable Units

The Project is not replacing any residential units and therefore satisfies this requirement.

Type 2. Low VMT Area Screening

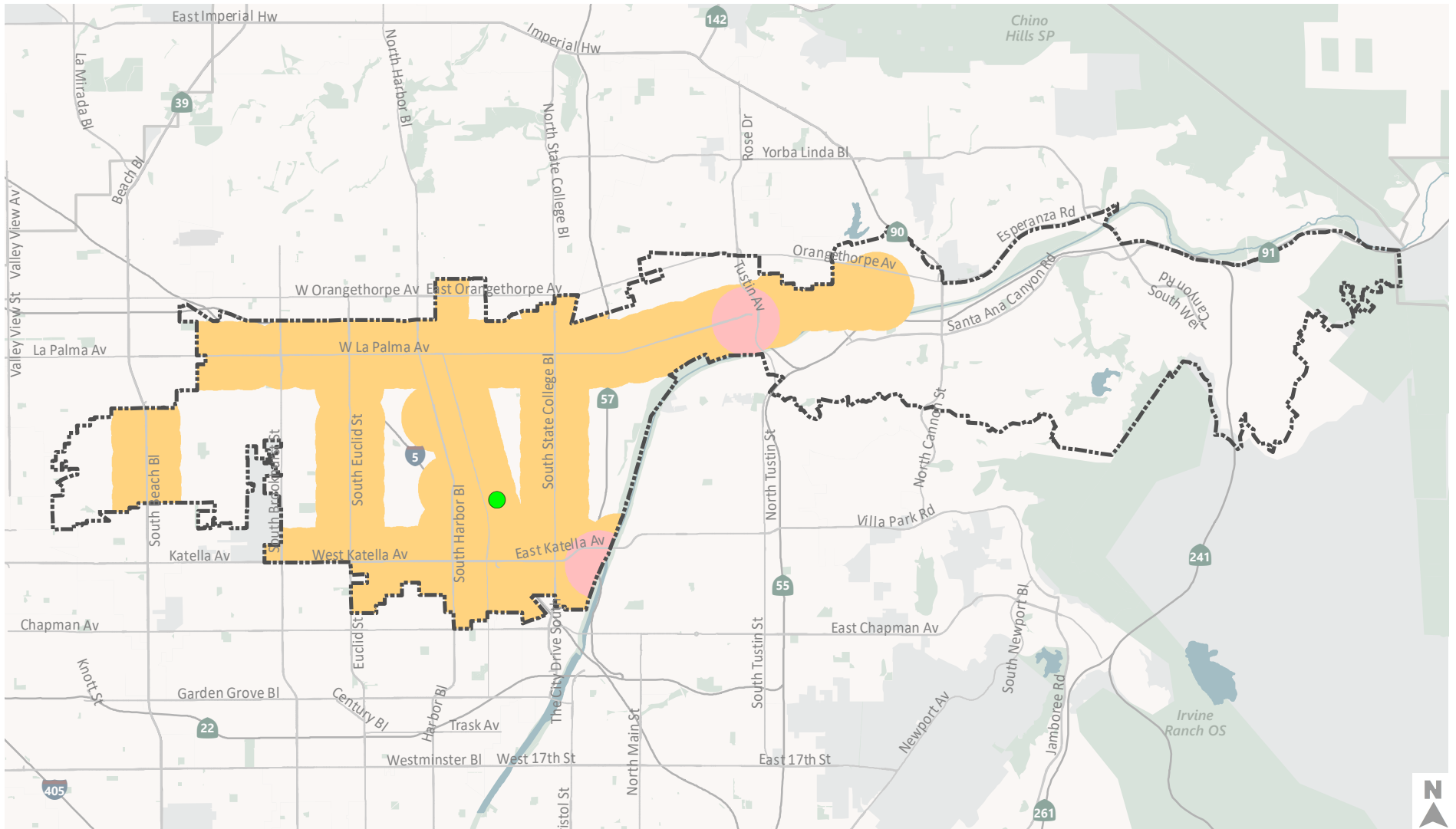
Projects located in transportation analysis zones (TAZs) that generate VMT per service population (SP) 15% below the Baseline Orange County average can be screened out. As shown in **Figure 2** in the City's guidelines, the project is not located in a low VMT generating area, therefore the project cannot be screened out of a complete VMT impact analysis under the Low VMT Area Screening.

