TRAFFIC IMPACT STUDY
FOR
ALEXAN ON CLAIREMONT
DECATUR, GEORGIA

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A & R Project # 13-112

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INTRODUCTION

The purpose of this study is to evaluate the operations along Commerce Drive due the proposed residential development at 160 Clairemont Avenue, in the southeast corner of Commerce Drive and Clairemont Avenue. The proposed development will consist of 176 apartment units. The proposed site plan shows the development will be served by two access points on:

- Montgomery Street, between Commerce Drive and Clairemont Avenue
- Commerce Drive, west of Clairemont Avenue

The location of the proposed development and the surrounding roadway network is shown in Figure 1.

In this study, the AM and PM peak hours have been analyzed. This study includes the evaluation of the existing and future traffic operations at the intersections of:

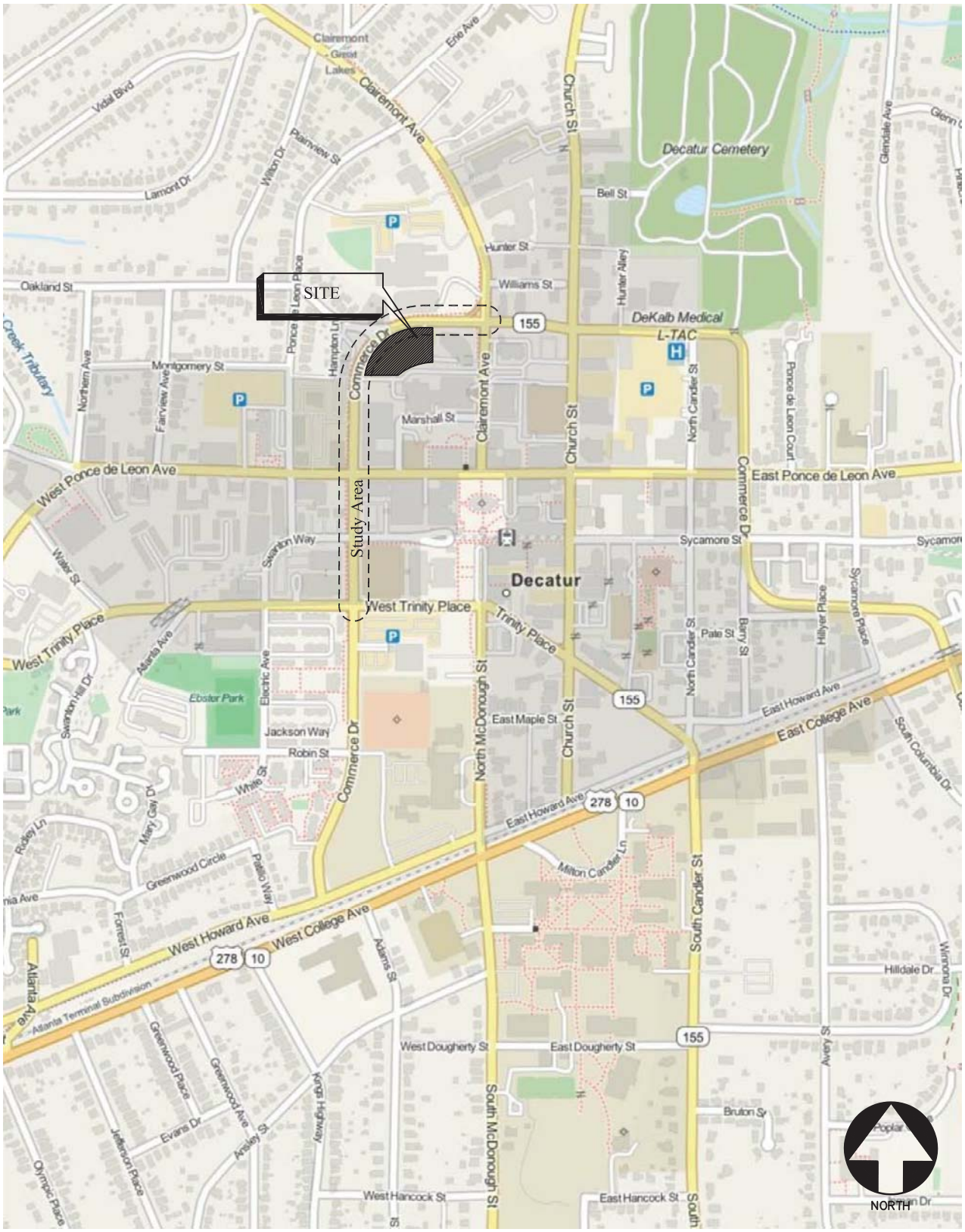
- Commerce Drive @ Clairemont Avenue
- Commerce Drive @ Site Access
- Commerce Drive @ Montgomery Street
- Commerce Drive @ Ponce de Leon Ave
- Commerce Drive @ Swanton Way
- Commerce Drive @ Trinity Place

Additional improvements are evaluated in conjunction with the planned development in context with the Decatur Community Transportation Plan, which "provides an overview of the plan detailing the vision, goals and objectives and the guiding principles of Active Living and Compete Streets". These additional improvements includes modifications along Commerce Drive to accommodate a roadway reconfiguration commonly referred to as a "road diet", which entails converting a multi-lane roadway to a two-lane roadway plus a two-way left turn lane by removing a travel lane in each direction. The remaining roadway width can be converted to bike lanes, on-street parking, or sidewalks.

The evaluation of the reconfiguration of Commerce Drive is analyzed in two phases:

- Phase 1: Repurposing the outside travel lanes on Commerce Drive to accommodate bike lanes on both sides of the roadway and widened sidewalks between Clairemont Ave and Ponce de Leon Ave. This phase would be implemented in conjunction with the residential development.
- Phase 2: Repurposing the outside travel lanes on Commerce Drive to accommodate bike lanes on both sides of the road between Ponce de Leon Ave and Trinity Place.

Recommendations to improve operations have been identified, where appropriate.



LOCATION MAP

FIGURE 1

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EXISTING FACILITIES

An inventory was performed of the major roadways in the area surrounding the site. The following is a brief description of each of these facilities.

Commerce Drive

Commerce Drive is a primary arterial route through the City. In the study area, Commerce Drive is predominately north-south in the study area, though bends east-west across the site frontage. Between Ponce de Leon Ave and Trinity Place, Commerce Drive is a five-lane roadway with a center two-way left turn lane (left turn bays between Ponce de Leon Ave and Trinity Pl). South of Trinity Place, Commerce Drive is a two-lane roadway. The posted speed limit on Commerce Drive is 35 mph in the vicinity of the site. Availability of on-street parking in the study area is as follows:

- 9 spaces on the east side of Commerce Drive, north of Ponce de Leon Ave
- 10 spaces on the west side of Commerce Drive, between Ponce de Leon Ave and Swanton Way
- 10 spaces on the west side of Commerce Drive, between Swanton Way and Trinity Place
- 10 spaces on the east side of Commerce Drive, between Swanton Way and Trinity Place

Clairemont Avenue

Clairemont Avenue is a north-south, undivided roadway with a posted speed limit of 35 mph in the vicinity of the site. Approaching Commerce Drive, Clairemont Avenue has one through lane in each direction (northbound and southbound).

Montgomery Street

Montgomery Street is an east-west, two-lane, undivided roadway that runs between Clairemont Ave and Commerce Drive. The road acts as an access road for 160 Clairemont Ave surface lot and 130 Clairemont Ave parking deck.

Swanton Way

At its intersection with Commerce Drive, Swanton Way as an east-west, two-lane roadway with a speed limit of 25 mph. East of Commerce Drive, Swanton Way is a direct access to the Decatur MARTA station, which is primarily an access for buses and riders (Church Street is the main pedestrian access). West of Commerce Drive, Swanton Way bends south to intersect with W Trinity Place.

W Trinity Place

At its intersection with Commerce Drive, W Trinity Place is an east-west, two-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the site.

STUDY METHODOLOGY

In this study, the methodology used for evaluating vehicular operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 2000 edition (HCM 2000). Synchro software, which utilizes the HCM 2000 methodology, was used for the vehicular analysis. An HCM intersection analysis determines the operations for the study locations without outside influence of spillover from intersections beyond the study area. While actual delays may be higher because of outside influences, the results of the HCM analysis are used to determine impacts of local changes within the study network. In order to model traffic conditions that are specific to this area, several factors have been taken into account in addition to the lane geometry and traffic control for the intersection approaches. Some of the most influential of these factors is provided below:

- The study network has been evaluated as a Central Business District in the area type adjustment factor to account for the relative inefficiency of intersections in downtown areas in comparison with those in other locations (i.e. suburban, rural, and exurban). HCM 2000 indicates that there is a 10% decrease in roadway capacity in CBDs.
- Actual signal timing from the controller cabinets is used in the evaluation of existing intersection operations.
- Lane widths have been adjusted in the model to match onsite conditions. Many of the roadways in the study network have lane widths more narrow than the 12' standards. Each foot less than 12' reduces roadway capacity by approximately 3%.

The methodology used for the Bicycle and Pedestrian Level-of-Service (LOS) analysis tool is based upon the proven peer-reviewed research documented in Transportation Research Records (TRR) 1578 and 1773 published by the Transportation Research Board of the National Academy of Sciences. It was developed with a background of over 150,000 miles of evaluated urban, suburban, and rural streets across North America. Many urban planning agencies and state highway departments are using this established method of evaluating their street networks. This is the same methodology used in the Decatur Community Transportation Plan (See CTP – Chapter 5).

Unsignalized Intersections

For unsignalized intersections at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level of service (LOS) for the turning movements at the intersection and the level of service for the overall intersection. Level of service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized

intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level of service is assigned a letter designation from A through F. Level of service A indicates excellent operations with little delay to motorists, while level of service F exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross safely, resulting in extremely long total delays and long queues. The level of service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections is given in Table 1.

TABLE 1
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Average Controlled Delay (sec/veh)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: 2000 Highway Capacity Manual

Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level of service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level of service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The levels of service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level of service A indicates operations with very low controlled delay, while level of service F describes operations with extremely high average controlled delay. Level of service E is typically considered to be the limit of acceptable delay, and level of service F is considered unacceptable by most drivers.

TABLE 2 LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS	
Level of Service	Controlled Delay Per Vehicle (sec)
A	≤ 10.0
B	> 10.0 and ≤20.0
C	> 20.0 and ≤35.0
D	> 35.0 and ≤55.0
E	> 55.0 and ≤80.0
F	> 80.0

Source: 2000 Highway Capacity Manual

Alternative Modes

The Bicycle LOS model uses the measurable traffic and roadway factors that transportation planners and engineers use for evaluating the design and operation of other travel modes, including:

- street width
- bike lane width
- striping combinations
- traffic volume
- pavement surface condition
- motor vehicle speed and type
- on-street parking

Pedestrian LOS uses

- roadway width
- presence of sidewalks
- intervening buffers and barriers within those buffers
- traffic volume
- motor vehicle speed
- on-street parking

The resulting Bicycle and Pedestrian LOS score equates to a LOS category (A, B, C, D, E, or F) similar to those used for highway capacity operations, based on the ranges shown in Table 3, that reflects the cyclist's perceived comfort and safety traveling on the street.

TABLE 3 LEVEL OF SERVICE CRITERIA FOR BICYCLES AND PEDESTRIANS	
Level of Service	Score
A	<1.5
B	> 1.5 and < 2.5
C	> 2.5 and < 3.5
D	> 3.5 and < 4.5
E	> 4.5 and < 5.5
F	> 5.5

EXISTING OPERATIONS

Existing peak hour traffic counts and geometric data were collected at the intersections of:

- Commerce Drive @ Clairemont Ave
- Commerce Drive @ Site Access
- Commerce Drive @ Montgomery St
- Commerce Dr @ Ponce de Leon Ave
- Commerce Drive @ Swanton Way
- Commerce Drive @ Trinity Place

Vehicular Analysis

Turning movement counts were collected on Thursday, January 9, 2014. All turning movement counts were recorded during the AM and PM peak hours between 7:00am to 9:00am and 4:00pm to 6:00pm, respectively. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined and used in the analysis.

Traffic operations were analyzed along Commerce Drive from Clairemont Ave to Trinity Place during the peak hour for the morning and evening travel times in accordance with the HCM methodology. Traffic operations were analyzed using existing lane geometry and signal timing The results of the analyses are shown in Table 4.

TABLE 4: EXISTING INTERSECTION VEHICULAR OPERATIONS

EXISTING INTERSECTION OPERATIONS	TRAFFIC CONTROL	AM Peak Hour		PM Peak Hour	
		LOS (sec delay)	v/c Ratio	LOS (sec delay)	v/c Ratio
Commerce Drive @ Clairemont Ave	Signalized	D (40.3)	0.79	D (48.2)	0.97
Commerce Drive @ 160 Clairemont Ave - Northbound Approach - Westbound Left	Stop Controlled on Northbound	 B (12.5) A (9.0)	-	 B (12.8) A (9.8)	-
Public Parking @ Commerce Drive -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	Stop Controlled on Eastbound Westbound	 B (12.1) B (12.2) B (10.4) A (8.5)	-	 B (12.2) B (13.8) A (9.2) A (9.0)	-
Ponce de Leon Ave @ Commerce Drive	Signalized	C (30.5)	0.81	C (26.8)	0.71
Swanton Way @ Commerce Drive	Signalized	A (4.2)	0.41	B (11.5)	0.42
Trinity Place @ Commerce Drive	Signalized	D (44.3)	0.91	E (65.9)	1.02

*v/c ratio not calculated for unsignalized intersections

Level-of-service "E" is used as standard due to the area being defined as a Regional Town Center in the Atlanta Regional Commission's Unified Growth Policy Map as well as being parallel to bus and rail transit facilities. All intersections are operating at LOS "E" or better in the existing conditions analysis.

Queuing often occurs along the southbound and westbound approach to the Commerce Dr at

Clairemont signal. The intersection is located a close distance (approximately 500 feet) from an adjacent signalized intersection at Commerce Drive at Church Street. Efficient coordination and interaction between the Clairemont Avenue and Church Street intersections is critical to maintain vehicular progression.

According to FHWA guidelines, roadways with Average Daily Traffic (ADT) of 20,000 or less may be good candidates for a road diet and should be evaluated for feasibility. It has been shown that roads with 15,000 ADT or less had very good results in the areas of safety, operations, and livability. As daily traffic volumes on Commerce Drive are around the 15,000 mark, the roadway will be a good candidate for consideration of a road diet.

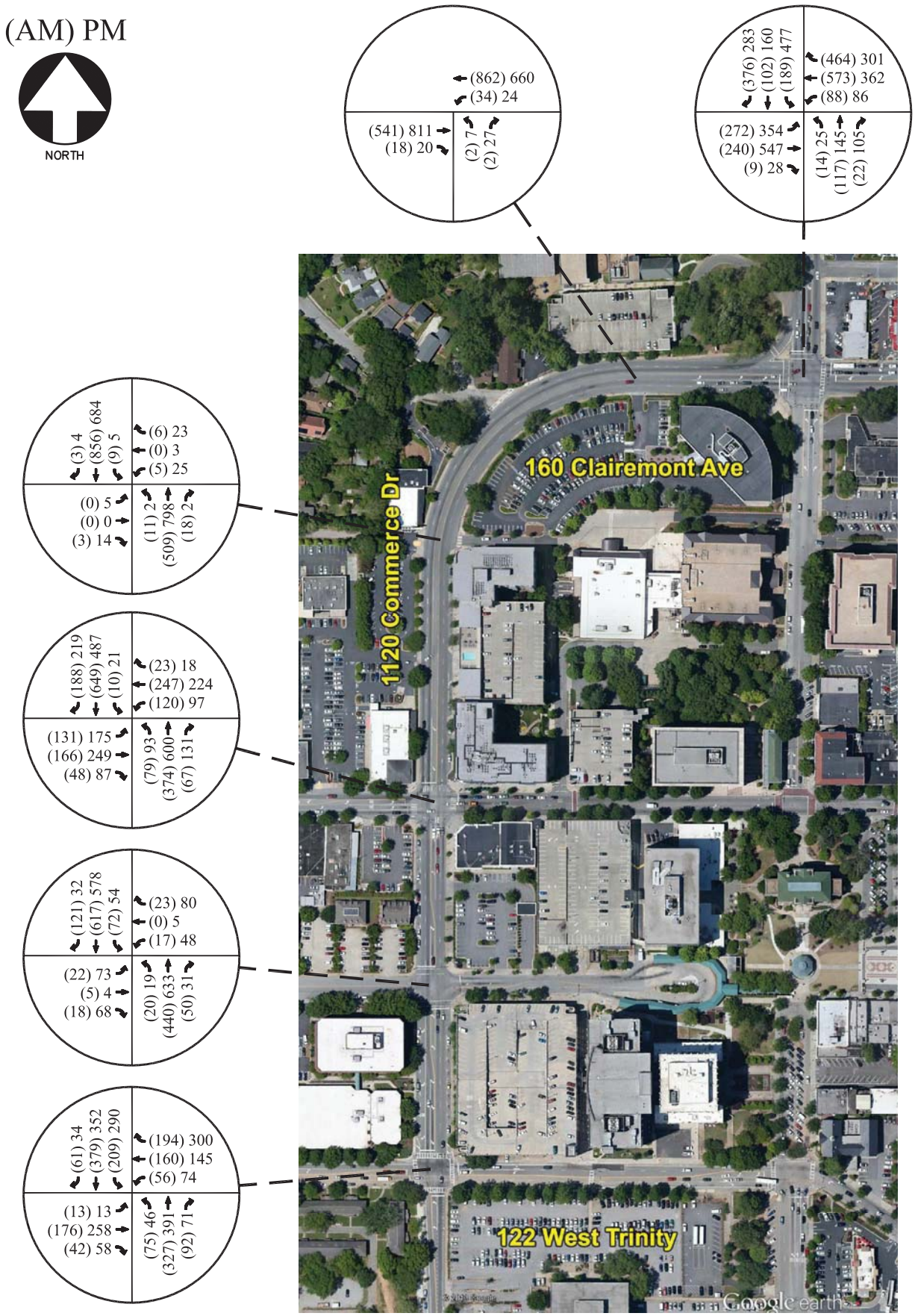
Bicycle and Pedestrian Analysis

In addition to vehicular level-of-service, an analysis of bicycle and pedestrian LOS has been prepared. The methodology used for this analysis is the same as what was used for the City of Decatur Community Transportation Plan, which "measures the factors that influence quality of travel, such as pavement condition, auto speeds, sidewalk widths, on-street parking, and other influencing details." As opposed to a delay analysis, this approach measures perceived comfort level and safety. The results of this analysis are shown below. The width of the travel way and sidewalk are also provided as reference.

TABLE 5: EXISTING BICYCLE AND PEDESTRIAN OPERATIONS

EXISTING BICYCLE AND PEDESTRIAN LOS	Outside lane	Bike lane	Sidewalk	BICYCLE LOS (AM / PM)	PED LOS (AM / PM)
Clairemont Ave to Site Driveway					
-Westbound	13 ft	0 ft	5 ft	D / D	C / D
-Eastbound	12 ft	0 ft	5 ft	D / D	E / D
Site Driveway to Montgomery Street					
-Southbound	13 ft	0 ft	5 ft	D / D	C / D
-Northbound	17 ft	0 ft	5 ft	C / C	E / D
Montgomery Street to Ponce de Leon					
-Southbound	11 ft	0 ft	5 ft	D / D	C / D
-Northbound	10 ft	0 ft	5 ft	D / D	E / D
Ponce de Leon Ave to Swanton Way					
-Southbound	11 ft	0 ft	5 ft	D / D	D / C
-Northbound	11 ft	0 ft	10 ft	D / D	B / B
Swanton Way to Trinity Ave					
-Southbound	10 ft	0 ft	5 ft	D / D	B / B
-Northbound	12 ft	0 ft	5 ft	D / D	D / C

The results of the existing conditions analysis indicate that there are several segments currently operating at a poor Bicycle and Pedestrian level-of-service (LOS "E" & "F") in the peak hours. The existing traffic control and lane geometry for the intersections are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

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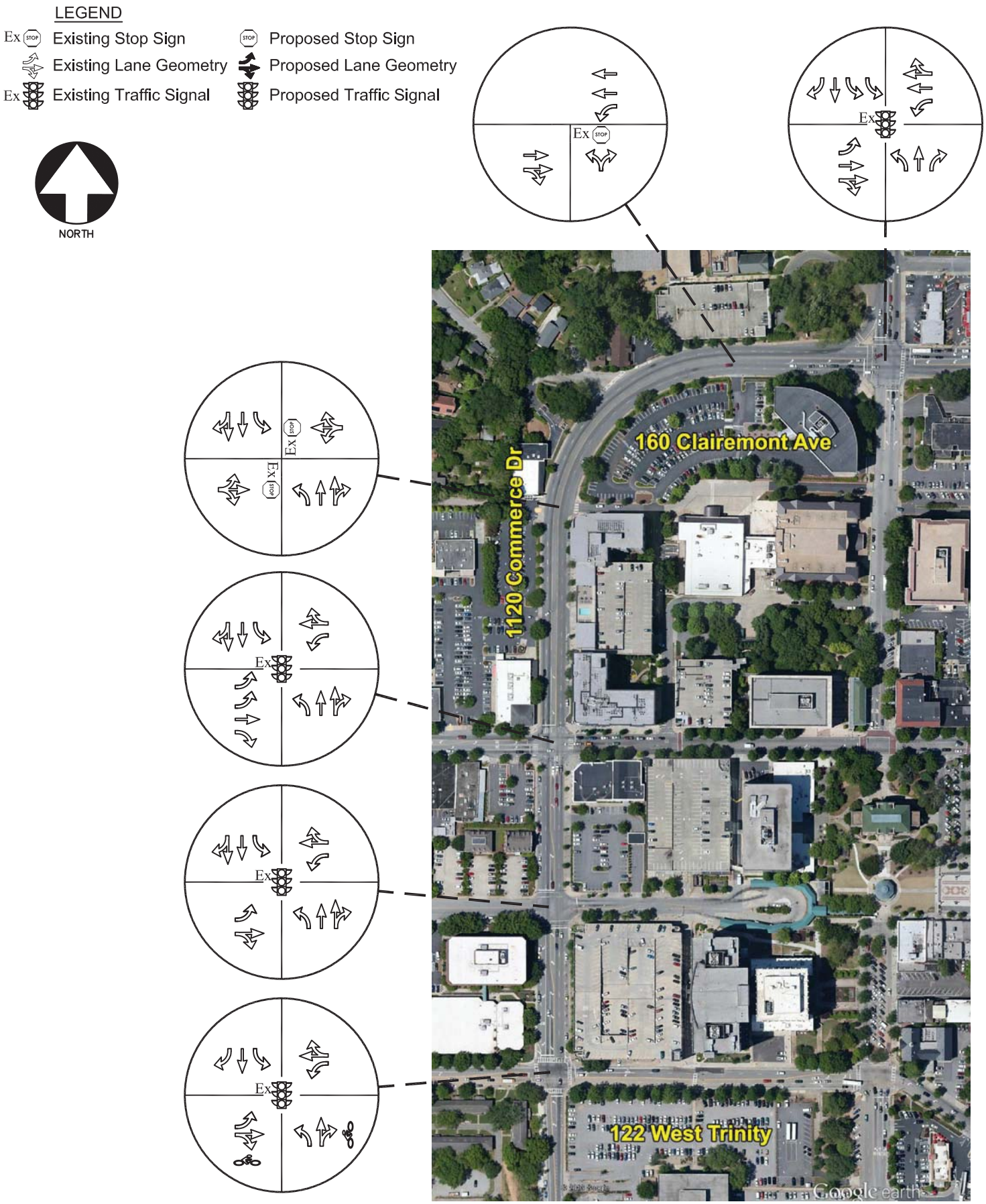

EXISTING TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 3

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ADJACENT DEVELOPMENT AND ANNUAL GROWTH

The background traffic in the study area consists of the following traffic types:

- all traffic movements through the study area that do not have an origin or destination within the study area
- traffic generated by all other development in the study area, with origin or destination within the study area

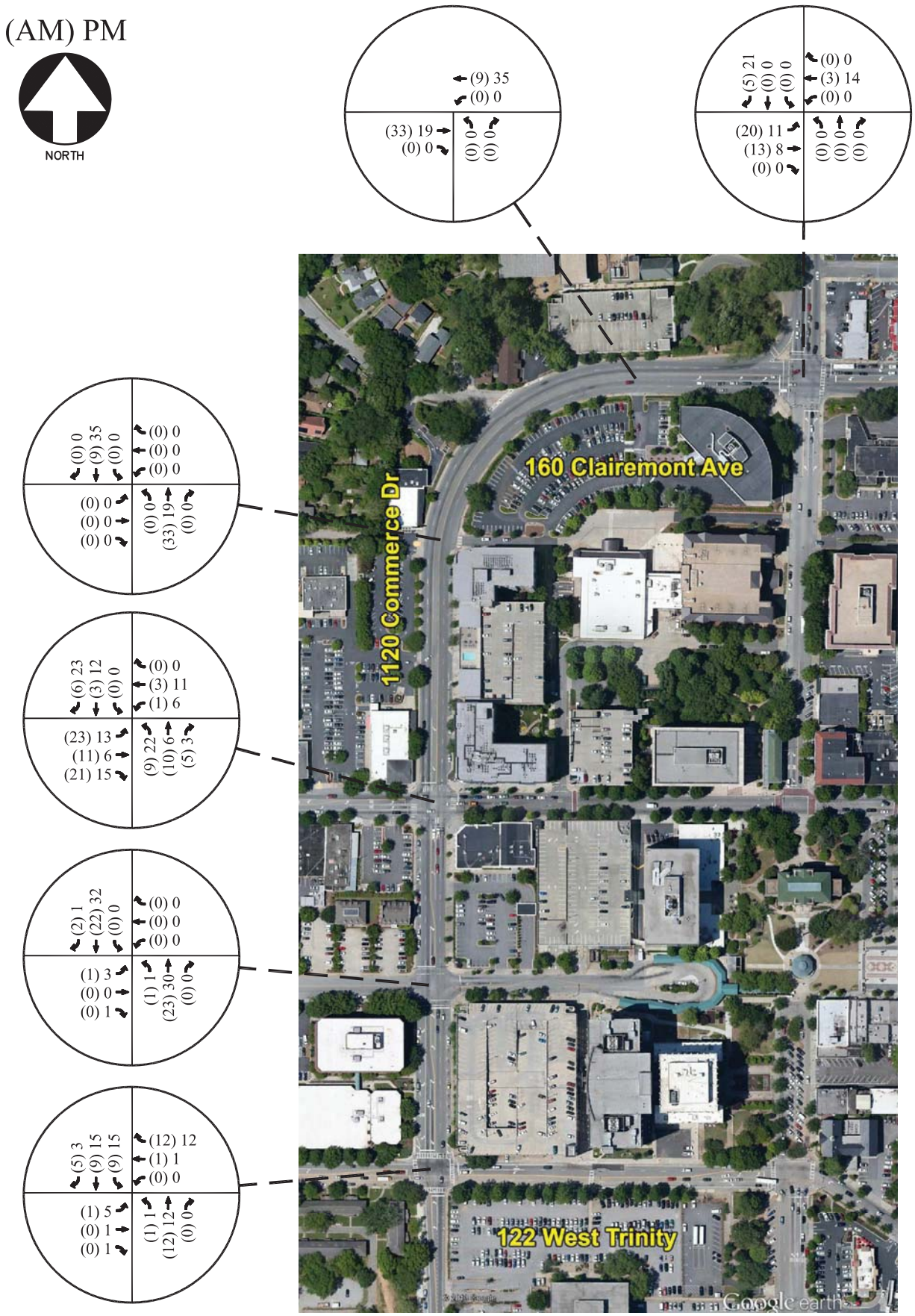
To estimate the traffic volumes inside the study network into the future, some calculation must be done to account for growth of both types of background traffic. The methodology used for these calculations is referred to as the Buildup Method. This methodology involves identifying the study area development within the forecast period (3 years), estimating trip generation, estimating directional distribution, assigning traffic, and estimating growth in through traffic. The information and calculations used for each of these steps is outlined in the following sections of this report.

The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the traffic count information, a growth rate of 1% was determined. This growth factor was applied to the existing traffic volumes on the roadways in order to estimate the future year 2017 traffic volumes prior to the addition of site-generated traffic.

Three sites near the study network were identified as being planned for construction by 2017, 315 West Ponce de Leon Ave (230 apartment units) and 122 West Trinity Pl (mixed-use with 100+ apartments). Trip generation estimates for the project were based on the rates and equations published in the 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Use: *220 – Apartment.* According to the American Community Survey (ACS 2010), 67.16% of the population within the study area drives to work. The remainder use alternate modes of transportation, such as walking, bicycle, and transit. The calculated trip generation for the site is shown in Table 6.

TABLE 6 TRIP GENERATION FOR ADJACENT DEVELOPMENT							
Land Use – Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour 2-way
	Enter	Exit	Total	Enter	Exit	Total	Two-way
220 – 230 Units at 315 West Ponce de Leon Ave							
Vehicular	15	62	77	63	34	97	1,019
Alternate Modes (Walk, Bike, Transit)	8	31	39	31	16	47	498
220 – 100 Units at 122 West Trinity Place							
Vehicular	7	28	35	32	17	49	490
Alternate Modes (Walk, Bike, Transit)	4	14	18	15	9	24	240

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the adjacent development based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve them. The location of this additional traffic within the study area is shown in Figure 4. The total background traffic (including annual growth of 1% and trips from nearby future developments) in shown in Figure 5.



ADJACENT DEVELOPMENT WEEKDAY PEAK-HOUR VOLUMES FIGURE 4

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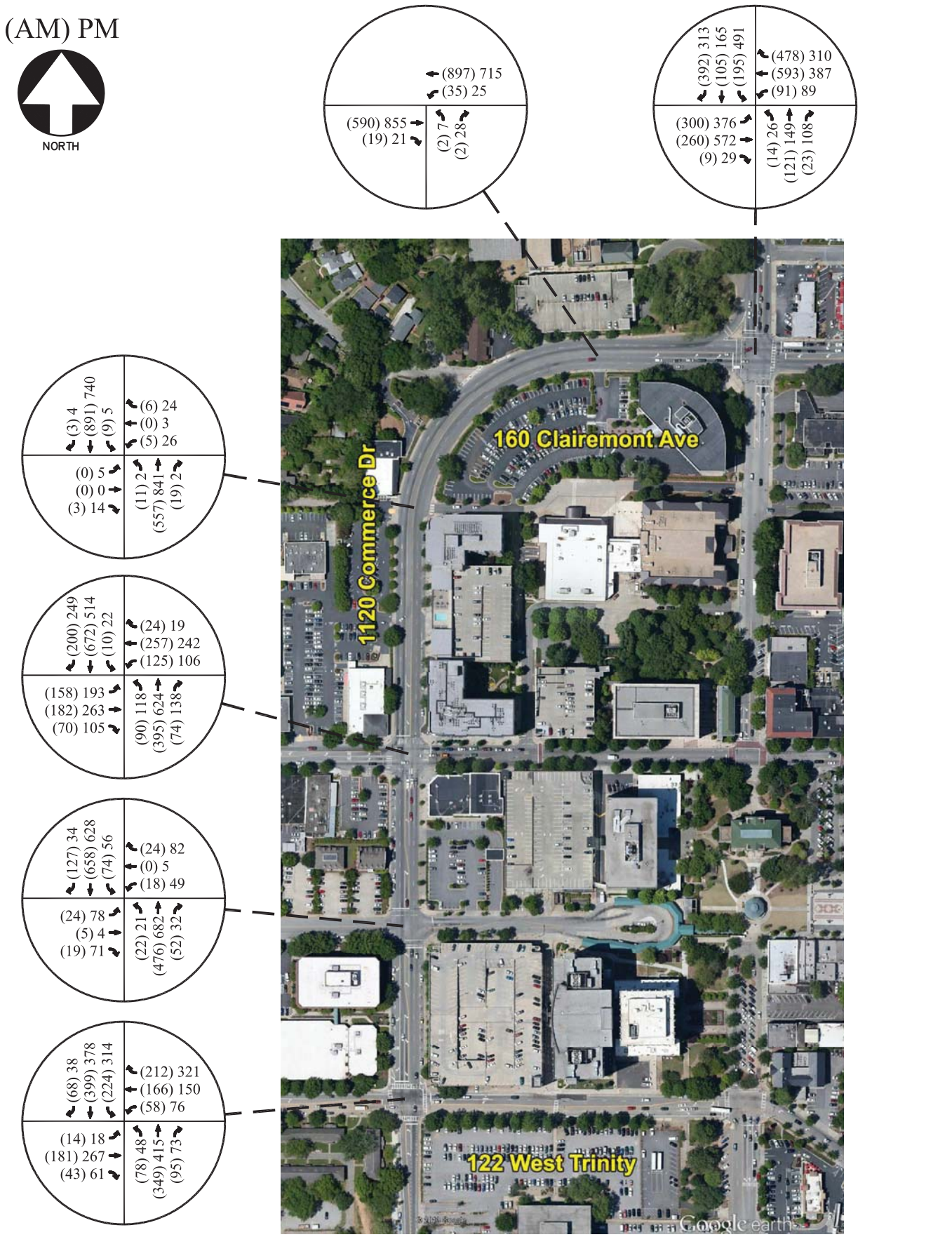

BASE 2017 WEEKDAY PEAK-HOUR VOLUMES

FIGURE 5

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PROPOSED DEVELOPMENT

The proposed development will consist of 176 apartment units. The proposed site plan shows the development will be served by two access points on:

- Montgomery Street, between Commerce Drive and Clairemont Avenue
- Commerce Drive, west of Clairemont Avenue

A site plan is shown in Figure 6.

Trip Generation

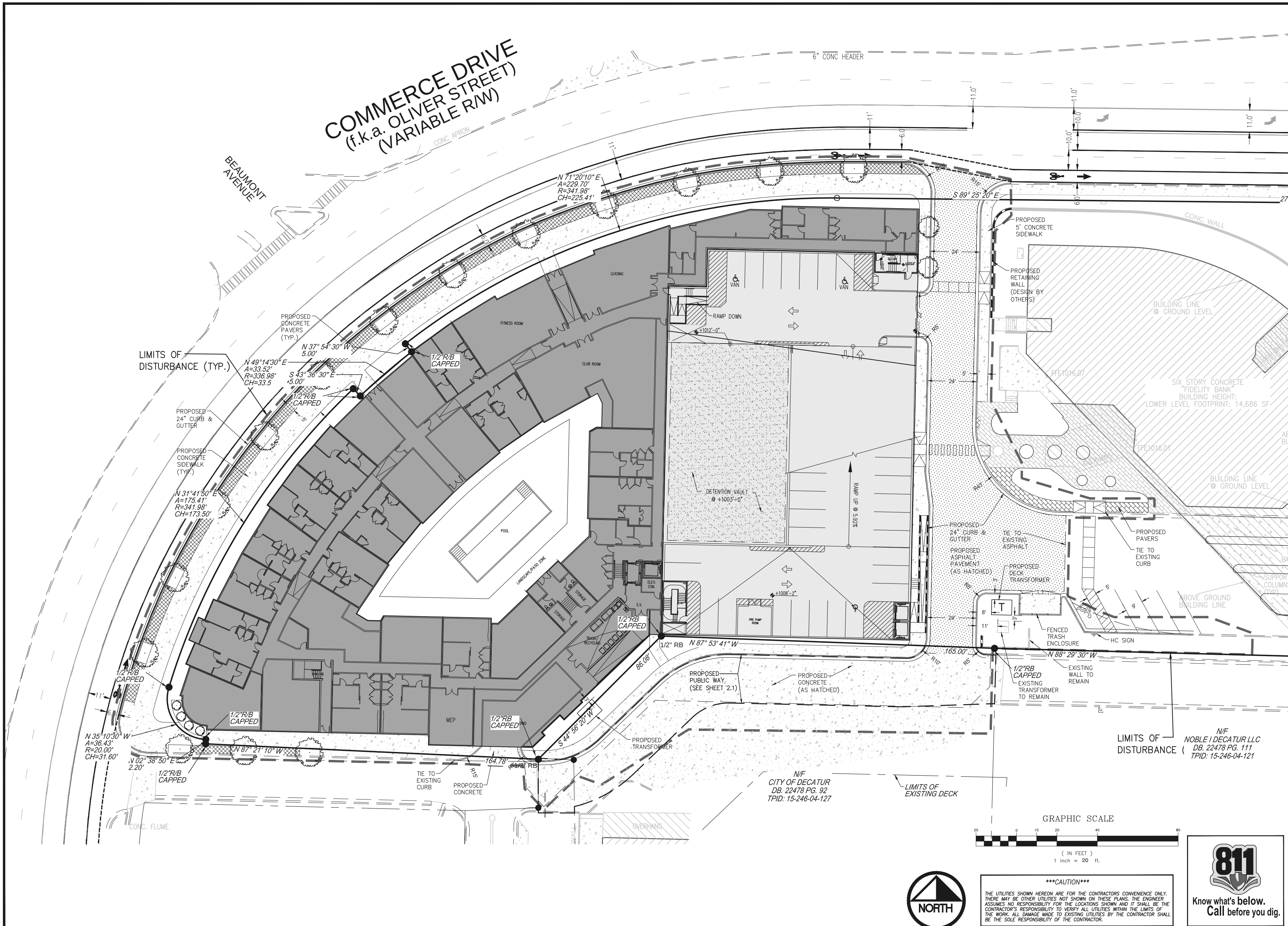
Trip generation estimates for the project were based on the rates and equations published in the 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Use: *220 – Apartment.* The calculated trip generation for the site is shown in Table 7.

TABLE 7
TRIP GENERATION FOR 160 CLAIREMONT AVE

Land Use – Size		A.M. Peak Hour			P.M. Peak Hour			24-Hour 2-way
		Enter	Exit	Total	Enter	Exit	Total	Two-way
210 – Apartment – 244 Units	TOTAL	18	72	90	74	40	114	1,190
	Vehicular	*12*	*48*	*60*	*50*	*27*	*77*	*799*
	Alternate Modes (Walk, Bike, Transit)	*6*	*24*	*30*	*24*	*13*	*37*	*391*

Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An examination was made of traffic exiting the study network in the morning peak and entering the study network in the evening peak to assess where the home-work trip patterns were the highest. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. This distribution is shown in Figure 7. The site-generated traffic volumes, shown in Table 7, were assigned to the study area intersections based on this distribution. The AM and PM peak hour new traffic generated by the site volumes are shown in Figure 8.



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Date:	12/20/13
Scale:	1" = 20'

SITE PLAN
ALEXAN ON CLAIREMONT

CITY OF DECATUR
DEKALB COUNTY, GEORGIA

Drawing No. 2.0

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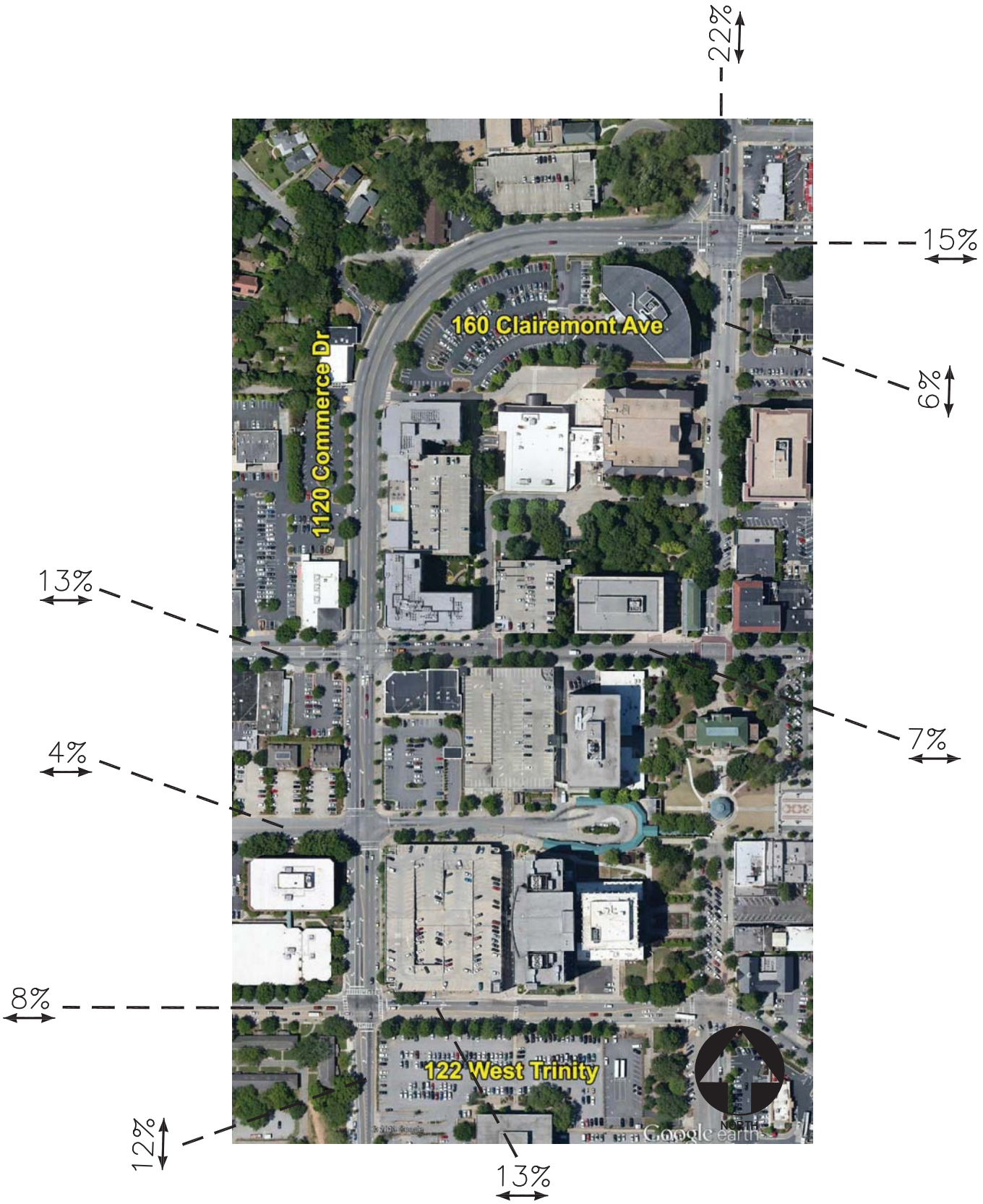
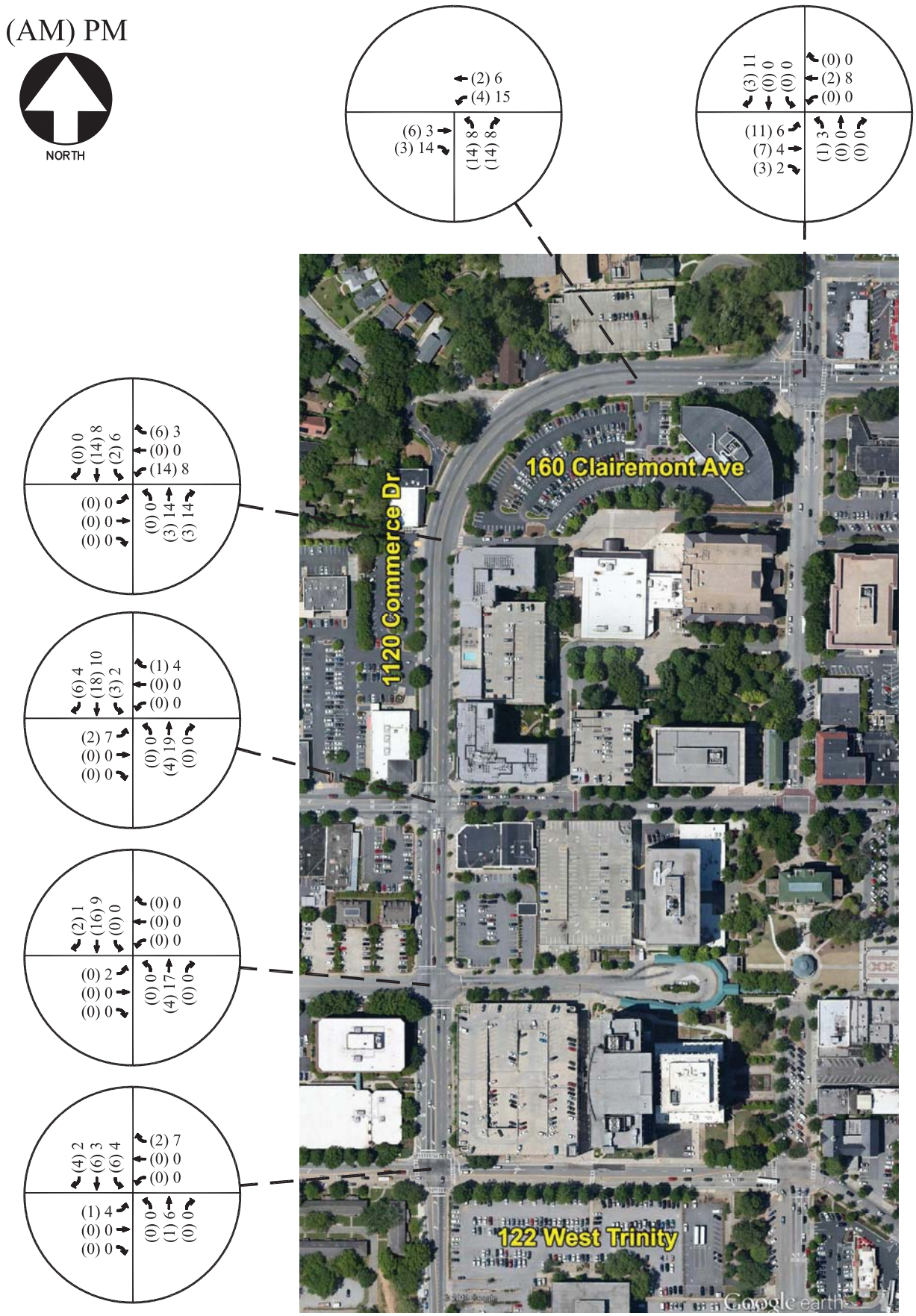


TRIP DISTRIBUTION - 160 CLAIREMONT AVE

FIGURE 7

A&R Engineering Inc.



