

# TRAFFIC IMPACT ANALYSIS

## 629 RESIDENCES FORT LAUDERDALE, FL

**PREPARED FOR:**  
629 SE 5<sup>TH</sup> VE, LLC

**Kimley»Horn**

February 1, 2019  
Revised February 22, 2019  
Revised February 27, 2019  
Revised March 1, 2019  
Kimley-Horn Project #140575000  
CA 00000696  
Kimley-Horn and Associates, Inc.  
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West Palm Beach, Florida 33411  
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## FORT LAUDERDALE, FL

Prepared by:  
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West Palm Beach, Florida

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## EXECUTIVE SUMMARY

Kimley-Horn and Associates has prepared a study to evaluate the impact of development of 249 units of high-rise multifamily housing and 1,300 square feet of commercial use located between SE 6<sup>th</sup> Street and SE 7<sup>th</sup> Street on the west side of SE 5<sup>th</sup> Avenue in Fort Lauderdale, Florida.

A site-specific analysis was undertaken to evaluate impacts on the surrounding transportation network. Project trips were assigned to the proposed driveway on SE 5<sup>th</sup> Avenue based upon the anticipated distribution of traffic to and from the site. The driveway analysis was performed with *HCS 2010* software and the analysis indicated the driveway will operate acceptably.

An analysis was also conducted to review the intersection operations at six intersections (three signalized and three unsignalized intersections) in the immediate vicinity of the site using *Synchro 10.0* and *HCS 2010* software.

1. Federal Highway & SE 7<sup>th</sup> Street
2. Federal Highway & SE 6<sup>th</sup> Street
3. SE 5<sup>th</sup> Avenue & SE 7<sup>th</sup> Street
4. SE 5 Avenue & SE 6<sup>th</sup> Street
5. SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street
6. SE 3<sup>rd</sup> Avenue & SE 6<sup>th</sup> Street

The analysis indicated that the signalized intersection operates at an acceptable Level of Service (LOS) and delay except the intersection of SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street, which will operate at LOS E overall during the future AM peak hour conditions but will have some individual movements at LOS F in the future with or without the project traffic. Additionally, turn lane storage is anticipated to adequately accommodate future volumes at the study intersections during total future conditions except for the eastbound left-turn lane on SE 7<sup>th</sup> Street & Federal Highway during the PM peak hour. However, the excess projected queue is only 7 feet, which is not a full vehicle length. No modifications are proposed.