Type 3. Project Type Screening

Affordable housing projects and local-serving projects can be screened out if the project type/land-use is explicitly listed in the City's guidelines or if the project generates less than 110 daily trips. Although the affordable housing portion of the residential uses and the retail uses (less than 50 KSF) meet the Project Type Screening, the rest of the regular housing units are not qualified for screening and would generate more than 110 daily trips (the project would generate 2,776 daily trips); therefore the project cannot be screened out of a VMT impact analysis under the Project Type Screening.

Conclusion

This project meets all of requirements of TPA screening and can be presumed to have a less-than-significant transportation impact related to VMT. No further VMT analysis will be performed as part of this assessment.







-  Anaheim
-  Metrolink Stations
-  HQT Bus Stops Buffer(0.5 mile)
-  Project Location



Figure 1

Transit Priority Areas (TPAs) in Anaheim

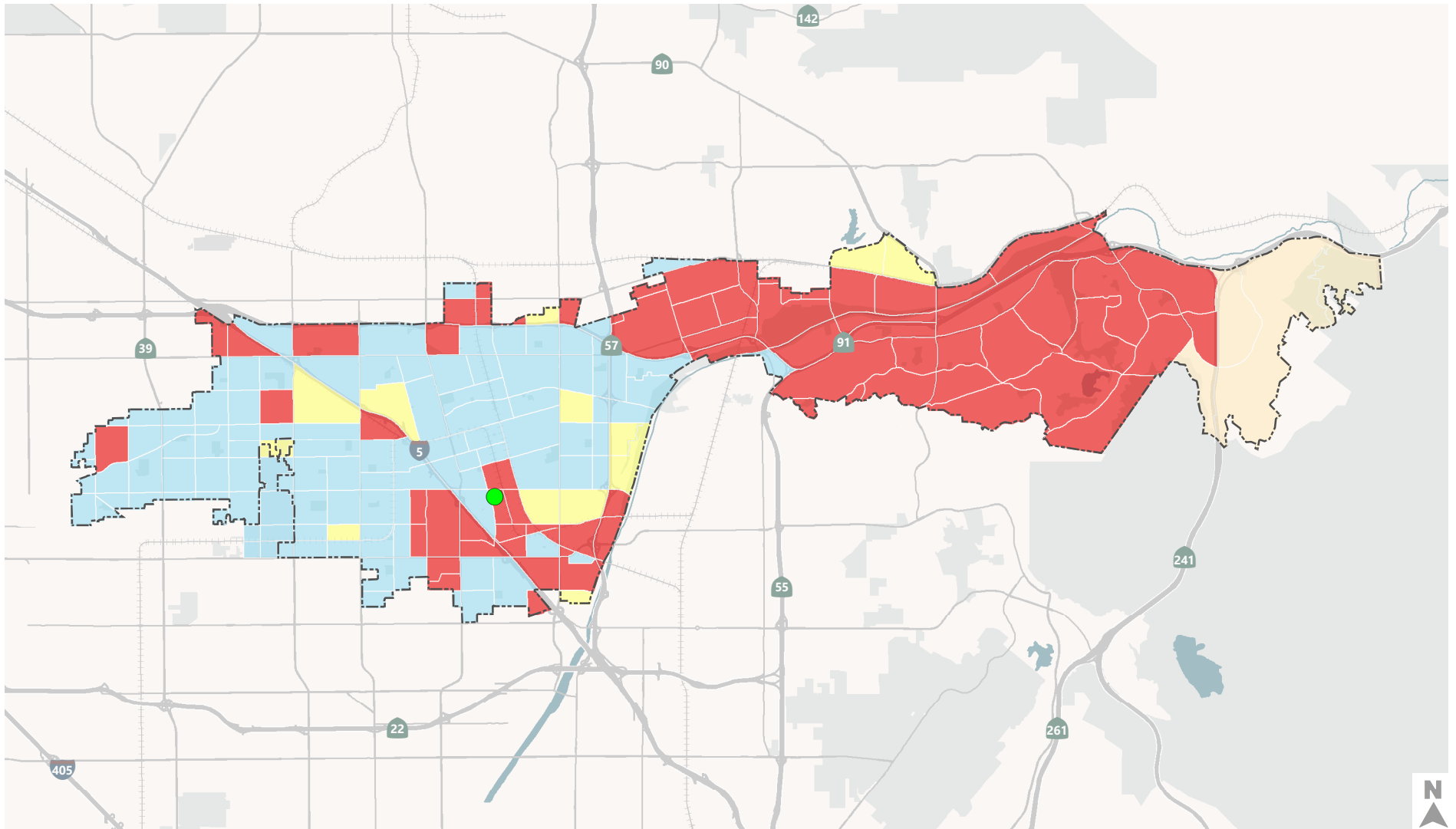


Figure 2



Daily VMT per Service Population in Anaheim TAZs as Compared to the Orange County Average (2016)