SITE GENERATED WEEKDAY PEAK-HOUR VOLUMES FIGURE 8

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FUTURE 2017 TRAFFIC OPERATIONS

In order to evaluate future traffic operations in this area, a projection was made of future base year traffic volumes. The site generated traffic volumes (shown in Figure 8) were added to base traffic volumes to calculate the future traffic volumes (shown in Figure 5). The resulting total Future 2017 peak hour volumes are shown in Figure 9. These volumes were used to analyze future traffic operations at all the study intersections. A "No Build" analysis has been included for comparison to the phased reconfiguration of Commerce Drive.

Phase 1

Phase 1 includes reconfiguration of Commerce Drive to accommodate 6' bike lanes and one 11' through lane on both sides of the roadway between Clairemont Ave and Ponce de Leon Ave. This phase would be implemented in conjunction with the residential development. The following modifications are also analyzed:

- Commerce Drive at Clairemont Ave
  - Restripe the eastbound outside through lane as a dedicated right turn lane
  - Restripe the westbound outside through lane as a dedicated right turn lane
- Commerce Drive at Ponce de Leon Ave
  - Restripe the southbound outside through lane as a 100' dedicated right turn lane
  - Restripe the northbound outside through lane as a dedicated right turn lane
  - Remove inside eastbound left turn lane
- Commerce Drive, between Clairemont Ave and Site Driveway
  - Restripe two-way left turn lane to accommodate a left turn lane for vehicles entering the site driveway (~50' storage) and a left turn lane for vehicles turning onto Clairemont Ave (~170' storage)

The results of the analysis are shown in Tables 8 and 9.

TABLE 8: FUTURE (PHASE 1) INTERSECTION VEHICULAR OPERATIONS

FUTURE INTERSECTION OPERATIONS	TRAFFIC CONTROL	NO BUILD		ROAD DIET	
		AM Peak	PM Peak	AM Peak	PM Peak
Commerce Drive @ Clairemont Ave	Signalized	D (47.9)	E (60.9)	D (54.1)	E (77.5)
Commerce Drive @ Site Driveway	Stop Controlled on Northbound				
- Northbound Approach		B (14.6)	B (14.9)	A (9.8)	B (12.2)
- Westbound Left		A (9.5)	B (10.3)	C (20.3)	C (23.3)
Public Parking @ Commerce Drive	Stop Controlled on Eastbound Westbound				
-Eastbound Approach		B (12.5)	B (13.1)	C (20.4)	C (18.5)
-Westbound Approach		C (15.3)	C (15.5)	D (27.3)	D (29.8)
-Northbound Left		B (10.7)	A (9.5)	B (12.1)	A (9.9)
-Southbound Left		A (8.8)	A (9.2)	A (9.4)	B (11.8)
Ponce de Leon Ave @ Commerce Drive	Signalized	D (43.0)	C (32.2)	F (89.0)	D (52.4)
Swanton Way @ Commerce Drive	Signalized	A (4.8)	B (11.8)	A (4.7)	B (11.4)
Trinity Place @ Commerce Drive	Signalized	E (62.1)	F (81.1)	E (56.0)	E (78.0)

TABLE 9: FUTURE (PHASE 1) BICYCLE AND PEDESTRIAN OPERATIONS

FUTURE BICYCLE AND PEDESTRIAN LOS	NO BUILD		PHASE 1	
	BICYCLE LOS (AM / PM)	PED LOS (AM / PM)	BICYCLE LOS (AM / PM)	PED LOS (AM / PM)
Clairemont Ave to Site Driveway				
-Westbound	D / D	C / C	B / B	B / C
-Eastbound	D / D	E / D	B / B	D / C
Site Driveway to Montgomery Street				
-Southbound	D / D	C / C	B / B	B / C
-Northbound	C / C	E / D	B / B	D / B
Montgomery Street to Ponce de Leon				
-Southbound	D / D	C / D	B / B	B / C
-Northbound	D / D	E / D	B / C	D / B
Ponce de Leon Ave to Swanton Way				
-Southbound	D / D	D / C	D / D	D / C
-Northbound	D / D	B / B	D / D	B / B
Swanton Way to Trinity Ave				
-Southbound	D / D	B / B	D / D	B / B
-Northbound	D / D	C / C	D / D	D / C

Results of the vehicular analysis indicate that the increases in traffic volumes will cause the Ponce de Leon Ave at Commerce Drive intersection to exceed the LOS standard of "E". However, the added improvements for bicycles and pedestrians within Phase 1 of the road diet will significantly improve Bicycle and Pedestrian LOS.

Phase 2

Phase 2 is an extension of the road diet along Commerce Drive to accommodate 6' bike lanes and one 11' through lane on both sides of the roadway between Ponce de Leon Ave and W Trinity Pl. The following modifications are analyzed as a part of Phase 2:

- Commerce Drive at Ponce de Leon Ave
  - Reduce the northbound right turn lane to have ~75' storage, starting north of the access point for 198 Ponce de Leon Ave
- Commerce Drive at Swanton Way
  - Remove southbound right turn lane and share it with the through lane
  - Remove northbound right turn lane and share it with the through lane
- Commerce Drive at W Trinity Place
  - Remove southbound right turn lane and share it with the through lane

The results of the analysis are shown in Table 10.

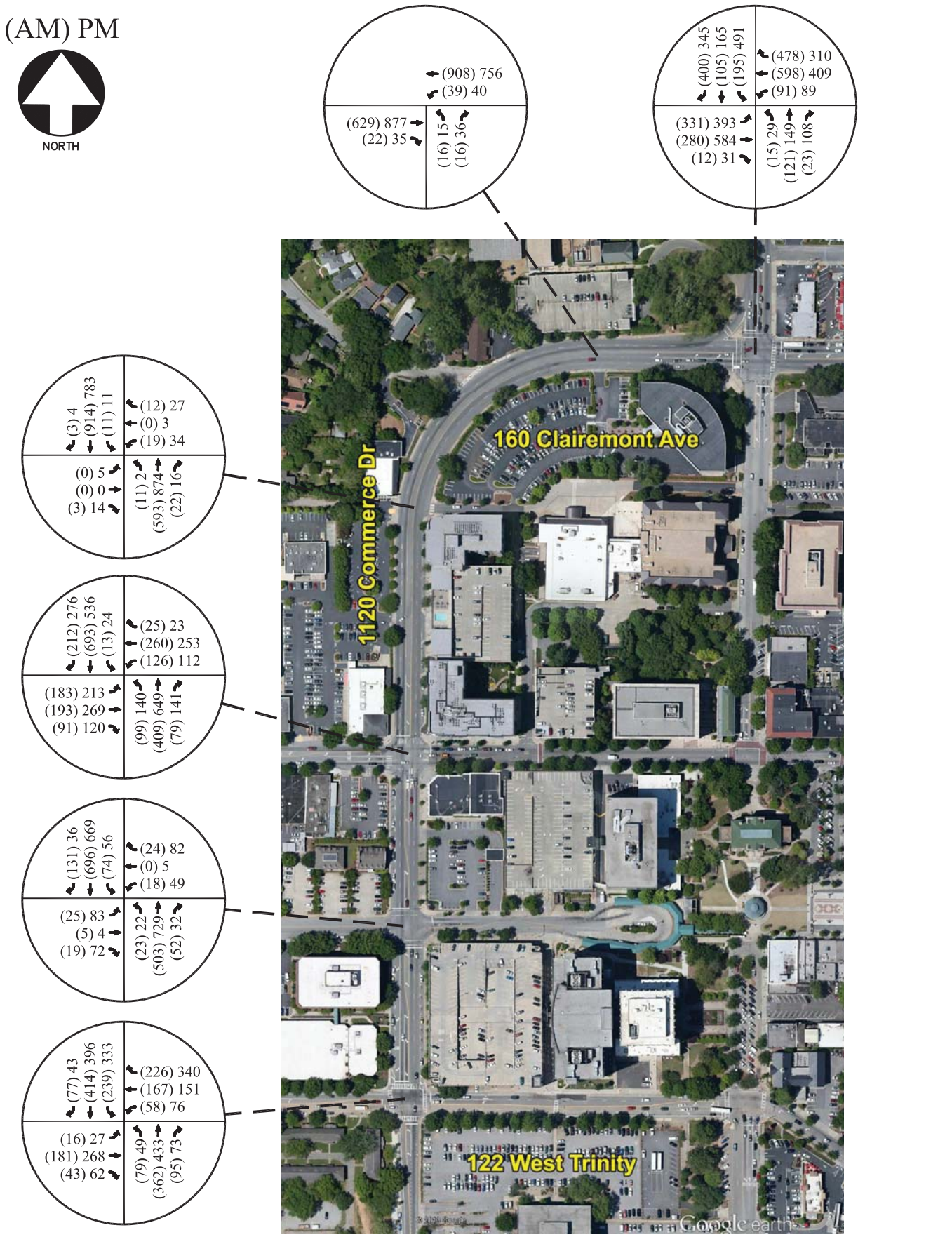
TABLE 10: FUTURE (PHASE 2) INTERSECTION VEHICULAR OPERATIONS

FUTURE INTERSECTION OPERATIONS	TRAFFIC CONTROL	NO BUILD		ROAD DIET	
		AM Peak	PM Peak	AM Peak	PM Peak
Commerce Drive @ Clairemont Ave	Signalized	D (47.9)	E (60.9)	E (55.1)	E (77.8)
Commerce Drive @ Site Driveway	Stop Controlled on Northbound				
- Northbound Approach		B (14.6)	B (14.9)	A (9.8)	B (12.2)
- Westbound Left		A (9.5)	B (10.3)	C (20.3)	C (23.3)
Public Parking @ Commerce Drive	Stop Controlled on Eastbound Westbound				
-Eastbound Approach		B (12.5)	B (13.1)	C (20.4)	C (18.5)
-Westbound Approach		C (15.3)	C (15.5)	D (27.3)	D (29.6)
-Northbound Left		B (10.7)	A (9.5)	B (12.1)	A (9.9)
-Southbound Left		A (8.8)	A (9.2)	A (9.4)	B (11.8)
Ponce de Leon Ave @ Commerce Drive	Signalized	D (43.0)	C (32.2)	F (92.8)	D (48.3)
Swanton Way @ Commerce Drive	Signalized	A (4.8)	B (11.8)	B (13.5)	B (16.6)
Trinity Place @ Commerce Drive	Signalized	E (62.1)	F (81.1)	D (52.7)	E (78.5)

TABLE 11: FUTURE (PHASE 2) BICYCLE AND PEDESTRIAN OPERATIONS

FUTURE BICYCLE AND PEDESTRIAN LOS	NO BUILD		PHASE 2	
	BICYCLE LOS (AM / PM)	PED LOS (AM / PM)	BICYCLE LOS (AM / PM)	PED LOS (AM / PM)
Clairemont Ave to Site Driveway				
-Westbound	D / D	C / C	B / B	B / C
-Eastbound	D / D	E / D	B / B	D / C
Site Driveway to Montgomery Street				
-Southbound	D / D	C / C	B / B	B / C
-Northbound	C / C	E / D	B / B	C / B
Montgomery Street to Ponce de Leon				
-Southbound	D / D	C / D	B / B	B / C
-Northbound	D / D	E / D	B / B	D / B
Ponce de Leon Ave to Swanton Way				
-Southbound	D / D	D / C	D / D	B / B
-Northbound	D / D	B / B	B / B	B / B
Swanton Way to Trinity Ave				
-Southbound	D / D	B / B	D / D	B / B
-Northbound	D / D	C / C	C / C	C / B

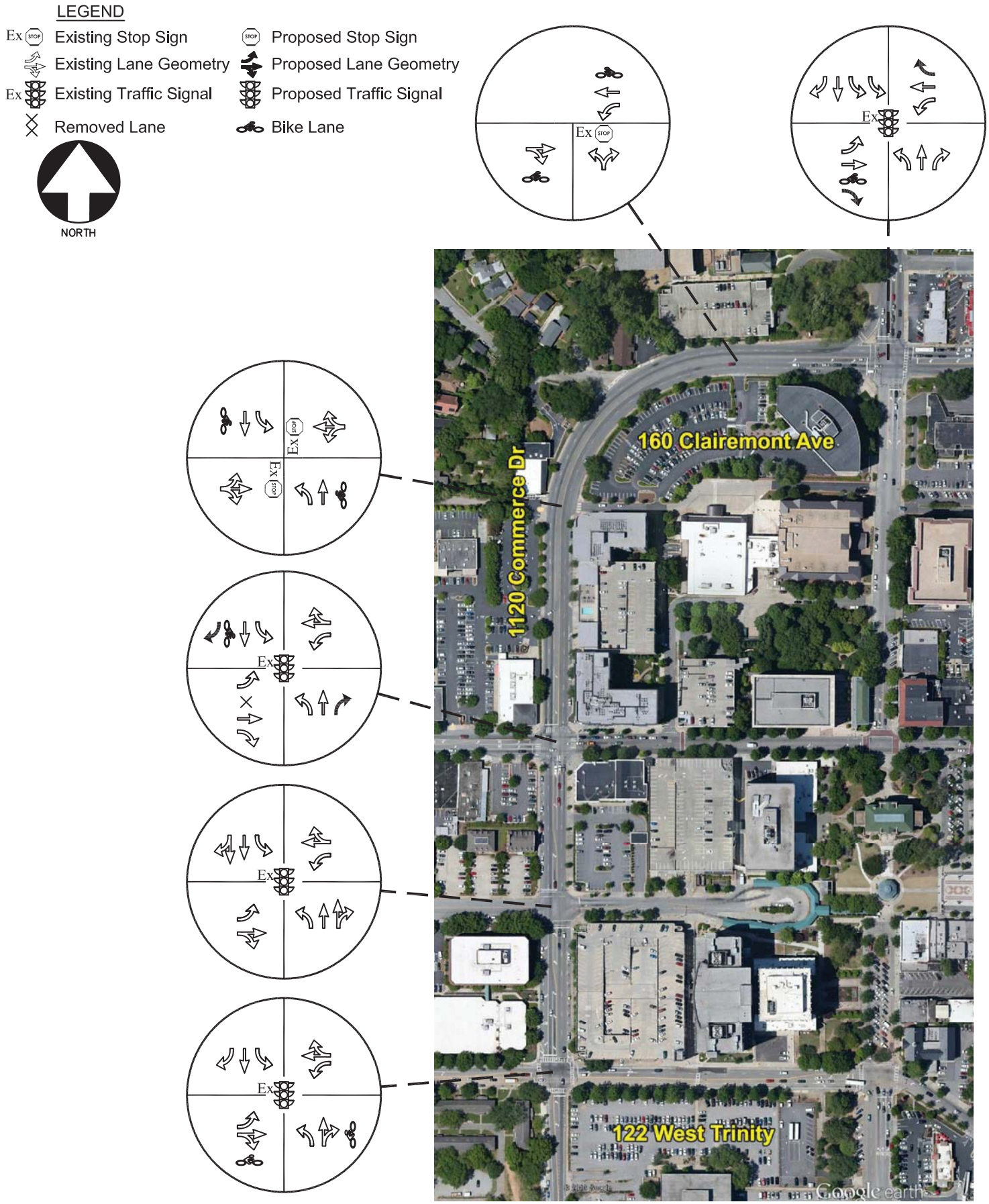
The result of the Phase 2 analysis shows that there will be lesser increases in vehicular delay by the extension of the Commerce Drive road diet south to W Trinity Pl. Some of the reason for this will be the metering caused by delays at the Ponce de Leon Avenue intersection and because Commerce Drive is currently a two-lane roadway south of W Trinity Pl. There are improvements in Bicycle and Pedestrian LOS. Bicycle LOS does not improve as much as other areas because of the on-street parking along the west side of Commerce Drive south of Ponce de Leon Ave.



FUTURE WEEKDAY PEAK-HOUR VOLUMES

FIGURE 9

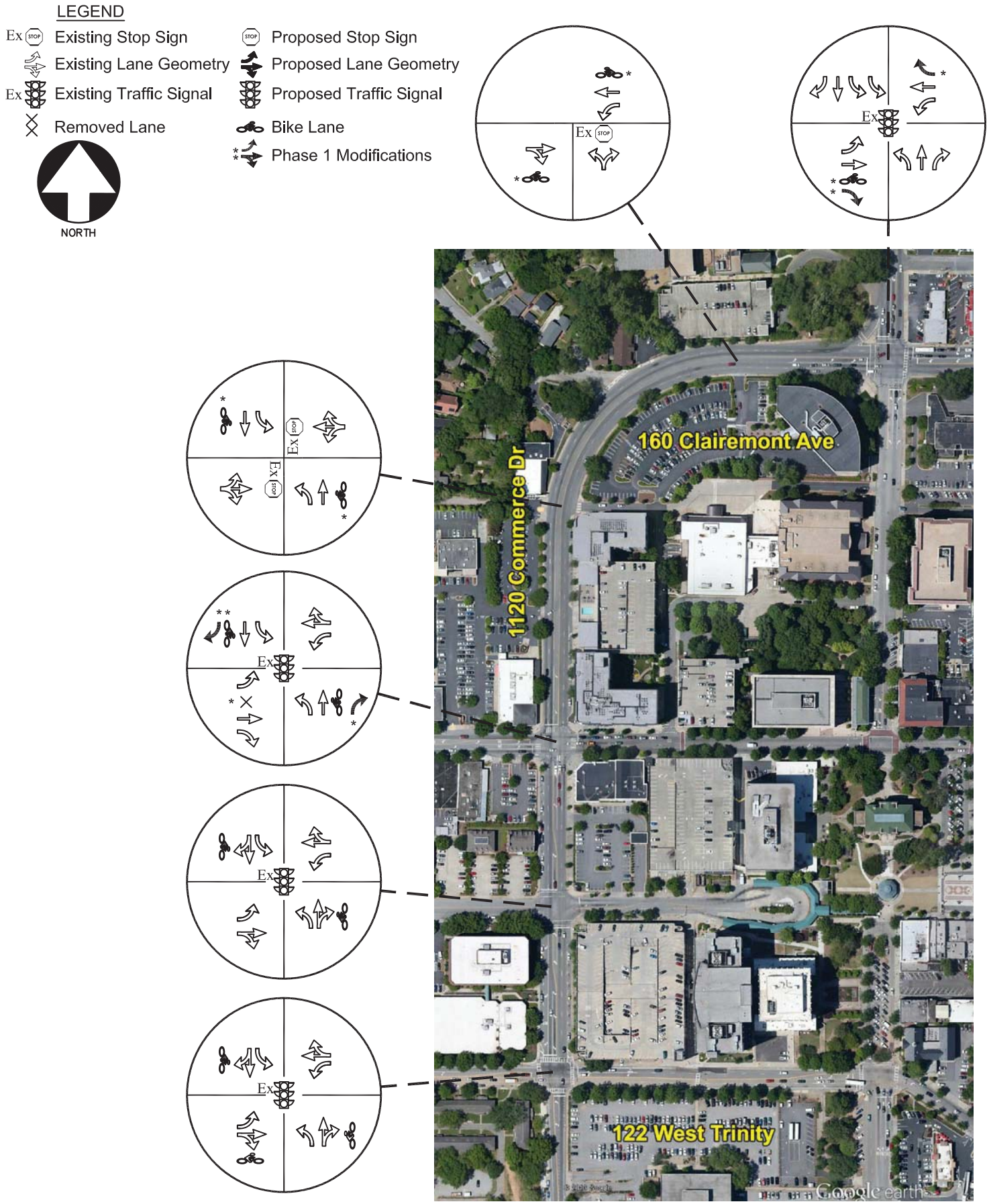
A&R Engineering Inc.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY - PHASE 1

FIGURE 10

A&R Engineering Inc.



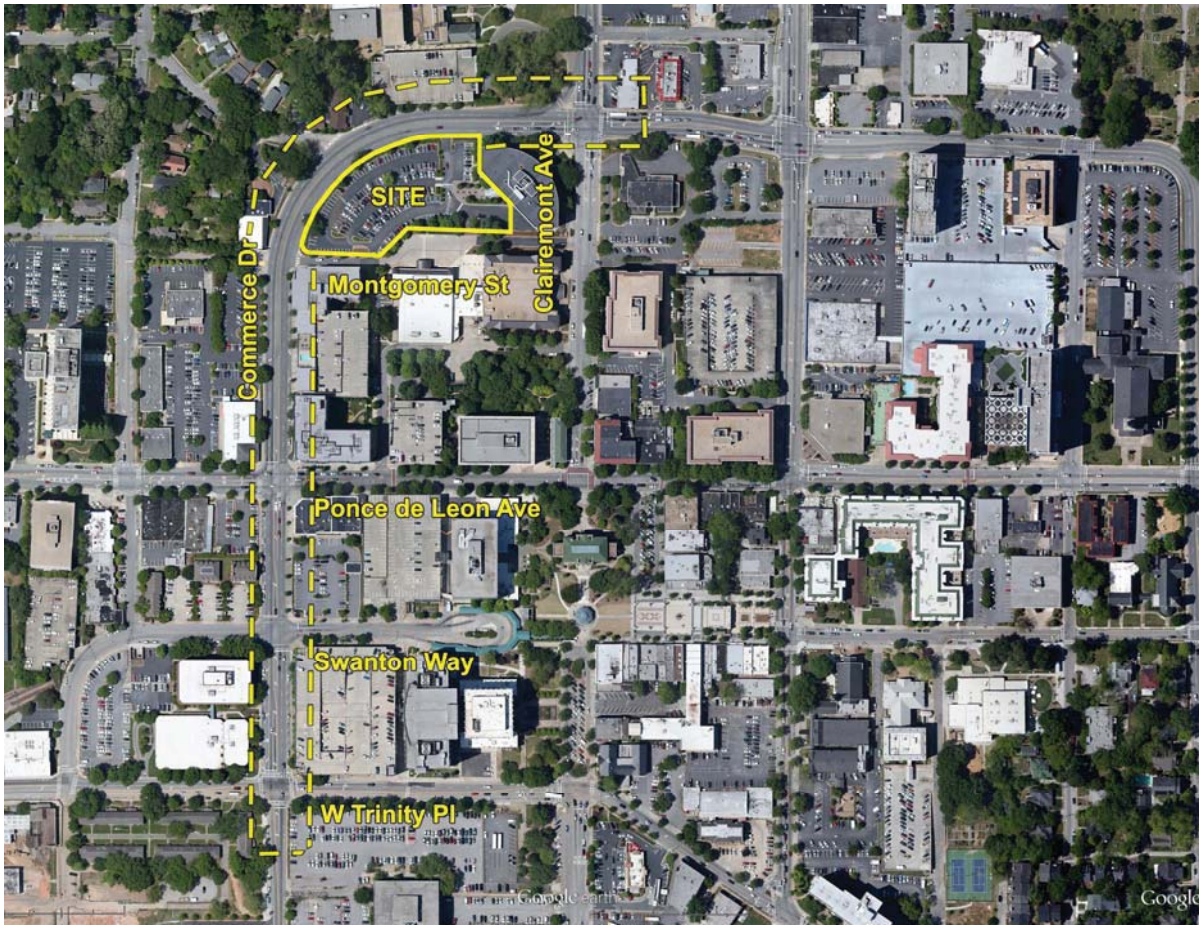
FUTURE TRAFFIC CONTROL AND LANE GEOMETRY - PHASE 2

FIGURE 11

A&R Engineering Inc.

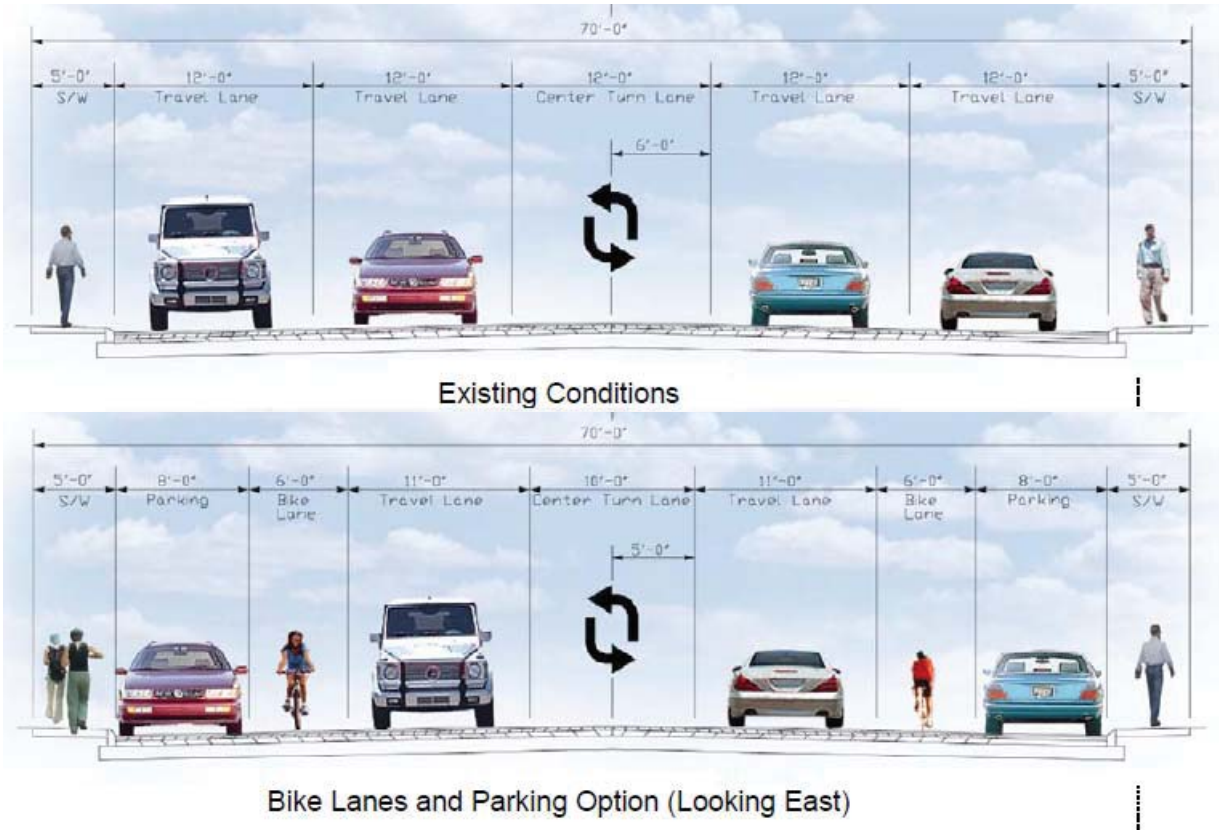
CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to evaluate levels-of-service for various modes of travel along the Commerce Drive corridor due to the impacts of proposed development in the context of the plans and objectives of the Decatur Community Transportation Plan. Additional traffic was included for the Alexan on Clairemont residential development at 160 Clairemont Avenue along with regular traffic growth and two other planned developments in the vicinity of the study area. The study area is along Commerce Drive, between Ponce de Leon Avenue and W Trinity Place.



Plans and recommendations in the Decatur CTP illustrate that the city is actively supporting alternative modes of transportation. The recommendations involve narrowing travel lanes and street sections, reducing the number of automobile travel lanes, widening sidewalks, improving crosswalks, enhancing pedestrian signals and providing amenities for non-motorized travel, all while maintaining vehicular movement. Specifically, the plans for Commerce Drive consist of

rebuilding the street to incorporate bike lanes by reducing the number of lanes and redesigning the street to promote slower speeds safer to bicycles and pedestrians.

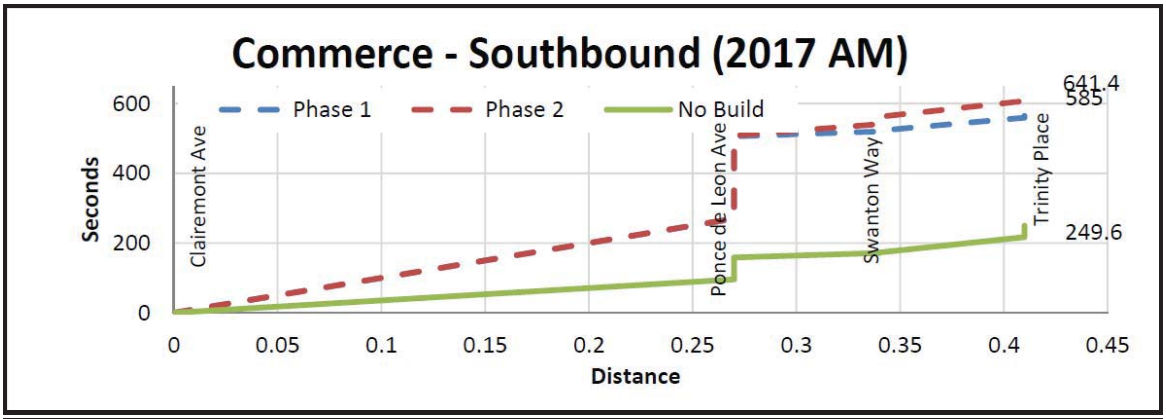


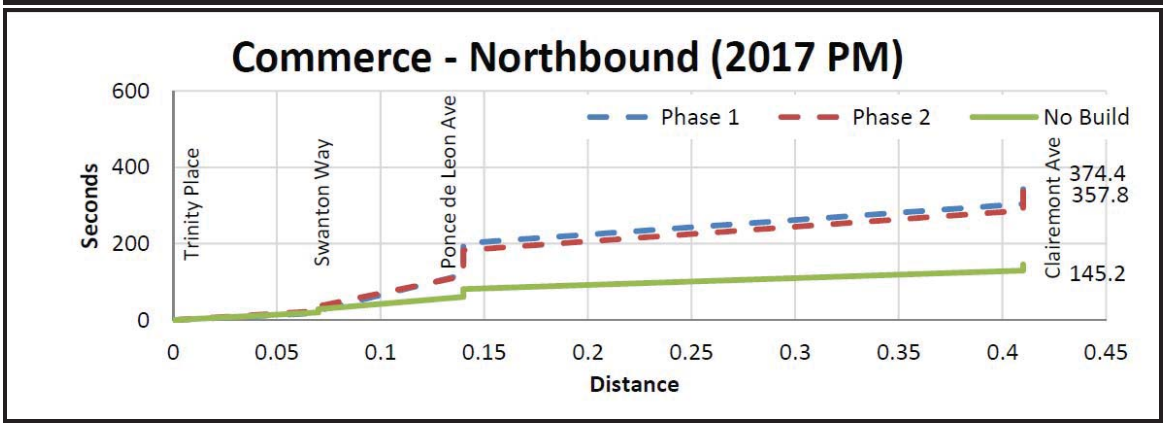
Source: Decatur Community Transportation Plan (Figure 6-9)

The future traffic operations with the lane reductions on Commerce Drive have been evaluated in two phases:

- Phase 1: Reconfiguration of Commerce Drive to accommodate bike lanes on both sides of the roadway and widened sidewalks between Clairemont Ave and Ponce de Leon Ave. This phase would be implemented in conjunction with the Alexan on Clairemont development.
- Phase 2: Reconfiguration of Commerce Drive to accommodate bike lanes on both sides of the road between Ponce de Leon Ave and Trinity Place.

The heaviest demands on Commerce Drive are southbound during the morning peak and northbound during the evening peak. A time-space diagram of the Commerce Drive corridor (below) shows the average delay for vehicles waiting at traffic signals and travel times between these signals during peak times.





Heaviest increases in delays from the lane reductions are seen as a result of slowed traffic from Clairemont Avenue to Ponce de Leon Avenue and wait times at the Ponce de Leon Avenue traffic signal. For this reason it is recommended that northbound and southbound right turn lanes not be removed in the design of the bike lanes at the Ponce de Leon Avenue intersection to avoid further delay.

Scenario	Vehicular Travel Time		Bicycle LOS		Pedestrian LOS	
	AM Southbound	PM Northbound	North of Ponce de Leon Ave	South of Ponce de Leon Ave	North of Ponce de Leon Ave	South of Ponce de Leon Ave
No Build	4m 10s	2m 25s	D	D	D	C
Phase 1	9m 45s	5m 58s	B	D	C	C
Phase 2	10m 41s	6m 14s	B	C	C	B

Bicycle level-of-service will average to “D” without any improvements due to challenges associated with higher vehicular volumes. Pedestrian level-of-service averages at “D” north of Ponce de Leon Ave and at “C” south of Ponce de Leon Ave. When comparing pedestrian LOS results, it is important to remember that facilities receiving levels-of-service “E” and “F” typically would not have sidewalks at all.

Below are recommended modifications to use as guidance in the design of the reduction of traffic lanes on Commerce Drive:

Phase 1

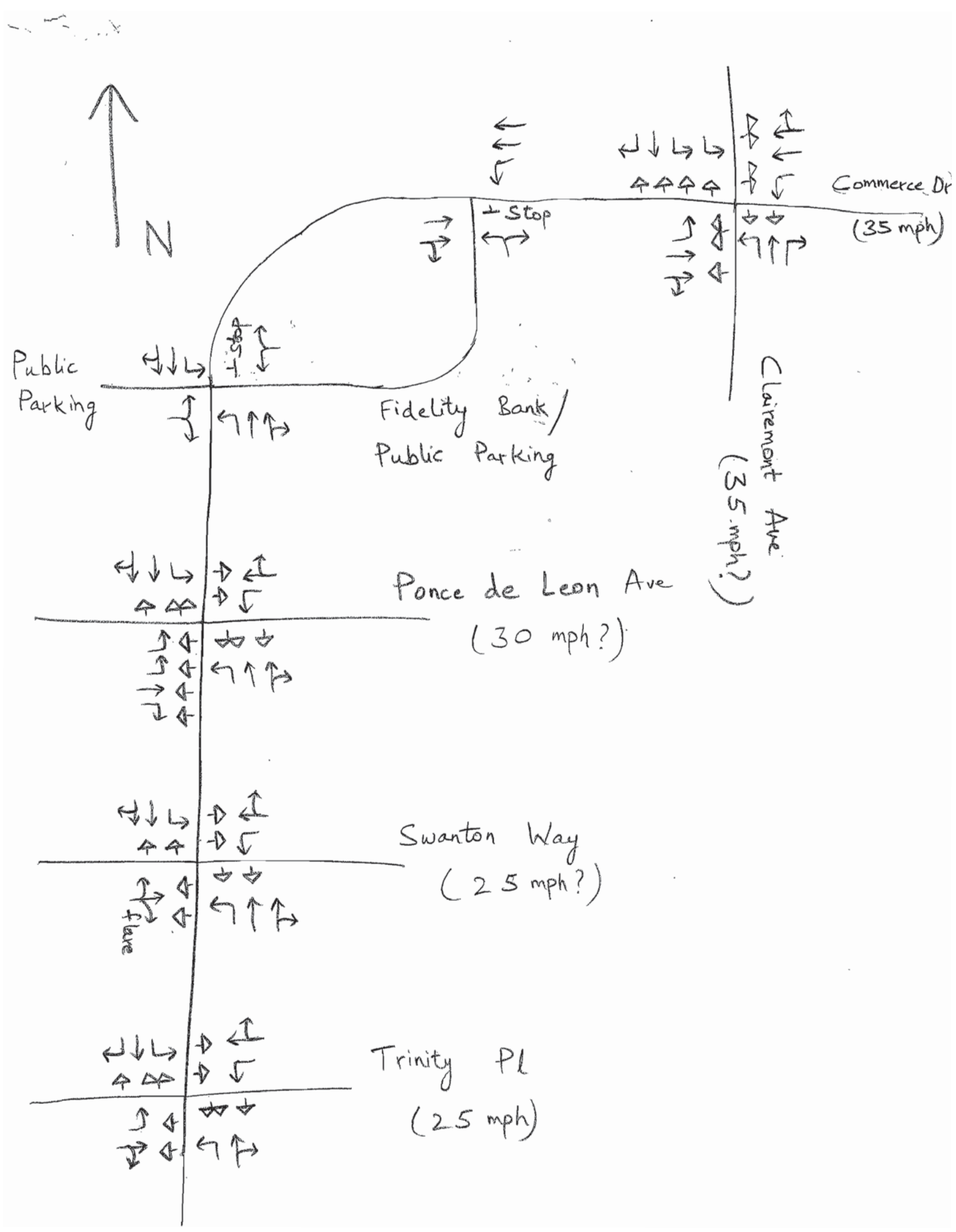
- Commerce Drive at Clairemont Ave
  - Restripe the eastbound outside through lane as a dedicated right turn lane
  - Restripe the westbound outside through lane as a dedicated right turn lane
- Commerce Drive at Ponce de Leon Ave
  - Restripe the southbound outside through lane as a dedicated right turn lane (100' minimum storage)
  - Restripe the northbound outside through lane as a dedicated right turn lane
  - Remove inside eastbound left turn lane
- Commerce Drive, between Clairemont Ave and Site Driveway
  - Restripe two-way left turn lane to accommodate a left turn lane for vehicles entering the site driveway (~50' storage) and a left turn lane for vehicles turning onto Clairemont Ave (~170' storage)

Phase 2

- Commerce Drive at Ponce de Leon Ave
  - Reduce the northbound right turn lane to have ~75' storage, starting north of the access point for 198 Ponce de Leon Ave
- Commerce Drive at Swanton Way
  - Remove southbound right turn lane and share it with the through lane
  - Remove northbound right turn lane and share it with the through lane
- Commerce Drive at W Trinity Place
  - Remove southbound right turn lane and share it with the through lane

Appendix

Existing Intersection Traffic Counts


N
Commerce Dr
(35 mph)
⊥ Stop
⊥ Stop
Public Parking
Fidelity Bank/
Public Parking
Claremont Ave
(35 mph?)
Ponce de Leon Ave
(30 mph?)
Swanton Way
(25 mph?)
flare
Trinity Pl
(25 mph)

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File Name : 34670001
Site Code : 34670001
Start Date : 1/9/2014
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Commerce Dr Northbound					Commerce Dr Southbound					Trinity Pl Eastbound					Trinity Pl Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	31	3	0	38	10	32	7	0	49	1	9	5	0	15	1	26	34	0	61	163
07:15 AM	7	43	11	0	61	31	74	15	0	120	3	17	4	0	24	6	38	34	0	78	283
07:30 AM	35	64	5	0	104	28	72	44	0	144	5	30	10	0	45	9	60	33	0	102	395
07:45 AM	27	70	11	0	108	27	90	30	0	147	2	39	6	0	47	17	51	43	0	111	413
Total	73	208	30	0	311	96	268	96	0	460	11	95	25	0	131	33	175	144	0	352	1254
08:00 AM	16	73	20	0	109	51	104	15	0	170	3	53	7	0	63	18	43	54	0	115	457
08:15 AM	18	98	25	0	141	72	108	12	0	192	4	40	17	0	61	10	38	53	0	101	495
08:30 AM	14	86	36	0	136	59	77	4	0	140	4	44	12	0	60	11	28	44	0	83	419
08:45 AM	15	60	21	0	96	53	70	11	0	134	2	44	3	0	49	10	25	48	0	83	362
Total	63	317	102	0	482	235	359	42	0	636	13	181	39	0	233	49	134	199	0	382	1733
*** BREAK ***																					
04:00 PM	13	68	18	0	99	55	69	7	0	131	5	38	8	0	51	13	29	60	0	102	383
04:15 PM	8	70	11	0	89	58	86	7	0	151	7	48	13	0	68	9	36	61	0	106	414
04:30 PM	6	83	25	0	114	45	82	5	0	132	6	77	14	0	97	18	28	57	0	103	446
04:45 PM	9	69	18	0	96	60	94	5	0	159	6	56	7	0	69	16	31	48	0	95	419
Total	36	290	72	0	398	218	331	24	0	573	24	219	42	0	285	56	124	226	0	406	1662
05:00 PM	8	97	24	0	129	78	105	10	0	193	4	62	15	0	81	21	37	91	0	149	552
05:15 PM	8	95	9	0	112	80	92	5	0	177	3	59	12	0	74	24	29	74	0	127	490
05:30 PM	15	107	13	0	135	68	74	10	0	152	1	66	15	0	82	12	45	65	0	122	491
05:45 PM	15	92	25	0	132	64	81	9	0	154	5	71	16	0	92	17	34	70	0	121	499
Total	46	391	71	0	508	290	352	34	0	676	13	258	58	0	329	74	145	300	0	519	2032
Grand Total	218	1206	275	0	1699	839	1310	196	0	2345	61	753	164	0	978	212	578	869	0	1659	6681
Apprch %	12.8	71	16.2	0		35.8	55.9	8.4	0		6.2	77	16.8	0		12.8	34.8	52.4	0		
Total %	3.3	18.1	4.1	0	25.4	12.6	19.6	2.9	0	35.1	0.9	11.3	2.5	0	14.6	3.2	8.7	13	0	24.8	