## INTRODUCTION

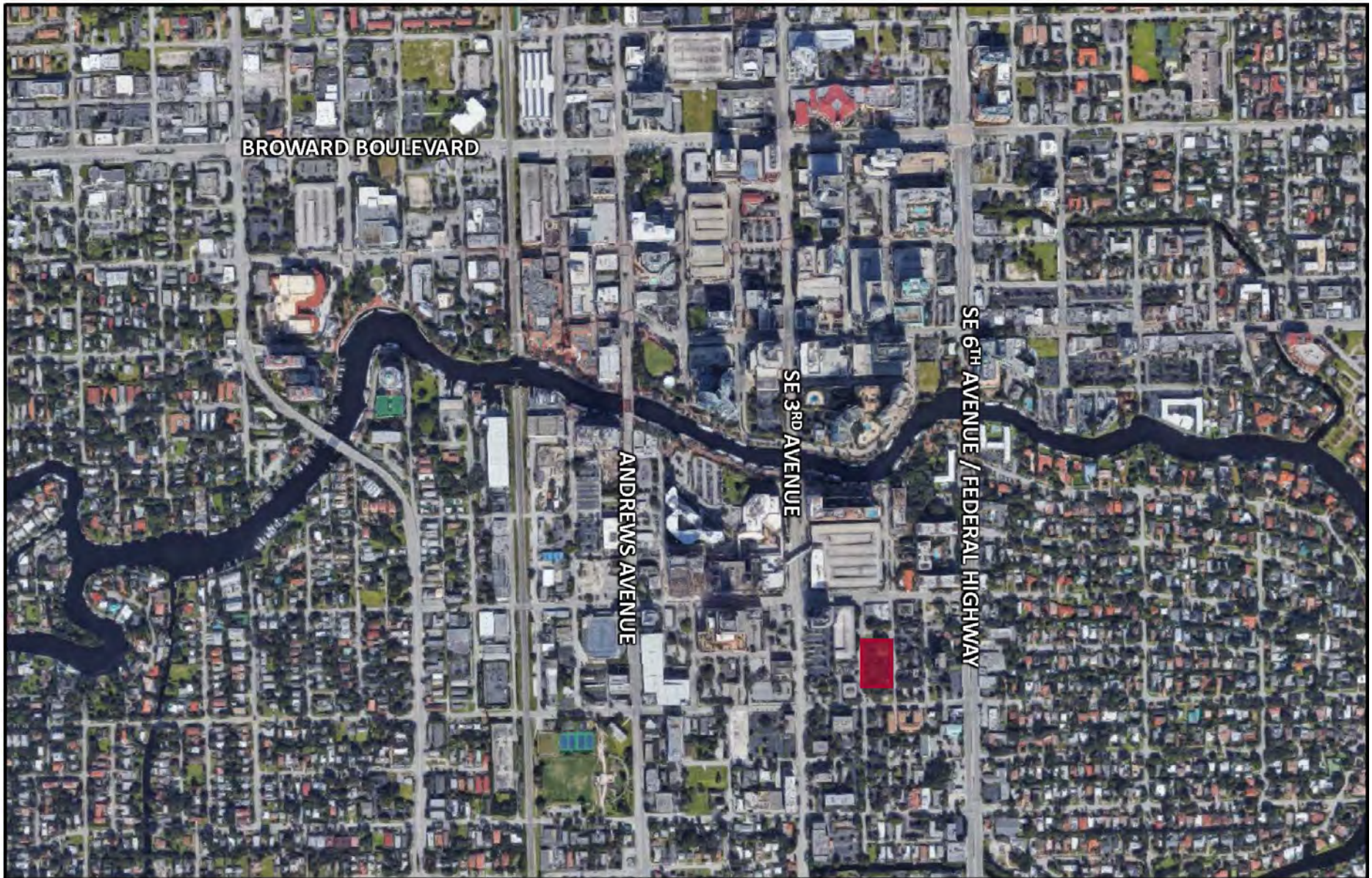
The proposed plan of development will include a high-rise multifamily housing and commercial uses located between SE 6<sup>th</sup> Street and SE 7<sup>th</sup> Street on the west side of SE 5<sup>th</sup> Avenue in Fort Lauderdale, Florida. *Figure 1* illustrates the location of the project site. The folio numbers for the project site are the following:

- 504210580100
- 504210580090
- 504210580080
- 504210580070
- 504210580060
- 504210580050

Kimley-Horn and Associates, Inc. was retained to prepare a traffic impact analysis to evaluate the impacts resulting from buildout of this site by 2022. This document presents the methodology used and the findings of the traffic impact analysis. The analysis was conducted in accordance with the requirements of the City of Fort Lauderdale, Florida.

The site plan, Folio Numbers, and study methodology information can be found in *Appendix A*.





**LEGEND**

 Project Site

**FIGURE 1**  
**PROJECT SITE LOCATION**  
**629 RESIDENCES**  
**140575000**

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## INVENTORY AND PLANNING DATA

To evaluate the traffic conditions on the surrounding network, intersection turning movement counts were performed at the following intersections listed below.

### Intersection Volume Data

Turning movement, pedestrian and bicycle counts were collected during the AM peak (7:00 a.m. to 9:00 p.m.) and PM peak (4:00 p.m. to 6:00 p.m.) periods at the following intersections:

7. Federal Highway & SE 7<sup>th</sup> Street
8. Federal Highway & SE 6<sup>th</sup> Street
9. SE 5<sup>th</sup> Avenue & SE 7<sup>th</sup> Street
10. SE 5 Avenue & SE 6<sup>th</sup> Street
11. SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street
12. SE 3<sup>rd</sup> Avenue & SE 6<sup>th</sup> Street

Intersection 1 turning movement counts were conducted during typical weekday conditions on January 16, 2019 while intersections 2 through 6 were conducted during typical weekday conditions on January 22, 2019. All counts were conducted during peak season. The volumes were collected in 15-minute intervals and the peak hour was determined for each intersection.

The turning movement counts are provided in *Appendix B*. Signal timing summaries are provided in *Appendix C*.

### Study Area Roadway Characteristics

The following roadways are within the project influence area and are characterized based on the number of lanes, annual average daily traffic, road classification, jurisdiction, posted speed limit, on street parking, and adjacent land uses:

- Federal Highway is a 6-lane divided arterial with an AADT of 50,500 vehicles. Federal Highway is under the jurisdiction of FDOT and is also designated as US 1/State Road 5. It has a posted speed limit of 35 miles per hour with no on-street parking and is surrounded by commercial and office uses.
- SE 3<sup>rd</sup> Avenue is a County 4-lane undivided arterial with an AADT of 16,600 vehicles. SE 3<sup>rd</sup> Avenue has a posted speed limit of 35 miles per hour with no on-street parking and is surrounded by office uses.