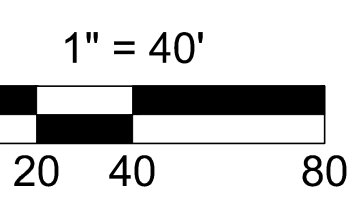
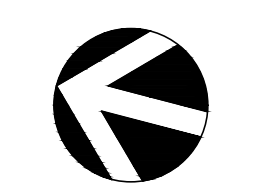


LEGEND:

- ADA PATH
 - FRONT DOOR
 - RETAIL OPEN PARKING
 - FOR SALE OPEN PARKING
 - ADA CONNECTION TO PUBLIC R/W
-
- | | | | | |
|--|-------------------|------------|--------------|-------|
| | 3-STORY TOWNHOMES | | | |
| | PLAN TYPE | BEDROOM(S) | PARKING/UNIT | UNITS |
| | 1 | 1 | 1 | 53 |
| | 2 | 2 | 2 | 93 |
| | 3 | 3 | 2 | 67 |
-
- | | | | | |
|--|---------------|------------|--------------|-------|
| | 4-STORY FLATS | | | |
| | PLAN TYPE | BEDROOM(S) | PARKING/UNIT | UNITS |
| | 1 | 2 | 2 | 10 |
| | 2 | 2 | 2 | 16 |
| | 3 | 3 | 2 | 10 |
-
- | | |
|--|--------|
| | RETAIL |
|--|--------|

NOTES:

1. ALL PARKING STALLS SHALL BE DOUBLE STRIPED PER CITY OF ANAHEIM ENGINEERING STANDARD DETAIL 470.



	UNITS	MIN. # OF SPACES PER UNIT	SPACE REQ.	GARAGE SPACE PROV.	PRIVATE BALCONY SPACE PER PLAN (SF)	STORAGE PROVIDED PER PLAN (SF)
TOWNHOMES - 1 BR	53	1	53	53	70	-
TOWNHOMES - 2 BR	93	2	186	186	70/95	-
TOWNHOMES - 3 BR	67	2	134	134	70	-
FLATS - 1 BR	10	1	10	10	70	-
FLATS - 2 BR	16	2	32	32	70	-
FLATS - 3 BR	10	2	20	20	70	-
TOTAL	249					
PARKING STALLS REQ.	435					
GARAGE PARKING STALLS PROVIDED	435					
SURFACE PARKING PROVIDED	77					
PARKING STALLS OVER PARKED	77					

RETAIL SHARED PARKING
 REQ'D RETAIL SPACES (4/1000 SF) - 4500 SF 18
RETAIL SPACES PROVIDED: 20

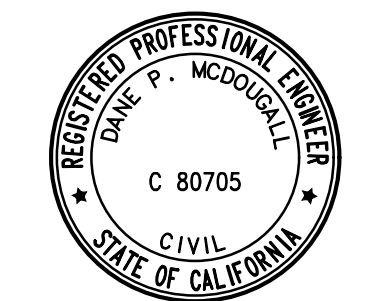
REVISIONS					
NO.	DATE	INITIAL	DESCRIPTION	APP	DATE

DEVELOPER : **TOFFOLI INVESTMENTS, LLC**
 3 HUGHES, IRVINE, CALIFORNIA 92618

SOILS ENGINEER : **ALTA CALIFORNIA GEOTECHNICAL, INC.**
 170 N. MAPLE STREET, SUITE 108
 CORONA, CA 92701
 PHONE (951) 508-7090

PREPARED BY : **C&V CONSULTING, INC.**
 CIVIL ENGINEERING
 LAND PLANNING & SURVEYING

6930 IRVINE CENTER DRIVE
 IRVINE, CALIFORNIA 92618
 (949) 916-3800
 INFO@CVC-INC.NET
 WWW.CVC-INC.NET



TENTATIVE TRACT MAP 19140 PARKING PLAN

TM-11
 DATE: 3/29/2022
 SHEET 11 OF 12

SCALE: AS SHOWN DRAWN BY: JM CHECKED BY: JC

CITY OF ANAHEIM

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