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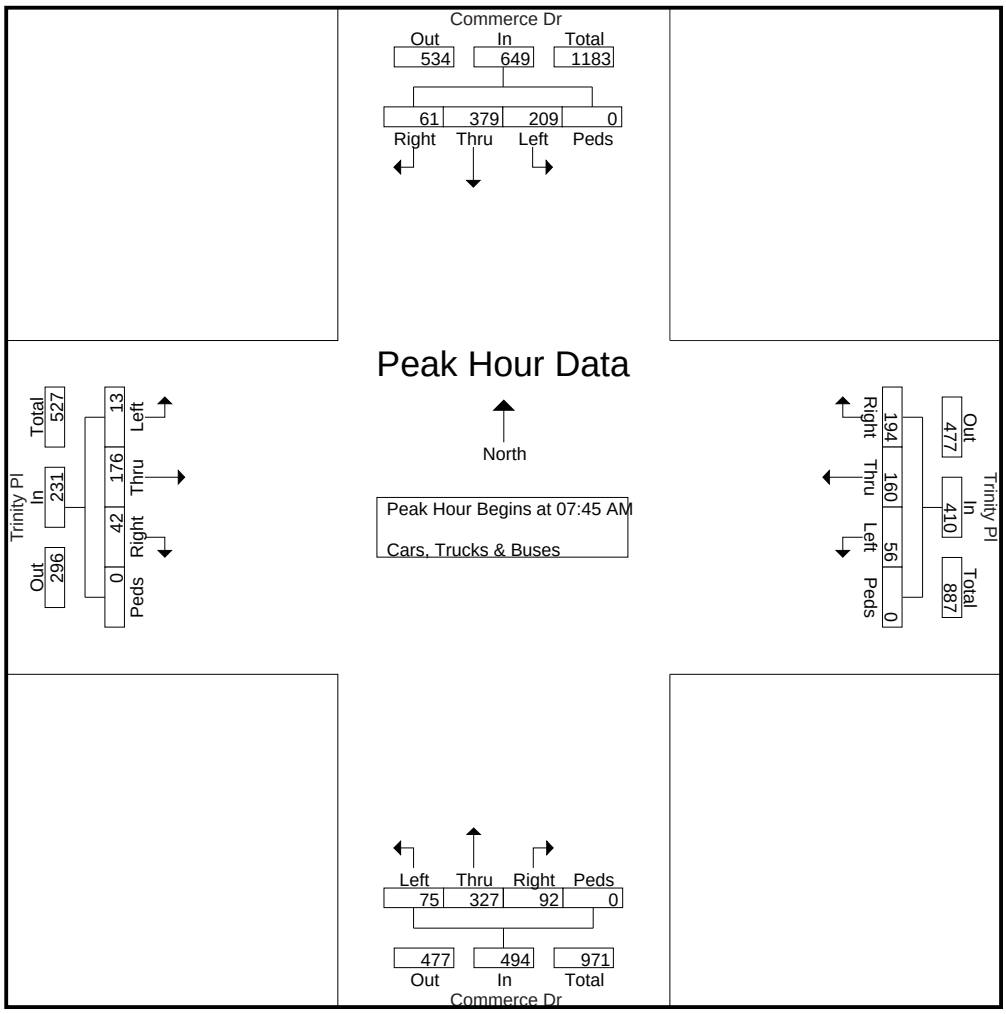
Site Code : 34670001
Start Date : 1/9/2014
Page No : 2

	Commerce Dr Northbound					Commerce Dr Southbound					Trinity Pl Eastbound					Trinity Pl Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	**27**	70	11	0	108	27	90	**30**	0	147	2	39	6	0	47	17	**51**	43	0	111	413
08:00 AM	16	73	20	0	109	51	104	15	0	170	3	**53**	7	0	**63**	**18**	43	**54**	0	**115**	457
08:15 AM	18	**98**	25	0	**141**	**72**	**108**	12	0	**192**	**4**	40	**17**	0	61	10	38	53	0	101	**495**
08:30 AM	14	86	**36**	0	136	59	77	4	0	140	4	44	12	0	60	11	28	44	0	83	419
Total Volume	75	327	92	0	494	209	379	61	0	649	13	176	42	0	231	56	160	194	0	410	1784
% App. Total	15.2	66.2	18.6	0		32.2	58.4	9.4	0		5.6	76.2	18.2	0		13.7	39	47.3	0		
PHF	.694	.834	.639	.000	.876	.726	.877	.508	.000	.845	.813	.830	.618	.000	.917	.778	.784	.898	.000	.891	.901



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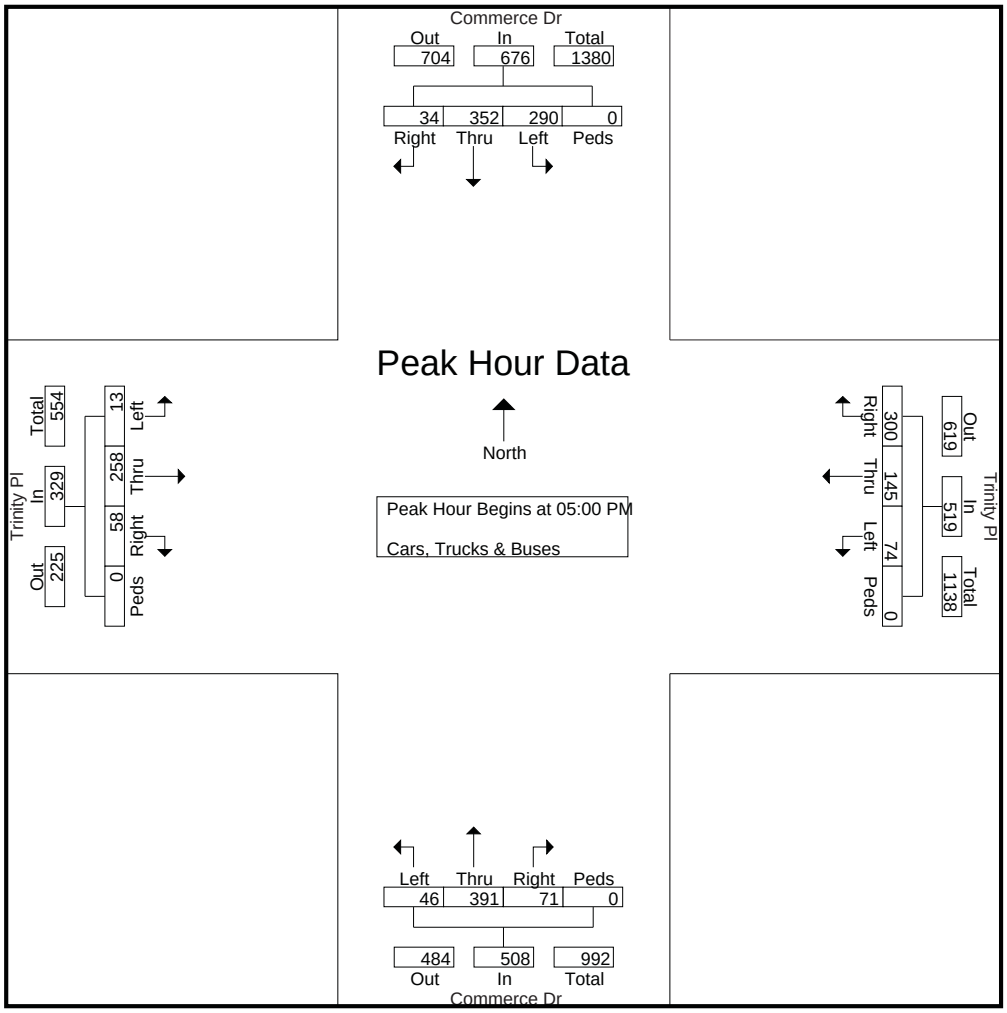
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	97	24	0	129	78	**105**	**10**	0	**193**	4	62	15	0	81	21	37	**91**	0	**149**	**552**
05:15 PM	8	95	9	0	112	**80**	92	5	0	177	3	59	12	0	74	**24**	29	74	0	127	490
05:30 PM	**15**	**107**	13	0	**135**	68	74	10	0	152	1	66	15	0	82	12	**45**	65	0	122	491
05:45 PM	15	92	**25**	0	132	64	81	9	0	154	**5**	**71**	**16**	0	**92**	17	34	70	0	121	499
Total Volume	46	391	71	0	508	290	352	34	0	676	13	258	58	0	329	74	145	300	0	519	2032
% App. Total	9.1	77	14	0		42.9	52.1	5	0		4	78.4	17.6	0		14.3	27.9	57.8	0		
PHF	.767	.914	.710	.000	.941	.906	.838	.850	.000	.876	.650	.908	.906	.000	.894	.771	.806	.824	.000	.871	.920



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Page No : 1

Groups Printed- Cars, Trucks & Buses

	Commerce Dr Northbound					Commerce Dr Southbound					Swanton Way Eastbound					Swanton Way Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	59	6	0	66	10	52	6	0	68	0	0	1	0	1	1	0	2	0	3	138
07:15 AM	0	75	4	0	79	10	96	10	0	116	1	1	2	0	4	1	0	5	0	6	205
07:30 AM	0	100	6	0	106	14	153	8	0	175	0	1	3	0	4	3	0	7	0	10	295
07:45 AM	1	99	10	0	110	17	128	26	0	171	6	1	1	0	8	3	0	8	0	11	300
Total	2	333	26	0	361	51	429	50	0	530	7	3	7	0	17	8	0	22	0	30	938
08:00 AM	7	111	9	0	127	14	162	29	0	205	4	2	5	0	11	5	0	3	0	8	351
08:15 AM	8	133	14	0	155	15	182	42	0	239	3	2	8	0	13	3	0	4	0	7	414
08:30 AM	4	97	17	0	118	26	145	24	0	195	9	0	4	0	13	6	0	8	0	14	340
08:45 AM	2	90	7	0	99	29	115	21	0	165	10	3	4	0	17	4	1	4	0	9	290
Total	21	431	47	0	499	84	604	116	0	804	26	7	21	0	54	18	1	19	0	38	1395
*** BREAK ***																					
04:00 PM	7	124	1	0	132	18	130	16	0	164	10	1	10	0	21	9	1	20	0	30	347
04:15 PM	5	137	6	0	148	14	125	14	0	153	16	5	11	0	32	13	4	12	0	29	362
04:30 PM	2	137	8	0	147	7	123	10	0	140	15	1	11	0	27	8	5	21	0	34	348
04:45 PM	3	119	7	0	129	12	127	4	0	143	14	0	11	0	25	11	0	17	0	28	325
Total	17	517	22	0	556	51	505	44	0	600	55	7	43	0	105	41	10	70	0	121	1382
05:00 PM	5	174	9	0	188	12	160	10	0	182	24	2	25	0	51	16	3	22	0	41	462
05:15 PM	2	164	4	0	170	13	151	9	0	173	21	1	20	0	42	14	2	23	0	39	424
05:30 PM	4	153	8	0	165	11	144	7	0	162	14	1	4	0	19	12	0	13	0	25	371
05:45 PM	8	142	10	0	160	18	123	6	0	147	14	0	19	0	33	6	0	22	0	28	368
Total	19	633	31	0	683	54	578	32	0	664	73	4	68	0	145	48	5	80	0	133	1625
Grand Total	59	1914	126	0	2099	240	2116	242	0	2598	161	21	139	0	321	115	16	191	0	322	5340
Apprch %	2.8	91.2	6	0		9.2	81.4	9.3	0		50.2	6.5	43.3	0		35.7	5	59.3	0		
Total %	1.1	35.8	2.4	0	39.3	4.5	39.6	4.5	0	48.7	3	0.4	2.6	0	6	2.2	0.3	3.6	0	6	

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7-9 am | 4-6 pm

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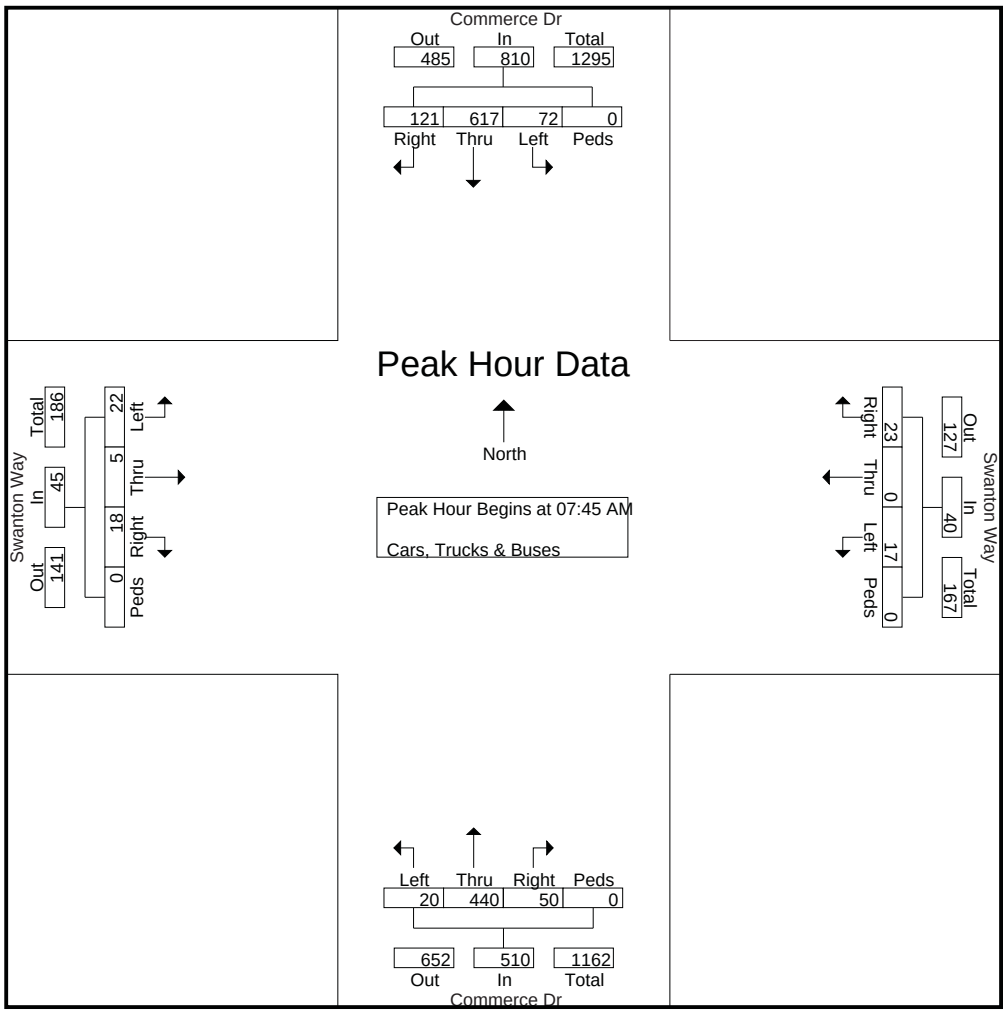
	Commerce Dr Northbound					Commerce Dr Southbound					Swanton Way Eastbound					Swanton Way Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	1	99	10	0	110	17	128	26	0	171	6	1	1	0	8	3	0	**8**	0	11	300
08:00 AM	7	111	9	0	127	14	162	29	0	205	4	**2**	5	0	11	5	0	3	0	8	351
08:15 AM	**8**	**133**	14	0	**155**	15	**182**	**42**	0	**239**	3	2	**8**	0	**13**	3	0	4	0	7	**414**
08:30 AM	4	97	**17**	0	118	**26**	145	24	0	195	**9**	0	4	0	13	**6**	0	8	0	**14**	340
Total Volume	20	440	50	0	510	72	617	121	0	810	22	5	18	0	45	17	0	23	0	40	1405
% App. Total	3.9	86.3	9.8	0		8.9	76.2	14.9	0		48.9	11.1	40	0		42.5	0	57.5	0		
PHF	.625	.827	.735	.000	.823	.692	.848	.720	.000	.847	.611	.625	.563	.000	.865	.708	.000	.719	.000	.714	.848



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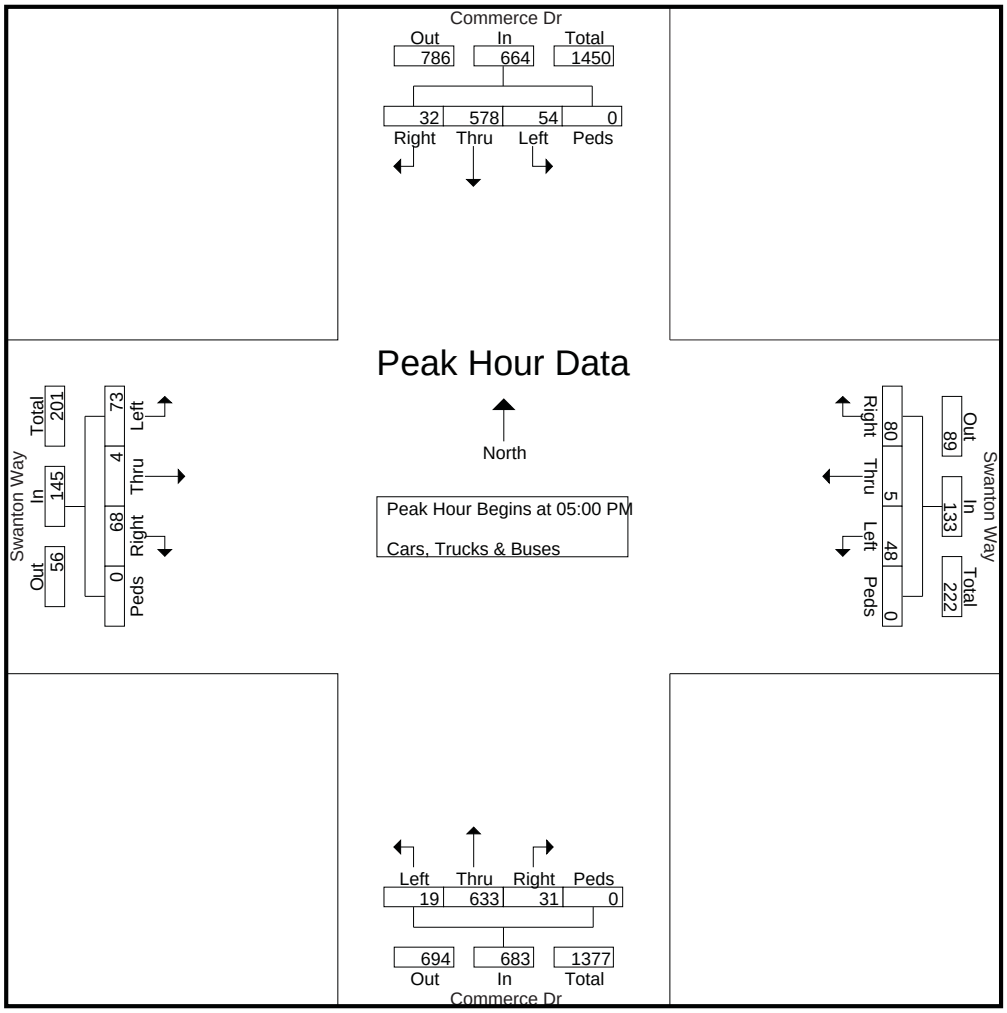
File Name : 34670002
Site Code : 34670002
Start Date : 1/9/2014

	Commerce Dr Northbound					Commerce Dr Southbound					Swanton Way Eastbound					Swanton Way Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	5	**174**	9	0	**188**	12	**160**	**10**	0	**182**	**24**	**2**	**25**	0	**51**	**16**	**3**	22	0	**41**	**462**
05:15 PM	2	164	4	0	170	13	151	9	0	173	21	1	20	0	42	14	2	**23**	0	39	424
05:30 PM	4	153	8	0	165	11	144	7	0	162	14	1	4	0	19	12	0	13	0	25	371
05:45 PM	**8**	142	**10**	0	160	**18**	123	6	0	147	14	0	19	0	33	6	0	22	0	28	368
Total Volume	19	633	31	0	683	54	578	32	0	664	73	4	68	0	145	48	5	80	0	133	1625
% App. Total	2.8	92.7	4.5	0		8.1	87	4.8	0		50.3	2.8	46.9	0		36.1	3.8	60.2	0		
PHF	.594	.909	.775	.000	.908	.750	.903	.800	.000	.912	.760	.500	.680	.000	.711	.750	.417	.870	.000	.811	.879



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TMC Data
Commerce Dr @ Ponce de Leon Ave

7-9 am | 4-6 pm

File Name : 34670003
Site Code : 34670003
Start Date : 1/9/2014
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Commerce Dr Northbound					Commerce Dr Southbound					Ponce de Leon Ave Eastbound					Ponce de Leon Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	7	42	10	0	59	1	44	23	0	68	7	16	6	0	29	8	16	1	0	25	181
07:15 AM	6	64	12	0	82	0	103	12	0	115	10	23	7	0	40	17	22	0	0	39	276
07:30 AM	10	83	18	0	111	2	130	37	0	169	20	32	11	0	63	21	45	3	0	69	412
07:45 AM	13	91	18	0	122	1	141	36	0	178	34	48	14	0	96	27	60	2	0	89	485
Total	36	280	58	0	374	4	418	108	0	530	71	119	38	0	228	73	143	6	0	222	1354
08:00 AM	23	88	13	0	124	2	187	39	0	228	45	43	10	0	98	26	58	4	0	88	538
08:15 AM	25	107	21	0	153	5	182	57	0	244	26	38	13	0	77	34	75	10	0	119	593
08:30 AM	18	88	15	0	121	2	139	56	0	197	26	37	11	0	74	33	54	7	0	94	486
08:45 AM	9	91	17	0	117	3	142	42	0	187	21	45	6	0	72	23	44	0	0	67	443
Total	75	374	66	0	515	12	650	194	0	856	118	163	40	0	321	116	231	21	0	368	2060
*** BREAK ***																					
04:00 PM	27	118	12	0	157	8	101	39	0	148	42	69	12	0	123	24	55	9	0	88	516
04:15 PM	38	114	30	0	182	6	112	46	0	164	39	59	18	0	116	21	49	3	0	73	535
04:30 PM	18	133	20	0	171	5	100	48	0	153	40	55	18	0	113	21	47	1	0	69	506
04:45 PM	16	109	22	0	147	5	120	54	0	179	34	52	17	0	103	21	54	4	0	79	508
Total	99	474	84	0	657	24	433	187	0	644	155	235	65	0	455	87	205	17	0	309	2065
05:00 PM	21	173	37	0	231	7	124	46	0	177	43	55	23	0	121	27	59	2	0	88	617
05:15 PM	28	163	30	0	221	4	125	60	0	189	42	65	22	0	129	28	63	5	0	96	635
05:30 PM	22	144	20	0	186	4	129	48	0	181	40	68	20	0	128	16	51	3	0	70	565
05:45 PM	22	120	44	0	186	6	109	65	0	180	50	61	22	0	133	26	51	8	0	85	584
Total	93	600	131	0	824	21	487	219	0	727	175	249	87	0	511	97	224	18	0	339	2401
Grand Total	303	1728	339	0	2370	61	1988	708	0	2757	519	766	230	0	1515	373	803	62	0	1238	7880
Apprch %	12.8	72.9	14.3	0		2.2	72.1	25.7	0		34.3	50.6	15.2	0		30.1	64.9	5	0		
Total %	3.8	21.9	4.3	0	30.1	0.8	25.2	9	0	35	6.6	9.7	2.9	0	19.2	4.7	10.2	0.8	0	15.7	

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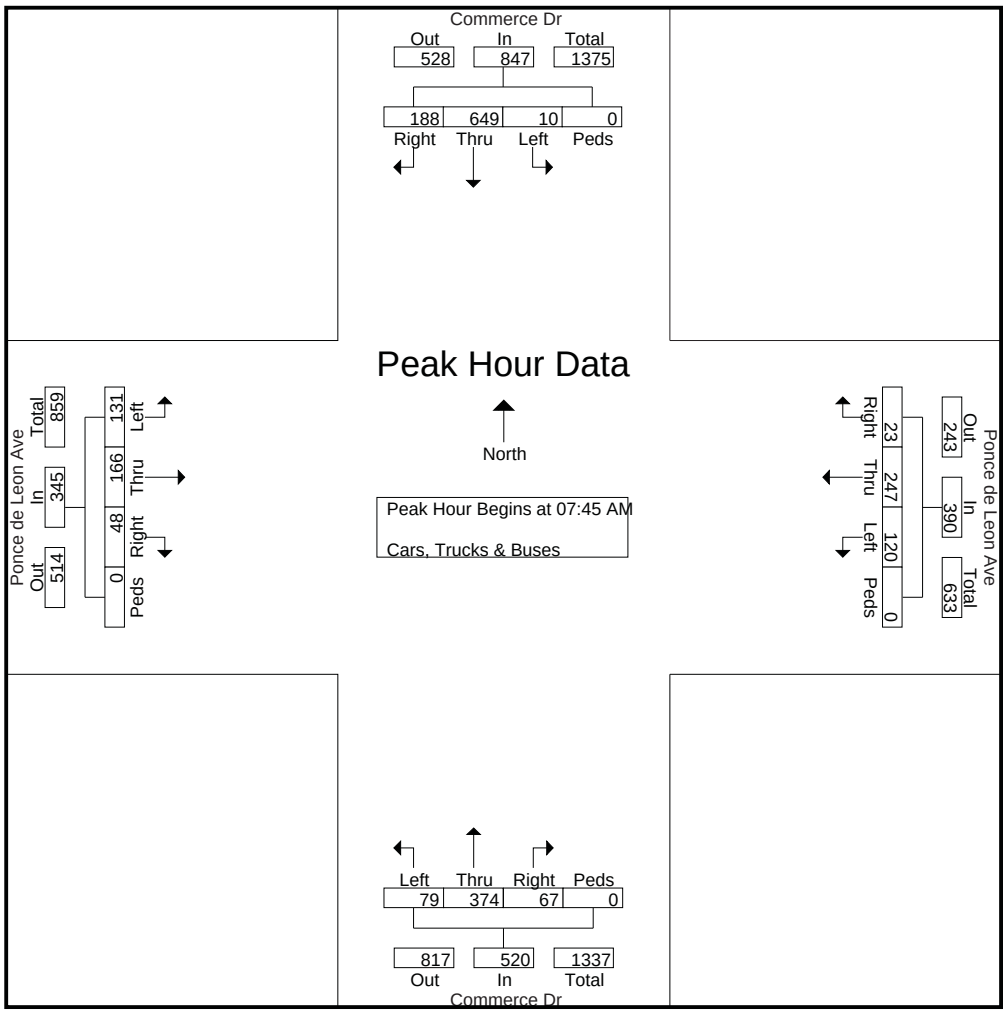
TMC Data
Commerce Dr @ Ponce de Leon Ave

7-9 am | 4-6 pm

File Name : 34670003
Site Code : 34670003
Start Date : 1/9/2014
Page No : 2

	Commerce Dr Northbound					Commerce Dr Southbound					Ponce de Leon Ave Eastbound					Ponce de Leon Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	13	91	18	0	122	1	141	36	0	178	34	**48**	**14**	0	96	27	60	2	0	89	485
08:00 AM	23	88	13	0	124	2	**187**	39	0	228	**45**	43	10	0	**98**	26	58	4	0	88	538
08:15 AM	**25**	**107**	**21**	0	**153**	**5**	182	**57**	0	**244**	26	38	13	0	77	**34**	**75**	**10**	0	**119**	**593**
08:30 AM	18	88	15	0	121	2	139	56	0	197	26	37	11	0	74	33	54	7	0	94	486
Total Volume	79	374	67	0	520	10	649	188	0	847	131	166	48	0	345	120	247	23	0	390	2102
% App. Total	15.2	71.9	12.9	0		1.2	76.6	22.2	0		38	48.1	13.9	0		30.8	63.3	5.9	0		
PHF	.790	.874	.798	.000	.850	.500	.868	.825	.000	.868	.728	.865	.857	.000	.880	.882	.823	.575	.000	.819	.886



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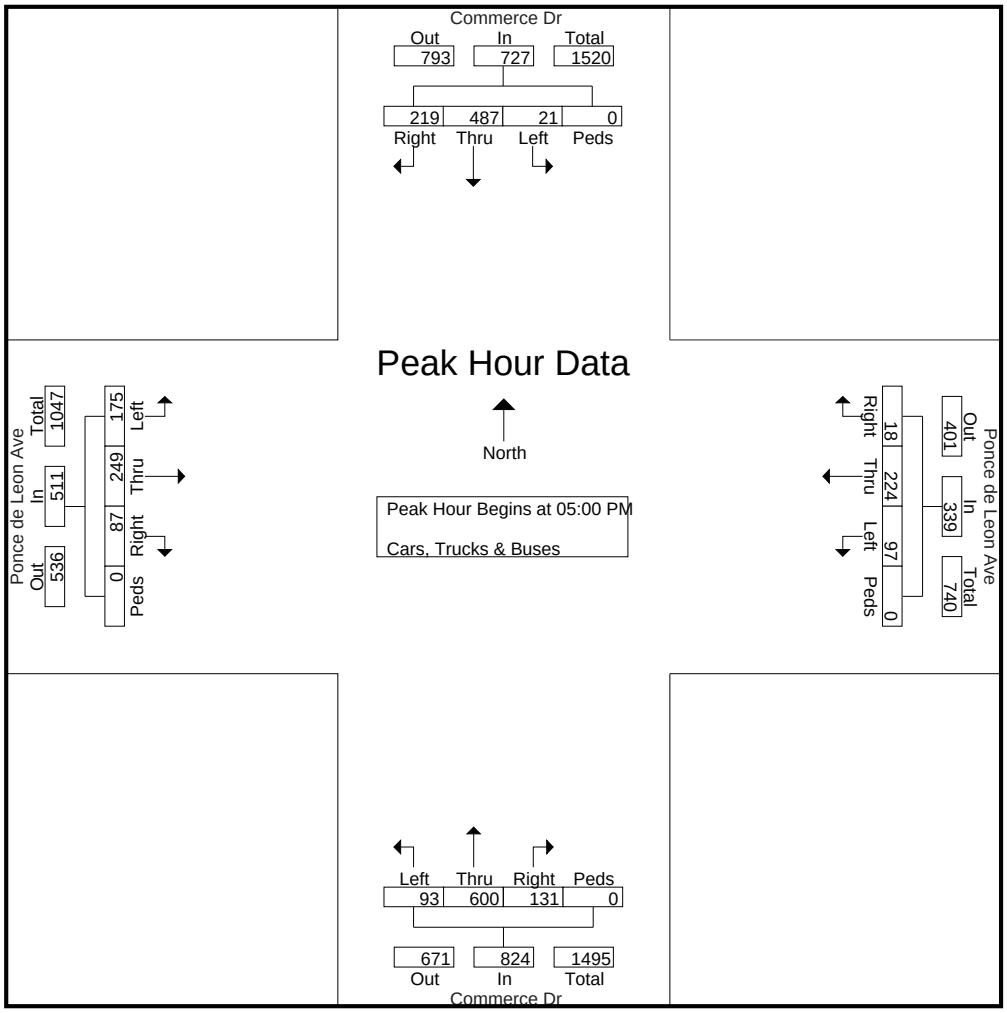
TMC Data
Commerce Dr @ Ponce de Leon Ave

7-9 am | 4-6 pm

File Name : 34670003
Site Code : 34670003
Start Date : 1/9/2014

	Commerce Dr Northbound					Commerce Dr Southbound					Ponce de Leon Ave Eastbound					Ponce de Leon Ave Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	21	**173**	37	0	**231**	**7**	124	46	0	177	43	55	**23**	0	121	27	59	2	0	88	617
05:15 PM	**28**	163	30	0	221	4	125	60	0	**189**	42	65	22	0	129	**28**	**63**	5	0	**96**	**635**
05:30 PM	22	144	20	0	186	4	**129**	48	0	181	40	**68**	20	0	128	16	51	3	0	70	565
05:45 PM	22	120	**44**	0	186	6	109	**65**	0	180	**50**	61	22	0	**133**	26	51	**8**	0	85	584
Total Volume	93	600	131	0	824	21	487	219	0	727	175	249	87	0	511	97	224	18	0	339	2401
% App. Total	11.3	72.8	15.9	0		2.9	67	30.1	0		34.2	48.7	17	0		28.6	66.1	5.3	0		
PHF	.830	.867	.744	.000	.892	.750	.944	.842	.000	.962	.875	.915	.946	.000	.961	.866	.889	.563	.000	.883	.945



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TMC Data
Commerce Dr @ Fidelity Bank Drwy/
Public Parking Lot Drwy
7-9 am | 4-6 pm

File Name : 34670004
Site Code : 34670004
Start Date : 1/9/2014
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Commerce Dr Northbound					Commerce Dr Southbound					Public Parking Lot Drwy Eastbound					Fidelity Bank Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	52	0	0	52	0	65	0	0	65	0	0	0	0	0	1	1	0	0	2	119
07:15 AM	0	72	5	0	77	2	113	2	0	117	2	0	0	0	2	2	0	0	0	2	198
07:30 AM	0	100	6	0	106	2	172	0	0	174	0	0	0	0	0	4	0	0	0	4	284
07:45 AM	0	120	6	0	126	6	193	1	0	200	0	0	0	0	0	0	0	1	0	1	327
Total	0	344	17	0	361	10	543	3	0	556	2	0	0	0	2	7	1	1	0	9	928
08:00 AM	3	141	3	0	147	3	224	0	0	227	0	0	0	0	0	3	0	4	0	7	381
08:15 AM	5	134	6	0	145	0	248	1	0	249	0	0	2	0	2	1	0	0	0	1	397
08:30 AM	3	114	3	0	120	0	191	1	0	192	0	0	1	0	1	1	0	1	0	2	315
08:45 AM	2	99	2	0	103	0	190	1	0	191	0	0	0	0	0	2	0	1	0	3	297
Total	13	488	14	0	515	3	853	3	0	859	0	0	3	0	3	7	0	6	0	13	1390
*** BREAK ***																					
04:00 PM	0	152	3	0	155	0	134	0	0	134	0	0	0	0	0	2	0	10	0	12	301
04:15 PM	1	162	0	0	163	0	167	0	0	167	0	0	1	0	1	3	0	1	0	4	335
04:30 PM	0	182	1	0	183	1	149	0	0	150	1	0	0	0	1	8	0	5	0	13	347
04:45 PM	2	139	0	0	141	0	166	0	0	166	0	0	2	0	2	9	1	4	0	14	323
Total	3	635	4	0	642	1	616	0	0	617	1	0	3	0	4	22	1	20	0	43	1306
05:00 PM	1	204	1	0	206	1	149	0	0	150	1	0	3	0	4	10	0	4	0	14	374
05:15 PM	0	218	1	0	219	1	180	2	0	183	1	0	1	0	2	7	0	9	0	16	420
05:30 PM	1	188	0	0	189	2	178	1	0	181	1	0	7	0	8	4	2	7	0	13	391
05:45 PM	0	188	0	0	188	1	177	1	0	179	2	0	3	0	5	4	1	3	0	8	380
Total	2	798	2	0	802	5	684	4	0	693	5	0	14	0	19	25	3	23	0	51	1565
Grand Total	18	2265	37	0	2320	19	2696	10	0	2725	8	0	20	0	28	61	5	50	0	116	5189
Apprch %	0.8	97.6	1.6	0		0.7	98.9	0.4	0		28.6	0	71.4	0		52.6	4.3	43.1	0		
Total %	0.3	43.7	0.7	0	44.7	0.4	52	0.2	0	52.5	0.2	0	0.4	0	0.5	1.2	0.1	1	0	2.2	

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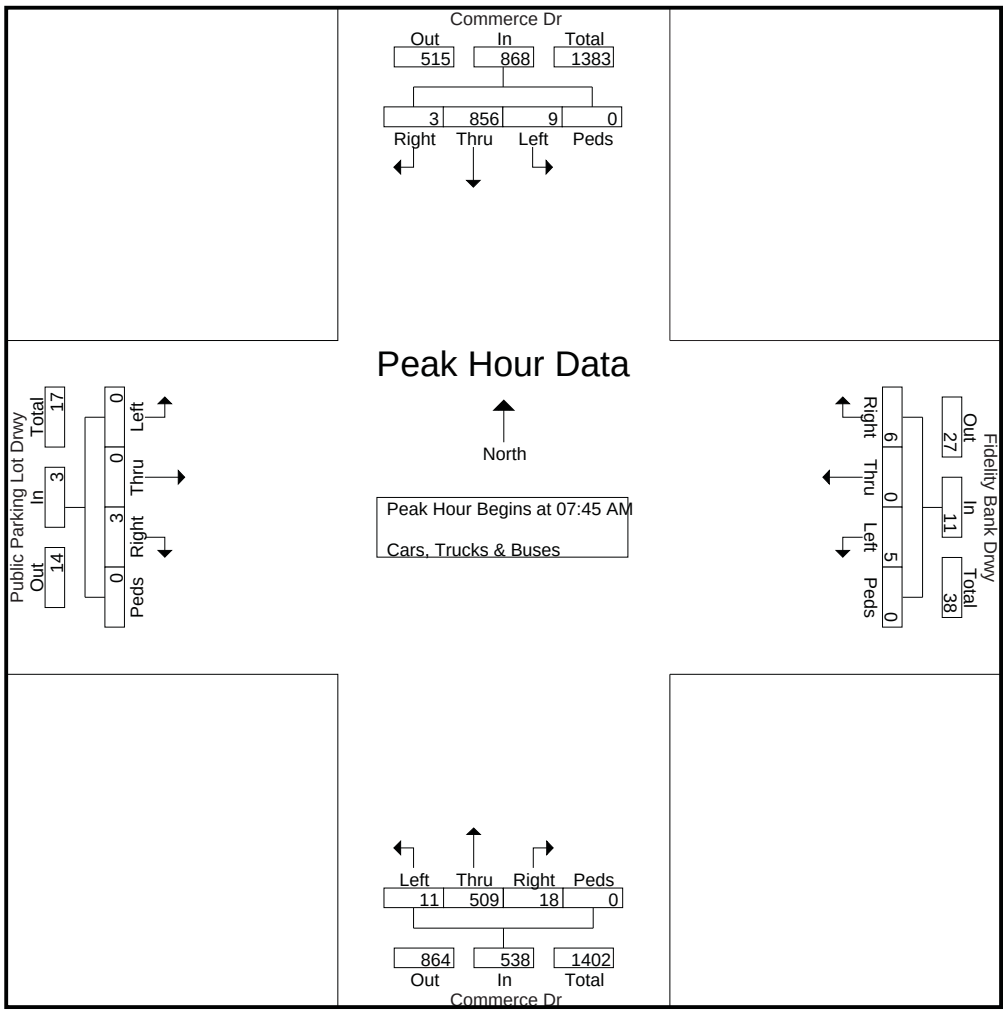
TMC Data
Commerce Dr @ Fidelity Bank Drwy/
Public Parking Lot Drwy
7-9 am | 4-6 pm

File Name : 34670004
Site Code : 34670004
Start Date : 1/9/2014
Page No : 2

	Commerce Dr Northbound					Commerce Dr Southbound					Public Parking Lot Drwy Eastbound					Fidelity Bank Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	120	**6**	0	126	**6**	193	**1**	0	200	0	0	0	0	0	0	0	1	0	1	327
08:00 AM	3	**141**	3	0	**147**	3	224	0	0	227	0	0	0	0	0	**3**	0	**4**	0	**7**	381
08:15 AM	**5**	134	6	0	145	0	**248**	1	0	**249**	0	0	**2**	0	**2**	1	0	0	0	1	**397**
08:30 AM	3	114	3	0	120	0	191	1	0	192	0	0	1	0	1	1	0	1	0	2	315
Total Volume	11	509	18	0	538	9	856	3	0	868	0	0	3	0	3	5	0	6	0	11	1420
% App. Total	2	94.6	3.3	0		1	98.6	0.3	0		0	0	100	0		45.5	0	54.5	0		
PHF	.550	.902	.750	.000	.915	.375	.863	.750	.000	.871	.000	.000	.375	.000	.375	.417	.000	.375	.000	.393	.894



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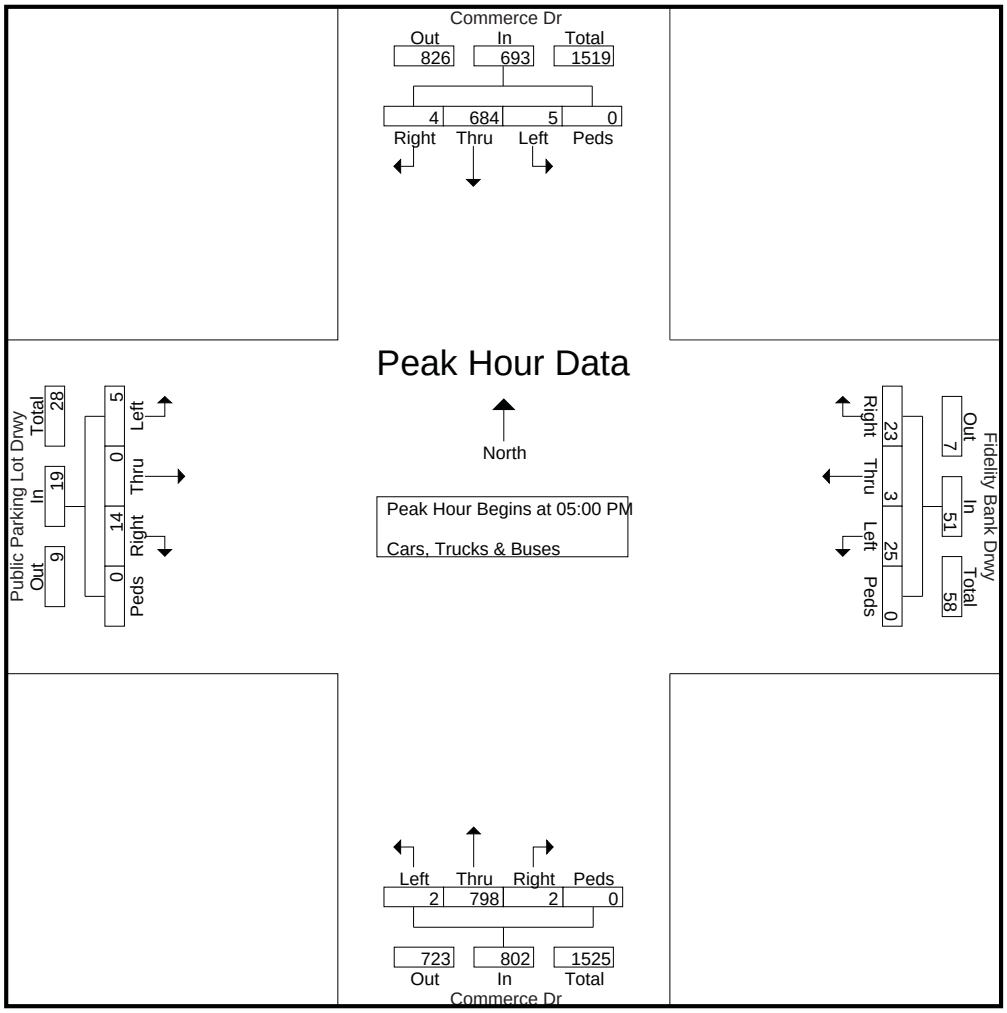
TMC Data
Commerce Dr @ Fidelity Bank Drwy/
Public Parking Lot Drwy
7-9 am | 4-6 pm