- SE 7<sup>th</sup> Street is a City 2-lane undivided collector road with an AADT of 11,500 vehicles. SE 7<sup>th</sup> Street has a posted speed limit of 25 miles per hour with no on-street parking and is surrounded by residential and office uses.

## PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project, and the distribution and assignment of that traffic over the study roadway network.

### Existing and Proposed Land Uses

The existing site currently contains a mix of uses: of a single-family detached home, 1,134 square feet of small office building and 11 multi-family (low-rise) dwelling units. The proposed site will include 1,300 square feet of commercial and 249 multi-family (high-rise) dwelling units.

### Trip Generation

The trip generation potential of the development was calculated based upon the trip generation rates and equations provided by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10<sup>th</sup> Edition*. The trip generation potential for the existing uses will be calculated using rates and equations published for Land Use 210 (Single-Family Detached, Land Use 712 (Small Office Building), and Land Use 220 (Multi-Family Housing (Low-Rise)). The trip generation for the proposed uses will be calculated using rates and equations published for Land Use 222 (Multi-Family Housing (High-Rise)) and Land Use 820 (Commercial). Internal capture between the proposed commercial and residential uses was determined using methodology published by the National Cooperative Highway Research Program (NCHRP) for calculating internal capture between land uses. The NCHRP worksheets are included in *Appendix A*.

As indicated in *Table 1*, the net new trip generation potential of the proposed site is 1,118 net external daily trips, 68 net new external AM peak hour trips (16 in/ 52 out) and 86 net new external PM peak hour trips (51 in/ 35 out).

Table 1: Trip Generation

LAND USE	INTENSITY	DAILY TRIPS	AM PEAK HOUR			PM PEAK HOUR		
			TOTAL	IN	OUT	TOTAL	IN	OUT
Existing Scenario								
Single-Family Detached home	1	DU	9	1	0	1	1	0
Small Office Building	1,134	SF	18	2	2	0	3	1
Multifamily Housing (Low-Rise)	11	DU	81	5	1	4	6	4
Subtotal			108	8	3	5	10	6
Driveway Volumes			108	8	3	5	10	6
Existing Net New External Trips			108	8	3	5	10	6
Proposed Scenario								
Multifamily Housing (High-Rise)	249	DU	1,193	83	20	63	93	57
Commercial	1,300	SF	49	1	1	0	23	11
Subtotal			1,242	84	21	63	116	68
Internal Capture								
Multifamily Housing (High-Rise)			8	0	0	0	4	3
Commercial			8	0	0	0	4	1
Subtotal			16	0	0	0	8	4
Multi-Modal Reduction								
Subtotal	10%		8	2	6	12	7	5
Driveway Volumes			1,226	76	19	57	96	57
Net New External Trips			1,226	76	19	57	96	57
Existing Net External Trips - Proposed Net External Trips			1,118	68	16	52	86	51

Note: Trip generation was calculated using the following data:

Daily Traffic Generation			
Single-Family Detached home	[ITE 210]	=	T = 9.44 trips / DU
Small Office Building	[ITE 712]	=	T = 16.19 trips / 1000 SF
Multifamily Housing (Low-Rise)	[ITE 220]	=	T = 7.32 trips / DU
Multifamily Housing (High-Rise)	[ITE 222]	=	T = 3.94(X) + 211.81 trips / DU
Commercial	[ITE 820]	=	T = 37.75 trips / 1000 SF
AM Peak Hour Traffic Generation			
Single-Family Detached home	[ITE 210]	=	T = 0.74 trips / DU (25% in / 75% out)
Small Office Building	[ITE 712]	=	T = 1.92 trips / 1000 SF (83% in, 18% out)
Multifamily Housing (Low-Rise)	[ITE 220]	=	T = 0.46 trips / DU (23% in, 77% out)
Multifamily Housing (High-Rise)	[ITE 222]	=	T = 0.28Ln(X) + 12.86 (24% in, 76% out)
Commercial	[ITE 820]	=	T = 0.94 trips / 1000 SF (62% in, 38% out)
PM Peak Hour Traffic Generation			
Single-Family Detached home	[ITE 210]	=	T = 0.99 trips / DU (63% in, 37% out)
Small Office Building	[ITE 712]	=	T = 2.45 trips / 1000 SF (32% in, 68% out)
Multifamily Housing (Low-Rise)	[ITE 220]	=	T = 0.56 trips / DU (63% in, 37% out)
Multifamily Housing (High-Rise)	[ITE 222]	=	T = 0.34 (X) + 8.56 (61% in, 39% out)
Commercial	[ITE 820]	=	Ln(T) = 0.74Ln(X) + 2.89 (48% in, 52% out)