File Name : 34670004
Site Code : 34670004
Start Date : 1/9/2014
Page No : 3

	Commerce Dr Northbound					Commerce Dr Southbound					Public Parking Lot Drwy Eastbound					Fidelity Bank Drwy Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	**1**	204	**1**	0	206	1	149	0	0	150	1	0	3	0	4	**10**	0	4	0	14	374
05:15 PM	0	**218**	1	0	**219**	1	**180**	**2**	0	**183**	1	0	1	0	2	7	0	**9**	0	**16**	**420**
05:30 PM	1	188	0	0	189	**2**	178	1	0	181	1	0	**7**	0	**8**	4	**2**	7	0	13	391
05:45 PM	0	188	0	0	188	1	177	1	0	179	**2**	0	3	0	5	4	1	3	0	8	380
Total Volume	2	798	2	0	802	5	684	4	0	693	5	0	14	0	19	25	3	23	0	51	1565
% App. Total	0.2	99.5	0.2	0		0.7	98.7	0.6	0		26.3	0	73.7	0		49	5.9	45.1	0		
PHF	.500	.915	.500	.000	.916	.625	.950	.500	.000	.947	.625	.000	.500	.000	.594	.625	.375	.639	.000	.797	.932



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TMC Data
Commerce Dr @ Fidelity Bank Drwy

7-9 am | 4-6 pm

File Name : 34670005
Site Code : 34670005
Start Date : 1/9/2014
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Fidelity Bank Drwy Northbound					Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	2	0	2	0	0	0	0	0	0	62	0	0	62	3	57	0	0	60	124
07:15 AM	1	0	1	0	2	0	0	0	0	0	0	74	2	0	76	5	129	0	0	134	212
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	92	1	0	93	2	176	0	0	178	271
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	132	2	0	134	3	195	0	0	198	332
Total	1	0	3	0	4	0	0	0	0	0	0	360	5	0	365	13	557	0	0	570	939
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	152	6	0	158	12	217	0	0	229	388
08:15 AM	0	0	1	0	1	0	0	0	0	0	0	147	2	0	149	9	237	0	0	246	396
08:30 AM	1	0	1	0	2	0	0	0	0	0	0	110	8	0	118	10	213	0	0	223	343
08:45 AM	0	0	2	0	2	0	0	0	0	0	0	103	5	0	108	10	203	0	0	213	323
Total	2	0	4	0	6	0	0	0	0	0	0	512	21	0	533	41	870	0	0	911	1450
*** BREAK ***																					
04:00 PM	2	0	6	0	8	0	0	0	0	0	0	162	7	0	169	4	120	0	0	124	301
04:15 PM	1	0	7	0	8	0	0	0	0	0	0	158	1	0	159	2	177	0	0	179	346
04:30 PM	1	0	8	0	9	0	0	0	0	0	0	194	6	0	200	3	138	0	0	141	350
04:45 PM	2	0	10	0	12	0	0	0	0	0	0	140	2	0	142	3	161	0	0	164	318
Total	6	0	31	0	37	0	0	0	0	0	0	654	16	0	670	12	596	0	0	608	1315
05:00 PM	1	0	7	0	8	0	0	0	0	0	0	200	3	0	203	6	136	0	0	142	353
05:15 PM	0	0	5	0	5	0	0	0	0	0	0	211	9	0	220	3	174	0	0	177	402
05:30 PM	4	0	9	0	13	0	0	0	0	0	0	198	5	0	203	5	167	0	0	172	388
05:45 PM	2	0	6	0	8	0	0	0	0	0	0	202	3	0	205	10	183	0	0	193	406
Total	7	0	27	0	34	0	0	0	0	0	0	811	20	0	831	24	660	0	0	684	1549
Grand Total	16	0	65	0	81	0	0	0	0	0	0	2337	62	0	2399	90	2683	0	0	2773	5253
Apprch %	19.8	0	80.2	0		0	0	0	0		0	97.4	2.6	0		3.2	96.8	0	0		
Total %	0.3	0	1.2	0	1.5	0	0	0	0	0	0	44.5	1.2	0	45.7	1.7	51.1	0	0	52.8	

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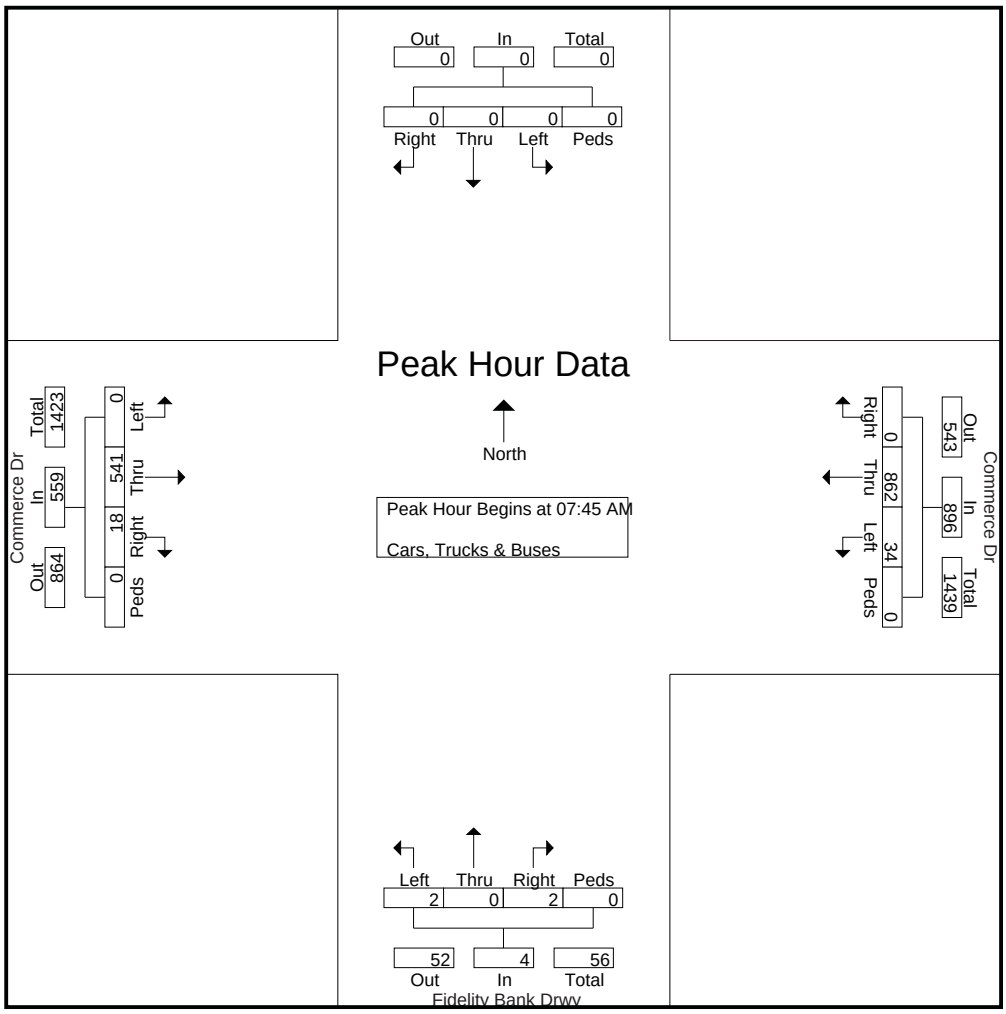
TMC Data
Commerce Dr @ Fidelity Bank Drwy

7-9 am | 4-6 pm

File Name : 34670005
Site Code : 34670005
Start Date : 1/9/2014
Page No : 2

	Fidelity Bank Drwy Northbound					Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	132	2	0	134	3	195	0	0	198	332
08:00 AM	**1**	0	0	0	1	0	0	0	0	0	0	**152**	6	0	**158**	**12**	217	0	0	229	388
08:15 AM	0	0	**1**	0	1	0	0	0	0	0	0	147	2	0	149	9	**237**	0	0	**246**	**396**
08:30 AM	1	0	1	0	**2**	0	0	0	0	0	0	110	**8**	0	118	10	213	0	0	223	343
Total Volume	2	0	2	0	4	0	0	0	0	0	0	541	18	0	559	34	862	0	0	896	1459
% App. Total	50	0	50	0		0	0	0	0		0	96.8	3.2	0		3.8	96.2	0	0		
PHF	.500	.000	.500	.000	.500	.000	.000	.000	.000	.000	.000	.890	.563	.000	.884	.708	.909	.000	.000	.911	.921



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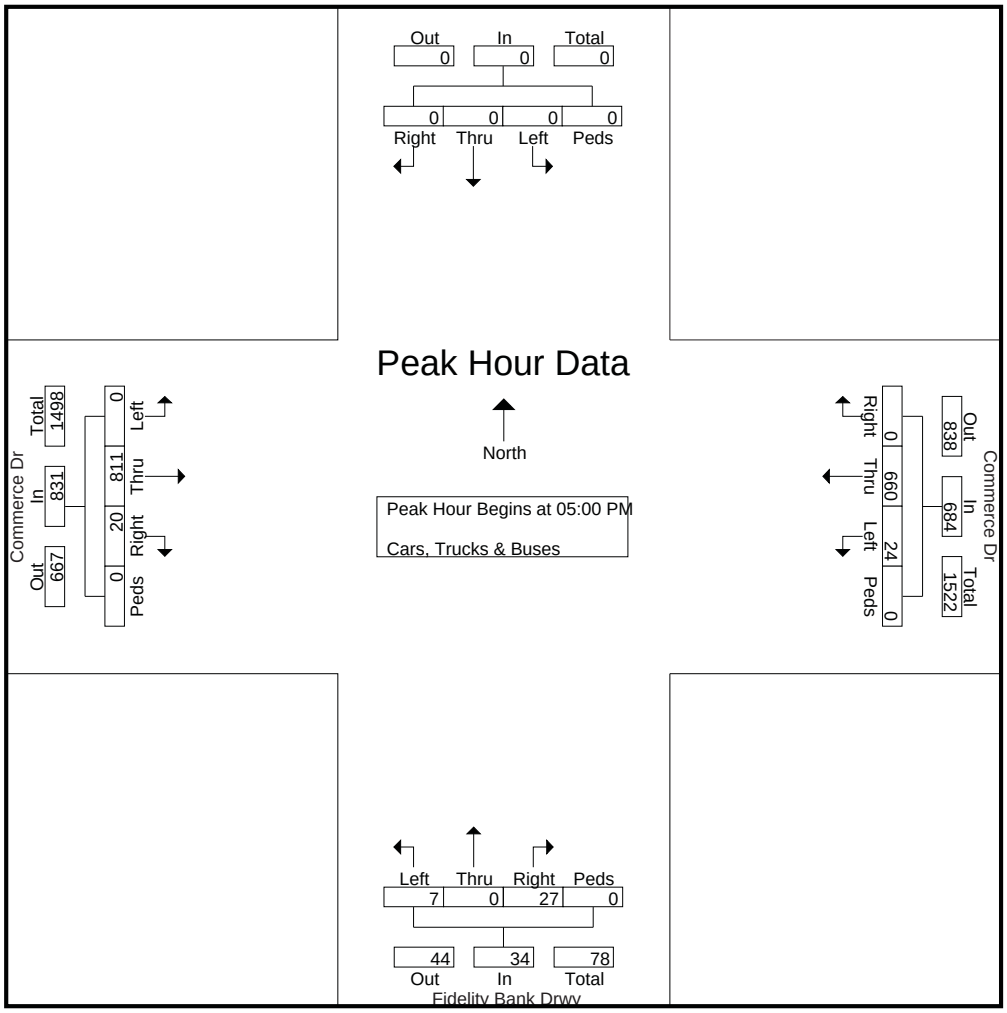
TMC Data
Commerce Dr @ Fidelity Bank Drwy

7-9 am | 4-6 pm

File Name : 34670005
Site Code : 34670005
Start Date : 1/9/2014

	Fidelity Bank Drwy Northbound					Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	7	0	8	0	0	0	0	0	0	200	3	0	203	6	136	0	0	142	353
05:15 PM	0	0	5	0	5	0	0	0	0	0	0	**211**	**9**	0	**220**	3	174	0	0	177	402
05:30 PM	**4**	0	**9**	0	**13**	0	0	0	0	0	0	198	5	0	203	5	167	0	0	172	388
05:45 PM	2	0	6	0	8	0	0	0	0	0	0	202	3	0	205	**10**	**183**	0	0	**193**	**406**
Total Volume	7	0	27	0	34	0	0	0	0	0	0	811	20	0	831	24	660	0	0	684	1549
% App. Total	20.6	0	79.4	0		0	0	0	0		0	97.6	2.4	0		3.5	96.5	0	0		
PHF	.438	.000	.750	.000	.654	.000	.000	.000	.000	.000	.000	.961	.556	.000	.944	.600	.902	.000	.000	.886	.954



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TMC Data
Commerce Dr @ Clairemont Ave

7-9 am | 4-6 pm

File Name : 34670006
Site Code : 34670006
Start Date : 1/9/2014
Page No : 1

Groups Printed- Cars, Trucks & Buses

	Clairemont Ave Northbound					Clairemont Ave Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	13	10	0	23	20	21	32	0	73	34	30	0	0	64	12	52	126	0	190	350
07:15 AM	0	23	6	0	29	44	17	55	0	116	27	36	1	0	64	21	82	156	0	259	468
07:30 AM	2	32	12	0	46	39	21	69	0	129	53	47	1	0	101	19	118	154	0	291	567
07:45 AM	2	32	5	0	39	45	43	75	0	163	69	64	1	0	134	26	116	124	0	266	602
Total	4	100	33	0	137	148	102	231	0	481	183	177	3	0	363	78	368	560	0	1006	1987
08:00 AM	3	29	6	0	38	62	26	113	0	201	67	53	3	0	123	29	144	98	0	271	633
08:15 AM	6	32	7	0	45	43	21	114	0	178	65	62	3	0	130	18	158	100	0	276	629
08:30 AM	3	24	4	0	31	39	12	74	0	125	71	61	2	0	134	15	155	142	0	312	602
08:45 AM	2	24	8	0	34	54	22	100	0	176	38	45	3	0	86	11	105	101	0	217	513
Total	14	109	25	0	148	198	81	401	0	680	241	221	11	0	473	73	562	441	0	1076	2377
*** BREAK ***																					
04:00 PM	2	26	21	0	49	91	34	73	0	198	71	101	8	0	180	13	77	59	0	149	576
04:15 PM	4	14	25	0	43	107	46	71	0	224	54	105	9	0	168	11	84	69	0	164	599
04:30 PM	2	24	30	0	56	107	24	63	0	194	77	132	0	0	209	13	87	79	0	179	638
04:45 PM	4	16	28	0	48	110	24	52	0	186	74	95	4	0	173	5	89	73	0	167	574
Total	12	80	104	0	196	415	128	259	0	802	276	433	21	0	730	42	337	280	0	659	2387
05:00 PM	2	36	25	0	63	123	20	71	0	214	103	150	3	0	256	16	87	61	0	164	697
05:15 PM	9	50	21	0	80	120	40	66	0	226	75	145	8	0	228	20	83	89	0	192	726
05:30 PM	6	25	23	0	54	95	37	69	0	201	110	148	10	0	268	24	92	88	0	204	727
05:45 PM	8	34	36	0	78	139	63	77	0	279	66	104	7	0	177	26	100	63	0	189	723
Total	25	145	105	0	275	477	160	283	0	920	354	547	28	0	929	86	362	301	0	749	2873
Grand Total	55	434	267	0	756	1238	471	1174	0	2883	1054	1378	63	0	2495	279	1629	1582	0	3490	9624
Apprch %	7.3	57.4	35.3	0		42.9	16.3	40.7	0		42.2	55.2	2.5	0		8	46.7	45.3	0		
Total %	0.6	4.5	2.8	0	7.9	12.9	4.9	12.2	0	30	11	14.3	0.7	0	25.9	2.9	16.9	16.4	0	36.3	

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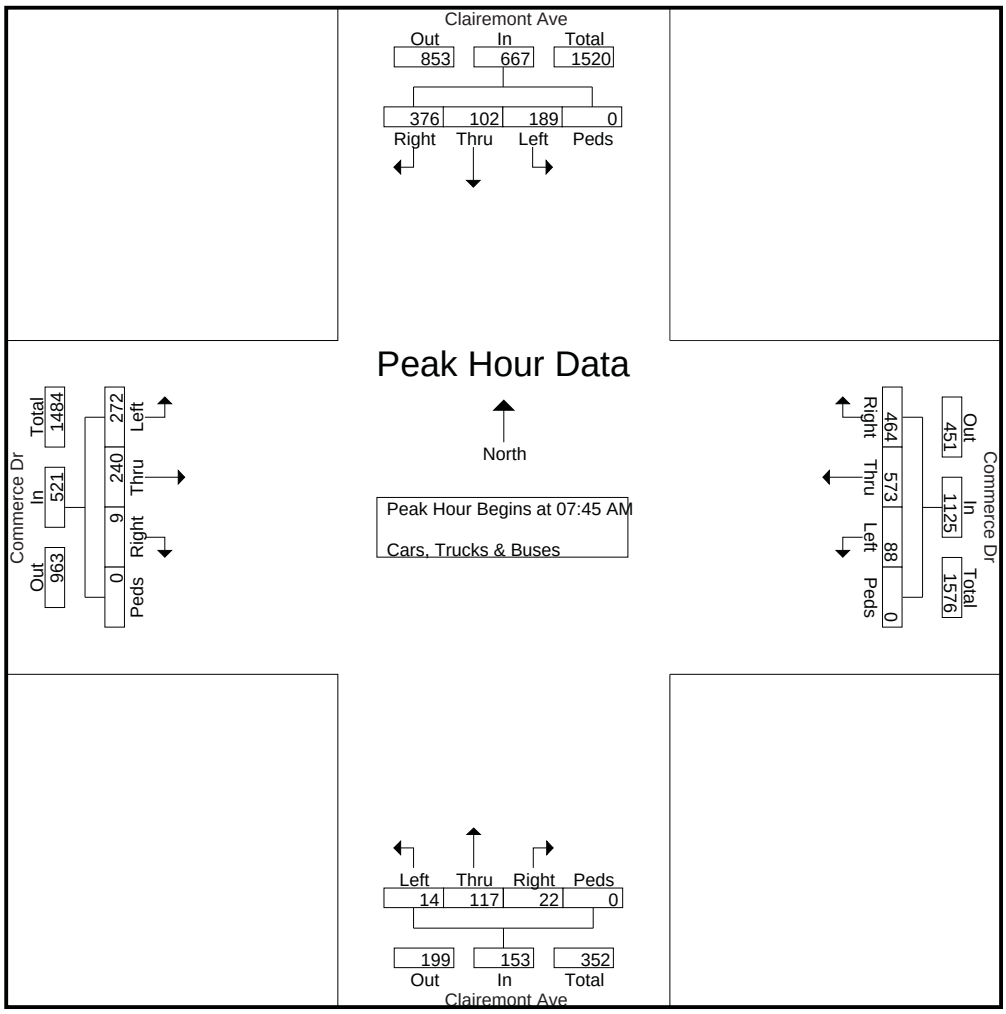
TMC Data
Commerce Dr @ Clairemont Ave

7-9 am | 4-6 pm

File Name : 34670006
Site Code : 34670006
Start Date : 1/9/2014
Page No : 2

	Clairemont Ave Northbound					Clairemont Ave Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	2	**32**	5	0	39	45	**43**	75	0	163	69	**64**	1	0	**134**	26	116	124	0	266	602
08:00 AM	3	29	6	0	38	**62**	26	113	0	**201**	67	53	**3**	0	123	**29**	144	98	0	271	**633**
08:15 AM	**6**	32	**7**	0	**45**	43	21	**114**	0	178	65	62	3	0	130	18	**158**	100	0	276	629
08:30 AM	3	24	4	0	31	39	12	74	0	125	**71**	61	2	0	134	15	155	**142**	0	**312**	602
Total Volume	14	117	22	0	153	189	102	376	0	667	272	240	9	0	521	88	573	464	0	1125	2466
% App. Total	9.2	76.5	14.4	0		28.3	15.3	56.4	0		52.2	46.1	1.7	0		7.8	50.9	41.2	0		
PHF	.583	.914	.786	.000	.850	.762	.593	.825	.000	.830	.958	.938	.750	.000	.972	.759	.907	.817	.000	.901	.974



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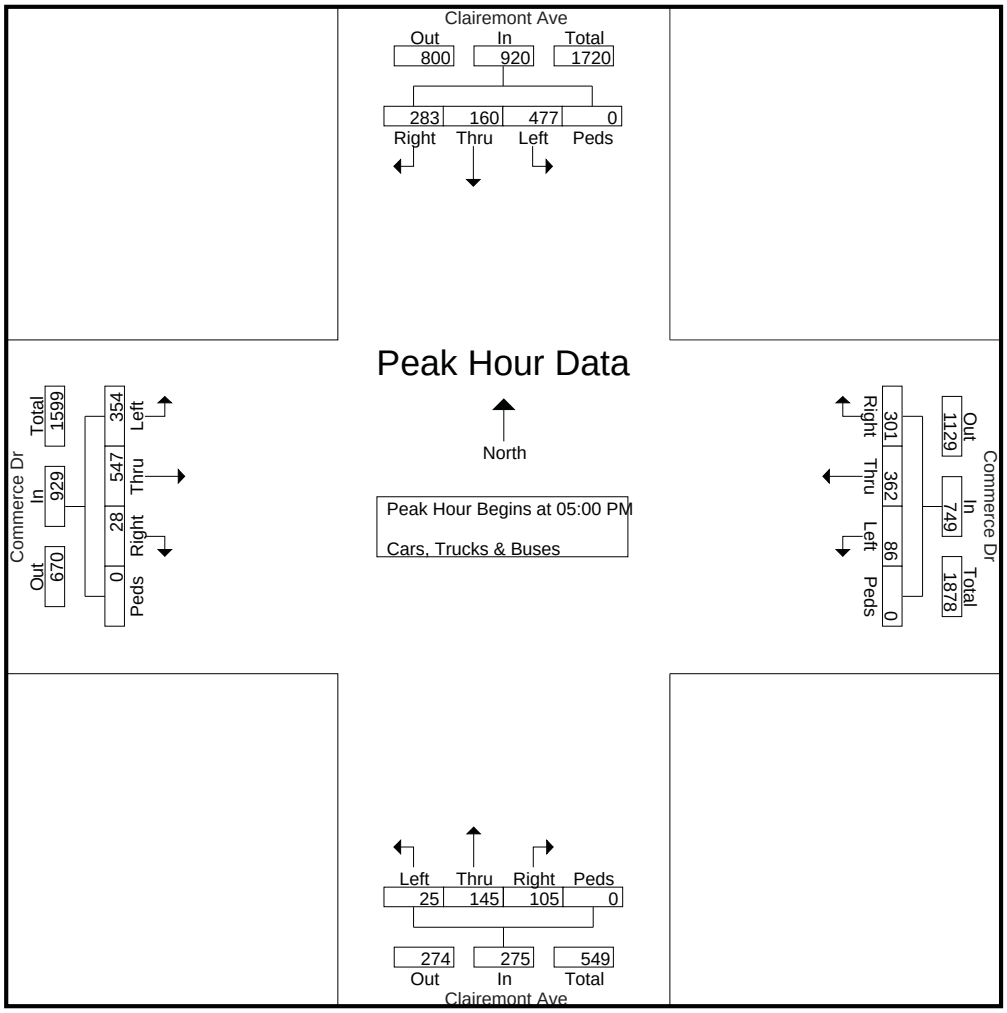
TMC Data
Commerce Dr @ Clairemont Ave

7-9 am | 4-6 pm

File Name : 34670006
Site Code : 34670006
Start Date : 1/9/2014

	Clairemont Ave Northbound					Clairemont Ave Southbound					Commerce Dr Eastbound					Commerce Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	2	36	25	0	63	123	20	71	0	214	103	**150**	3	0	256	16	87	61	0	164	697
05:15 PM	**9**	**50**	21	0	**80**	120	40	66	0	226	75	145	8	0	228	20	83	**89**	0	192	726
05:30 PM	6	25	23	0	54	95	37	69	0	201	**110**	148	**10**	0	**268**	24	92	88	0	**204**	**727**
05:45 PM	8	34	**36**	0	78	**139**	**63**	**77**	0	**279**	66	104	7	0	177	**26**	**100**	63	0	189	723
Total Volume	25	145	105	0	275	477	160	283	0	920	354	547	28	0	929	86	362	301	0	749	2873
% App. Total	9.1	52.7	38.2	0		51.8	17.4	30.8	0		38.1	58.9	3	0		11.5	48.3	40.2	0		
PHF	.694	.725	.729	.000	.859	.858	.635	.919	.000	.824	.805	.912	.700	.000	.867	.827	.905	.846	.000	.918	.988



Existing Intersection Analysis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	13	176	56	160	75	327	209	379	61
Lane Group Flow (vph)	16	280	72	421	109	538	286	431	120
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	38.0	38.0	38.0	38.0	18.0	37.0	25.0	44.0	44.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	18.0%	37.0%	25.0%	44.0%	44.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.11	0.56	0.31	0.84	0.29	1.03	0.82	0.64	0.21
Control Delay	26.7	31.7	30.1	43.9	13.3	80.1	33.5	28.7	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.0	0.0
Total Delay	26.7	31.7	30.1	43.9	13.3	80.1	34.3	30.6	8.0
Queue Length 50th (ft)	7	138	34	218	30	~386	116	233	27
Queue Length 95th (ft)	22	199	63	276	41	#522	155	331	25
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	140	496	235	502	444	524	382	675	562
Starvation Cap Reductn	0	0	0	0	0	0	14	123	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.56	0.31	0.84	0.25	1.03	0.78	0.78	0.21

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 18 (18%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	176	42	56	160	194	75	327	92	209	379	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.92		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1508		1486	1444		1486	1502		1486	1565	1144
Flt Permitted	0.28	1.00		0.47	1.00		0.45	1.00		0.14	1.00	1.00
Satd. Flow (perm)	435	1508		730	1444		712	1502		220	1565	1144
Peak-hour factor, PHF	0.81	0.83	0.62	0.78	0.78	0.90	0.69	0.83	0.64	0.73	0.88	0.51
Adj. Flow (vph)	16	212	68	72	205	216	109	394	144	286	431	120
RTOR Reduction (vph)	0	12	0	0	38	0	0	13	0	0	0	68
Lane Group Flow (vph)	16	268	0	72	383	0	109	525	0	286	431	52
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	32.1	32.1		32.1	32.1		42.8	34.1		56.7	43.2	43.2
Effective Green, g (s)	32.1	32.1		32.1	32.1		42.8	34.1		56.7	43.2	43.2
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.43	0.34		0.57	0.43	0.43
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	140	484		234	464		372	512		346	676	494
v/s Ratio Prot		0.18			c0.27		0.03	c0.35		c0.14	0.28	
v/s Ratio Perm	0.04			0.10			0.10			0.32		0.05
v/c Ratio	0.11	0.55		0.31	0.83		0.29	1.03		0.83	0.64	0.10
Uniform Delay, d1	23.9	28.0		25.6	31.4		17.7	33.0		22.4	22.3	16.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.74	1.03	1.95
Incremental Delay, d2	1.7	4.5		3.4	15.3		0.3	46.7		14.0	4.3	0.4
Delay (s)	25.6	32.6		29.0	46.7		18.1	79.6		30.6	27.4	33.4
Level of Service	C	C		C	D		B	E		C	C	C
Approach Delay (s)		32.2			44.1			69.2			29.3	
Approach LOS		C			D			E			C	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	89.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	22	5	18	17	0	20	440	72	617
Lane Group Flow (vph)	0	44	32	24	32	32	598	104	894
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.41	0.21	0.21	0.07	0.08	0.26	0.19	0.40
Control Delay		53.4	17.3	44.7	0.3	1.0	0.9	1.3	1.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Total Delay		53.4	17.3	44.7	0.3	1.0	1.2	1.3	1.4
Queue Length 50th (ft)		27	0	14	0	0	1	4	17
Queue Length 95th (ft)		41	10	30	0	m3	m38	m6	m26
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		306	373	333	611	407	2263	554	2241
Starvation Cap Reductn		0	0	0	0	0	1033	0	666
Spillback Cap Reductn		0	23	21	0	0	0	0	58
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.14	0.09	0.08	0.05	0.08	0.49	0.19	0.57

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 80 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	5	18	17	0	23	20	440	50	72	617	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.85		1.00	0.98		1.00	0.97	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1450	1282	1593	1282		1486	2718		1486	2687	
Flt Permitted		0.74	1.00	0.73	1.00		0.31	1.00		0.43	1.00	
Satd. Flow (perm)		1121	1282	1221	1282		489	2718		666	2687	
Peak-hour factor, PHF	0.61	0.62	0.56	0.71	0.25	0.72	0.62	0.83	0.73	0.69	0.85	0.72
Adj. Flow (vph)	36	8	32	24	0	32	32	530	68	104	726	168
RTOR Reduction (vph)	0	0	29	0	29	0	0	5	0	0	10	0
Lane Group Flow (vph)	0	44	3	24	3	0	32	593	0	104	884	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		8.1	8.1	8.1	8.1		80.9	80.9		80.9	80.9	
Effective Green, g (s)		8.1	8.1	8.1	8.1		80.9	80.9		80.9	80.9	
Actuated g/C Ratio		0.08	0.08	0.08	0.08		0.81	0.81		0.81	0.81	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		91	104	99	104		396	2199		539	2174	
v/s Ratio Prot					0.00			0.22			c0.33	
v/s Ratio Perm		c0.04	0.00	0.02			0.07			0.16		
v/c Ratio		0.48	0.02	0.24	0.02		0.08	0.27		0.19	0.41	
Uniform Delay, d1		43.9	42.3	43.1	42.3		2.0	2.3		2.2	2.7	
Progression Factor		1.00	1.00	1.00	1.00		0.31	0.29		0.28	0.26	
Incremental Delay, d2		4.0	0.1	1.3	0.1		0.1	0.1		0.5	0.4	
Delay (s)		48.0	42.4	44.3	42.4		0.7	0.8		1.1	1.1	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		45.6			43.2			0.8			1.1	
Approach LOS		D			D			A			A	

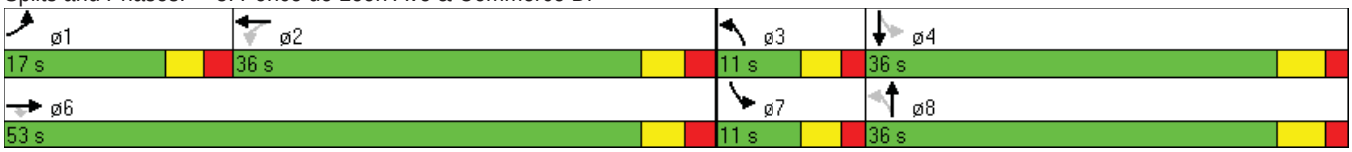
Intersection Summary			
HCM Average Control Delay	4.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	131	166	48	120	247	79	374	10	649
Lane Group Flow (vph)	179	193	56	136	341	100	514	20	975
Turn Type	Prot		Perm	Perm		pm+pt		pm+pt	
Protected Phases	1	6			2	3	8	7	4
Permitted Phases			6	2		8		4	
Detector Phase	1	6	6	2	2	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	5.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	10.0	23.4
Total Split (s)	17.0	53.0	53.0	36.0	36.0	11.0	36.0	11.0	36.0
Total Split (%)	17.0%	53.0%	53.0%	36.0%	36.0%	11.0%	36.0%	11.0%	36.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.7	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	4.7	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	Min	Min	None	C-Min	None	C-Min
v/c Ratio	0.58	0.30	0.10	0.55	0.88	0.52	0.39	0.05	0.89
Control Delay	50.5	20.6	4.6	40.4	58.1	21.2	14.6	10.7	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.5	20.6	4.6	40.4	58.1	21.2	14.6	10.7	33.0
Queue Length 50th (ft)	56	81	0	75	203	22	70	4	300
Queue Length 95th (ft)	72	111	19	124	255	#50	183	m8	m#421
Internal Link Dist (ft)		243			582		289		438
Turn Bay Length (ft)	120		70	125		140		125	
Base Capacity (vph)	355	768	682	313	489	191	1317	396	1094
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.25	0.08	0.43	0.70	0.52	0.39	0.05	0.89

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 64 (64%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	166	48	120	247	23	79	374	67	10	649	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	10	10
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2987	1621	1378	1540	1592		1486	2900		1593	2868	
Flt Permitted	0.95	1.00	1.00	0.64	1.00		0.12	1.00		0.46	1.00	
Satd. Flow (perm)	2987	1621	1378	1031	1592		193	2900		775	2868	
Peak-hour factor, PHF	0.73	0.86	0.86	0.88	0.82	0.57	0.79	0.87	0.80	0.50	0.87	0.82
Adj. Flow (vph)	179	193	56	136	301	40	100	430	84	20	746	229
RTOR Reduction (vph)	0	0	34	0	5	0	0	13	0	0	26	0
Lane Group Flow (vph)	179	193	22	136	336	0	100	501	0	20	949	0
Turn Type	Prot		Perm	Perm			pm+pt			pm+pt		
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases			6	2			8			4		
Actuated Green, G (s)	10.3	39.5	39.5	24.1	24.1		49.5	42.2		39.8	37.2	
Effective Green, g (s)	10.3	39.5	39.5	24.1	24.1		49.5	42.2		39.8	37.2	
Actuated g/C Ratio	0.10	0.40	0.40	0.24	0.24		0.50	0.42		0.40	0.37	
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5		3.0	3.5	
Lane Grp Cap (vph)	308	640	544	248	384		194	1224		330	1067	
v/s Ratio Prot	c0.06	0.12			c0.21		c0.04	0.17		0.00	c0.33	
v/s Ratio Perm			0.02	0.13			0.22			0.02		
v/c Ratio	0.58	0.30	0.04	0.55	0.87		0.52	0.41		0.06	0.89	
Uniform Delay, d1	42.8	20.8	18.6	33.2	36.5		17.5	20.2		18.4	29.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.56	0.66		0.65	0.77	
Incremental Delay, d2	2.3	0.7	0.1	4.9	21.0		2.3	1.0		0.1	7.9	
Delay (s)	45.1	21.4	18.7	38.1	57.5		12.1	14.4		12.1	30.5	
Level of Service	D	C	B	D	E		B	B		B	C	
Approach Delay (s)		31.0			52.0			14.0			30.1	
Approach LOS		C			D			B			C	

Intersection Summary				
HCM Average Control Delay	30.5	HCM Level of Service	C	
HCM Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.8	
Intersection Capacity Utilization	69.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	3	5	0	6	11	509	18	9	856	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.38	0.42	0.25	0.38	0.55	0.90	0.75	0.38	0.86	0.75
Hourly flow rate (vph)	0	0	8	12	0	16	20	566	24	24	995	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.95	0.95		0.95	0.95	0.95				0.95		
vC, conflicting volume	1383	1674	500	1170	1664	295	999			590		
vC1, stage 1 conf vol	1045	1045		618	618							
vC2, stage 2 conf vol	339	630		553	1047							
vCu, unblocked vol	1291	1598	500	1066	1588	140	999			452		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	98	97	100	98	97			98		
cM capacity (veh/h)	228	259	516	355	249	835	688			1045		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	8	28	20	377	213	24	664	336
Volume Left	0	12	20	0	0	24	0	0
Volume Right	8	16	0	0	24	0	0	4
cSH	516	528	688	1700	1700	1045	1700	1700
Volume to Capacity	0.02	0.05	0.03	0.22	0.13	0.02	0.39	0.20
Queue Length 95th (ft)	1	4	2	0	0	2	0	0
Control Delay (s)	12.1	12.2	10.4	0.0	0.0	8.5	0.0	0.0
Lane LOS	B	B	B			A		
Approach Delay (s)	12.1	12.2	0.3			0.2		
Approach LOS	B	B						

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	541	18	34	862	2	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.56	0.71	0.91	0.50	0.50
Hourly flow rate (vph)	608	32	48	947	4	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked						
vC, conflicting volume			640		1193	320
vC1, stage 1 conf vol					624	
vC2, stage 2 conf vol					569	
vCu, unblocked vol			640		1193	320
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		99	99
cM capacity (veh/h)			940		381	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	405	235	48	474	474	8
Volume Left	0	0	48	0	0	4
Volume Right	0	32	0	0	0	4
cSH	1700	1700	940	1700	1700	487
Volume to Capacity	0.24	0.14	0.05	0.28	0.28	0.02
Queue Length 95th (ft)	0	0	4	0	0	1
Control Delay (s)	0.0	0.0	9.0	0.0	0.0	12.5
Lane LOS			A			B
Approach Delay (s)	0.0		0.4			12.5
Approach LOS						B

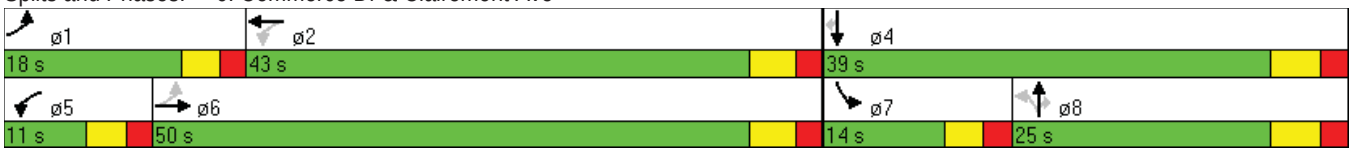
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	272	240	88	573	14	117	22	189	102	376
Lane Group Flow (vph)	283	267	116	1196	24	129	28	249	173	459
Turn Type	pm+pt		pm+pt		Perm		Perm	Prot		Perm
Protected Phases	1	6	5	2		8		7	4	
Permitted Phases	6		2		8		8			4
Detector Phase	1	6	5	2	8	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	18.0	5.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	10.0	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	18.0	50.0	11.0	43.0	25.0	25.0	25.0	14.0	39.0	39.0
Total Split (%)	18.0%	50.0%	11.0%	43.0%	25.0%	25.0%	25.0%	14.0%	39.0%	39.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	1.9	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	5.7	4.9	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.80	0.18	0.24	0.96	0.16	0.55	0.12	0.88	0.37	0.68
Control Delay	42.7	9.6	11.4	42.0	38.4	48.2	14.2	76.6	30.4	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	9.6	11.4	42.0	38.4	48.2	14.2	76.6	30.4	16.2
Queue Length 50th (ft)	133	48	28	316	14	78	0	82	89	90
Queue Length 95th (ft)	#288	m41	49	#469	23	131	19	#120	85	146
Internal Link Dist (ft)		204		351		415			525	
Turn Bay Length (ft)	135		120		250		250	210		100
Base Capacity (vph)	352	1486	491	1265	202	311	287	283	538	732
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.18	0.24	0.95	0.12	0.41	0.10	0.88	0.32	0.63

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	240	9	88	573	464	14	117	22	189	102	376
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1593	3164		1593	2959		1540	1621	1378	2987	1621	1615
Flt Permitted	0.10	1.00		0.59	1.00		0.65	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	161	3164		984	2959		1050	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.96	0.94	0.75	0.76	0.91	0.82	0.58	0.91	0.79	0.76	0.59	0.82
Adj. Flow (vph)	283	255	12	116	630	566	24	129	28	249	173	459
RTOR Reduction (vph)	0	3	0	0	163	0	0	0	24	0	0	208
Lane Group Flow (vph)	283	264	0	116	1033	0	24	129	4	249	173	251
Turn Type	pm+pt			pm+pt			Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2			8		8			4
Actuated Green, G (s)	59.4	46.8		44.4	36.7		14.5	14.5	14.5	9.5	29.1	29.1
Effective Green, g (s)	59.4	46.8		44.4	36.7		14.5	14.5	14.5	9.5	29.1	29.1
Actuated g/C Ratio	0.59	0.47		0.44	0.37		0.14	0.14	0.14	0.10	0.29	0.29
Clearance Time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	351	1481		484	1086		152	235	200	284	472	470
v/s Ratio Prot	c0.14	0.08		0.02	c0.35			0.08		c0.08	0.11	
v/s Ratio Perm	0.34			0.09			0.02		0.00			c0.16
v/c Ratio	0.81	0.18		0.24	0.95		0.16	0.55	0.02	0.88	0.37	0.53
Uniform Delay, d1	26.9	15.4		16.7	30.8		37.4	39.7	36.7	44.7	28.1	29.8
Progression Factor	1.05	0.60		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.0	0.2		0.3	17.8		0.6	2.9	0.0	24.7	0.6	1.3
Delay (s)	40.3	9.5		16.9	48.6		38.0	42.6	36.7	69.4	28.7	31.1
Level of Service	D	A		B	D		D	D	D	E	C	C
Approach Delay (s)		25.3			45.8			41.1			41.4	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.7
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

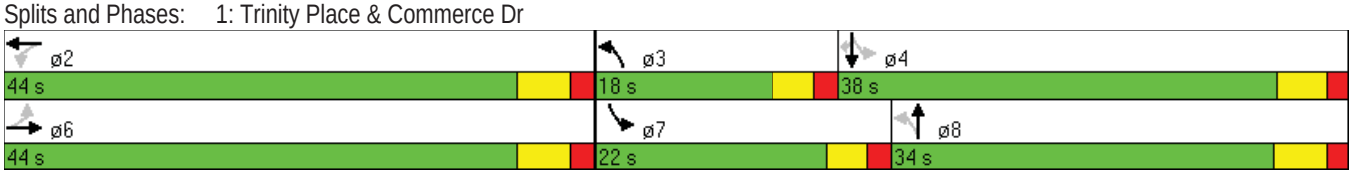
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	13	258	74	145	46	391	290	352	34
Lane Group Flow (vph)	20	348	96	545	60	530	319	419	40
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	44.0	44.0	44.0	44.0	18.0	34.0	22.0	38.0	38.0
Total Split (%)	44.0%	44.0%	44.0%	44.0%	18.0%	34.0%	22.0%	38.0%	38.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.16	0.59	0.38	0.89	0.18	1.20	1.00	0.66	0.08
Control Delay	24.7	28.8	28.0	41.9	14.9	143.6	73.2	33.0	6.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Total Delay	24.7	28.8	28.0	41.9	14.9	143.6	73.2	34.1	6.2
Queue Length 50th (ft)	8	168	44	262	19	~410	177	257	7
Queue Length 95th (ft)	19	263	75	#380	34	#615	#328	348	17
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	123	588	252	610	415	441	319	635	488
Starvation Cap Reductn	0	0	0	0	0	0	0	73	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.59	0.38	0.89	0.14	1.20	1.00	0.75	0.08

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 3 (3%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	258	58	74	145	300	46	391	71	290	352	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.90		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1522		1486	1407		1486	1520		1486	1565	1144
Flt Permitted	0.21	1.00		0.42	1.00		0.48	1.00		0.12	1.00	1.00
Satd. Flow (perm)	324	1522		661	1407		749	1520		187	1565	1144
Peak-hour factor, PHF	0.65	0.91	0.91	0.77	0.81	0.82	0.77	0.91	0.71	0.91	0.84	0.85
Adj. Flow (vph)	20	284	64	96	179	366	60	430	100	319	419	40
RTOR Reduction (vph)	0	8	0	0	74	0	0	9	0	0	0	24
Lane Group Flow (vph)	20	340	0	96	471	0	60	521	0	319	419	16
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	38.1	38.1		38.1	38.1		34.7	28.4		50.7	39.6	39.6
Effective Green, g (s)	38.1	38.1		38.1	38.1		34.7	28.4		50.7	39.6	39.6
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.35	0.28		0.51	0.40	0.40
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	123	580		252	536		306	432		318	620	453
v/s Ratio Prot		0.22			c0.33		0.01	c0.34		c0.17	0.27	
v/s Ratio Perm	0.06			0.15			0.06			0.34		0.01
v/c Ratio	0.16	0.59		0.38	0.88		0.20	1.21		1.00	0.68	0.03
Uniform Delay, d1	20.4	24.7		22.4	28.8		22.2	35.8		29.6	24.9	18.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.78	1.06	0.86
Incremental Delay, d2	2.8	4.3		4.3	18.3		0.2	113.1		50.4	5.6	0.1
Delay (s)	23.2	29.0		26.7	47.1		22.5	148.9		73.3	32.1	16.0
Level of Service	C	C		C	D		C	F		E	C	B
Approach Delay (s)		28.7			44.1			136.1			48.2	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM Average Control Delay	65.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	73	4	68	48	5	19	633	54	578
Lane Group Flow (vph)	0	104	100	64	104	32	736	72	682
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.66	0.36	0.35	0.37	0.07	0.37	0.17	0.34
Control Delay		57.7	11.5	40.8	12.9	5.8	6.9	3.3	3.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4
Total Delay		57.7	11.5	40.8	12.9	5.8	7.7	3.3	3.6
Queue Length 50th (ft)		63	3	37	7	7	111	6	29
Queue Length 95th (ft)		56	20	58	0	m6	m94	m7	40
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		275	419	316	424	441	2014	415	2012
Starvation Cap Reductn		0	0	0	0	0	891	0	775
Spillback Cap Reductn		0	4	0	0	0	22	0	112
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.38	0.24	0.20	0.25	0.07	0.66	0.17	0.55

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 11 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 45
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	4	68	48	5	80	19	633	31	54	578	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442	1282	1593	1309		1486	2742		1486	2741	
Flt Permitted		0.67	1.00	0.69	1.00		0.39	1.00		0.36	1.00	
Satd. Flow (perm)		1009	1282	1156	1309		603	2742		566	2741	
Peak-hour factor, PHF	0.76	0.50	0.68	0.75	0.42	0.87	0.59	0.91	0.78	0.75	0.90	0.80
Adj. Flow (vph)	96	8	100	64	12	92	32	696	40	72	642	40
RTOR Reduction (vph)	0	0	80	0	78	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	104	20	64	26	0	32	733	0	72	679	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		15.7	15.7	15.7	15.7		73.3	73.3		73.3	73.3	
Effective Green, g (s)		15.7	15.7	15.7	15.7		73.3	73.3		73.3	73.3	
Actuated g/C Ratio		0.16	0.16	0.16	0.16		0.73	0.73		0.73	0.73	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		158	201	181	206		442	2010		415	2009	
v/s Ratio Prot					0.02			c0.27			0.25	
v/s Ratio Perm		c0.10	0.02	0.06			0.05			0.13		
v/c Ratio		0.66	0.10	0.35	0.13		0.07	0.36		0.17	0.34	
Uniform Delay, d1		39.6	36.1	37.6	36.3		3.8	4.9		4.1	4.7	
Progression Factor		1.00	1.00	1.00	1.00		1.09	1.24		0.45	0.52	
Incremental Delay, d2		9.5	0.2	1.2	0.3		0.0	0.0		0.8	0.4	
Delay (s)		49.1	36.3	38.8	36.5		4.1	6.1		2.6	2.9	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		42.8			37.4			6.0			2.9	
Approach LOS		D			D			A			A	

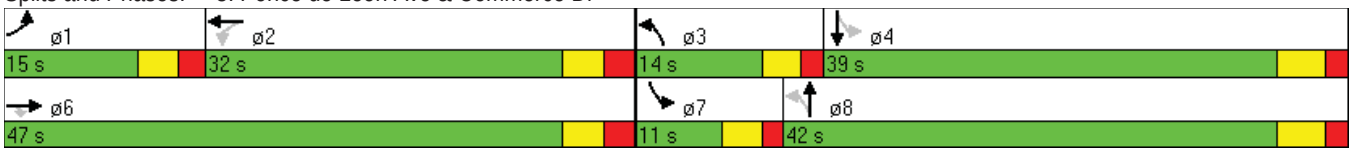
Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	175	249	87	97	224	93	600	21	487
Lane Group Flow (vph)	199	271	92	111	284	112	867	28	779
Turn Type	Prot		Perm	Perm		pm+pt		pm+pt	
Protected Phases	1	6			2	3	8	7	4
Permitted Phases			6	2		8		4	
Detector Phase	1	6	6	2	2	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	5.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	10.0	23.4
Total Split (s)	15.0	47.0	47.0	32.0	32.0	14.0	42.0	11.0	39.0
Total Split (%)	15.0%	47.0%	47.0%	32.0%	32.0%	14.0%	42.0%	11.0%	39.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.7	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	4.7	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	Min	Min	None	C-Min	None	C-Min
v/c Ratio	0.67	0.47	0.17	0.57	0.86	0.39	0.63	0.10	0.65
Control Delay	55.5	27.0	6.5	46.1	61.5	12.9	16.1	9.9	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	55.5	27.0	6.5	46.1	61.5	12.9	16.4	9.9	21.8
Queue Length 50th (ft)	62	126	5	63	170	26	145	6	213
Queue Length 95th (ft)	#100	188	35	109	247	63	237	m11	m287
Internal Link Dist (ft)		243			582		289		438
Turn Bay Length (ft)	120		70	125		140		125	
Base Capacity (vph)	307	671	616	254	425	296	1370	280	1191
Starvation Cap Reductn	0	0	0	0	0	0	115	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.40	0.15	0.44	0.67	0.38	0.69	0.10	0.65

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 61 (61%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	249	87	97	224	18	93	600	131	21	487	219
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	10	10
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2987	1621	1378	1540	1593		1486	2882		1593	2824	
Flt Permitted	0.95	1.00	1.00	0.59	1.00		0.22	1.00		0.26	1.00	
Satd. Flow (perm)	2987	1621	1378	960	1593		347	2882		434	2824	
Peak-hour factor, PHF	0.88	0.92	0.95	0.87	0.89	0.56	0.83	0.87	0.74	0.75	0.94	0.84
Adj. Flow (vph)	199	271	92	111	252	32	112	690	177	28	518	261
RTOR Reduction (vph)	0	0	51	0	5	0	0	20	0	0	57	0
Lane Group Flow (vph)	199	271	41	111	279	0	112	847	0	28	722	0
Turn Type	Prot		Perm	Perm			pm+pt			pm+pt		
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases			6	2			8			4		
Actuated Green, G (s)	9.9	35.4	35.4	20.4	20.4		53.6	45.0		44.0	40.1	
Effective Green, g (s)	9.9	35.4	35.4	20.4	20.4		53.6	45.0		44.0	40.1	
Actuated g/C Ratio	0.10	0.35	0.35	0.20	0.20		0.54	0.45		0.44	0.40	
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5		3.0	3.5	
Lane Grp Cap (vph)	296	574	488	196	325		286	1297		236	1132	
v/s Ratio Prot	c0.07	0.17			c0.18		c0.03	c0.29		0.00	0.26	
v/s Ratio Perm			0.03	0.12			0.18			0.05		
v/c Ratio	0.67	0.47	0.08	0.57	0.86		0.39	0.65		0.12	0.64	
Uniform Delay, d1	43.5	25.1	21.5	35.8	38.4		13.4	21.4		16.3	24.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.69	0.62		0.69	0.84	
Incremental Delay, d2	5.4	1.5	0.2	6.8	21.7		0.9	2.5		0.2	2.4	
Delay (s)	48.9	26.6	21.7	42.6	60.1		10.1	15.9		11.5	22.7	
Level of Service	D	C	C	D	E		B	B		B	C	
Approach Delay (s)		33.7			55.2			15.2			22.3	
Approach LOS		C			E			B			C	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.8
Intersection Capacity Utilization	70.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	14	25	3	23	2	798	2	5	684	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.62	0.25	0.50	0.62	0.38	0.64	0.50	0.92	0.50	0.62	0.95	0.50
Hourly flow rate (vph)	8	0	28	40	8	36	4	867	4	8	720	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.84	0.84		0.84	0.84	0.84				0.84		
vC, conflicting volume	1222	1620	364	1282	1622	436	728			871		
vC1, stage 1 conf vol	740	740		877	877							
vC2, stage 2 conf vol	482	879		404	744							
vCu, unblocked vol	879	1354	364	951	1356	0	728			462		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	96	89	98	96	100			99		
cM capacity (veh/h)	351	324	633	378	324	909	871			919		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	36	84	4	578	293	8	480	248
Volume Left	8	40	4	0	0	8	0	0
Volume Right	28	36	0	0	4	0	0	8
cSH	536	493	871	1700	1700	919	1700	1700
Volume to Capacity	0.07	0.17	0.00	0.34	0.17	0.01	0.28	0.15
Queue Length 95th (ft)	5	15	0	0	0	1	0	0
Control Delay (s)	12.2	13.8	9.2	0.0	0.0	9.0	0.0	0.0
Lane LOS	B	B	A			A		
Approach Delay (s)	12.2	13.8	0.0			0.1		
Approach LOS	B	B						

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	37.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	811	20	24	660	7	27
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.56	0.60	0.90	0.44	0.75
Hourly flow rate (vph)	845	36	40	733	16	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.96		0.96	0.96
vC, conflicting volume			881		1309	440
vC1, stage 1 conf vol					863	
vC2, stage 2 conf vol					447	
vCu, unblocked vol			785		1233	325
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			95		95	94
cM capacity (veh/h)			794		349	642

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	563	317	40	367	367	52
Volume Left	0	0	40	0	0	16
Volume Right	0	36	0	0	0	36
cSH	1700	1700	794	1700	1700	511
Volume to Capacity	0.33	0.19	0.05	0.22	0.22	0.10
Queue Length 95th (ft)	0	0	4	0	0	8
Control Delay (s)	0.0	0.0	9.8	0.0	0.0	12.8
Lane LOS			A			B
Approach Delay (s)	0.0		0.5			12.8
Approach LOS						B

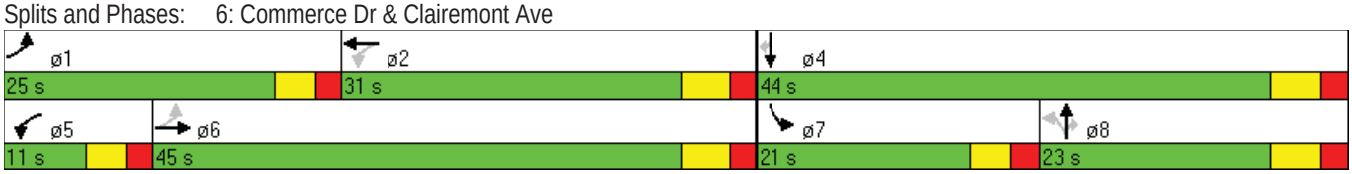
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	35.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	354	547	86	362	25	145	105	477	160	283
Lane Group Flow (vph)	437	641	104	752	36	201	144	555	250	308
Turn Type	pm+pt		pm+pt		Perm		Perm	Prot		Perm
Protected Phases	1	6	5	2		8		7	4	
Permitted Phases	6		2		8		8			4
Detector Phase	1	6	5	2	8	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	18.0	5.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	10.0	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	25.0	45.0	11.0	31.0	23.0	23.0	23.0	21.0	44.0	44.0
Total Split (%)	25.0%	45.0%	11.0%	31.0%	23.0%	23.0%	23.0%	21.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	1.9	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	5.7	4.9	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	1.07	0.51	0.39	0.90	0.23	0.78	0.42	1.01	0.39	0.37
Control Delay	88.2	15.5	20.2	40.6	40.1	61.4	10.4	83.0	24.3	3.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.2	15.5	20.2	40.6	40.1	61.4	10.4	83.0	24.3	3.9
Queue Length 50th (ft)	~259	148	34	177	20	123	0	~206	112	0
Queue Length 95th (ft)	#371	143	57	#256	38	155	26	#303	120	53
Internal Link Dist (ft)		204		351		415			525	
Turn Bay Length (ft)	135		120		250		250	210		100
Base Capacity (vph)	410	1302	264	910	168	279	356	551	639	823
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.49	0.39	0.83	0.21	0.72	0.40	1.01	0.39	0.37

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 9 (9%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	354	547	28	86	362	301	25	145	105	477	160	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1593	3155		1593	2960		1540	1621	1378	2987	1621	1615
Flt Permitted	0.14	1.00		0.41	1.00		0.60	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	242	3155		685	2960		979	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.81	0.91	0.70	0.83	0.91	0.85	0.69	0.72	0.73	0.86	0.64	0.92
Adj. Flow (vph)	437	601	40	104	398	354	36	201	144	555	250	308
RTOR Reduction (vph)	0	5	0	0	167	0	0	0	121	0	0	187
Lane Group Flow (vph)	437	636	0	104	585	0	36	201	23	555	250	121
Turn Type	pm+pt			pm+pt			Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2			8		8			4
Actuated Green, G (s)	49.1	39.0		28.0	22.8		15.9	15.9	15.9	18.4	39.4	39.4
Effective Green, g (s)	49.1	39.0		28.0	22.8		15.9	15.9	15.9	18.4	39.4	39.4
Actuated g/C Ratio	0.49	0.39		0.28	0.23		0.16	0.16	0.16	0.18	0.39	0.39
Clearance Time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	408	1230		239	675		156	258	219	550	639	636
v/s Ratio Prot	c0.23	0.20		0.02	0.20			c0.12		c0.19	0.15	
v/s Ratio Perm	c0.30			0.10			0.04		0.02			0.08
v/c Ratio	1.07	0.52		0.44	0.87		0.23	0.78	0.10	1.01	0.39	0.19
Uniform Delay, d1	28.6	23.3		27.7	37.1		36.7	40.4	36.0	40.8	21.7	19.9
Progression Factor	0.94	0.62		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	62.4	1.4		1.3	14.1		0.9	14.2	0.2	40.6	0.5	0.2
Delay (s)	89.3	15.8		29.0	51.2		37.6	54.5	36.2	81.4	22.2	20.0
Level of Service	F	B		C	D		D	D	D	F	C	C
Approach Delay (s)		45.6			48.5			46.0			51.1	
Approach LOS		D			D			D			D	

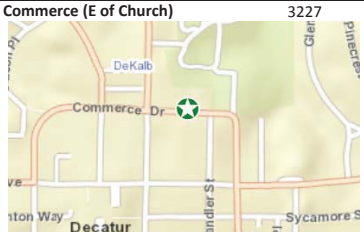
Intersection Summary			
HCM Average Control Delay	48.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		

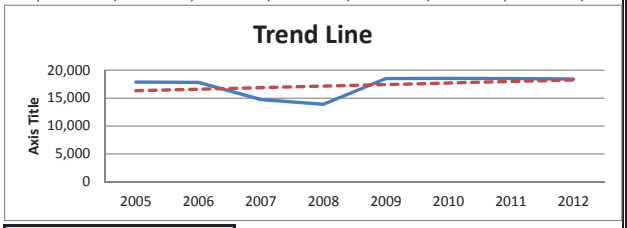
c Critical Lane Group

Growth Rate Analysis

Location	Growth Rate	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Commerce (E of Churc	1.6%	3227	0892536500	17,880	17,830	14,770	13,900	18,510	18,550	18,530	18,430
Church (N of Commerc	0.2%	3012	0893071911	10,990	10,630	11,400	11,330	11,100	10,960	10,800	11,290
Church (S of E Trinity)	4.0%	3752	0891015500	9,820	9,700	10,420	9,810	12,180	12,210	12,200	12,080
Commerce (E of Barry)	-1.9%	3225	0891015500	17,590	10,460	12,280	12,970	12,660	13,330	12,680	12,610
Clairemont (N of Comr	2.4%	3229	0891015500	18,870	15,900	18,080	17,030	20,380	20,420	20,400	19,550

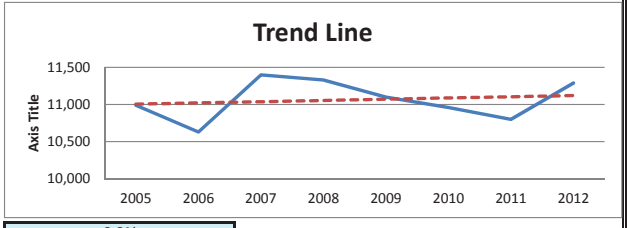
Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Commerce (E of Church)	3227	0892536500	17,880	17,830	14,770	13,900	18,510	18,550	18,530	18,430





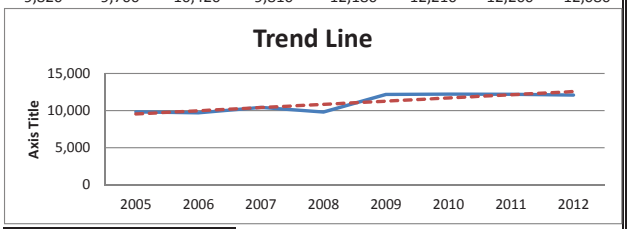
Growth Rate	1.6%	Intercept	-539,820	Slope	277.38
Trend Line	16,329	16,607	16,884	17,161	17,439	17,716	17,993	18,271

Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Church (N of Commerce)	3012	0893071911	10,990	10,630	11,400	11,330	11,100	10,960	10,800	11,290



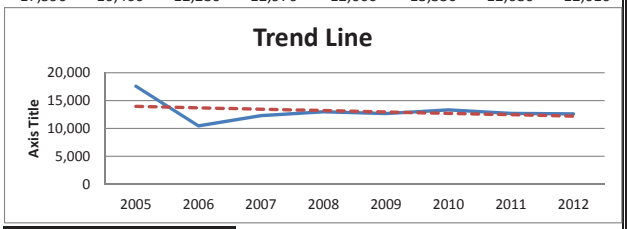
Growth Rate	0.2%	Intercept	-22,413	Slope	16.67
Trend Line	11,004	11,021	11,038	11,054	11,071	11,088	11,104	11,121

Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Church (S of E Trinity)	3752	0891015500	9,820	9,700	10,420	9,810	12,180	12,210	12,200	12,080



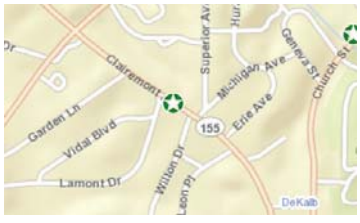
Growth Rate	4.0%	Intercept	-851,168	Slope	429.29
Trend Line	9,550	9,979	10,409	10,838	11,267	11,696	12,126	12,555

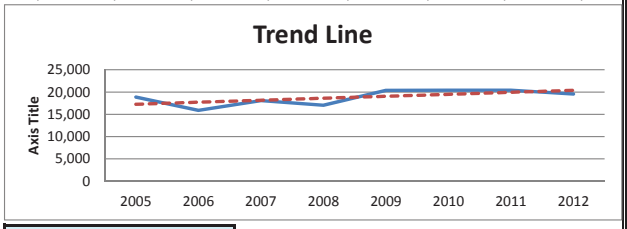
Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Commerce (E of Barry)	3225	0891015500	17,590	10,460	12,280	12,970	12,660	13,330	12,680	12,610



Growth Rate	-1.9%	Intercept	513,285	Slope	-249.05
Trend Line	13,944	13,695	13,446	13,197	12,948	12,699	12,450	12,201

Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Clairemont (N of Commerce)	3229	0891015500	18,870	15,900	18,080	17,030	20,380	20,420	20,400	19,550





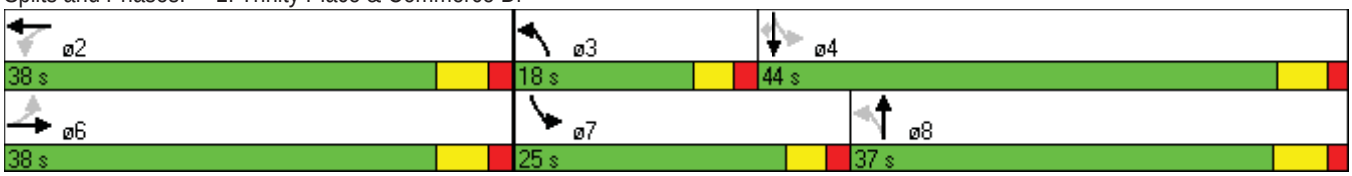
Growth Rate	2.4%	Intercept	-880,931	Slope	447.98
Trend Line	17,261	17,709	18,157	18,605	19,053	19,501	19,949	20,397

Future (No Build) Vehicular Analysis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	16	181	58	167	79	362	239	414	77
Lane Group Flow (vph)	20	287	74	465	114	584	327	470	151
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	38.0	38.0	38.0	38.0	18.0	37.0	25.0	44.0	44.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	18.0%	37.0%	25.0%	44.0%	44.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.18	0.58	0.32	0.92	0.32	1.17	0.94	0.70	0.26
Control Delay	29.6	32.1	30.6	54.7	14.0	127.3	52.3	32.5	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.9	0.0
Total Delay	29.6	32.1	30.6	54.7	14.0	127.3	54.5	36.4	8.7
Queue Length 50th (ft)	9	143	35	253	32	~450	157	265	33
Queue Length 95th (ft)	26	206	65	#341	43	#585	#190	413	24
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	111	496	230	504	417	500	362	673	578
Starvation Cap Reductn	0	0	0	0	0	0	8	128	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.58	0.32	0.92	0.27	1.17	0.92	0.86	0.26

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 18 (18%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	181	43	58	167	226	79	362	95	239	414	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.92		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1508		1486	1438		1486	1505		1486	1565	1144
Flt Permitted	0.22	1.00		0.46	1.00		0.42	1.00		0.11	1.00	1.00
Satd. Flow (perm)	347	1508		715	1438		664	1505		167	1565	1144
Peak-hour factor, PHF	0.81	0.83	0.62	0.78	0.78	0.90	0.69	0.83	0.64	0.73	0.88	0.51
Adj. Flow (vph)	20	218	69	74	214	251	114	436	148	327	470	151
RTOR Reduction (vph)	0	12	0	0	42	0	0	12	0	0	0	86
Lane Group Flow (vph)	20	275	0	74	423	0	114	572	0	327	470	65
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	32.1	32.1		32.1	32.1		41.3	32.4		56.7	43.0	43.0
Effective Green, g (s)	32.1	32.1		32.1	32.1		41.3	32.4		56.7	43.0	43.0
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.41	0.32		0.57	0.43	0.43
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	111	484		230	462		347	488		348	673	492
v/s Ratio Prot		0.18			c0.29		0.03	c0.38		c0.18	0.30	
v/s Ratio Perm	0.06			0.10			0.11			0.35		0.06
v/c Ratio	0.18	0.57		0.32	0.92		0.33	1.17		0.94	0.70	0.13
Uniform Delay, d1	24.5	28.2		25.7	32.6		18.8	33.8		29.2	23.2	17.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.64	1.10	2.26
Incremental Delay, d2	3.5	4.8		3.7	25.3		0.4	97.3		31.2	5.6	0.5
Delay (s)	28.0	33.0		29.4	58.0		19.2	131.1		49.8	31.0	39.5
Level of Service	C	C		C	E		B	F		D	C	D
Approach Delay (s)		32.7			54.0			112.8			38.9	
Approach LOS		C			D			F			D	

Intersection Summary			
HCM Average Control Delay	62.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	25	5	19	18	0	23	503	74	696
Lane Group Flow (vph)	0	49	34	25	33	37	677	107	1001
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.44	0.22	0.21	0.08	0.10	0.30	0.21	0.45
Control Delay		53.9	16.5	43.9	0.4	2.7	2.2	1.7	1.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4
Total Delay		53.9	16.5	43.9	0.4	2.7	2.7	1.7	2.0
Queue Length 50th (ft)		30	0	15	0	0	1	2	7
Queue Length 95th (ft)		43	10	31	0	m8	m104	m10	m50
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		304	375	332	572	357	2252	509	2231
Starvation Cap Reductn		0	0	0	0	0	1044	0	661
Spillback Cap Reductn		0	11	8	0	0	0	0	122
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.16	0.09	0.08	0.06	0.10	0.56	0.21	0.64

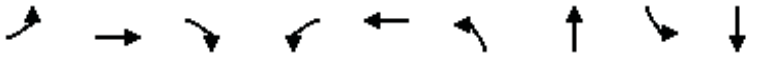
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 80 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	19	18	0	24	23	503	52	74	696	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.85		1.00	0.98		1.00	0.97	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1448	1282	1593	1282		1486	2721		1486	2689	
Flt Permitted		0.74	1.00	0.73	1.00		0.28	1.00		0.39	1.00	
Satd. Flow (perm)		1113	1282	1216	1282		432	2721		617	2689	
Peak-hour factor, PHF	0.61	0.62	0.56	0.71	0.25	0.72	0.62	0.83	0.73	0.69	0.85	0.72
Adj. Flow (vph)	41	8	34	25	0	33	37	606	71	107	819	182
RTOR Reduction (vph)	0	0	31	0	30	0	0	5	0	0	10	0
Lane Group Flow (vph)	0	49	3	25	3	0	37	672	0	107	991	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		8.6	8.6	8.6	8.6		80.4	80.4		80.4	80.4	
Effective Green, g (s)		8.6	8.6	8.6	8.6		80.4	80.4		80.4	80.4	
Actuated g/C Ratio		0.09	0.09	0.09	0.09		0.80	0.80		0.80	0.80	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		96	110	105	110		347	2188		496	2162	
v/s Ratio Prot					0.00			0.25			c0.37	
v/s Ratio Perm		c0.04	0.00	0.02			0.09			0.17		
v/c Ratio		0.51	0.03	0.24	0.03		0.11	0.31		0.22	0.46	
Uniform Delay, d1		43.7	41.9	42.6	41.9		2.1	2.6		2.3	3.0	
Progression Factor		1.00	1.00	1.00	1.00		0.84	0.78		0.36	0.37	
Incremental Delay, d2		4.5	0.1	1.2	0.1		0.1	0.0		0.5	0.4	
Delay (s)		48.2	42.0	43.8	42.0		1.8	2.0		1.4	1.5	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		45.7			42.8			2.0			1.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	4.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	183	193	91	126	260	99	409	13	693
Lane Group Flow (vph)	251	224	106	143	361	125	569	26	1056
Turn Type	Prot		Perm	Perm		pm+pt		pm+pt	
Protected Phases	1	6			2	3	8	7	4
Permitted Phases			6	2		8		4	
Detector Phase	1	6	6	2	2	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	5.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	10.0	23.4
Total Split (s)	17.0	53.0	53.0	36.0	36.0	11.0	36.0	11.0	36.0
Total Split (%)	17.0%	53.0%	53.0%	36.0%	36.0%	11.0%	36.0%	11.0%	36.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.7	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	4.7	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	Min	Min	None	C-Min	None	C-Min
v/c Ratio	0.74	0.33	0.17	0.56	0.88	0.69	0.45	0.07	1.04
Control Delay	56.9	20.0	3.6	40.4	58.0	39.3	14.5	11.9	62.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	56.9	20.0	3.6	40.4	58.0	39.3	14.7	11.9	62.9
Queue Length 50th (ft)	80	91	0	78	214	34	100	6	~411
Queue Length 95th (ft)	96	129	25	132	272	#110	202	m10	m#467
Internal Link Dist (ft)		243			582		289		438
Turn Bay Length (ft)	120		70	125		140		125	
Base Capacity (vph)	355	768	708	305	489	182	1255	351	1013
Starvation Cap Reductn	0	0	0	0	0	0	210	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.29	0.15	0.47	0.74	0.69	0.54	0.07	1.04

Intersection Summary

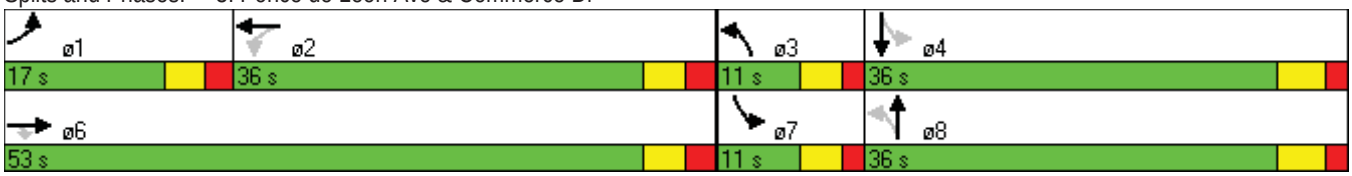
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 64 (64%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

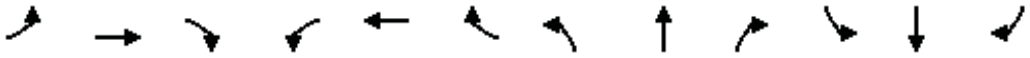
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	183	193	91	126	260	25	99	409	79	13	693	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	10	10
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2987	1621	1378	1540	1591		1486	2895		1593	2864	
Flt Permitted	0.95	1.00	1.00	0.62	1.00		0.10	1.00		0.43	1.00	
Satd. Flow (perm)	2987	1621	1378	1002	1591		160	2895		716	2864	
Peak-hour factor, PHF	0.73	0.86	0.86	0.88	0.82	0.57	0.79	0.87	0.80	0.50	0.87	0.82
Adj. Flow (vph)	251	224	106	143	317	44	125	470	99	26	797	259
RTOR Reduction (vph)	0	0	62	0	5	0	0	16	0	0	30	0
Lane Group Flow (vph)	251	224	44	143	356	0	125	553	0	26	1026	0
Turn Type	Prot		Perm	Perm			pm+pt			pm+pt		
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases			6	2			8			4		
Actuated Green, G (s)	11.3	41.8	41.8	25.4	25.4		47.2	40.0		36.8	34.3	
Effective Green, g (s)	11.3	41.8	41.8	25.4	25.4		47.2	40.0		36.8	34.3	
Actuated g/C Ratio	0.11	0.42	0.42	0.25	0.25		0.47	0.40		0.37	0.34	
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5		3.0	3.5	
Lane Grp Cap (vph)	338	678	576	255	404		184	1158		285	982	
v/s Ratio Prot	c0.08	0.14			c0.22		c0.06	0.19		0.00	c0.36	
v/s Ratio Perm			0.03	0.14			0.26			0.03		
v/c Ratio	0.74	0.33	0.08	0.56	0.88		0.68	0.48		0.09	1.05	
Uniform Delay, d1	42.9	19.6	17.5	32.4	35.8		20.4	22.3		20.3	32.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.86	0.60		0.70	0.79	
Incremental Delay, d2	8.1	0.7	0.1	5.2	21.1		9.3	1.4		0.1	36.4	
Delay (s)	51.0	20.4	17.6	37.6	57.0		26.8	14.7		14.3	62.1	
Level of Service	D	C	B	D	E		C	B		B	E	
Approach Delay (s)		33.1			51.5			16.9			61.0	
Approach LOS		C			D			B			E	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.8
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	3	19	0	12	11	593	22	11	914	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.38	0.42	0.25	0.38	0.55	0.90	0.75	0.38	0.86	0.75
Hourly flow rate (vph)	0	0	8	45	0	32	20	659	29	29	1063	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.93	0.93		0.93	0.93	0.93				0.93		
vC, conflicting volume	1524	1851	533	1311	1838	344	1067			688		
vC1, stage 1 conf vol	1123	1123		714	714							
vC2, stage 2 conf vol	401	728		597	1125							
vCu, unblocked vol	1417	1768	533	1189	1755	153	1067			522		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	98	86	100	96	97			97		
cM capacity (veh/h)	202	232	491	319	223	808	649			971		

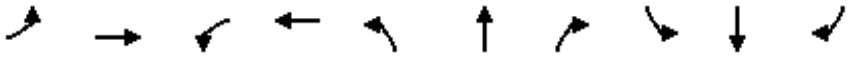
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	8	77	20	439	249	29	709	358
Volume Left	0	45	20	0	0	29	0	0
Volume Right	8	32	0	0	29	0	0	4
cSH	491	425	649	1700	1700	971	1700	1700
Volume to Capacity	0.02	0.18	0.03	0.26	0.15	0.03	0.42	0.21
Queue Length 95th (ft)	1	16	2	0	0	2	0	0
Control Delay (s)	12.5	15.3	10.7	0.0	0.0	8.8	0.0	0.0
Lane LOS	B	C	B			A		
Approach Delay (s)	12.5	15.3	0.3			0.2		
Approach LOS	B	C						

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	43.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	629	22	39	908	16	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.56	0.71	0.91	0.50	0.50
Hourly flow rate (vph)	707	39	55	998	32	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked						
vC, conflicting volume			746		1335	373
vC1, stage 1 conf vol					726	
vC2, stage 2 conf vol					609	
vCu, unblocked vol			746		1335	373
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			94		91	95
cM capacity (veh/h)			858		340	624

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	471	275	55	499	499	64
Volume Left	0	0	55	0	0	32
Volume Right	0	39	0	0	0	32
cSH	1700	1700	858	1700	1700	441
Volume to Capacity	0.28	0.16	0.06	0.29	0.29	0.15
Queue Length 95th (ft)	0	0	5	0	0	13
Control Delay (s)	0.0	0.0	9.5	0.0	0.0	14.6
Lane LOS			A			B
Approach Delay (s)	0.0		0.5			14.6
Approach LOS						B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		



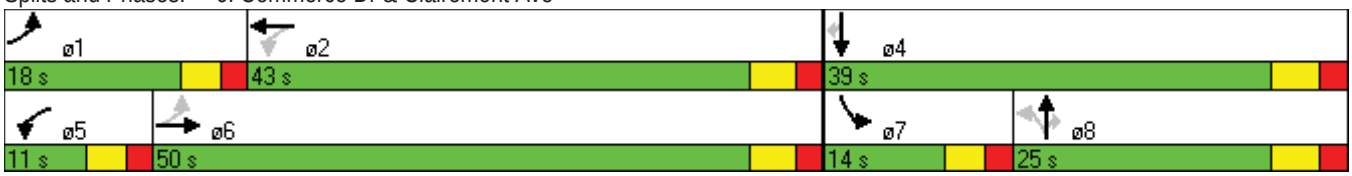
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	331	280	91	598	15	121	23	195	105	400
Lane Group Flow (vph)	345	314	120	1240	26	133	29	257	178	488
Turn Type	pm+pt		pm+pt		Perm		Perm	Prot		Perm
Protected Phases	1	6	5	2		8		7	4	
Permitted Phases	6		2		8		8			4
Detector Phase	1	6	5	2	8	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	18.0	5.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	10.0	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	18.0	50.0	11.0	43.0	25.0	25.0	25.0	14.0	39.0	39.0
Total Split (%)	18.0%	50.0%	11.0%	43.0%	25.0%	25.0%	25.0%	14.0%	39.0%	39.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	1.9	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	5.7	4.9	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	0.99	0.21	0.25	0.98	0.17	0.56	0.13	0.97	0.38	0.73
Control Delay	74.2	8.8	11.7	46.6	38.5	48.4	13.8	94.0	30.7	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.2	8.8	11.7	46.6	38.5	48.4	13.8	94.0	30.7	19.9
Queue Length 50th (ft)	178	55	29	341	15	81	0	85	92	118
Queue Length 95th (ft)	m#393	m45	51	#503	24	134	19	#125	87	177
Internal Link Dist (ft)		204		351		415			525	
Turn Bay Length (ft)	135		120		250		250	210		100
Base Capacity (vph)	349	1500	479	1264	201	311	288	266	538	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.21	0.25	0.98	0.13	0.43	0.10	0.97	0.33	0.67

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	280	12	91	598	478	15	121	23	195	105	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1593	3161		1593	2961		1540	1621	1378	2987	1621	1615
Flt Permitted	0.09	1.00		0.56	1.00		0.64	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	159	3161		941	2961		1045	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.96	0.94	0.75	0.76	0.91	0.82	0.58	0.91	0.79	0.76	0.59	0.82
Adj. Flow (vph)	345	298	16	120	657	583	26	133	29	257	178	488
RTOR Reduction (vph)	0	4	0	0	161	0	0	0	25	0	0	202
Lane Group Flow (vph)	345	310	0	120	1079	0	26	133	4	257	178	286
Turn Type	pm+pt			pm+pt			Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2			8		8			4
Actuated Green, G (s)	59.8	47.3		44.9	37.3		14.7	14.7	14.7	8.9	28.7	28.7
Effective Green, g (s)	59.8	47.3		44.9	37.3		14.7	14.7	14.7	8.9	28.7	28.7
Actuated g/C Ratio	0.60	0.47		0.45	0.37		0.15	0.15	0.15	0.09	0.29	0.29
Clearance Time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	347	1495		472	1104		154	238	203	266	465	464
v/s Ratio Prot	c0.17	0.10		0.02	0.36			0.08		c0.09	0.11	
v/s Ratio Perm	c0.42			0.09			0.02		0.00			c0.18
v/c Ratio	0.99	0.21		0.25	0.98		0.17	0.56	0.02	0.97	0.38	0.62
Uniform Delay, d1	30.9	15.4		16.4	30.9		37.3	39.6	36.5	45.4	28.6	30.9
Progression Factor	1.08	0.54		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	44.0	0.3		0.3	22.3		0.6	3.1	0.0	45.4	0.6	2.6
Delay (s)	77.5	8.6		16.7	53.2		37.9	42.7	36.5	90.8	29.2	33.4
Level of Service	E	A		B	D		D	D	D	F	C	C
Approach Delay (s)		44.7			50.0			41.1			48.6	
Approach LOS		D			D			D			D	

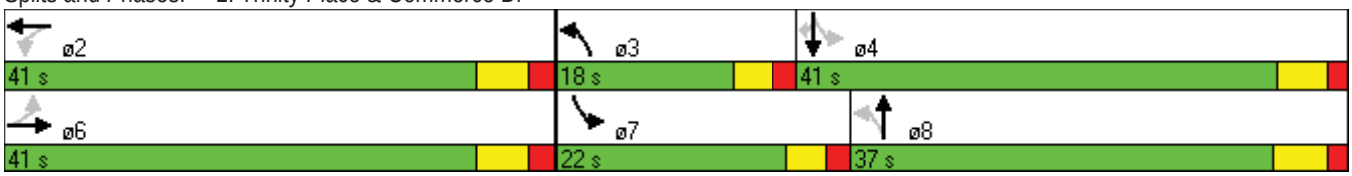
Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	27	268	76	151	49	433	333	396	43
Lane Group Flow (vph)	42	363	99	601	64	579	366	471	51
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	41.0	41.0	41.0	41.0	18.0	37.0	22.0	41.0	41.0
Total Split (%)	41.0%	41.0%	41.0%	41.0%	18.0%	37.0%	22.0%	41.0%	41.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.68	0.67	0.47	1.05	0.19	1.19	1.15	0.69	0.10
Control Delay	80.6	33.8	34.4	77.9	13.6	138.0	119.2	30.3	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
Total Delay	80.6	33.8	34.4	77.9	13.6	138.0	119.2	31.4	4.1
Queue Length 50th (ft)	23	187	49	~365	19	~446	~224	278	6
Queue Length 95th (ft)	#50	292	83	#476	33	#657	#396	366	7
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	62	542	210	573	412	485	319	682	527
Starvation Cap Reductn	0	0	0	0	0	0	0	70	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.67	0.47	1.05	0.16	1.19	1.15	0.77	0.10

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 7 (7%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	268	62	76	151	340	49	433	73	333	396	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.90		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1521		1486	1403		1486	1523		1486	1565	1144
Flt Permitted	0.11	1.00		0.38	1.00		0.43	1.00		0.11	1.00	1.00
Satd. Flow (perm)	178	1521		597	1403		670	1523		171	1565	1144
Peak-hour factor, PHF	0.65	0.91	0.91	0.77	0.81	0.82	0.77	0.91	0.71	0.91	0.84	0.85
Adj. Flow (vph)	42	295	68	99	186	415	64	476	103	366	471	51
RTOR Reduction (vph)	0	8	0	0	80	0	0	8	0	0	0	29
Lane Group Flow (vph)	42	355	0	99	521	0	64	571	0	366	471	22
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	35.1	35.1		35.1	35.1		37.7	31.4		53.7	42.6	42.6
Effective Green, g (s)	35.1	35.1		35.1	35.1		37.7	31.4		53.7	42.6	42.6
Actuated g/C Ratio	0.35	0.35		0.35	0.35		0.38	0.31		0.54	0.43	0.43
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	62	534		210	492		304	478		318	667	487
v/s Ratio Prot		0.23			c0.37		0.01	0.38		c0.20	0.30	
v/s Ratio Perm	0.24			0.17			0.07			c0.42		0.02
v/c Ratio	0.68	0.66		0.47	1.06		0.21	1.20		1.15	0.71	0.04
Uniform Delay, d1	27.6	27.5		25.2	32.5		20.4	34.3		30.1	23.6	16.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.79	1.00	0.67
Incremental Delay, d2	46.2	6.4		7.4	56.8		0.3	106.9		96.6	5.9	0.2
Delay (s)	73.9	33.9		32.6	89.2		20.6	141.2		120.3	29.5	11.4
Level of Service	E	C		C	F		C	F		F	C	B
Approach Delay (s)		38.0			81.2			129.2			65.9	
Approach LOS		D			F			F			E	

Intersection Summary			
HCM Average Control Delay	81.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.7
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		

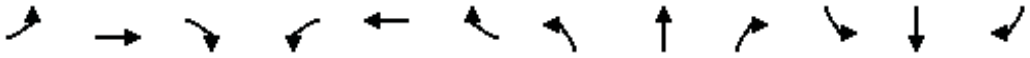
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	83	4	72	49	5	22	729	56	669
Lane Group Flow (vph)	0	117	106	65	106	37	842	75	788
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.68	0.36	0.34	0.35	0.10	0.43	0.21	0.40
Control Delay		57.8	13.0	39.0	12.0	6.8	8.4	4.8	4.1
Queue Delay		3.6	0.0	0.0	0.5	0.0	1.1	0.0	0.5
Total Delay		61.4	13.0	39.0	12.5	6.8	9.5	4.8	4.6
Queue Length 50th (ft)		71	9	37	7	8	140	6	35
Queue Length 95th (ft)		60	25	58	0	m8	m121	m23	205
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		274	415	311	425	381	1979	357	1976
Starvation Cap Reductn		0	0	0	0	0	840	0	684
Spillback Cap Reductn		91	5	0	121	0	33	0	154
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.64	0.26	0.21	0.35	0.10	0.74	0.21	0.61

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 11 (11%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