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**Traffic Distribution**

Traffic distribution is the pairing of trip ends from the subject site with other land uses in the area. These trips were assigned to the surrounding roadways based upon a review of the roadway network proposed to be in place at the time of buildout and its travel time characteristics.

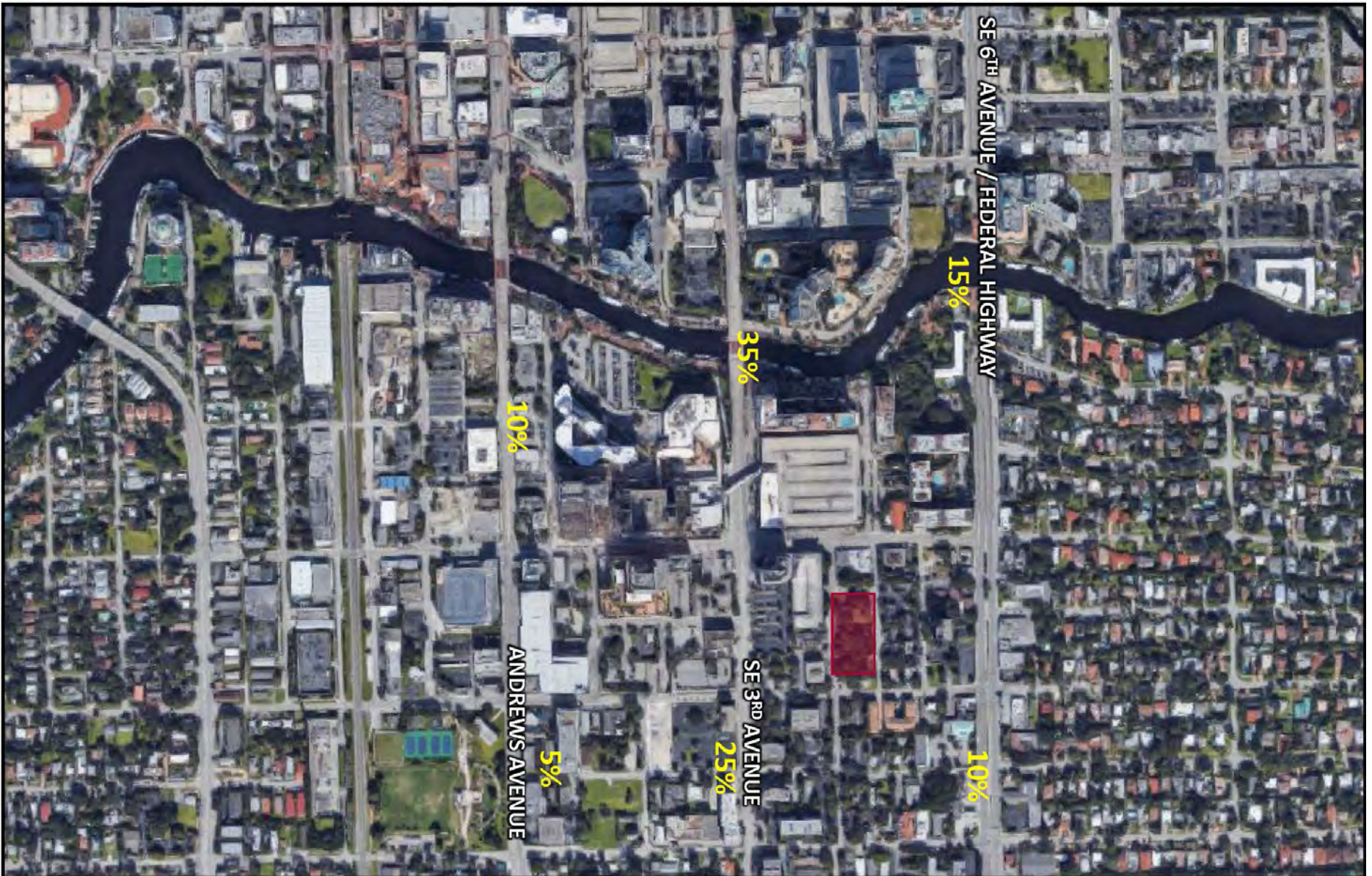
The distribution according to cardinal directions is:

NORTH	-	60 percent
SOUTH	-	40 percent

**Traffic Assignment**

The site traffic was assigned to the surrounding roadway network based upon existing travel patterns. *Figure 2* shows the project distribution of the surrounding roadways. *Figure 3* and *Figure 4* illustrate the lane configurations and the project traffic assignments at the study intersections, respectively.