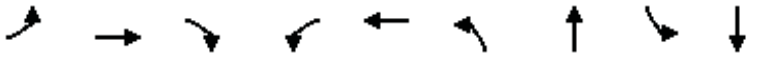
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	4	72	49	5	82	22	729	32	56	669	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442	1282	1593	1308		1486	2745		1486	2741	
Flt Permitted		0.67	1.00	0.68	1.00		0.34	1.00		0.32	1.00	
Satd. Flow (perm)		1004	1282	1138	1308		529	2745		496	2741	
Peak-hour factor, PHF	0.76	0.50	0.68	0.75	0.42	0.87	0.59	0.91	0.78	0.75	0.90	0.80
Adj. Flow (vph)	109	8	106	65	12	94	37	801	41	75	743	45
RTOR Reduction (vph)	0	0	75	0	78	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	117	31	65	28	0	37	839	0	75	785	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		17.0	17.0	17.0	17.0		72.0	72.0		72.0	72.0	
Effective Green, g (s)		17.0	17.0	17.0	17.0		72.0	72.0		72.0	72.0	
Actuated g/C Ratio		0.17	0.17	0.17	0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		171	218	193	222		381	1976		357	1974	
v/s Ratio Prot					0.02			c0.31			0.29	
v/s Ratio Perm		c0.12	0.02	0.06			0.07			0.15		
v/c Ratio		0.68	0.14	0.34	0.13		0.10	0.42		0.21	0.40	
Uniform Delay, d1		39.0	35.3	36.5	35.2		4.2	5.6		4.6	5.5	
Progression Factor		1.00	1.00	1.00	1.00		1.12	1.28		0.57	0.58	
Incremental Delay, d2		10.8	0.3	1.0	0.3		0.0	0.1		1.0	0.5	
Delay (s)		49.7	35.6	37.6	35.5		4.8	7.3		3.7	3.7	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		43.0			36.3			7.2			3.7	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



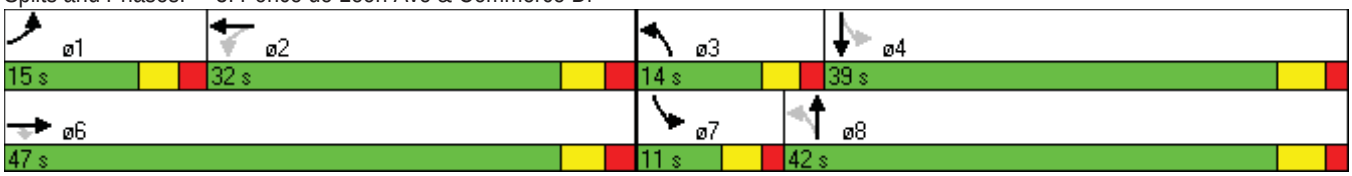
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	213	269	120	112	253	140	649	24	536
Lane Group Flow (vph)	242	292	126	129	325	169	937	32	899
Turn Type	Prot		Perm	Perm		pm+pt		pm+pt	
Protected Phases	1	6			2	3	8	7	4
Permitted Phases			6	2		8		4	
Detector Phase	1	6	6	2	2	3	8	7	4
Switch Phase									
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	5.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	10.0	23.4
Total Split (s)	15.0	47.0	47.0	32.0	32.0	14.0	42.0	11.0	39.0
Total Split (%)	15.0%	47.0%	47.0%	32.0%	32.0%	14.0%	42.0%	11.0%	39.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.0	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.7	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	4.7	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	Min	Min	None	C-Min	None	C-Min
v/c Ratio	0.79	0.48	0.22	0.61	0.90	0.70	0.72	0.14	0.81
Control Delay	63.2	25.8	6.6	46.7	63.8	35.8	20.7	11.0	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	63.2	25.8	6.6	46.7	63.8	35.8	21.2	11.0	28.3
Queue Length 50th (ft)	79	135	10	72	193	55	146	7	255
Queue Length 95th (ft)	#137	204	45	127	#311	#145	#338	m13	m#327
Internal Link Dist (ft)		243			582		289		438
Turn Bay Length (ft)	120		70	125		140		125	
Base Capacity (vph)	308	671	629	249	425	245	1303	239	1105
Starvation Cap Reductn	0	0	0	0	0	0	106	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.44	0.20	0.52	0.76	0.69	0.78	0.13	0.81

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 61 (61%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

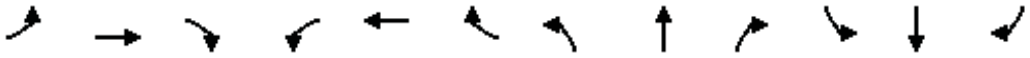
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	269	120	112	253	23	140	649	141	24	536	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	10	10
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	2987	1621	1378	1540	1590		1486	2882		1593	2810	
Flt Permitted	0.95	1.00	1.00	0.58	1.00		0.15	1.00		0.22	1.00	
Satd. Flow (perm)	2987	1621	1378	942	1590		232	2882		369	2810	
Peak-hour factor, PHF	0.88	0.92	0.95	0.87	0.89	0.56	0.83	0.87	0.74	0.75	0.94	0.84
Adj. Flow (vph)	242	292	126	129	284	41	169	746	191	32	570	329
RTOR Reduction (vph)	0	0	63	0	5	0	0	21	0	0	79	0
Lane Group Flow (vph)	242	292	63	129	320	0	169	916	0	32	820	0
Turn Type	Prot		Perm	Perm			pm+pt			pm+pt		
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases			6	2			8			4		
Actuated Green, G (s)	10.3	37.9	37.9	22.5	22.5		51.1	42.6		40.3	36.5	
Effective Green, g (s)	10.3	37.9	37.9	22.5	22.5		51.1	42.6		40.3	36.5	
Actuated g/C Ratio	0.10	0.38	0.38	0.22	0.22		0.51	0.43		0.40	0.36	
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4		4.7	5.4	
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5		3.0	3.5	
Lane Grp Cap (vph)	308	614	522	212	358		243	1228		195	1026	
v/s Ratio Prot	c0.08	0.18			c0.20		c0.07	0.32		0.01	c0.29	
v/s Ratio Perm			0.05	0.14			0.29			0.06		
v/c Ratio	0.79	0.48	0.12	0.61	0.89		0.70	0.75		0.16	0.80	
Uniform Delay, d1	43.8	23.5	20.2	34.8	37.6		17.1	24.2		18.7	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.34	0.70		0.72	0.86	
Incremental Delay, d2	12.0	1.4	0.3	7.8	25.0		7.9	3.9		0.3	5.6	
Delay (s)	55.7	24.9	20.5	42.6	62.6		30.8	20.7		13.7	30.1	
Level of Service	E	C	C	D	E		C	C		B	C	
Approach Delay (s)		35.4			56.9			22.3			29.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.8
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	14	34	3	27	2	874	16	11	783	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.62	0.25	0.50	0.62	0.38	0.64	0.50	0.92	0.50	0.62	0.95	0.50
Hourly flow rate (vph)	8	0	28	55	8	42	4	950	32	18	824	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.79	0.79		0.79	0.79	0.79				0.79		
vC, conflicting volume	1393	1854	416	1450	1842	491	832			982		
vC1, stage 1 conf vol	864	864		974	974							
vC2, stage 2 conf vol	529	990		476	868							
vCu, unblocked vol	978	1558	416	1049	1543	0	832			461		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	100	95	84	97	95	99			98		
cM capacity (veh/h)	293	281	585	347	285	862	796			871		

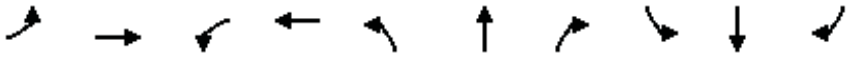
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	36	105	4	633	349	18	549	283
Volume Left	8	55	4	0	0	18	0	0
Volume Right	28	42	0	0	32	0	0	8
cSH	479	447	796	1700	1700	871	1700	1700
Volume to Capacity	0.08	0.23	0.01	0.37	0.21	0.02	0.32	0.17
Queue Length 95th (ft)	6	22	0	0	0	2	0	0
Control Delay (s)	13.1	15.5	9.5	0.0	0.0	9.2	0.0	0.0
Lane LOS	B	C	A			A		
Approach Delay (s)	13.1	15.5	0.0			0.2		
Approach LOS	B	C						

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	877	35	40	756	15	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.56	0.60	0.90	0.44	0.75
Hourly flow rate (vph)	914	62	67	840	34	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			976		1498	488
vC1, stage 1 conf vol					945	
vC2, stage 2 conf vol					553	
vCu, unblocked vol			831		1390	308
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)			2.2		3.5	3.3
p0 queue free %			91		89	93
cM capacity (veh/h)			744		311	642

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	609	367	67	420	420	82
Volume Left	0	0	67	0	0	34
Volume Right	0	62	0	0	0	48
cSH	1700	1700	744	1700	1700	445
Volume to Capacity	0.36	0.22	0.09	0.25	0.25	0.18
Queue Length 95th (ft)	0	0	7	0	0	17
Control Delay (s)	0.0	0.0	10.3	0.0	0.0	14.9
Lane LOS			B			B
Approach Delay (s)	0.0		0.8			14.9
Approach LOS						B

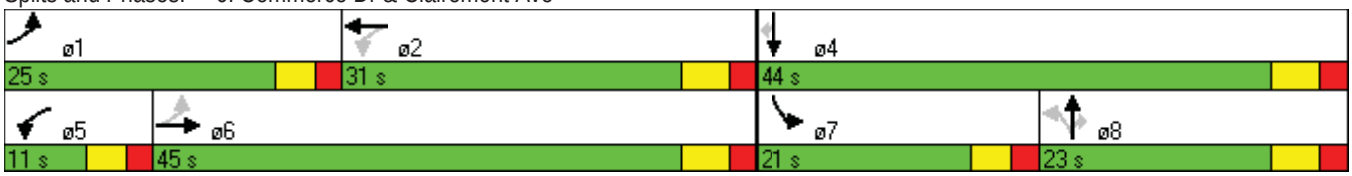
Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	393	584	89	409	29	149	108	491	165	345
Lane Group Flow (vph)	485	686	107	814	42	207	148	571	258	375
Turn Type	pm+pt		pm+pt		Perm		Perm	Prot		Perm
Protected Phases	1	6	5	2		8		7	4	
Permitted Phases	6		2		8		8			4
Detector Phase	1	6	5	2	8	8	8	7	4	4
Switch Phase										
Minimum Initial (s)	5.0	18.0	5.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	10.0	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	25.0	45.0	11.0	31.0	23.0	23.0	23.0	21.0	44.0	44.0
Total Split (%)	25.0%	45.0%	11.0%	31.0%	23.0%	23.0%	23.0%	21.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.6	3.0	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	1.9	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.9	5.7	4.9	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	None
v/c Ratio	1.19	0.56	0.41	0.94	0.27	0.80	0.43	1.11	0.41	0.44
Control Delay	132.7	15.7	20.3	48.0	41.1	62.7	10.4	113.9	25.2	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.7	15.7	20.3	48.0	41.1	62.7	10.4	113.9	25.2	4.0
Queue Length 50th (ft)	~325	123	34	207	23	127	0	~229	119	0
Queue Length 95th (ft)	#441	160	58	#323	42	158	27	#313	124	57
Internal Link Dist (ft)		204		351		415			525	
Turn Bay Length (ft)	135		120		250		250	210		100
Base Capacity (vph)	407	1244	263	900	167	279	359	514	623	852
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.19	0.55	0.41	0.90	0.25	0.74	0.41	1.11	0.41	0.44

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 9 (9%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	584	31	89	409	310	29	149	108	491	165	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1593	3155		1593	2971		1540	1621	1378	2987	1621	1615
Flt Permitted	0.14	1.00		0.39	1.00		0.60	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	232	3155		655	2971		972	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.81	0.91	0.70	0.83	0.91	0.85	0.69	0.72	0.73	0.86	0.64	0.92
Adj. Flow (vph)	485	642	44	107	449	365	42	207	148	571	258	375
RTOR Reduction (vph)	0	5	0	0	150	0	0	0	124	0	0	231
Lane Group Flow (vph)	485	681	0	107	664	0	42	207	24	571	258	144
Turn Type	pm+pt			pm+pt			Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2			8		8			4
Actuated Green, G (s)	50.1	38.9		30.3	24.0		16.1	16.1	16.1	17.2	38.4	38.4
Effective Green, g (s)	50.1	38.9		30.3	24.0		16.1	16.1	16.1	17.2	38.4	38.4
Actuated g/C Ratio	0.50	0.39		0.30	0.24		0.16	0.16	0.16	0.17	0.38	0.38
Clearance Time (s)	4.9	5.7		4.9	5.7		5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	405	1227		258	713		156	261	222	514	622	620
v/s Ratio Prot	c0.25	0.22		0.03	0.22			c0.13		c0.19	0.16	
v/s Ratio Perm	c0.35			0.10			0.04		0.02			0.09
v/c Ratio	1.20	0.56		0.41	0.93		0.27	0.79	0.11	1.11	0.41	0.23
Uniform Delay, d1	28.9	23.8		26.0	37.2		36.8	40.3	35.8	41.4	22.6	20.8
Progression Factor	0.99	0.59		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	107.7	1.5		1.1	20.5		1.1	15.5	0.3	73.7	0.5	0.2
Delay (s)	136.5	15.7		27.1	57.6		37.9	55.9	36.1	115.1	23.1	21.1
Level of Service	F	B		C	E		D	E	D	F	C	C
Approach Delay (s)		65.7			54.1			46.6			66.1	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM Average Control Delay	60.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Future (No Build) Bike / Ped Analysis

Bicycle LOS = $a_1 \ln(Vol_{15}/L_n) + a_2 SP_t(1+10.38HV)^2 + a_3(1/PR_S)^2 + a_4(W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
Vol_{15}	Volume of autos and trucks in 15 minute time period traveling in same direction as bicyclists (Base: 12,000)
L_n	Total number of directional through lanes (includes shared through/turn lanes)
SP_p	Posted speed limit (a surrogate for average running speed)
HV	Percentage of heavy vehicles (vehicles with more than four wheels touching the pavement) (Base: 1%)
PR_S	FHWA's five point pavement surface condition rating (Base: 4)
W_l	width of pavement between the outside lane stripe and the edge of pavement (not including the gutter pan)
W_v	Total width of pavement: lane separation striping to the edge of pavement or to the gutter pan (Base: 12')
% OSPA	estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking
W_{ps}	width of pavement striped for on-street parking (recorded only if there is parking to the right of a striped bike lane)
SP_t	Effective speed limit (in miles per hour) = 1.1199 ln(SP_p - 20) + 0.8103
W_e	Average effective width of outside through lane where: $W_l = 0$: $W_e = W_v$ - (10 ft x % OSPA) $W_l > 0$ & $Wp_s = 0$: $W_e = W_v + W_l$ (1 - 2 x % OSPA) $W_l > 0$ & $Wp_s > 0$: $W_e = W_v + W_l$ - 2 (10 x % OSPA)
W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln(W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln(Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

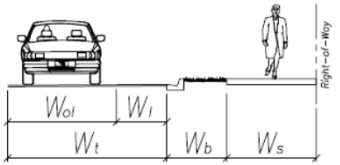
W_{ol}	Width of outside vehicular travel lane, excluding the gutter (in feet)
f_p	On-street parking effect coefficient (= 0.20)
f_b	Buffer area barrier coefficient (= 5.37 for trees spaced 20 feet on center)
W_b	Buffer width (distance between edge of pavement and sidewalk, in feet)
f_{sw}	Sidewalk presence coefficient = $6 - 0.3W_s$
W_s	Width of sidewalk (feet)
SPD	Average running speed of motor vehicle traffic (in miles per hour)

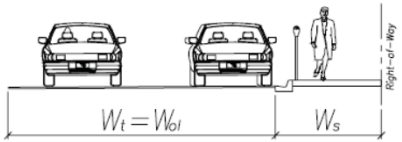
PAVEMENT CONDITION

5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

0	≤	1.5	A
1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
4.5	≤	5.5	E
5.5	-	-	F

a1:	0.507
a2:	0.199
a3:	7.066
a4:	-0.005
C_{BLOS}:	0.76
C_{PLOS}:	5.3876





FUTURE

DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk			Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	2	280	0	0%	4	13	0	0	13	0	0	5	18500	0.02	947	0.91	260	35	10.1	3.9	D	2.8	C
Commerce Dr EB	Site	Clairemont	2	280	0	0%	4	12	0	0	12	0	0	5	18500	0.02	623	0.89	175	35	23.2	3.9	D	5.0	E
Commerce Dr SB	Site	Montgomery	2	560	0	0%	4	13	0	0	13	0	0	5	18500	0.02	928	0.91	255	35	10.1	3.9	D	2.8	C
Commerce Dr NB	Montgomery	Site	2	560	0	0%	4	17	0	0	17	0	0	5	18500	0.02	651	0.89	183	35	23.2	3.2	C	4.8	E
Commerce Dr SB	Montgomery	Ponce	2	480	0	0%	4	11	0	0	11	0	0	5	18500	0.02	918	0.91	252	35	10.1	4.2	D	2.9	C
Commerce Dr NB	Ponce	Montgomery	2	480	210	44%	4	10	0	8	18	0	0	5	18500	0.02	626	0.89	176	35	23.2	3.7	D	4.7	E
Commerce Dr SB	Ponce	Swanton	2	275	220	80%	4	11	0	8	19	0	0	5	18500	0.02	901	0.87	259	35	19.2	4.2	D	3.8	D
Commerce Dr NB	Swanton	Ponce	2	275	0	0%	4	11	0	0	11	5	1	10	18500	0.02	587	0.85	173	35	9.7	4.0	D	1.9	B
Commerce Dr SB	Swanton	Trinity	1	290	220	76%	4	10	0	8	18	0	0	5	18500	0.02	730	0.88	207	35	5.7	4.5	D	2.3	B
Commerce Dr NB	Trinity	Swanton	2	290	220	76%	4	12	0	8	20	0	0	5	18500	0.02	578	0.83	174	35	18.4	3.8	D	3.5	C

Bicycle LOS = $a_1 \ln(Vol_{15}/L_n) + a_2 SP_t(1+10.38HV)^2 + a_3(1/PR_S)^2 + a_4(W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
Vol_{15}	Volume of autos and trucks in 15 minute time period traveling in same direction as bicyclists (Base: 12,000)
L_n	Total number of directional through lanes (includes shared through/turn lanes)
SP_p	Posted speed limit (a surrogate for average running speed)
HV	Percentage of heavy vehicles (vehicles with more than four wheels touching the pavement) (Base: 1%)
PR_S	FHWA's five point pavement surface condition rating (Base: 4)
W_l	width of pavement between the outside lane stripe and the edge of pavement (not including the gutter pan)
W_v	Total width of pavement: lane separation striping to the edge of pavement or to the gutter pan (Base: 12')
% OSPA	estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking
W_{ps}	width of pavement striped for on-street parking (recorded only if there is parking to the right of a striped bike lane)
SP_t	Effective speed limit (in miles per hour) = 1.1199 ln(SP_p - 20) + 0.8103
W_e	Average effective width of outside through lane where: $W_l = 0$: $W_e = W_v$ - (10 ft x % OSPA) $W_l > 0$ & $Wp_s = 0$: $W_e = W_v + W_l$ (1 - 2 x % OSPA) $W_l > 0$ & $Wp_s > 0$: $W_e = W_v + W_l$ - 2 (10 x % OSPA)
W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln(W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln(Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

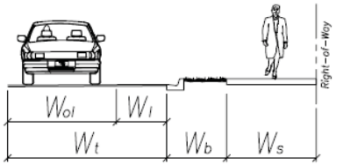
W_{ol}	Width of outside vehicular travel lane, excluding the gutter (in feet)
f_p	On-street parking effect coefficient (= 0.20)
f_b	Buffer area barrier coefficient (= 5.37 for trees spaced 20 feet on center)
W_b	Buffer width (distance between edge of pavement and sidewalk, in feet)
f_{sw}	Sidewalk presence coefficient = $6 - 0.3W_s$
W_s	Width of sidewalk (feet)
SPD	Average running speed of motor vehicle traffic (in miles per hour)

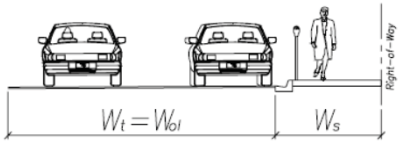
PAVEMENT CONDITION

5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

0	≤	1.5	A
1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
4.5	≤	5.5	E
5.5	-	-	F

a1:	0.507
a2:	0.199
a3:	7.066
a4:	-0.005
C_{BLOS}:	0.76
C_{PLOS}:	5.3876





FUTURE

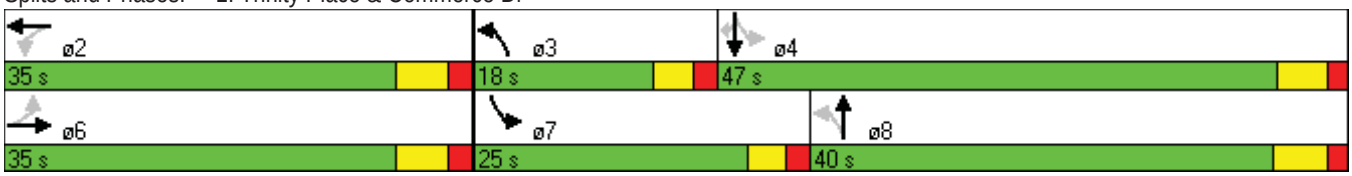
DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk		Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	2	280	0	0%	4	13	0	0	13	0	0	5	18500	0.02	796	0.90	221	35	15.8	3.9	D	3.5	C
Commerce Dr EB	Site	Clairemont	2	280	0	0%	4	12	0	0	12	0	0	5	18500	0.02	1008	0.96	263	35	19.9	4.1	D	4.3	D
Commerce Dr SB	Site	Montgomery	2	560	0	0%	4	13	0	0	13	0	0	5	18500	0.02	798	0.90	222	35	15.8	3.9	D	3.5	C
Commerce Dr NB	Montgomery	Site	2	560	0	0%	4	17	0	0	17	0	0	5	18500	0.02	912	0.96	238	35	19.9	3.3	C	4.2	D
Commerce Dr SB	Montgomery	Ponce	2	480	0	0%	4	11	0	0	11	0	0	5	18500	0.02	836	0.90	232	35	15.8	4.1	D	3.6	D
Commerce Dr NB	Ponce	Montgomery	2	480	210	44%	4	10	0	8	18	0	0	5	18500	0.02	892	0.96	232	35	19.9	3.8	D	4.1	D
Commerce Dr SB	Ponce	Swanton	2	275	220	80%	4	11	0	8	19	0	0	5	18500	0.02	761	0.90	211	35	16.1	4.1	D	3.2	C
Commerce Dr NB	Swanton	Ponce	2	275	0	0%	4	11	0	0	11	5	1	10	18500	0.02	930	0.87	267	35	7.8	4.2	D	1.9	B
Commerce Dr SB	Swanton	Trinity	1	290	220	76%	4	10	0	8	18	0	0	5	18500	0.02	772	0.84	230	35	6	4.5	D	2.3	B
Commerce Dr NB	Trinity	Swanton	2	290	220	76%	4	12	0	8	20	0	0	5	18500	0.02	783	0.91	215	35	12.6	3.9	D	2.7	C

Future (Phase 1) Vehicular Analysis

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	16	181	58	167	79	362	239	414	77
Lane Group Flow (vph)	20	287	74	465	114	584	327	470	151
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	35.0	35.0	35.0	35.0	18.0	40.0	25.0	47.0	47.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	18.0%	40.0%	25.0%	47.0%	47.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.25	0.64	0.38	1.01	0.30	1.07	0.91	0.65	0.25
Control Delay	36.8	36.6	35.1	76.4	12.2	91.6	47.8	25.6	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.0	0.0
Total Delay	36.8	36.6	35.1	76.4	12.2	91.6	49.5	27.6	7.2
Queue Length 50th (ft)	10	150	37	~271	29	~418	179	228	31
Queue Length 95th (ft)	29	216	69	#371	40	#553	167	352	23
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	80	450	197	461	451	545	371	724	610
Starvation Cap Reductn	0	0	0	0	0	0	8	130	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.64	0.38	1.01	0.25	1.07	0.90	0.79	0.25

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 24 (24%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	181	43	58	167	226	79	362	95	239	414	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.92		1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1508		1486	1438		1486	1505		1486	1565	1144
Flt Permitted	0.18	1.00		0.43	1.00		0.45	1.00		0.11	1.00	1.00
Satd. Flow (perm)	275	1508		677	1438		702	1505		176	1565	1144
Peak-hour factor, PHF	0.81	0.83	0.62	0.78	0.78	0.90	0.69	0.83	0.64	0.73	0.88	0.51
Adj. Flow (vph)	20	218	69	74	214	251	114	436	148	327	470	151
RTOR Reduction (vph)	0	11	0	0	43	0	0	12	0	0	0	81
Lane Group Flow (vph)	20	276	0	74	422	0	114	572	0	327	470	70
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	29.1	29.1		29.1	29.1		44.1	35.4		59.7	46.2	46.2
Effective Green, g (s)	29.1	29.1		29.1	29.1		44.1	35.4		59.7	46.2	46.2
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.44	0.35		0.60	0.46	0.46
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	80	439		197	418		378	533		357	723	529
v/s Ratio Prot		0.18			c0.29		0.03	c0.38		c0.18	0.30	
v/s Ratio Perm	0.07			0.11			0.11			0.37		0.06
v/c Ratio	0.25	0.63		0.38	1.01		0.30	1.07		0.92	0.65	0.13
Uniform Delay, d1	27.1	30.8		28.2	35.5		17.0	32.3		27.6	20.7	15.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.73	0.98	2.11
Incremental Delay, d2	7.3	6.7		5.4	46.7		0.3	59.9		26.1	4.2	0.5
Delay (s)	34.4	37.4		33.6	82.2		17.3	92.2		46.1	24.5	33.1
Level of Service	C	D		C	F		B	F		D	C	C
Approach Delay (s)		37.2			75.5			80.0			33.3	
Approach LOS		D			E			E			C	

Intersection Summary			
HCM Average Control Delay	56.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.3
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	25	5	19	18	0	23	503	74	696
Lane Group Flow (vph)	0	49	34	25	33	37	677	107	1001
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.44	0.22	0.21	0.08	0.10	0.30	0.21	0.45
Control Delay		53.9	16.5	43.9	0.4	1.2	1.0	1.7	2.2
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.8
Total Delay		53.9	16.5	43.9	0.4	1.2	1.4	1.7	3.0
Queue Length 50th (ft)		30	0	15	0	0	1	11	52
Queue Length 95th (ft)		43	10	31	0	m4	m50	m5	m21
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		304	375	332	572	357	2252	509	2231
Starvation Cap Reductn		0	0	0	0	0	979	0	828
Spillback Cap Reductn		0	22	19	14	0	129	0	60
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.16	0.10	0.08	0.06	0.10	0.53	0.21	0.71

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 80 (80%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	19	18	0	24	23	503	52	74	696	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.85		1.00	0.98		1.00	0.97	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1448	1282	1593	1282		1486	2721		1486	2689	
Flt Permitted		0.74	1.00	0.73	1.00		0.28	1.00		0.39	1.00	
Satd. Flow (perm)		1113	1282	1216	1282		432	2721		617	2689	
Peak-hour factor, PHF	0.61	0.62	0.56	0.71	0.25	0.72	0.62	0.83	0.73	0.69	0.85	0.72
Adj. Flow (vph)	41	8	34	25	0	33	37	606	71	107	819	182
RTOR Reduction (vph)	0	0	31	0	30	0	0	5	0	0	10	0
Lane Group Flow (vph)	0	49	3	25	3	0	37	672	0	107	991	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		8.6	8.6	8.6	8.6		80.4	80.4		80.4	80.4	
Effective Green, g (s)		8.6	8.6	8.6	8.6		80.4	80.4		80.4	80.4	
Actuated g/C Ratio		0.09	0.09	0.09	0.09		0.80	0.80		0.80	0.80	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		96	110	105	110		347	2188		496	2162	
v/s Ratio Prot					0.00			0.25			c0.37	
v/s Ratio Perm		c0.04	0.00	0.02			0.09			0.17		
v/c Ratio		0.51	0.03	0.24	0.03		0.11	0.31		0.22	0.46	
Uniform Delay, d1		43.7	41.9	42.6	41.9		2.1	2.6		2.3	3.0	
Progression Factor		1.00	1.00	1.00	1.00		0.37	0.35		0.50	0.66	
Incremental Delay, d2		4.5	0.1	1.2	0.1		0.1	0.0		0.1	0.1	
Delay (s)		48.2	42.0	43.8	42.0		0.8	0.9		1.2	2.1	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		45.7			42.8			0.9			2.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	183	193	91	126	260	99	409	79	13	693	212
Lane Group Flow (vph)	251	224	106	143	361	125	470	99	26	797	259
Turn Type	pm+pt		Perm	Perm		pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2	3	8		7	4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	1	6	6	2	2	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	23.4	10.0	23.4	23.4
Total Split (s)	17.0	53.0	53.0	36.0	36.0	11.0	36.0	36.0	11.0	36.0	36.0
Total Split (%)	17.0%	53.0%	53.0%	36.0%	36.0%	11.0%	36.0%	36.0%	11.0%	36.0%	36.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.8	1.7	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	Min	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.86	0.33	0.16	0.56	0.88	0.68	0.71	0.16	0.09	1.45	0.50
Control Delay	47.5	19.8	3.6	40.4	58.0	37.1	27.9	4.1	10.5	236.9	13.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0
Total Delay	47.5	19.8	3.6	40.4	58.0	37.1	29.4	4.1	10.5	236.9	13.9
Queue Length 50th (ft)	104	91	0	78	214	35	223	5	6	~753	88
Queue Length 95th (ft)	118	129	25	132	272	#109	#476	41	m9	m#811	m119
Internal Link Dist (ft)		243			582		289			438	
Turn Bay Length (ft)	120		70	125		140			125		100
Base Capacity (vph)	292	768	708	305	489	183	662	619	300	548	521
Starvation Cap Reductn	0	0	0	0	0	0	73	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.29	0.15	0.47	0.74	0.68	0.80	0.16	0.09	1.45	0.50

Intersection Summary

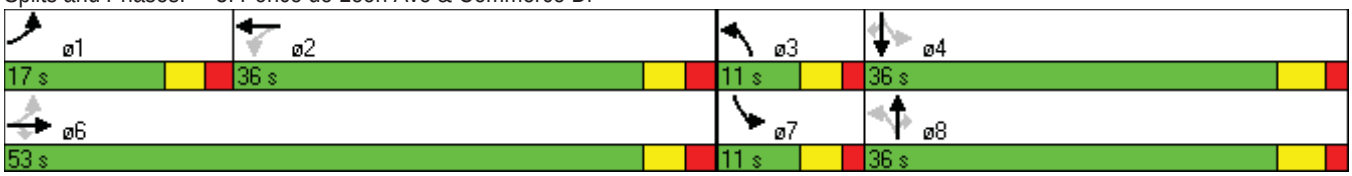
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 70 (70%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

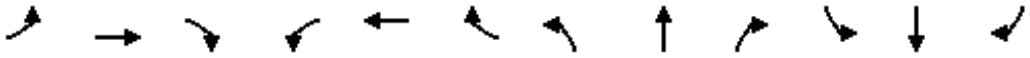
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	183	193	91	126	260	25	99	409	79	13	693	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	11	11
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1621	1378	1540	1591		1486	1565	1330	1593	1621	1378
Flt Permitted	0.22	1.00	1.00	0.62	1.00		0.10	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	354	1621	1378	1002	1591		163	1565	1330	576	1621	1378
Peak-hour factor, PHF	0.73	0.86	0.86	0.88	0.82	0.57	0.79	0.87	0.80	0.50	0.87	0.82
Adj. Flow (vph)	251	224	106	143	317	44	125	470	99	26	797	259
RTOR Reduction (vph)	0	0	61	0	5	0	0	0	60	0	0	56
Lane Group Flow (vph)	251	224	45	143	356	0	125	470	39	26	797	203
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases	6		6	2			8		8	4		4
Actuated Green, G (s)	42.3	42.3	42.3	25.3	25.3		46.7	39.5	39.5	36.3	33.8	33.8
Effective Green, g (s)	42.3	42.3	42.3	25.3	25.3		46.7	39.5	39.5	36.3	33.8	33.8
Actuated g/C Ratio	0.42	0.42	0.42	0.25	0.25		0.47	0.40	0.40	0.36	0.34	0.34
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	291	686	583	254	403		185	618	525	235	548	466
v/s Ratio Prot	c0.10	0.14			0.22		c0.06	0.30		0.00	c0.49	
v/s Ratio Perm	c0.26		0.03	0.14			0.26		0.03	0.04		0.15
v/c Ratio	0.86	0.33	0.08	0.56	0.88		0.68	0.76	0.07	0.11	1.45	0.44
Uniform Delay, d1	22.2	19.3	17.2	32.5	35.9		22.0	26.2	18.9	21.2	33.1	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.73	0.70	0.65	0.61	0.80	0.62
Incremental Delay, d2	22.0	0.7	0.1	5.2	21.4		9.2	8.4	0.3	0.1	210.9	1.9
Delay (s)	44.2	20.0	17.3	37.8	57.4		25.1	26.8	12.5	13.1	237.3	17.8
Level of Service	D	B	B	D	E		C	C	B	B	F	B
Approach Delay (s)		30.0			51.8			24.4			179.4	
Approach LOS		C			D			C			F	

Intersection Summary			
HCM Average Control Delay	89.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	3	19	0	12	11	593	22	11	914	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.38	0.42	0.25	0.38	0.55	0.90	0.75	0.38	0.86	0.75
Hourly flow rate (vph)	0	0	8	45	0	32	20	659	29	29	1063	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.83	0.83	0.67	0.83	0.83	0.68	0.67			0.68		
vC, conflicting volume	1853	1851	1065	1842	1838	674	1067			688		
vC1, stage 1 conf vol	1123	1123		714	714							
vC2, stage 2 conf vol	730	728		1129	1125							
vCu, unblocked vol	1064	1061	849	1051	1046	289	852			311		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	97	74	100	94	96			97		
cM capacity (veh/h)	198	215	241	172	196	512	526			853		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	8	77	20	688	29	1067
Volume Left	0	45	20	0	29	0
Volume Right	8	32	0	29	0	4
cSH	241	237	526	1700	853	1700
Volume to Capacity	0.03	0.32	0.04	0.40	0.03	0.63
Queue Length 95th (ft)	3	34	3	0	3	0
Control Delay (s)	20.4	27.3	12.1	0.0	9.4	0.0
Lane LOS	C	D	B		A	
Approach Delay (s)	20.4	27.3	0.3		0.2	
Approach LOS	C	D				

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	629	22	39	908	16	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.56	0.71	0.91	0.50	0.50
Hourly flow rate (vph)	707	39	55	998	32	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.78		0.75	0.78
vC, conflicting volume			746		1834	726
vC1, stage 1 conf vol					726	
vC2, stage 2 conf vol					1108	
vCu, unblocked vol			532		1282	506
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			93		86	93
cM capacity (veh/h)			807		226	441

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	746	55	998	64
Volume Left	0	55	0	32
Volume Right	39	0	0	32
cSH	1700	807	1700	299
Volume to Capacity	0.44	0.07	0.59	0.21
Queue Length 95th (ft)	0	5	0	20
Control Delay (s)	0.0	9.8	0.0	20.3
Lane LOS		A		C
Approach Delay (s)	0.0	0.5		20.3
Approach LOS				C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	280	12	91	598	478	15	121	23	195	105	400
Lane Group Flow (vph)	345	298	16	120	657	583	26	133	29	257	178	488
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Detector Phase	1	6	6	5	2	2	8	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	18.0	18.0	5.0	18.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	24.7	10.0	24.7	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	18.0	50.0	50.0	11.0	43.0	43.0	25.0	25.0	25.0	14.0	39.0	39.0
Total Split (%)	18.0%	50.0%	50.0%	11.0%	43.0%	43.0%	25.0%	25.0%	25.0%	14.0%	39.0%	39.0%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	2.1	1.9	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (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
Total Lost Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	1.22	0.42	0.03	0.25	1.05	0.69	0.19	0.56	0.13	0.69	0.34	0.68
Control Delay	149.7	15.4	2.3	12.7	82.3	8.6	39.5	48.4	13.8	53.6	27.7	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	149.7	15.4	2.3	12.7	82.3	8.6	39.5	48.4	13.8	53.6	27.7	17.2
Queue Length 50th (ft)	~236	134	2	34	~459	30	15	81	0	80	85	107
Queue Length 95th (ft)	m#376	m133	m0	51	#676	81	24	134	19	#125	87	177
Internal Link Dist (ft)		204			351			415			525	
Turn Bay Length (ft)	135			120			250		250	210		100
Base Capacity (vph)	283	702	606	472	625	851	178	311	288	373	538	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.42	0.03	0.25	1.05	0.69	0.15	0.43	0.10	0.69	0.33	0.67

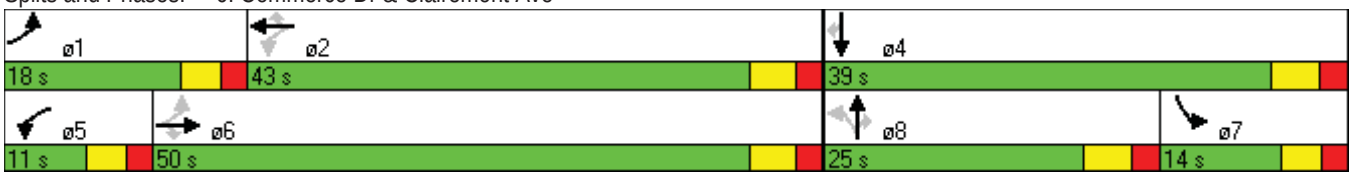
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 12 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	280	12	91	598	478	15	121	23	195	105	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1565	1330	1593	1676	1425	1540	1621	1378	2987	1621	1615
Flt Permitted	0.09	1.00	1.00	0.58	1.00	1.00	0.57	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	154	1565	1330	969	1676	1425	929	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.96	0.94	0.75	0.76	0.91	0.82	0.58	0.91	0.79	0.76	0.59	0.82
Adj. Flow (vph)	345	298	16	120	657	583	26	133	29	257	178	488
RTOR Reduction (vph)	0	0	9	0	0	320	0	0	25	0	0	192
Lane Group Flow (vph)	345	298	7	120	657	263	26	133	4	257	178	296
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Actuated Green, G (s)	56.2	44.8	44.8	43.8	37.3	37.3	14.7	14.7	14.7	12.5	32.3	32.3
Effective Green, g (s)	56.2	44.8	44.8	43.8	37.3	37.3	14.7	14.7	14.7	12.5	32.3	32.3
Actuated g/C Ratio	0.56	0.45	0.45	0.44	0.37	0.37	0.15	0.15	0.15	0.12	0.32	0.32
Clearance Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	281	701	596	465	625	532	137	238	203	373	524	522
v/s Ratio Prot	c0.17	0.19		0.02	0.39			0.08		c0.09	0.11	
v/s Ratio Perm	c0.52		0.01	0.10		0.18	0.03		0.00			c0.18
v/c Ratio	1.23	0.43	0.01	0.26	1.05	0.49	0.19	0.56	0.02	0.69	0.34	0.57
Uniform Delay, d1	30.5	18.8	15.3	17.1	31.4	24.1	37.4	39.6	36.5	41.9	25.7	28.1
Progression Factor	1.07	0.72	0.31	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	124.2	1.4	0.0	0.3	50.2	3.3	0.8	3.1	0.0	5.2	0.5	1.5
Delay (s)	156.8	15.0	4.8	17.4	81.5	27.4	38.2	42.7	36.5	47.1	26.2	29.6
Level of Service	F	B	A	B	F	C	D	D	D	D	C	C
Approach Delay (s)		89.0			52.7			41.2			33.8	
Approach LOS		F			D			D			C	

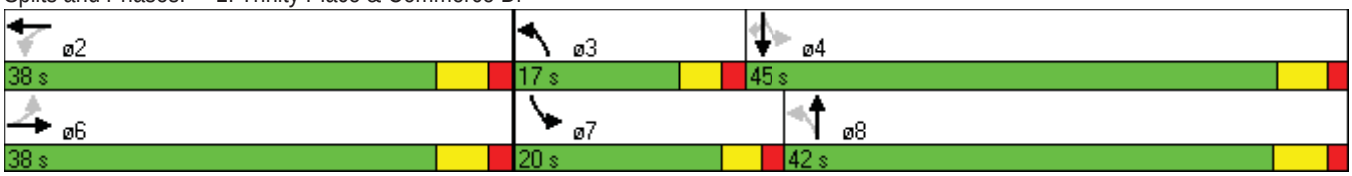
Intersection Summary			
HCM Average Control Delay	54.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	27	268	76	151	49	433	333	396	43
Lane Group Flow (vph)	42	363	99	601	64	579	366	471	51
Turn Type	Perm		Perm		pm+pt		pm+pt		Perm
Protected Phases		6		2	3	8	7	4	
Permitted Phases	6		2		8		4		4
Detector Phase	6	6	2	2	3	8	7	4	4
Switch Phase									
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6	21.6
Total Split (s)	38.0	38.0	38.0	38.0	17.0	42.0	20.0	45.0	45.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	17.0%	42.0%	20.0%	45.0%	45.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3	5.3
Lead/Lag					Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min	C-Min
v/c Ratio	0.67	0.73	0.56	1.13	0.18	1.03	1.17	0.64	0.09
Control Delay	79.8	39.3	42.2	108.9	11.7	78.2	138.5	14.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
Total Delay	79.8	39.3	42.2	108.9	11.7	78.2	138.5	14.9	1.4
Queue Length 50th (ft)	23	198	52	~394	17	~393	~225	128	0
Queue Length 95th (ft)	#50	308	90	#506	30	#604	#414	144	3
Internal Link Dist (ft)		395		562		241		289	
Turn Bay Length (ft)	50		450		66		140		
Base Capacity (vph)	63	496	178	530	429	562	312	731	562
Starvation Cap Reductn	0	0	0	0	0	0	0	77	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.73	0.56	1.13	0.15	1.03	1.17	0.72	0.09

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 73 (73%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Trinity Place & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	268	62	76	151	340	49	433	73	333	396	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.97		1.00	0.90		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1486	1521		1486	1403		1486	1523		1486	1565	1144
Flt Permitted	0.12	1.00		0.35	1.00		0.43	1.00		0.13	1.00	1.00
Satd. Flow (perm)	195	1521		554	1403		667	1523		204	1565	1144
Peak-hour factor, PHF	0.65	0.91	0.91	0.77	0.81	0.82	0.77	0.91	0.71	0.91	0.84	0.85
Adj. Flow (vph)	42	295	68	99	186	415	64	476	103	366	471	51
RTOR Reduction (vph)	0	8	0	0	80	0	0	8	0	0	0	28
Lane Group Flow (vph)	42	355	0	99	521	0	64	571	0	366	471	23
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		Perm
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		4
Actuated Green, G (s)	32.1	32.1		32.1	32.1		42.6	36.4		56.7	45.7	45.7
Effective Green, g (s)	32.1	32.1		32.1	32.1		42.6	36.4		56.7	45.7	45.7
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.43	0.36		0.57	0.46	0.46
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	5.3
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	5.0
Lane Grp Cap (vph)	63	488		178	450		335	554		311	715	523
v/s Ratio Prot		0.23			c0.37		0.01	0.38		c0.18	0.30	
v/s Ratio Perm	0.22			0.18			0.07			c0.49		0.02
v/c Ratio	0.67	0.73		0.56	1.16		0.19	1.03		1.18	0.66	0.04
Uniform Delay, d1	29.3	30.1		28.1	34.0		17.3	31.8		26.9	21.1	15.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.60	0.45	0.22
Incremental Delay, d2	44.1	9.1		12.0	93.2		0.2	46.5		106.8	4.5	0.2
Delay (s)	73.5	39.2		40.0	127.2		17.6	78.3		149.7	13.9	3.4
Level of Service	E	D		D	F		B	E		F	B	A
Approach Delay (s)		42.8			114.9			72.3			69.3	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	78.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.7
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		

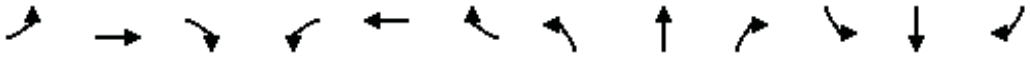
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	83	4	72	49	5	22	729	56	669
Lane Group Flow (vph)	0	117	106	65	106	37	842	75	788
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	33.0	33.0	33.0	33.0	33.0	67.0	67.0	67.0	67.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	67.0%	67.0%	67.0%	67.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.68	0.36	0.34	0.35	0.10	0.43	0.21	0.40
Control Delay		57.8	13.0	39.0	12.0	6.3	6.7	4.7	4.5
Queue Delay		1.0	0.0	0.0	0.2	0.0	0.6	0.0	0.6
Total Delay		58.8	13.0	39.0	12.1	6.3	7.4	4.7	5.0
Queue Length 50th (ft)		71	9	37	7	9	125	10	56
Queue Length 95th (ft)		60	25	58	0	m5	m64	m7	m61
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		274	415	311	425	381	1979	357	1976
Starvation Cap Reductn		0	0	0	0	0	704	0	735
Spillback Cap Reductn		45	0	0	63	0	74	0	0
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.51	0.26	0.21	0.29	0.10	0.66	0.21	0.63

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 4 (4%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 50
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	4	72	49	5	82	22	729	32	56	669	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85	1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442	1282	1593	1308		1486	2745		1486	2741	
Flt Permitted		0.67	1.00	0.68	1.00		0.34	1.00		0.32	1.00	
Satd. Flow (perm)		1004	1282	1138	1308		529	2745		496	2741	
Peak-hour factor, PHF	0.76	0.50	0.68	0.75	0.42	0.87	0.59	0.91	0.78	0.75	0.90	0.80
Adj. Flow (vph)	109	8	106	65	12	94	37	801	41	75	743	45
RTOR Reduction (vph)	0	0	75	0	78	0	0	3	0	0	3	0
Lane Group Flow (vph)	0	117	31	65	28	0	37	839	0	75	785	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		17.0	17.0	17.0	17.0		72.0	72.0		72.0	72.0	
Effective Green, g (s)		17.0	17.0	17.0	17.0		72.0	72.0		72.0	72.0	
Actuated g/C Ratio		0.17	0.17	0.17	0.17		0.72	0.72		0.72	0.72	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		171	218	193	222		381	1976		357	1974	
v/s Ratio Prot					0.02			c0.31			0.29	
v/s Ratio Perm		c0.12	0.02	0.06			0.07			0.15		
v/c Ratio		0.68	0.14	0.34	0.13		0.10	0.42		0.21	0.40	
Uniform Delay, d1		39.0	35.3	36.5	35.2		4.2	5.6		4.6	5.5	
Progression Factor		1.00	1.00	1.00	1.00		1.04	1.03		0.59	0.65	
Incremental Delay, d2		10.8	0.3	1.0	0.3		0.0	0.1		0.9	0.4	
Delay (s)		49.7	35.6	37.6	35.5		4.4	5.9		3.6	3.9	
Level of Service		D	D	D	D		A	A		A	A	
Approach Delay (s)		43.0			36.3			5.8			3.9	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	213	269	120	112	253	140	649	141	24	536	276
Lane Group Flow (vph)	242	292	126	129	325	169	746	191	32	570	329
Turn Type	pm+pt		Perm	Perm		pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2	3	8		7	4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	1	6	6	2	2	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	23.4	10.0	23.4	23.4
Total Split (s)	15.0	47.0	47.0	32.0	32.0	14.0	42.0	42.0	11.0	39.0	39.0
Total Split (%)	15.0%	47.0%	47.0%	32.0%	32.0%	14.0%	42.0%	42.0%	11.0%	39.0%	39.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.8	1.7	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	Min	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.95	0.48	0.22	0.61	0.90	0.70	1.06	0.28	0.19	0.96	0.54
Control Delay	71.1	26.1	6.6	46.7	63.8	38.6	82.3	7.3	11.2	48.7	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.1	26.1	6.6	46.7	63.8	38.6	82.3	7.3	11.2	48.7	6.9
Queue Length 50th (ft)	108	135	10	72	193	57	~595	12	5	~403	34
Queue Length 95th (ft)	#226	204	45	127	#311	#129	#786	34	m9	m#502	m46
Internal Link Dist (ft)		243			582		289			438	
Turn Bay Length (ft)	120		70	125		140			125		100
Base Capacity (vph)	255	671	629	249	425	241	702	685	170	594	604
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.44	0.20	0.52	0.76	0.70	1.06	0.28	0.19	0.96	0.54

Intersection Summary

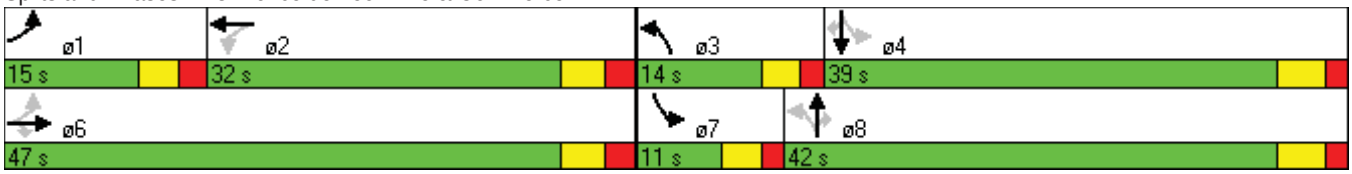
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 63 (63%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

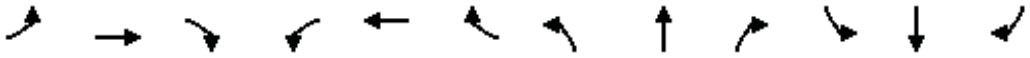
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	269	120	112	253	23	140	649	141	24	536	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	11	11
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1621	1378	1540	1590		1486	1565	1330	1593	1621	1378
Flt Permitted	0.23	1.00	1.00	0.58	1.00		0.14	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	365	1621	1378	942	1590		215	1565	1330	183	1621	1378
Peak-hour factor, PHF	0.88	0.92	0.95	0.87	0.89	0.56	0.83	0.87	0.74	0.75	0.94	0.84
Adj. Flow (vph)	242	292	126	129	284	41	169	746	191	32	570	329
RTOR Reduction (vph)	0	0	63	0	5	0	0	0	91	0	0	99
Lane Group Flow (vph)	242	292	63	129	320	0	169	746	100	32	570	230
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases	6		6	2			8		8	4		4
Actuated Green, G (s)	37.5	37.5	37.5	22.5	22.5		51.5	43.0	43.0	40.4	36.6	36.6
Effective Green, g (s)	37.5	37.5	37.5	22.5	22.5		51.5	43.0	43.0	40.4	36.6	36.6
Actuated g/C Ratio	0.38	0.38	0.38	0.22	0.22		0.52	0.43	0.43	0.40	0.37	0.37
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	253	608	517	212	358		240	673	572	128	593	504
v/s Ratio Prot	c0.09	0.18			0.20		c0.07	c0.48		0.01	0.35	
v/s Ratio Perm	c0.26		0.05	0.14			0.29		0.08	0.09		0.17
v/c Ratio	0.96	0.48	0.12	0.61	0.89		0.70	1.11	0.17	0.25	0.96	0.46
Uniform Delay, d1	27.2	23.8	20.5	34.8	37.6		18.7	28.5	17.6	22.4	31.0	24.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.44	1.05	1.14	0.66	0.66	0.30
Incremental Delay, d2	44.2	1.5	0.3	7.8	25.0		8.6	67.5	0.6	0.8	24.6	2.3
Delay (s)	71.4	25.3	20.7	42.6	62.6		35.5	97.4	20.7	15.6	45.0	9.5
Level of Service	E	C	C	D	E		D	F	C	B	D	A
Approach Delay (s)		41.3			56.9			74.7			31.4	
Approach LOS		D			E			E			C	

Intersection Summary			
HCM Average Control Delay	52.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	14	34	3	27	2	874	16	11	783	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.62	0.25	0.50	0.62	0.38	0.64	0.50	0.92	0.50	0.62	0.95	0.50
Hourly flow rate (vph)	8	0	28	55	8	42	4	950	32	18	824	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.61	0.61	0.78	0.61	0.61	0.50	0.78			0.50		
vC, conflicting volume	1868	1854	828	1862	1842	966	832			982		
vC1, stage 1 conf vol	864	864		974	974							
vC2, stage 2 conf vol	1004	990		888	868							
vCu, unblocked vol	1285	1262	637	1275	1242	424	642			456		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	92	75	97	87	99			97		
cM capacity (veh/h)	184	219	371	216	232	313	734			548		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	36	105	4	982	18	832
Volume Left	8	55	4	0	18	0
Volume Right	28	42	0	32	0	8
cSH	303	248	734	1700	548	1700
Volume to Capacity	0.12	0.42	0.01	0.58	0.03	0.49
Queue Length 95th (ft)	10	50	0	0	3	0
Control Delay (s)	18.5	29.8	9.9	0.0	11.8	0.0
Lane LOS	C	D	A		B	
Approach Delay (s)	18.5	29.8	0.0		0.2	
Approach LOS	C	D				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	877	35	40	756	15	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.56	0.60	0.90	0.44	0.75
Hourly flow rate (vph)	914	62	67	840	34	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.57		0.69	0.57
vC, conflicting volume			976		1918	945
vC1, stage 1 conf vol					945	
vC2, stage 2 conf vol					973	
vCu, unblocked vol			576		1310	521
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			88		86	85
cM capacity (veh/h)			566		238	315

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	976	67	840	82
Volume Left	0	67	0	34
Volume Right	62	0	0	48
cSH	1700	566	1700	278
Volume to Capacity	0.57	0.12	0.49	0.30
Queue Length 95th (ft)	0	10	0	30
Control Delay (s)	0.0	12.2	0.0	23.3
Lane LOS		B		C
Approach Delay (s)	0.0	0.9		23.3
Approach LOS				C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	584	31	89	409	310	29	149	108	491	165	345
Lane Group Flow (vph)	485	642	44	107	449	365	42	207	148	571	258	375
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Detector Phase	1	6	6	5	2	2	8	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	18.0	18.0	5.0	18.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	24.7	10.0	24.7	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	25.0	45.0	45.0	11.0	31.0	31.0	23.0	23.0	23.0	21.0	44.0	44.0
Total Split (%)	25.0%	45.0%	45.0%	11.0%	31.0%	31.0%	23.0%	23.0%	23.0%	21.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	2.1	1.9	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (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
Total Lost Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	1.29	1.04	0.08	0.59	1.06	0.58	0.38	0.80	0.43	1.12	0.42	0.44
Control Delay	166.0	70.4	3.8	30.6	97.7	7.4	47.3	62.7	10.4	117.5	25.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.0	70.4	3.8	30.6	97.7	7.4	47.3	62.7	10.4	117.5	25.3	4.0
Queue Length 50th (ft)	~344	~453	4	34	~316	0	24	127	0	~229	119	0
Queue Length 95th (ft)	m#361	m#498	m6	58	#507	55	44	158	27	#313	124	57
Internal Link Dist (ft)		204			351			415			525	
Turn Bay Length (ft)	135			120			250		250	210		100
Base Capacity (vph)	376	615	549	180	424	633	120	279	359	509	619	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.29	1.04	0.08	0.59	1.06	0.58	0.35	0.74	0.41	1.12	0.42	0.44

Intersection Summary

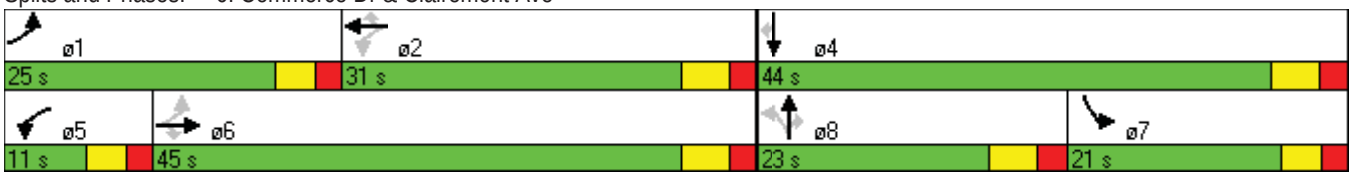
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 27 (27%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	584	31	89	409	310	29	149	108	491	165	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1565	1330	1593	1676	1425	1540	1621	1378	2987	1621	1615
Flt Permitted	0.13	1.00	1.00	0.19	1.00	1.00	0.43	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	215	1565	1330	317	1676	1425	698	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.81	0.91	0.70	0.83	0.91	0.85	0.69	0.72	0.73	0.86	0.64	0.92
Adj. Flow (vph)	485	642	44	107	449	365	42	207	148	571	258	375
RTOR Reduction (vph)	0	0	27	0	0	273	0	0	124	0	0	232
Lane Group Flow (vph)	485	642	17	107	449	92	42	207	24	571	258	143
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Actuated Green, G (s)	50.3	39.3	39.3	31.4	25.3	25.3	16.1	16.1	16.1	17.0	38.2	38.2
Effective Green, g (s)	50.3	39.3	39.3	31.4	25.3	25.3	16.1	16.1	16.1	17.0	38.2	38.2
Actuated g/C Ratio	0.50	0.39	0.39	0.31	0.25	0.25	0.16	0.16	0.16	0.17	0.38	0.38
Clearance Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	374	615	523	177	424	361	112	261	222	508	619	617
v/s Ratio Prot	c0.26	0.41		0.04	0.27			c0.13		c0.19	0.16	
v/s Ratio Perm	c0.39		0.01	0.15		0.06	0.06		0.02			0.09
v/c Ratio	1.30	1.04	0.03	0.60	1.06	0.26	0.38	0.79	0.11	1.12	0.42	0.23
Uniform Delay, d1	29.1	30.4	18.7	26.4	37.4	29.8	37.5	40.3	35.8	41.5	22.7	21.0
Progression Factor	0.77	0.93	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	145.7	40.9	0.1	5.7	60.2	1.7	2.5	15.5	0.3	78.6	0.5	0.2
Delay (s)	168.0	69.1	11.3	32.1	97.5	31.5	39.9	55.9	36.1	120.1	23.3	21.2
Level of Service	F	E	B	C	F	C	D	E	D	F	C	C
Approach Delay (s)		107.9			63.8			46.8			68.5	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM Average Control Delay	77.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Future (Phase 1) Bike / Ped Analysis

Bicycle LOS = $a_1 \ln (Vol_{15}/L_n) + a_2 SP_t (1+10.38HV)^2 + a_3 (1/PR_S)^2 + a_4 (W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
Vol_{15}	Volume of autos and trucks in 15 minute time period traveling in same direction as bicyclists (Base: 12,000)
L_n	Total number of directional through lanes (includes shared through/turn lanes)
SP_p	Posted speed limit (a surrogate for average running speed)
HV	Percentage of heavy vehicles (vehicles with more than four wheels touching the pavement) (Base: 1%)
PR_S	FHWA's five point pavement surface condition rating (Base: 4)
W_l	width of pavement between the outside lane stripe and the edge of pavement (not including the gutter pan)
W_v	Total width of pavement: lane separation striping to the edge of pavement or to the gutter pan (Base: 12')
% OSPA	estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking
W_{ps}	width of pavement striped for on-street parking (recorded only if there is parking to the right of a striped bike lane)
SP_t	Effective speed limit (in miles per hour) = 1.1199 ln(SP_p - 20) + 0.8103
W_e	Average effective width of outside through lane where: $W_l = 0$: $W_e = W_v$ - (10 ft x % OSPA) $W_l > 0$ & $Wp_s = 0$: $W_e = W_v + W_l$ (1 - 2 x % OSPA) $W_l > 0$ & $Wp_s > 0$: $W_e = W_v + W_l$ - 2 (10 x % OSPA)
W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln (W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln (Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

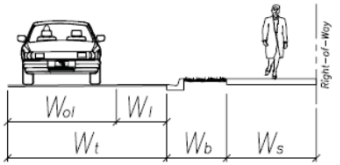
W_{ol}	Width of outside vehicular travel lane, excluding the gutter (in feet)
f_p	On-street parking effect coefficient (= 0.20)
f_b	Buffer area barrier coefficient (= 5.37 for trees spaced 20 feet on center)
W_b	Buffer width (distance between edge of pavement and sidewalk, in feet)
f_{sw}	Sidewalk presence coefficient = 6 – 0.3W_s
W_s	Width of sidewalk (feet)
SPD	Average running speed of motor vehicle traffic (in miles per hour)

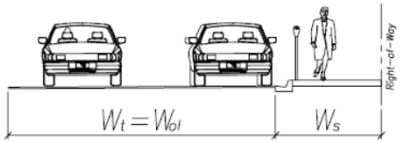
PAVEMENT CONDITION

5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

0	≤	1.5	A
1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
4.5	≤	5.5	E
5.5	-	-	F

a1:	0.507
a2:	0.199
a3:	7.066
a4:	-0.005
C_{BLOS}:	0.76
C_{PLOS}:	5.3876





FUTURE

DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk			Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	947	0.91	260	35	3.6	2.5	B	2.4	B
Commerce Dr EB	Site	Clairemont	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	623	0.89	175	35	20	2.3	B	4.3	D
Commerce Dr SB	Site	Montgomery	1	560	0	0%	4	11	6	0	17	0	0	5	18500	0.02	928	0.91	255	35	3.6	2.5	B	2.4	B
Commerce Dr NB	Montgomery	Site	1	560	0	0%	4	11	6	0	17	5	1	15	18500	0.02	651	0.89	183	35	20	2.3	B	3.7	D
Commerce Dr SB	Montgomery	Ponce	1	480	0	0%	4	11	6	0	17	0	0	5	18500	0.02	918	0.91	252	35	3.6	2.5	B	2.4	B
Commerce Dr NB	Ponce	Montgomery	1	480	210	44%	4	11	6	8	25	0	0	5	18500	0.02	626	0.89	176	35	20	2.5	B	4.0	D
Commerce Dr SB	Ponce	Swanton	2	275	220	80%	4	11	0	8	19	0	0	5	18500	0.02	901	0.87	259	35	18.4	4.2	D	3.6	D
Commerce Dr NB	Swanton	Ponce	2	275	0	0%	4	11	0	0	11	5	1	10	18500	0.02	587	0.85	173	35	6.4	4.0	D	1.7	B
Commerce Dr SB	Swanton	Trinity	2	290	220	76%	4	10	0	8	18	0	0	5	18500	0.02	730	0.88	207	35	6.8	4.1	D	2.1	B
Commerce Dr NB	Trinity	Swanton	2	290	220	76%	4	12	0	8	20	0	0	5	18500	0.02	578	0.83	174	35	20.1	3.8	D	3.8	D

Bicycle LOS = $a_1 \ln(Vol_{15}/L_n) + a_2 SP_t(1+10.38HV)^2 + a_3(1/PR_S)^2 + a_4(W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
Vol_{15}	Volume of autos and trucks in 15 minute time period traveling in same direction as bicyclists (Base: 12,000)
L_n	Total number of directional through lanes (includes shared through/turn lanes)
SP_p	Posted speed limit (a surrogate for average running speed)
HV	Percentage of heavy vehicles (vehicles with more than four wheels touching the pavement) (Base: 1%)
PR_S	FHWA's five point pavement surface condition rating (Base: 4)
W_l	width of pavement between the outside lane stripe and the edge of pavement (not including the gutter pan)
W_v	Total width of pavement: lane separation striping to the edge of pavement or to the gutter pan (Base: 12')
% OSPA	estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking
W_{ps}	width of pavement striped for on-street parking (recorded only if there is parking to the right of a striped bike lane)
SP_t	Effective speed limit (in miles per hour) = 1.1199 ln(SP_p - 20) + 0.8103
W_e	Average effective width of outside through lane where: $W_l = 0$: $W_e = W_v$ - (10 ft x % OSPA) $W_l > 0$ & $Wp_s = 0$: $W_e = W_v + W_l$ (1 - 2 x % OSPA) $W_l > 0$ & $Wp_s > 0$: $W_e = W_v + W_l$ - 2 (10 x % OSPA)
W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln(W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln(Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

W_{ol}	Width of outside vehicular travel lane, excluding the gutter (in feet)
f_p	On-street parking effect coefficient (= 0.20)
f_b	Buffer area barrier coefficient (= 5.37 for trees spaced 20 feet on center)
W_b	Buffer width (distance between edge of pavement and sidewalk, in feet)
f_{sw}	Sidewalk presence coefficient = $6 - 0.3W_s$
W_s	Width of sidewalk (feet)
SPD	Average running speed of motor vehicle traffic (in miles per hour)

PAVEMENT CONDITION

5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

0	≤	1.5	A
1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
4.5	≤	5.5	E
5.5	-	-	F

a1:	0.507
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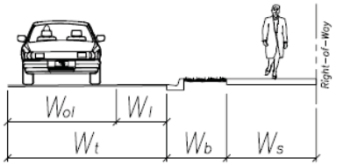
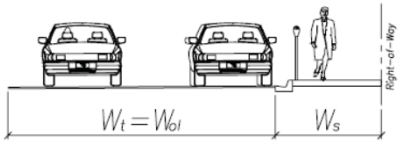
C_{BLOS}:	0.76
C_{PLOS}:	5.3876

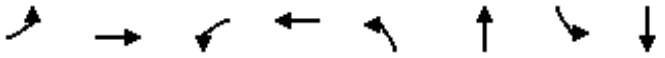




FUTURE

DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk		Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	796	0.90	221	35	11.8	2.4	B	3.0	C
Commerce Dr EB	Site	Clairemont	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	1008	0.96	263	35	9.3	2.5	B	2.8	C
Commerce Dr SB	Site	Montgomery	1	560	0	0%	4	11	6	0	17	0	0	5	18500	0.02	798	0.90	222	35	11.8	2.4	B	3.0	C
Commerce Dr NB	Montgomery	Site	1	560	0	0%	4	11	6	0	17	5	1	15	18500	0.02	912	0.96	238	35	9.3	2.4	B	2.2	B
Commerce Dr SB	Montgomery	Ponce	1	480	0	0%	4	11	6	0	17	0	0	5	18500	0.02	836	0.90	232	35	11.8	2.4	B	3.0	C
Commerce Dr NB	Ponce	Montgomery	1	480	210	44%	4	11	6	8	25	0	0	5	18500	0.02	892	0.96	232	35	9.3	2.6	C	2.5	B
Commerce Dr SB	Ponce	Swanton	2	275	220	80%	4	11	0	8	19	0	0	5	18500	0.02	761	0.90	211	35	15.7	4.1	D	3.1	C
Commerce Dr NB	Swanton	Ponce	2	275	0	0%	4	11	0	0	11	5	1	10	18500	0.02	930	0.87	267	35	2.7	4.2	D	1.6	B
Commerce Dr SB	Swanton	Trinity	2	290	220	76%	4	10	0	8	18	0	0	5	18500	0.02	772	0.84	230	35	9.8	4.2	D	2.4	B
Commerce Dr NB	Trinity	Swanton	2	290	220	76%	4	12	0	8	20	0	0	5	18500	0.02	783	0.91	215	35	13.8	3.9	D	2.8	C

Future (Phase 2) Vehicular Analysis



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	16	181	58	167	79	362	239	414
Lane Group Flow (vph)	20	287	74	465	114	584	327	621
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		6		2	3	8	7	4
Permitted Phases	6		2		8		4	
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6
Total Split (s)	35.0	35.0	35.0	35.0	12.0	44.0	21.0	53.0
Total Split (%)	35.0%	35.0%	35.0%	35.0%	12.0%	44.0%	21.0%	53.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min
v/c Ratio	0.25	0.64	0.38	1.01	0.41	0.99	0.95	0.85
Control Delay	36.8	36.6	35.1	76.4	14.6	65.7	51.6	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	42.0
Total Delay	36.8	36.6	35.1	76.4	14.6	65.7	51.6	76.1
Queue Length 50th (ft)	10	150	37	~271	29	355	164	278
Queue Length 95th (ft)	29	216	69	#371	40	#511	m#194	m345
Internal Link Dist (ft)		395		562		241		289
Turn Bay Length (ft)	50		450		66		140	
Base Capacity (vph)	80	450	197	461	279	590	344	732
Starvation Cap Reductn	0	0	0	0	0	0	0	157
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.64	0.38	1.01	0.41	0.99	0.95	1.08

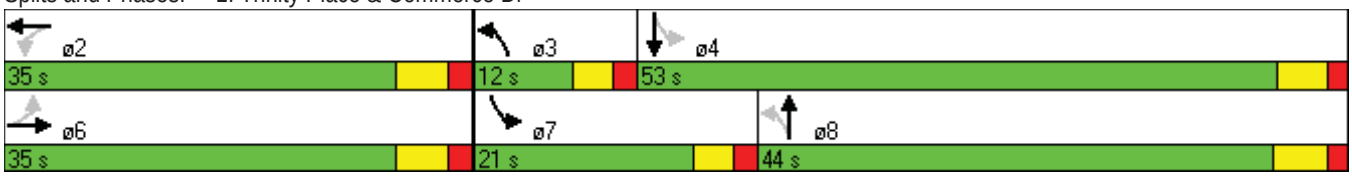
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 60 (60%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

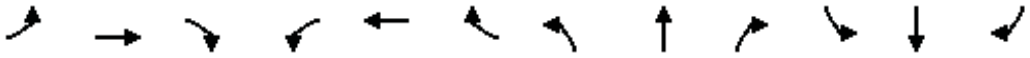
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trinity Place & Commerce Dr





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	181	43	58	167	226	79	362	95	239	414	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.92		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1486	1508		1486	1438		1486	1505		1486	1508	
Flt Permitted	0.18	1.00		0.43	1.00		0.28	1.00		0.15	1.00	
Satd. Flow (perm)	275	1508		677	1438		440	1505		235	1508	
Peak-hour factor, PHF	0.81	0.83	0.62	0.78	0.78	0.90	0.69	0.83	0.64	0.73	0.88	0.51
Adj. Flow (vph)	20	218	69	74	214	251	114	436	148	327	470	151
RTOR Reduction (vph)	0	11	0	0	43	0	0	12	0	0	12	0
Lane Group Flow (vph)	20	276	0	74	422	0	114	572	0	327	609	0
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	29.1	29.1		29.1	29.1		45.6	38.4		59.7	47.7	
Effective Green, g (s)	29.1	29.1		29.1	29.1		45.6	38.4		59.7	47.7	
Actuated g/C Ratio	0.29	0.29		0.29	0.29		0.46	0.38		0.60	0.48	
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	
Lane Grp Cap (vph)	80	439		197	418		276	578		343	719	
v/s Ratio Prot		0.18			c0.29		0.03	0.38		c0.15	0.40	
v/s Ratio Perm	0.07			0.11			0.16			c0.41		
v/c Ratio	0.25	0.63		0.38	1.01		0.41	0.99		0.95	0.85	
Uniform Delay, d1	27.1	30.8		28.2	35.5		17.1	30.6		24.1	23.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.23	1.16	
Incremental Delay, d2	7.3	6.7		5.4	46.7		0.7	34.9		25.3	7.1	
Delay (s)	34.4	37.4		33.6	82.2		17.8	65.4		54.8	33.8	
Level of Service	C	D		C	F		B	E		D	C	
Approach Delay (s)		37.2			75.5			57.7			41.1	
Approach LOS		D			E			E			D	

Intersection Summary			
HCM Average Control Delay	52.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.7
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	25	5	19	18	0	23	503	74	696
Lane Group Flow (vph)	0	49	34	25	33	37	677	107	1001
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	22.0	22.0	22.0	22.0	22.0	78.0	78.0	78.0	78.0
Total Split (%)	22.0%	22.0%	22.0%	22.0%	22.0%	78.0%	78.0%	78.0%	78.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.43	0.21	0.20	0.07	0.13	0.62	0.22	0.92
Control Delay		53.1	16.4	43.6	0.3	0.6	1.2	1.3	21.0
Queue Delay		0.0	0.5	0.6	0.0	0.0	1.5	0.0	43.1
Total Delay		53.1	16.8	44.1	0.3	0.6	2.7	1.3	64.1
Queue Length 50th (ft)		30	0	15	0	1	7	7	319
Queue Length 95th (ft)		43	10	31	0	m1	m8	m6	m158
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		182	237	198	520	294	1094	482	1084
Starvation Cap Reductn		0	0	0	0	0	235	0	169
Spillback Cap Reductn		0	73	66	29	0	105	0	112
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		0.27	0.21	0.19	0.07	0.13	0.79	0.22	1.09

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 67 (67%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	5	19	18	0	24	23	503	52	74	696	131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	0.85		1.00	0.98		1.00	0.97	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1448	1282	1593	1282		1486	1324		1486	1309	
Flt Permitted		0.74	1.00	0.73	1.00		0.23	1.00		0.37	1.00	
Satd. Flow (perm)		1113	1282	1216	1282		356	1324		585	1309	
Peak-hour factor, PHF	0.61	0.62	0.56	0.71	0.25	0.72	0.62	0.83	0.73	0.69	0.85	0.72
Adj. Flow (vph)	41	8	34	25	0	33	37	606	71	107	819	182
RTOR Reduction (vph)	0	0	31	0	30	0	0	3	0	0	6	0
Lane Group Flow (vph)	0	49	3	25	3	0	37	674	0	107	995	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		8.8	8.8	8.8	8.8		80.2	80.2		80.2	80.2	
Effective Green, g (s)		8.8	8.8	8.8	8.8		80.2	80.2		80.2	80.2	
Actuated g/C Ratio		0.09	0.09	0.09	0.09		0.80	0.80		0.80	0.80	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		98	113	107	113		286	1062		469	1050	
v/s Ratio Prot					0.00			0.51			c0.76	
v/s Ratio Perm		c0.04	0.00	0.02			0.10			0.18		
v/c Ratio		0.50	0.03	0.23	0.03		0.13	0.63		0.23	0.95	
Uniform Delay, d1		43.5	41.7	42.5	41.7		2.2	4.0		2.4	8.2	
Progression Factor		1.00	1.00	1.00	1.00		0.11	0.09		0.36	2.05	
Incremental Delay, d2		4.0	0.1	1.1	0.1		0.3	0.9		0.1	2.5	
Delay (s)		47.5	41.8	43.6	41.8		0.5	1.2		1.0	19.3	
Level of Service		D	D	D	D		A	A		A	B	
Approach Delay (s)		45.1			42.6			1.2			17.5	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	84.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	183	193	91	126	260	99	409	79	13	693	212
Lane Group Flow (vph)	251	224	106	143	361	125	470	99	26	797	259
Turn Type	pm+pt		Perm	Perm		pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2	3	8		7	4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	1	6	6	2	2	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	23.4	10.0	23.4	23.4
Total Split (s)	17.0	53.0	53.0	36.0	36.0	10.0	37.0	37.0	10.0	37.0	37.0
Total Split (%)	17.0%	53.0%	53.0%	36.0%	36.0%	10.0%	37.0%	37.0%	10.0%	37.0%	37.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.8	1.7	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	Min	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.86	0.33	0.16	0.56	0.88	0.70	0.70	0.17	0.09	1.45	0.49
Control Delay	47.5	19.8	3.6	40.4	58.0	43.3	31.1	12.4	15.5	237.8	21.5
Queue Delay	0.0	0.0	0.1	2.2	0.0	0.0	3.0	0.0	0.0	28.2	0.0
Total Delay	47.5	19.8	3.7	42.5	58.0	43.3	34.1	12.4	15.5	266.0	21.5
Queue Length 50th (ft)	104	91	0	78	214	35	186	11	10	~745	117
Queue Length 95th (ft)	118	129	25	132	272	#125	#475	39	m13	m#818	m103
Internal Link Dist (ft)		243			582		289			438	
Turn Bay Length (ft)	120		70	125		140		75	125		100
Base Capacity (vph)	292	768	708	305	489	179	668	593	293	551	525
Starvation Cap Reductn	0	0	0	0	0	0	111	0	0	0	0
Spillback Cap Reductn	0	0	183	74	0	0	0	0	0	23	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.29	0.20	0.62	0.74	0.70	0.84	0.17	0.09	1.51	0.49

Intersection Summary

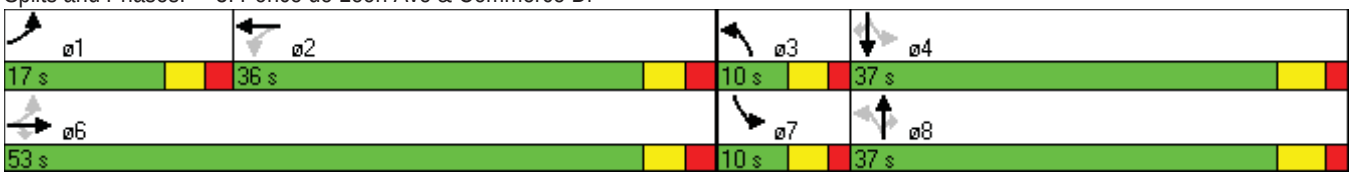
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 88 (88%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

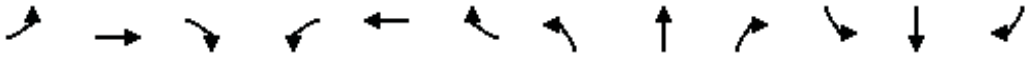
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	183	193	91	126	260	25	99	409	79	13	693	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	11	11
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1621	1378	1540	1591		1486	1565	1330	1593	1621	1378
Flt Permitted	0.22	1.00	1.00	0.62	1.00		0.10	1.00	1.00	0.35	1.00	1.00
Satd. Flow (perm)	354	1621	1378	1002	1591		162	1565	1330	586	1621	1378
Peak-hour factor, PHF	0.73	0.86	0.86	0.88	0.82	0.57	0.79	0.87	0.80	0.50	0.87	0.82
Adj. Flow (vph)	251	224	106	143	317	44	125	470	99	26	797	259
RTOR Reduction (vph)	0	0	61	0	5	0	0	0	26	0	0	57
Lane Group Flow (vph)	251	224	45	143	356	0	125	470	73	26	797	202
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases	6		6	2			8		8	4		4
Actuated Green, G (s)	42.3	42.3	42.3	25.3	25.3		46.7	39.9	39.9	36.1	34.0	34.0
Effective Green, g (s)	42.3	42.3	42.3	25.3	25.3		46.7	39.9	39.9	36.1	34.0	34.0
Actuated g/C Ratio	0.42	0.42	0.42	0.25	0.25		0.47	0.40	0.40	0.36	0.34	0.34
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	291	686	583	254	403		182	624	531	233	551	469
v/s Ratio Prot	c0.10	0.14			0.22		c0.06	0.30		0.00	c0.49	
v/s Ratio Perm	c0.26		0.03	0.14			0.27		0.05	0.04		0.15
v/c Ratio	0.86	0.33	0.08	0.56	0.88		0.69	0.75	0.14	0.11	1.45	0.43
Uniform Delay, d1	22.2	19.3	17.2	32.5	35.9		22.1	25.8	19.1	21.3	33.0	25.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.13	0.91	0.87	0.91	1.09	1.05
Incremental Delay, d2	22.0	0.7	0.1	5.2	21.4		8.7	6.9	0.4	0.1	207.4	1.8
Delay (s)	44.2	20.0	17.3	37.8	57.4		33.6	30.5	17.1	19.4	243.2	28.7
Level of Service	D	B	B	D	E		C	C	B	B	F	C
Approach Delay (s)		30.0			51.8			29.2			186.5	
Approach LOS		C			D			C			F	

Intersection Summary			
HCM Average Control Delay	92.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	3	19	0	12	11	593	22	11	914	3
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.25	0.25	0.38	0.42	0.25	0.38	0.55	0.90	0.75	0.38	0.86	0.75
Hourly flow rate (vph)	0	0	8	45	0	32	20	659	29	29	1063	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.83	0.83	0.67	0.83	0.83	0.68	0.67			0.68		
vC, conflicting volume	1853	1851	1065	1842	1838	674	1067			688		
vC1, stage 1 conf vol	1123	1123		714	714							
vC2, stage 2 conf vol	730	728		1129	1125							
vCu, unblocked vol	1068	1065	849	1055	1050	292	852			314		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	97	74	100	94	96			97		
cM capacity (veh/h)	198	215	241	172	196	511	526			853		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	8	77	20	688	29	1067
Volume Left	0	45	20	0	29	0
Volume Right	8	32	0	29	0	4
cSH	241	237	526	1700	853	1700
Volume to Capacity	0.03	0.32	0.04	0.40	0.03	0.63
Queue Length 95th (ft)	3	34	3	0	3	0
Control Delay (s)	20.4	27.3	12.1	0.0	9.4	0.0
Lane LOS	C	D	B		A	
Approach Delay (s)	20.4	27.3	0.3		0.2	
Approach LOS	C	D				

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	69.0%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	629	22	39	908	16	16
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.56	0.71	0.91	0.50	0.50
Hourly flow rate (vph)	707	39	55	998	32	32
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.78		0.75	0.78
vC, conflicting volume			746		1834	726
vC1, stage 1 conf vol					726	
vC2, stage 2 conf vol					1108	
vCu, unblocked vol			534		1287	509
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			93		86	93
cM capacity (veh/h)			807		226	440

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	746	55	998	64
Volume Left	0	55	0	32
Volume Right	39	0	0	32
cSH	1700	807	1700	299
Volume to Capacity	0.44	0.07	0.59	0.21
Queue Length 95th (ft)	0	5	0	20
Control Delay (s)	0.0	9.8	0.0	20.3
Lane LOS		A		C
Approach Delay (s)	0.0	0.5		20.3
Approach LOS				C

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	63.1%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	280	12	91	598	478	15	121	23	195	105	400
Lane Group Flow (vph)	345	298	16	120	657	583	26	133	29	257	178	488
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Detector Phase	1	6	6	5	2	2	8	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	18.0	18.0	5.0	18.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	24.7	10.0	24.7	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	18.0	50.0	50.0	11.0	43.0	43.0	25.0	25.0	25.0	14.0	39.0	39.0
Total Split (%)	18.0%	50.0%	50.0%	11.0%	43.0%	43.0%	25.0%	25.0%	25.0%	14.0%	39.0%	39.0%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	2.1	1.9	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (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
Total Lost Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	1.22	0.42	0.03	0.25	1.05	0.69	0.19	0.56	0.13	0.69	0.34	0.68
Control Delay	152.8	18.7	6.4	12.7	82.3	8.6	39.5	48.4	13.8	53.6	27.7	17.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	152.8	18.7	6.4	12.7	82.3	8.6	39.5	48.4	13.8	53.6	27.7	17.2
Queue Length 50th (ft)	~229	116	0	34	~459	30	15	81	0	80	85	107
Queue Length 95th (ft)	m#397	m116	m1	51	#676	81	24	134	19	#125	87	177
Internal Link Dist (ft)		204			351			415			525	
Turn Bay Length (ft)	135			120			250		250	210		100
Base Capacity (vph)	283	702	606	472	625	851	178	311	288	373	538	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.22	0.42	0.03	0.25	1.05	0.69	0.15	0.43	0.10	0.69	0.33	0.67

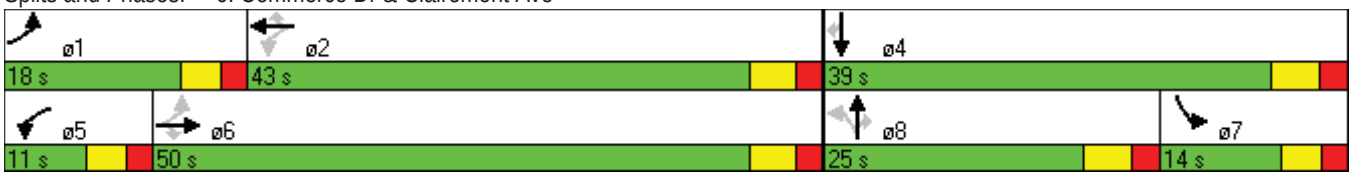
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 12 (12%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

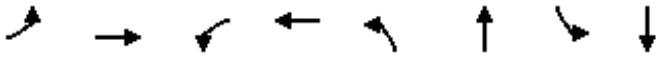
Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	280	12	91	598	478	15	121	23	195	105	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1565	1330	1593	1676	1425	1540	1621	1378	2987	1621	1615
Flt Permitted	0.09	1.00	1.00	0.58	1.00	1.00	0.57	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	154	1565	1330	969	1676	1425	929	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.96	0.94	0.75	0.76	0.91	0.82	0.58	0.91	0.79	0.76	0.59	0.82
Adj. Flow (vph)	345	298	16	120	657	583	26	133	29	257	178	488
RTOR Reduction (vph)	0	0	9	0	0	320	0	0	25	0	0	192
Lane Group Flow (vph)	345	298	7	120	657	263	26	133	4	257	178	296
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Actuated Green, G (s)	56.2	44.8	44.8	43.8	37.3	37.3	14.7	14.7	14.7	12.5	32.3	32.3
Effective Green, g (s)	56.2	44.8	44.8	43.8	37.3	37.3	14.7	14.7	14.7	12.5	32.3	32.3
Actuated g/C Ratio	0.56	0.45	0.45	0.44	0.37	0.37	0.15	0.15	0.15	0.12	0.32	0.32
Clearance Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	281	701	596	465	625	532	137	238	203	373	524	522
v/s Ratio Prot	c0.17	0.19		0.02	0.39			0.08		c0.09	0.11	
v/s Ratio Perm	c0.52		0.01	0.10		0.18	0.03		0.00			c0.18
v/c Ratio	1.23	0.43	0.01	0.26	1.05	0.49	0.19	0.56	0.02	0.69	0.34	0.57
Uniform Delay, d1	30.5	18.8	15.3	17.1	31.4	24.1	37.4	39.6	36.5	41.9	25.7	28.1
Progression Factor	1.27	0.88	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	124.3	1.4	0.0	0.3	50.2	3.3	0.8	3.1	0.0	5.2	0.5	1.5
Delay (s)	163.1	18.1	13.3	17.4	81.5	27.4	38.2	42.7	36.5	47.1	26.2	29.6
Level of Service	F	B	B	B	F	C	D	D	D	D	C	C
Approach Delay (s)		93.9			52.7			41.2			33.8	
Approach LOS		F			D			D			C	

Intersection Summary			
HCM Average Control Delay	55.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	27	268	76	151	49	433	333	396
Lane Group Flow (vph)	42	363	99	601	64	579	366	522
Turn Type	Perm		Perm		pm+pt		pm+pt	
Protected Phases		6		2	3	8	7	4
Permitted Phases	6		2		8		4	
Detector Phase	6	6	2	2	3	8	7	4
Switch Phase								
Minimum Initial (s)	12.0	12.0	12.0	12.0	7.0	20.0	7.0	5.0
Minimum Split (s)	21.9	21.9	21.9	21.9	12.0	25.9	12.0	21.6
Total Split (s)	38.0	38.0	38.0	38.0	12.0	42.0	20.0	50.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	12.0%	42.0%	20.0%	50.0%
Yellow Time (s)	3.9	3.9	3.9	3.9	3.0	3.9	3.0	3.6
All-Red Time (s)	2.0	2.0	2.0	2.0	1.8	1.7	1.8	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.9	4.8	5.6	4.8	5.3
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	Max	Max	Max	Max	None	C-Min	None	C-Min
v/c Ratio	0.67	0.73	0.56	1.13	0.20	1.03	1.17	0.71
Control Delay	79.8	39.3	42.2	108.9	12.1	78.2	129.4	23.9
Queue Delay	0.0	0.0	0.0	1.8	0.0	24.0	0.0	5.2
Total Delay	79.8	39.3	42.2	110.7	12.1	102.2	129.4	29.1
Queue Length 50th (ft)	23	198	52	~394	17	~393	~217	202
Queue Length 95th (ft)	#50	308	90	#506	30	#604	m#364	333
Internal Link Dist (ft)		395		562		241		289
Turn Bay Length (ft)	50		450		66		140	
Base Capacity (vph)	63	496	178	530	327	562	312	731
Starvation Cap Reductn	0	0	0	0	0	0	0	149
Spillback Cap Reductn	0	0	0	2	0	34	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.73	0.56	1.14	0.20	1.10	1.17	0.90

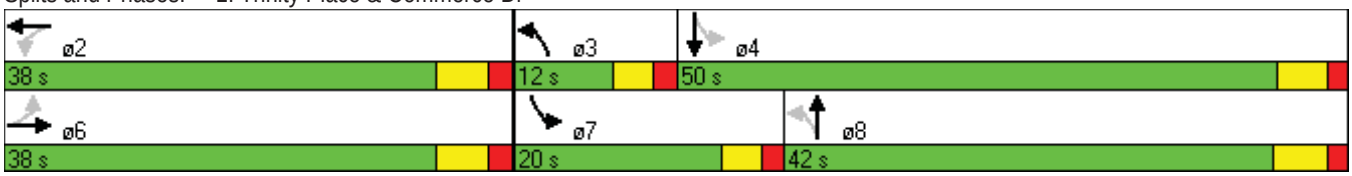
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 67 (67%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

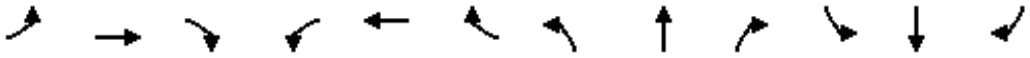
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Trinity Place & Commerce Dr





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	268	62	76	151	340	49	433	73	333	396	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.90		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1486	1521		1486	1403		1486	1523		1486	1542	
Flt Permitted	0.12	1.00		0.35	1.00		0.38	1.00		0.13	1.00	
Satd. Flow (perm)	195	1521		554	1403		591	1523		204	1542	
Peak-hour factor, PHF	0.65	0.91	0.91	0.77	0.81	0.82	0.77	0.91	0.71	0.91	0.84	0.85
Adj. Flow (vph)	42	295	68	99	186	415	64	476	103	366	471	51
RTOR Reduction (vph)	0	8	0	0	80	0	0	8	0	0	4	0
Lane Group Flow (vph)	42	355	0	99	521	0	64	571	0	366	518	0
Parking (#/hr)												8
Turn Type	Perm			Perm			pm+pt			pm+pt		
Protected Phases		6			2		3	8		7	4	
Permitted Phases	6			2			8			4		
Actuated Green, G (s)	32.1	32.1		32.1	32.1		42.1	36.4		56.7	46.2	
Effective Green, g (s)	32.1	32.1		32.1	32.1		42.1	36.4		56.7	46.2	
Actuated g/C Ratio	0.32	0.32		0.32	0.32		0.42	0.36		0.57	0.46	
Clearance Time (s)	5.9	5.9		5.9	5.9		4.8	5.6		4.8	5.3	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		2.5	1.5		2.5	5.0	
Lane Grp Cap (vph)	63	488		178	450		300	554		311	712	
v/s Ratio Prot		0.23			c0.37		0.01	0.38		c0.18	0.34	
v/s Ratio Perm	0.22			0.18			0.08			c0.49		
v/c Ratio	0.67	0.73		0.56	1.16		0.21	1.03		1.18	0.73	
Uniform Delay, d1	29.3	30.1		28.1	34.0		17.8	31.8		26.9	21.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.40	0.87	
Incremental Delay, d2	44.1	9.1		12.0	93.2		0.3	46.5		100.5	4.5	
Delay (s)	73.5	39.2		40.0	127.2		18.1	78.3		138.1	23.5	
Level of Service	E	D		D	F		B	E		F	C	
Approach Delay (s)		42.8			114.9			72.3			70.8	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	10.7
Intersection Capacity Utilization	111.3%	ICU Level of Service	H
Analysis Period (min)	15		

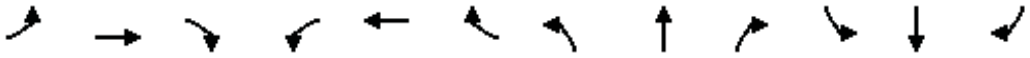
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	83	4	72	49	5	22	729	56	669
Lane Group Flow (vph)	0	117	106	65	106	37	842	75	788
Turn Type	Perm		Perm	Perm		Perm		Perm	
Protected Phases		4			8		6		2
Permitted Phases	4		4	8		6		2	
Detector Phase	4	4	4	8	8	6	6	2	2
Switch Phase									
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	15.0	15.0	15.0	15.0
Minimum Split (s)	21.7	21.7	21.7	21.7	21.7	21.6	21.6	21.6	21.6
Total Split (s)	23.0	23.0	23.0	23.0	23.0	77.0	77.0	77.0	77.0
Total Split (%)	23.0%	23.0%	23.0%	23.0%	23.0%	77.0%	77.0%	77.0%	77.0%
Yellow Time (s)	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
All-Red Time (s)	2.1	2.1	2.1	2.1	2.1	1.7	1.7	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7	5.7	5.7	5.7	5.3	5.3	5.3	5.3
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.77	0.41	0.38	0.38	0.11	0.85	0.24	0.80
Control Delay		71.6	17.9	44.0	14.0	5.9	12.4	4.6	13.0
Queue Delay		41.8	0.0	0.0	1.8	0.0	99.5	0.0	8.3
Total Delay		113.4	17.9	44.0	15.9	5.9	112.0	4.6	21.3
Queue Length 50th (ft)		70	15	37	6	9	247	10	116
Queue Length 95th (ft)		67	35	64	0	m8	m182	m12	m118
Internal Link Dist (ft)		245			224		289		289
Turn Bay Length (ft)			25	90		80		75	
Base Capacity (vph)		174	288	195	304	338	989	307	988
Starvation Cap Reductn		0	0	0	0	0	132	0	169
Spillback Cap Reductn		58	4	0	99	0	298	0	76
Storage Cap Reductn		0	0	0	0	0	0	0	0
Reduced v/c Ratio		1.01	0.37	0.33	0.52	0.11	1.22	0.24	0.96

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 53 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Swanton Way & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	4	72	49	5	82	22	729	32	56	669	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Lane Util. Factor		1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt		1.00	0.85	1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected		0.96	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442	1282	1593	1308		1486	1336		1486	1334	
Flt Permitted		0.67	1.00	0.67	1.00		0.29	1.00		0.27	1.00	
Satd. Flow (perm)		1004	1282	1128	1308		457	1336		415	1334	
Peak-hour factor, PHF	0.76	0.50	0.68	0.75	0.42	0.87	0.59	0.91	0.78	0.75	0.90	0.80
Adj. Flow (vph)	109	8	106	65	12	94	37	801	41	75	743	45
RTOR Reduction (vph)	0	0	67	0	80	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	117	39	65	26	0	37	840	0	75	786	0
Parking (#/hr)		0	0		0			8			8	
Turn Type	Perm		Perm	Perm			Perm			Perm		
Protected Phases		4			8			6			2	
Permitted Phases	4		4	8			6			2		
Actuated Green, G (s)		15.2	15.2	15.2	15.2		73.8	73.8		73.8	73.8	
Effective Green, g (s)		15.2	15.2	15.2	15.2		73.8	73.8		73.8	73.8	
Actuated g/C Ratio		0.15	0.15	0.15	0.15		0.74	0.74		0.74	0.74	
Clearance Time (s)		5.7	5.7	5.7	5.7		5.3	5.3		5.3	5.3	
Vehicle Extension (s)		3.0	3.0	3.0	3.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)		153	195	171	199		337	986		306	984	
v/s Ratio Prot					0.02			c0.63			0.59	
v/s Ratio Perm		c0.12	0.03	0.06			0.08			0.18		
v/c Ratio		0.76	0.20	0.38	0.13		0.11	0.85		0.25	0.80	
Uniform Delay, d1		40.7	37.1	38.2	36.7		3.7	9.2		4.2	8.4	
Progression Factor		1.00	1.00	1.00	1.00		1.28	0.99		0.63	0.81	
Incremental Delay, d2		20.1	0.5	1.4	0.3		0.1	0.9		1.3	4.6	
Delay (s)		60.7	37.6	39.6	37.0		4.8	10.1		3.9	11.4	
Level of Service		E	D	D	D		A	B		A	B	
Approach Delay (s)		49.7			38.0			9.9			10.7	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	213	269	120	112	253	140	649	141	24	536	276
Lane Group Flow (vph)	242	292	126	129	325	169	746	191	32	570	329
Turn Type	pm+pt		Perm	Perm		pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2	3	8		7	4	
Permitted Phases	6		6	2		8		8	4		4
Detector Phase	1	6	6	2	2	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	5.0	12.0	12.0	12.0	12.0	5.0	8.0	8.0	5.0	8.0	8.0
Minimum Split (s)	10.1	26.6	26.6	26.6	26.6	10.0	23.4	23.4	10.0	23.4	23.4
Total Split (s)	15.0	45.0	45.0	30.0	30.0	15.0	45.0	45.0	10.0	40.0	40.0
Total Split (%)	15.0%	45.0%	45.0%	30.0%	30.0%	15.0%	45.0%	45.0%	10.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.2	3.2	3.2	3.2	3.0	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	2.1	2.4	2.4	2.4	2.4	1.7	1.8	1.8	1.7	1.8	1.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.1	5.6	5.6	5.6	5.6	4.7	5.4	5.4	4.7	5.4	5.4
Lead/Lag	Lead			Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	None	Min	Min	Min	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.98	0.49	0.22	0.63	0.92	0.68	1.03	0.30	0.21	0.94	0.53
Control Delay	78.5	26.9	7.4	48.8	69.1	28.1	67.5	14.7	11.2	43.7	6.1
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	54.9	0.0	0.0	0.0	0.0
Total Delay	78.5	26.9	7.4	48.9	69.1	28.1	122.4	14.7	11.2	43.7	6.1
Queue Length 50th (ft)	108	135	11	72	193	53	~579	38	5	~392	18
Queue Length 95th (ft)	#219	212	48	131	#333	m82	m#763	m70	m8	m#488	m29
Internal Link Dist (ft)		243			582		289			438	
Turn Bay Length (ft)	120		70	125		140		75	125		100
Base Capacity (vph)	248	639	601	230	393	252	722	646	156	607	615
Starvation Cap Reductn	0	0	0	0	0	0	85	0	0	0	0
Spillback Cap Reductn	0	0	2	2	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	0.46	0.21	0.57	0.83	0.67	1.17	0.30	0.21	0.94	0.53

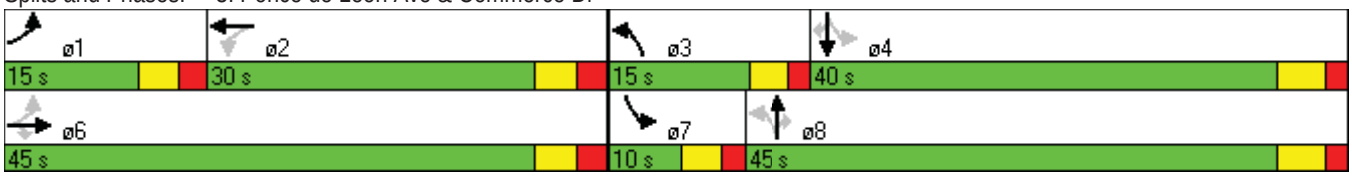
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 60 (60%), Referenced to phase 4:SBTL and 8:NBTL, Start of Green
Natural Cycle: 140
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

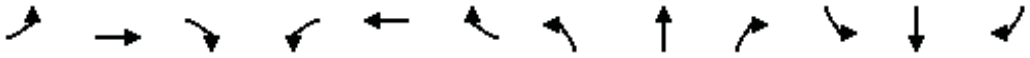
Splits and Phases: 3: Ponce de Leon Ave & Commerce Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	213	269	120	112	253	23	140	649	141	24	536	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	10	10	10	12	11	11
Total Lost time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1621	1378	1540	1590		1486	1565	1330	1593	1621	1378
Flt Permitted	0.21	1.00	1.00	0.58	1.00		0.15	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	348	1621	1378	942	1590		231	1565	1330	179	1621	1378
Peak-hour factor, PHF	0.88	0.92	0.95	0.87	0.89	0.56	0.83	0.87	0.74	0.75	0.94	0.84
Adj. Flow (vph)	242	292	126	129	284	41	169	746	191	32	570	329
RTOR Reduction (vph)	0	0	61	0	5	0	0	0	34	0	0	100
Lane Group Flow (vph)	242	292	65	129	320	0	169	746	157	32	570	229
Turn Type	pm+pt		Perm	Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases	1	6			2		3	8		7	4	
Permitted Phases	6		6	2			8		8	4		4
Actuated Green, G (s)	36.9	36.9	36.9	21.9	21.9		52.1	44.2	44.2	40.6	37.4	37.4
Effective Green, g (s)	36.9	36.9	36.9	21.9	21.9		52.1	44.2	44.2	40.6	37.4	37.4
Actuated g/C Ratio	0.37	0.37	0.37	0.22	0.22		0.52	0.44	0.44	0.41	0.37	0.37
Clearance Time (s)	5.1	5.6	5.6	5.6	5.6		4.7	5.4	5.4	4.7	5.4	5.4
Vehicle Extension (s)	2.5	5.5	5.5	5.5	5.5		3.0	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	246	598	508	206	348		246	692	588	118	606	515
v/s Ratio Prot	c0.10	0.18			0.20		c0.07	c0.48		0.01	0.35	
v/s Ratio Perm	c0.26		0.05	0.14			0.29		0.12	0.10		0.17
v/c Ratio	0.98	0.49	0.13	0.63	0.92		0.69	1.08	0.27	0.27	0.94	0.45
Uniform Delay, d1	27.9	24.3	20.9	35.3	38.2		18.2	27.9	17.7	21.9	30.2	23.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.18	1.04	1.04	0.66	0.64	0.26
Incremental Delay, d2	52.5	1.5	0.3	9.0	29.8		5.4	51.8	0.8	1.0	20.8	2.2
Delay (s)	80.3	25.8	21.2	44.3	68.0		27.0	80.8	19.0	15.5	40.2	8.3
Level of Service	F	C	C	D	E		C	F	B	B	D	A
Approach Delay (s)		44.9			61.2			61.9			28.1	
Approach LOS		D			E			E			C	

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	5	0	14	34	3	27	2	874	16	11	783	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.62	0.25	0.50	0.62	0.38	0.64	0.50	0.92	0.50	0.62	0.95	0.50
Hourly flow rate (vph)	8	0	28	55	8	42	4	950	32	18	824	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)								518			892	
pX, platoon unblocked	0.59	0.59	0.78	0.59	0.59	0.48	0.78			0.48		
vC, conflicting volume	1868	1854	828	1862	1842	966	832			982		
vC1, stage 1 conf vol	864	864		974	974							
vC2, stage 2 conf vol	1004	990		888	868							
vCu, unblocked vol	1280	1256	637	1270	1236	395	642			428		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)	6.1	5.5		6.1	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	92	75	97	87	99			97		
cM capacity (veh/h)	185	219	371	216	232	316	734			547		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	36	105	4	982	18	832
Volume Left	8	55	4	0	18	0
Volume Right	28	42	0	32	0	8
cSH	303	249	734	1700	547	1700
Volume to Capacity	0.12	0.42	0.01	0.58	0.03	0.49
Queue Length 95th (ft)	10	49	0	0	3	0
Control Delay (s)	18.5	29.6	9.9	0.0	11.8	0.0
Lane LOS	C	D	A		B	
Approach Delay (s)	18.5	29.6	0.0		0.2	
Approach LOS	C	D				

Intersection Summary				
Average Delay	2.0			
Intersection Capacity Utilization	66.6%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	877	35	40	756	15	36
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.56	0.60	0.90	0.44	0.75
Hourly flow rate (vph)	914	62	67	840	34	48
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			None		
Median storage veh)	2					
Upstream signal (ft)	1126			284		
pX, platoon unblocked			0.56		0.68	0.56
vC, conflicting volume			976		1918	945
vC1, stage 1 conf vol					945	
vC2, stage 2 conf vol					973	
vCu, unblocked vol			563		1308	507
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			88		86	85
cM capacity (veh/h)			564		238	316

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	976	67	840	82
Volume Left	0	67	0	34
Volume Right	62	0	0	48
cSH	1700	564	1700	278
Volume to Capacity	0.57	0.12	0.49	0.30
Queue Length 95th (ft)	0	10	0	30
Control Delay (s)	0.0	12.2	0.0	23.3
Lane LOS		B		C
Approach Delay (s)	0.0	0.9		23.3
Approach LOS				C

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	584	31	89	409	310	29	149	108	491	165	345
Lane Group Flow (vph)	485	642	44	107	449	365	42	207	148	571	258	375
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Detector Phase	1	6	6	5	2	2	8	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	5.0	18.0	18.0	5.0	18.0	18.0	12.0	12.0	12.0	5.0	12.0	12.0
Minimum Split (s)	10.0	24.7	24.7	10.0	24.7	24.7	26.8	26.8	26.8	10.1	26.8	26.8
Total Split (s)	25.0	45.0	45.0	11.0	31.0	31.0	23.0	23.0	23.0	21.0	44.0	44.0
Total Split (%)	25.0%	45.0%	45.0%	11.0%	31.0%	31.0%	23.0%	23.0%	23.0%	21.0%	44.0%	44.0%
Yellow Time (s)	3.0	3.6	3.6	3.0	3.6	3.6	3.6	3.6	3.6	3.0	3.6	3.6
All-Red Time (s)	1.9	2.1	2.1	1.9	2.1	2.1	2.2	2.2	2.2	2.1	2.2	2.2
Lost Time Adjust (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
Total Lost Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lead	Lead	Lag		
Lead-Lag Optimize?												
Recall Mode	None	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	1.29	1.04	0.08	0.59	1.06	0.58	0.38	0.80	0.43	1.12	0.42	0.44
Control Delay	166.5	71.2	4.4	30.6	97.7	7.4	47.3	62.7	10.4	117.5	25.3	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	166.5	71.2	4.4	30.6	97.7	7.4	47.3	62.7	10.4	117.5	25.3	4.0
Queue Length 50th (ft)	~344	~453	5	34	~316	0	24	127	0	~229	119	0
Queue Length 95th (ft)	m#369	m#506	m7	58	#507	55	44	158	27	#313	124	57
Internal Link Dist (ft)		204			351			415			525	
Turn Bay Length (ft)	135			120			250		250	210		100
Base Capacity (vph)	376	615	549	180	424	633	120	279	359	509	619	849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.29	1.04	0.08	0.59	1.06	0.58	0.35	0.74	0.41	1.12	0.42	0.44

Intersection Summary

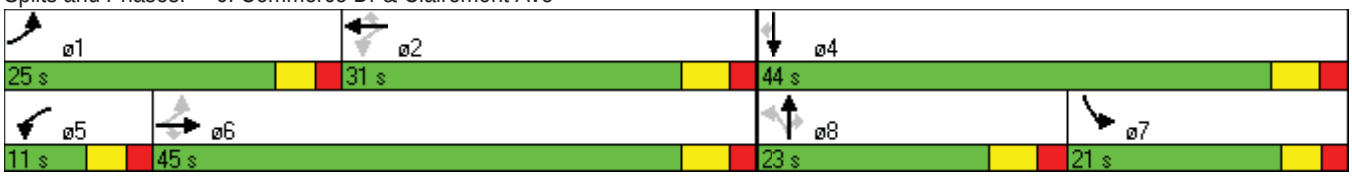
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 26 (26%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Commerce Dr & Clairemont Ave



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	584	31	89	409	310	29	149	108	491	165	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	10	10	12	12	12	11	11	11	11	11	16
Total Lost time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1540	1565	1330	1593	1676	1425	1540	1621	1378	2987	1621	1615
Flt Permitted	0.13	1.00	1.00	0.19	1.00	1.00	0.43	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	215	1565	1330	317	1676	1425	698	1621	1378	2987	1621	1615
Peak-hour factor, PHF	0.81	0.91	0.70	0.83	0.91	0.85	0.69	0.72	0.73	0.86	0.64	0.92
Adj. Flow (vph)	485	642	44	107	449	365	42	207	148	571	258	375
RTOR Reduction (vph)	0	0	27	0	0	273	0	0	124	0	0	232
Lane Group Flow (vph)	485	642	17	107	449	92	42	207	24	571	258	143
Turn Type	pm+pt		Perm	pm+pt		Perm	Perm		Perm	Prot		Perm
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6		6	2		2	8		8			4
Actuated Green, G (s)	50.3	39.3	39.3	31.4	25.3	25.3	16.1	16.1	16.1	17.0	38.2	38.2
Effective Green, g (s)	50.3	39.3	39.3	31.4	25.3	25.3	16.1	16.1	16.1	17.0	38.2	38.2
Actuated g/C Ratio	0.50	0.39	0.39	0.31	0.25	0.25	0.16	0.16	0.16	0.17	0.38	0.38
Clearance Time (s)	4.9	5.7	5.7	4.9	5.7	5.7	5.8	5.8	5.8	5.1	5.8	5.8
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0	5.0	3.5	3.5	3.5	3.0	3.5	3.5
Lane Grp Cap (vph)	374	615	523	177	424	361	112	261	222	508	619	617
v/s Ratio Prot	c0.26	0.41		0.04	0.27			c0.13		c0.19	0.16	
v/s Ratio Perm	c0.39		0.01	0.15		0.06	0.06		0.02			0.09
v/c Ratio	1.30	1.04	0.03	0.60	1.06	0.26	0.38	0.79	0.11	1.12	0.42	0.23
Uniform Delay, d1	29.1	30.4	18.7	26.4	37.4	29.8	37.5	40.3	35.8	41.5	22.7	21.0
Progression Factor	0.79	0.95	0.70	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	145.9	41.2	0.1	5.7	60.2	1.7	2.5	15.5	0.3	78.6	0.5	0.2
Delay (s)	168.9	70.0	13.1	32.1	97.5	31.5	39.9	55.9	36.1	120.1	23.3	21.2
Level of Service	F	E	B	C	F	C	D	E	D	F	C	C
Approach Delay (s)		108.8			63.8			46.8			68.5	
Approach LOS		F			E			D			E	

Intersection Summary			
HCM Average Control Delay	77.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Future (Phase 2) Bike / Ped Analysis

Bicycle LOS = $a_1 \ln (Vol_{15}/L_n) + a_2 SP_t (1+10.38HV)^2 + a_3 (1/PR_S)^2 + a_4 (W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
Vol_{15}	Volume of autos and trucks in 15 minute time period traveling in same direction as bicyclists (Base: 12,000)
L_n	Total number of directional through lanes (includes shared through/turn lanes)
SP_p	Posted speed limit (a surrogate for average running speed)
HV	Percentage of heavy vehicles (vehicles with more than four wheels touching the pavement) (Base: 1%)
PR_S	FHWA's five point pavement surface condition rating (Base: 4)
W_l	width of pavement between the outside lane stripe and the edge of pavement (not including the gutter pan)
W_v	Total width of pavement: lane separation striping to the edge of pavement or to the gutter pan (Base: 12')
% OSPA	estimated percentage of the segment (excluding driveways) along which there is occupied on-street parking
W_{ps}	width of pavement striped for on-street parking (recorded only if there is parking to the right of a striped bike lane)
SP_t	Effective speed limit (in miles per hour) = 1.1199 ln(SP_p - 20) + 0.8103
W_e	Average effective width of outside through lane where: $W_l = 0$: $W_e = W_v$ - (10 ft x % OSPA) $W_l > 0$ & $Wp_s = 0$: $W_e = W_v + W_l$ (1 - 2 x % OSPA) $W_l > 0$ & $Wp_s > 0$: $W_e = W_v + W_l$ - 2 (10 x % OSPA)
W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln (W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln (Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

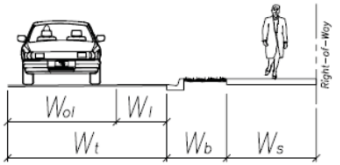
W_{ol}	Width of outside vehicular travel lane, excluding the gutter (in feet)
f_p	On-street parking effect coefficient (= 0.20)
f_b	Buffer area barrier coefficient (= 5.37 for trees spaced 20 feet on center)
W_b	Buffer width (distance between edge of pavement and sidewalk, in feet)
f_{sw}	Sidewalk presence coefficient = $6 - 0.3 W_s$
W_s	Width of sidewalk (feet)
SPD	Average running speed of motor vehicle traffic (in miles per hour)

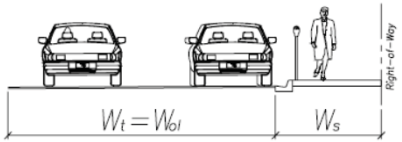
PAVEMENT CONDITION

5.0 (Very Good)	Only new or nearly new pavements are likely to be smooth enough and free of cracks and patches to qualify for this category
4.0 (Good)	Pavement, although not as smooth as described above, gives a first class ride and exhibits signs of surface deterioration
3.0 (Fair)	Riding qualities are noticeably inferior to those above; may be barely tolerable for high-speed traffic. Defects may include rutting, map cracking, and extensive patching.
2.0 (Poor)	Pavements have deteriorated to such an extent that they affect the speed of free-flow traffic. Flexible pavement has distress over 50 percent or more of the surface. Rigid pavement distress includes joint spalling, patching, etc.
1 (Very Poor)	Pavements that are in an extremely deteriorated condition. Distress occurs over 75 percent or more of the surface.

0	≤	1.5	A
1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
4.5	≤	5.5	E
5.5	-	-	F

a1:	0.507
a2:	0.199
a3:	7.066
a4:	-0.005
C_{BLOS}:	0.76
C_{PLOS}:	5.3876





FUTURE

DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk			Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	947	0.91	260	35	3.6	2.5	B	2.4	B
Commerce Dr EB	Site	Clairemont	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	623	0.89	175	35	18.7	2.3	B	4.0	D
Commerce Dr SB	Site	Montgomery	1	560	0	0%	4	11	6	0	17	0	0	5	18500	0.02	928	0.91	255	35	3.6	2.5	B	2.4	B
Commerce Dr NB	Montgomery	Site	1	560	0	0%	4	11	6	0	17	5	1	15	18500	0.02	651	0.89	183	35	18.7	2.3	B	3.4	C
Commerce Dr SB	Montgomery	Ponce	1	480	0	0%	4	11	6	0	17	0	0	5	18500	0.02	918	0.91	252	35	3.6	2.5	B	2.4	B
Commerce Dr NB	Ponce	Montgomery	1	480	210	44%	4	11	6	9	26	0	0	5	18500	0.02	626	0.89	176	35	18.7	2.2	B	3.8	D
Commerce Dr SB	Ponce	Swanton	1	275	220	80%	4	11	6	9	26	0	0	5	18500	0.02	901	0.87	259	35	7.7	3.9	D	2.3	B
Commerce Dr NB	Swanton	Ponce	1	275	0	0%	4	11	6	0	17	5	1	10	18500	0.02	587	0.85	173	35	5.9	2.3	B	1.7	B
Commerce Dr SB	Swanton	Trinity	1	290	220	76%	4	10	6	9	25	0	0	5	18500	0.02	730	0.88	207	35	5.5	3.8	D	2.1	B
Commerce Dr NB	Trinity	Swanton	1	290	220	76%	4	12	6	9	27	0	0	5	18500	0.02	578	0.83	174	35	19.8	3.3	C	3.8	D

Bicycle LOS = $a_1 \ln(Vol_{15}/L_n) + a_2 SP_t(1+10.38HV)^2 + a_3(1/PR_S)^2 + a_4(W_e)^2 + C$

AADT	average daily trafficvolume on the segment or link
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W_v	effective width as a function of traffic volume as follows: = Wt (if AADT is more than 4,000 veh per day) = Wt (2-0.00025 x ADT)

Pedestrian LOS = $-1.2021 \ln(W_{ol} + W_l + f_p \times \%OSP + f_b \times W_b + f_{sw} \times W_s) + 0.253 \ln(Vol_{15}/L_n) + 0.0005\, SPD^2 + 5.3876$

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1.5	≤	2.5	B
2.5	≤	3.5	C
3.5	≤	4.5	D
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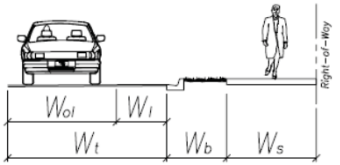

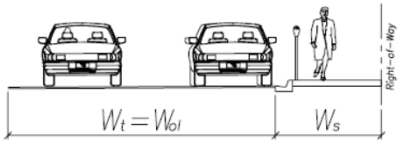

FUTURE

DESCRIPTION			GEOMETRY											TRAFFIC							BLOS		PLOS	
			Longitudinal					Road Width				Sidewalk			Volume					Speed					
Roadway	from	to	L_n	Length (ft)	$L_{parking}$	% OSPA	PR_S	W_{ol}	W_l	W_{ps}	W_t	W_b	20ft spacing (1=Y)	W_s	AADT	HV	Volume	PHF	Vol_{15}	SPp	SPD	Score	LOS	Score	LOS
Commerce Dr WB	Clairemont	Site	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	796	0.90	221	35	12.6	2.4	B	3.1	C
Commerce Dr EB	Site	Clairemont	1	280	0	0%	4	11	6	0	17	0	0	5	18500	0.02	1008	0.96	263	35	9.3	2.5	B	2.8	C
Commerce Dr SB	Site	Montgomery	1	560	0	0%	4	11	6	0	17	0	0	5	18500	0.02	798	0.90	222	35	12.6	2.4	B	3.1	C
Commerce Dr NB	Montgomery	Site	1	560	0	0%	4	11	6	0	17	5	1	15	18500	0.02	912	0.96	238	35	9.3	2.4	B	2.2	B
Commerce Dr SB	Montgomery	Ponce	1	480	0	0%	4	11	6	0	17	0	0	5	18500	0.02	836	0.90	232	35	12.6	2.4	B	3.1	C
Commerce Dr NB	Ponce	Montgomery	1	480	210	44%	4	11	6	9	26	0	0	5	18500	0.02	892	0.96	232	35	9.3	2.4	B	2.5	B
Commerce Dr SB	Ponce	Swanton	1	275	220	80%	4	11	6	9	26	0	0	5	18500	0.02	761	0.90	211	35	10.3	3.8	D	2.4	B
Commerce Dr NB	Swanton	Ponce	1	275	0	0%	4	11	6	0	17	5	1	10	18500	0.02	930	0.87	267	35	3.2	2.5	B	1.7	B
Commerce Dr SB	Swanton	Trinity	1	290	220	76%	4	10	6	9	25	0	0	5	18500	0.02	772	0.84	230	35	7.1	3.8	D	2.2	B
Commerce Dr NB	Trinity	Swanton	1	290	220	76%	4	12	6	9	27	0	0	5	18500	0.02	783	0.91	215	35	10.5	3.5	C	2.5	B

Traffic Volume Worksheets

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

1. Commerce Dr @ Trinity Pl

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	75	327	92	494	209	379	61	649	13	176	42	231	56	160	194	410
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	77	337	95	509	215	390	63	668	13	181	43	237	58	165	200	423
Trips - 315 W Ponce	0	2	0	2	6	6	5	17	1	0	0	1	0	0	2	2
Trips - 122 West Trinity	1	10	0	11	3	3	0	6	0	0	0	0	0	1	10	11
Total Adjacent Trips	1	12	0	13	9	9	5	23	1	0	0	1	0	1	12	13
Base with Development	78	349	95	522	224	399	68	691	14	181	43	238	58	166	212	436
Trips - 160 Clairemont	0	1	0	1	6	6	4	16	1	0	0	1	0	0	2	2
Total New Trips	1	13	0	14	15	15	9	39	2	0	0	2	0	1	14	15
Future Traffic Volumes:	79	362	95	536	239	414	77	730	16	181	43	240	58	167	226	451

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	46	391	71	508	290	352	34	676	13	258	58	329	74	145	300	519
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	47	403	73	523	299	363	35	697	13	266	60	339	76	149	309	534
Trips - 315 W Ponce	0	6	0	6	3	3	3	9	5	0	0	5	0	0	6	6
Trips - 122 West Trinity	1	6	0	7	12	12	0	24	0	1	1	2	0	1	6	7
Total Adjacent Trips	1	12	0	13	15	15	3	33	5	1	1	7	0	1	12	13
Base with Development	48	415	73	536	314	378	38	730	18	267	61	346	76	150	321	547
Trips - 160 Clairemont	0	6	0	6	4	3	2	9	4	0	0	4	0	0	7	7
Total New Trips	1	18	0	19	19	18	5	42	9	1	1	11	0	1	19	20
Future Traffic Volumes:	49	433	73	555	333	396	43	772	27	268	62	357	76	151	340	567

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

2.Commerce Dr @ Swanton Way

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	20	440	50	510	72	617	121	810	22	5	18	45	17	0	23	40
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	21	453	52	526	74	636	125	835	23	5	19	47	18	0	24	42
Trips - 315 W Ponce	0	4	0	4	0	17	2	19	1	0	0	1	0	0	0	0
Trips - 122 West Trinity	1	19	0	20	0	5	0	5	0	0	0	0	0	0	0	0
Total Adjacent Trips	1	23	0	24	0	22	2	24	1	0	0	1	0	0	0	0
Base with Development	22	476	52	550	74	658	127	859	24	5	19	48	18	0	24	42
Trips - 160 Clairemont	0	4	0	4	0	16	2	18	0	0	0	0	0	0	0	0
Total New Trips	1	27	0	28	0	38	4	42	1	0	0	1	0	0	0	0
Future Traffic Volumes:	23	503	52	578	74	696	131	901	25	5	19	49	18	0	24	42

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	19	633	31	683	54	578	32	664	73	4	68	145	48	5	80	133
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	20	652	32	704	56	596	33	685	75	4	70	149	49	5	82	136
Trips - 315 W Ponce	0	18	0	18	0	10	1	11	3	0	0	3	0	0	0	0
Trips - 122 West Trinity	1	12	0	13	0	22	0	22	0	0	1	1	0	0	0	0
Total Adjacent Trips	1	30	0	31	0	32	1	33	3	0	1	4	0	0	0	0
Base with Development	21	682	32	735	56	628	34	718	78	4	71	153	49	5	82	136
Trips - 160 Clairemont	0	17	0	17	0	9	1	10	2	0	0	2	0	0	0	0
Total New Trips	1	47	0	48	0	41	2	43	5	0	1	6	0	0	0	0
Future Traffic Volumes:	22	729	32	783	56	669	36	761	83	4	72	159	49	5	82	136

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

3. Commerce Dr @ Ponce

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	79	374	67	520	10	649	188	847	131	166	48	345	120	247	23	390
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	81	385	69	535	10	669	194	873	135	171	49	355	124	254	24	402
Trips - 315 W Ponce	5	0	0	5	0	0	6	6	23	11	20	54	0	3	0	3
Trips - 122 West Trinity	4	10	5	19	0	3	0	3	0	0	1	1	1	0	0	1
Total Adjacent Trips	9	10	5	24	0	3	6	9	23	11	21	55	1	3	0	4
Base with Development	90	395	74	559	10	672	200	882	158	182	70	410	125	257	24	406
Trips - 160 Clairemont	0	4	0	4	3	18	6	27	2	0	0	2	0	0	1	1
Total New Trips	9	14	5	28	3	21	12	36	25	11	21	57	1	3	1	5
Future Traffic Volumes:	99	409	79	587	13	693	212	918	183	193	91	467	126	260	25	411

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	93	600	131	824	21	487	219	727	175	249	87	511	97	224	18	339
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	96	618	135	849	22	502	226	750	180	257	90	527	100	231	19	350
Trips - 315 W Ponce	20	0	0	20	0	0	23	23	13	6	11	30	0	11	0	11
Trips - 122 West Trinity	2	6	3	11	0	12	0	12	0	0	4	4	6	0	0	6
Total Adjacent Trips	22	6	3	31	0	12	23	35	13	6	15	34	6	11	0	17
Base with Development	118	624	138	880	22	514	249	785	193	263	105	561	106	242	19	367
Trips - 160 Clairemont	0	19	0	19	2	10	4	16	7	0	0	7	0	0	4	4
Total New Trips	22	25	3	50	2	22	27	51	20	6	15	41	6	11	4	21
Future Traffic Volumes:	140	649	141	930	24	536	276	836	213	269	120	602	112	253	23	388

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

4. Commerce Dr @ Public Parking

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	11	509	18	538	9	856	3	868	0	0	3	3	5	0	6	11
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	11	524	19	554	9	882	3	894	0	0	3	3	5	0	6	11
Trips - 315 W Ponce	0	23	0	23	0	6	0	6	0	0	0	0	0	0	0	0
Trips - 122 West Trinity	0	10	0	10	0	3	0	3	0	0	0	0	0	0	0	0
Total Adjacent Trips	0	33	0	33	0	9	0	9	0	0	0	0	0	0	0	0
Base with Development	11	557	19	587	9	891	3	903	0	0	3	3	5	0	6	11
Trips - 160 Clairemont	0	3	3	6	2	14	0	16	0	0	0	0	14	0	6	20
Total New Trips	0	36	3	39	2	23	0	25	0	0	0	0	14	0	6	20
Future Traffic Volumes:	11	593	22	626	11	914	3	928	0	0	3	3	19	0	12	31

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	2	798	2	802	5	684	4	693	5	0	14	19	25	3	23	51
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	2	822	2	826	5	705	4	714	5	0	14	19	26	3	24	53
Trips - 315 W Ponce	0	13	0	13	0	23	0	23	0	0	0	0	0	0	0	0
Trips - 122 West Trinity	0	6	0	6	0	12	0	12	0	0	0	0	0	0	0	0
Total Adjacent Trips	0	19	0	19	0	35	0	35	0	0	0	0	0	0	0	0
Base with Development	2	841	2	845	5	740	4	749	5	0	14	19	26	3	24	53
Trips - 160 Clairemont	0	14	14	28	6	8	0	14	0	0	0	0	8	0	3	11
Total New Trips	0	33	14	47	6	43	0	49	0	0	0	0	8	0	3	11
Future Traffic Volumes:	2	874	16	892	11	783	4	798	5	0	14	19	34	3	27	64

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

5. Commerce Dr @ Fidelity Bank

A.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	2	0	2	4	0	0	0	0	0	541	18	559	34	862	0	896
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	2	0	2	4	0	0	0	0	0	557	19	576	35	888	0	923
Trips - 315 W Ponce	0	0	0	0	0	0	0	0	0	23	0	23	0	6	0	6
Trips - 122 West Trinity	0	0	0	0	0	0	0	0	0	10	0	10	0	3	0	3
Total Adjacent Trips	0	0	0	0	0	0	0	0	0	33	0	33	0	9	0	9
Base with Development	2	0	2	4	0	0	0	0	0	590	19	609	35	897	0	932
Trips - 160 Clairemont	14	0	14	28	0	0	0	0	0	6	3	9	4	2	0	6
Total New Trips	14	0	14	28	0	0	0	0	0	39	3	42	4	11	0	15
Future Traffic Volumes:	16	0	16	32	0	0	0	0	0	629	22	651	39	908	0	947

P.M. Peak Hour

	Northbound				Southbound				Eastbound				Westbound			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	7	0	27	34	0	0	0	0	0	811	20	831	24	660	0	684
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	7	0	28	35	0	0	0	0	0	836	21	857	25	680	0	705
Trips - 315 W Ponce	0	0	0	0	0	0	0	0	0	13	0	13	0	23	0	23
Trips - 122 West Trinity	0	0	0	0	0	0	0	0	0	6	0	6	0	12	0	12
Total Adjacent Trips	0	0	0	0	0	0	0	0	0	19	0	19	0	35	0	35
Base with Development	7	0	28	35	0	0	0	0	0	855	21	876	25	715	0	740
Trips - 160 Clairemont	8	0	8	16	0	0	0	0	0	3	14	17	15	6	0	21
Total New Trips	8	0	8	16	0	0	0	0	0	22	14	36	15	41	0	56
Future Traffic Volumes:	15	0	36	51	0	0	0	0	0	877	35	912	40	756	0	796

Project Name
Traffic Volumes
Future Conditions

A&R Engineering
March 2014

6. Commerce Dr @ Clairemont Ave

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	14	117	22	153	189	102	376	667	272	240	9	521	88	573	464	1125
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	14	121	23	158	195	105	387	687	280	247	9	536	91	590	478	1159
Trips - 315 W Ponce	0	0	0	0	0	0	3	3	14	9	0	23	0	2	0	2
Trips - 122 West Trinity	0	0	0	0	0	0	2	2	6	4	0	10	0	1	0	1
Total Adjacent Trips	0	0	0	0	0	0	5	5	20	13	0	33	0	3	0	3
Base with Development	14	121	23	158	195	105	392	692	300	260	9	569	91	593	478	1162
Trips - 160 Clairemont	1	0	0	1	0	0	3	3	11	7	3	21	0	2	0	2
Total New Trips	1	0	0	1	0	0	8	8	31	20	3	54	0	5	0	5
Future Traffic Volumes:	15	121	23	159	195	105	400	700	331	280	12	623	91	598	478	1167

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	25	145	105	275	477	160	283	920	354	547	28	929	86	362	301	749
Growth Factor	1	1	1		1	1	1		1	1	1		1	1	1	
Base with Growth	26	149	108	283	491	165	292	948	365	564	29	958	89	373	310	772
Trips - 315 W Ponce	0	0	0	0	0	0	14	14	7	5	0	12	0	9	0	9
Trips - 122 West Trinity	0	0	0	0	0	0	7	7	4	3	0	7	0	5	0	5
Total Adjacent Trips	0	0	0	0	0	0	21	21	11	8	0	19	0	14	0	14
Base with Development	26	149	108	283	491	165	313	969	376	572	29	977	89	387	310	786
Trips - 160 Clairemont	3	0	0	3	0	0	11	11	6	4	2	12	0	8	0	8
Total New Trips	3	0	0	3	0	0	32	32	17	12	2	31	0	22	0	22
Future Traffic Volumes:	29	149	108	286	491	165	345	1001	393	584	31	1008	89	409	310	808