#### LEGEND



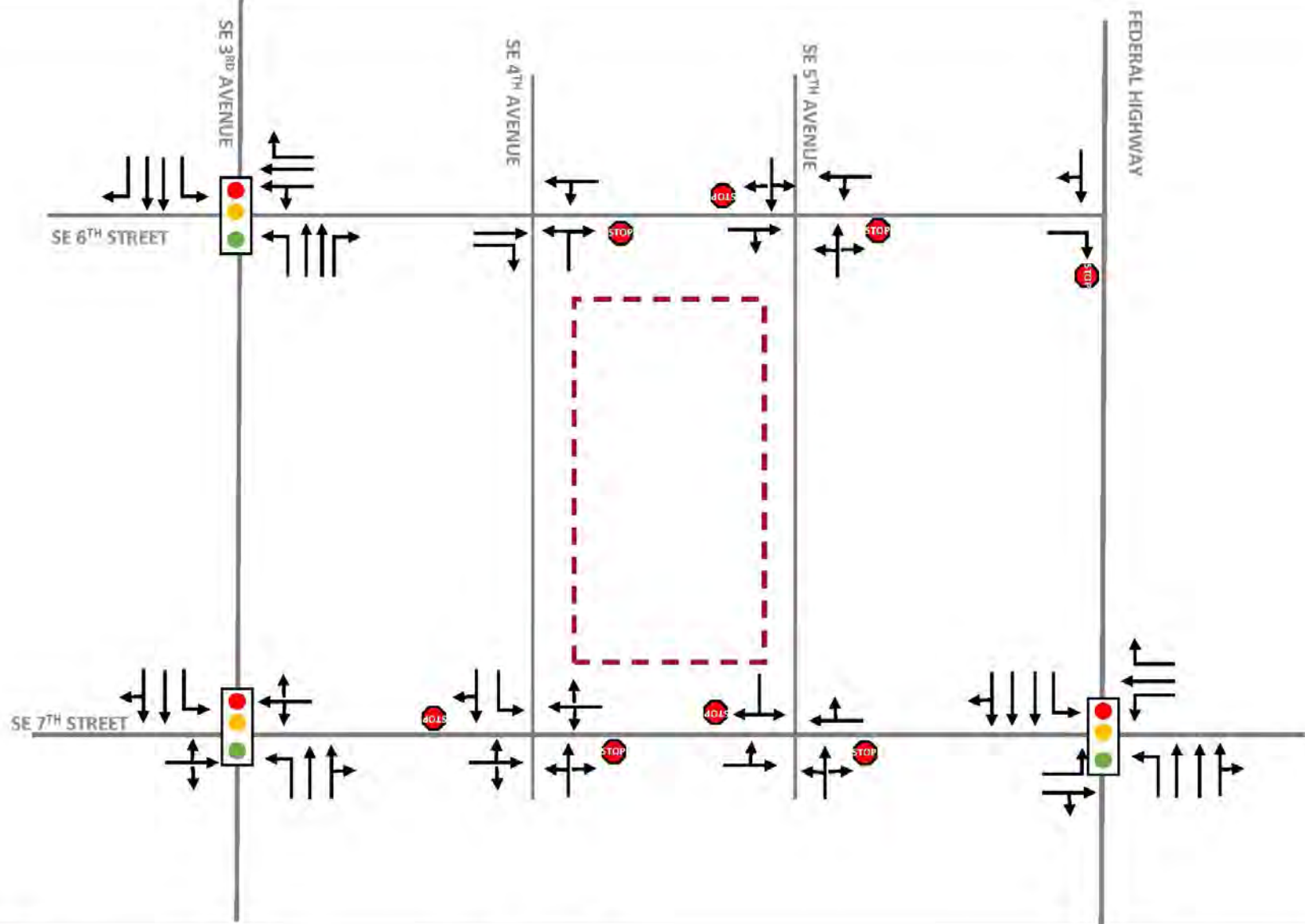
Project Site

XX% Percent Assignment

FIGURE 2  
PERCENT PROJECT TRAFFIC ASSIGNMENT  
629 RESIDENCES  
140575000

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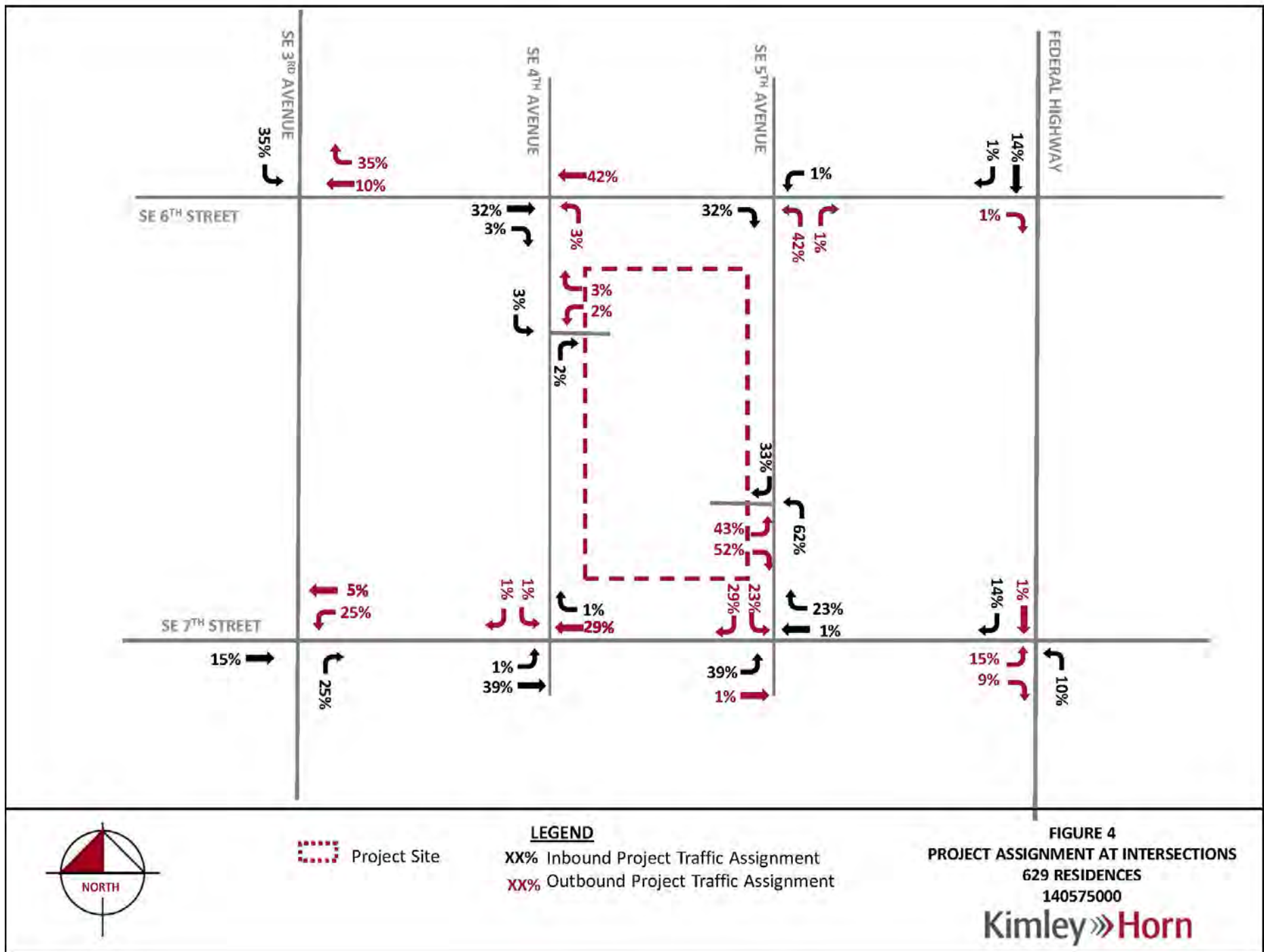


#### LEGEND

Project Site

**FIGURE 3**  
**INTERSECTION LANE DIAGRAM**  
 629 RESIDENCES  
 140575000

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## INTERSECTION ANALYSIS

The operating analyses for three conditions (2019 existing, 2022 background, and 2022 future total) were performed at the signalized and unsignalized study intersections and unsignalized site driveway during the AM and PM peak hours for:

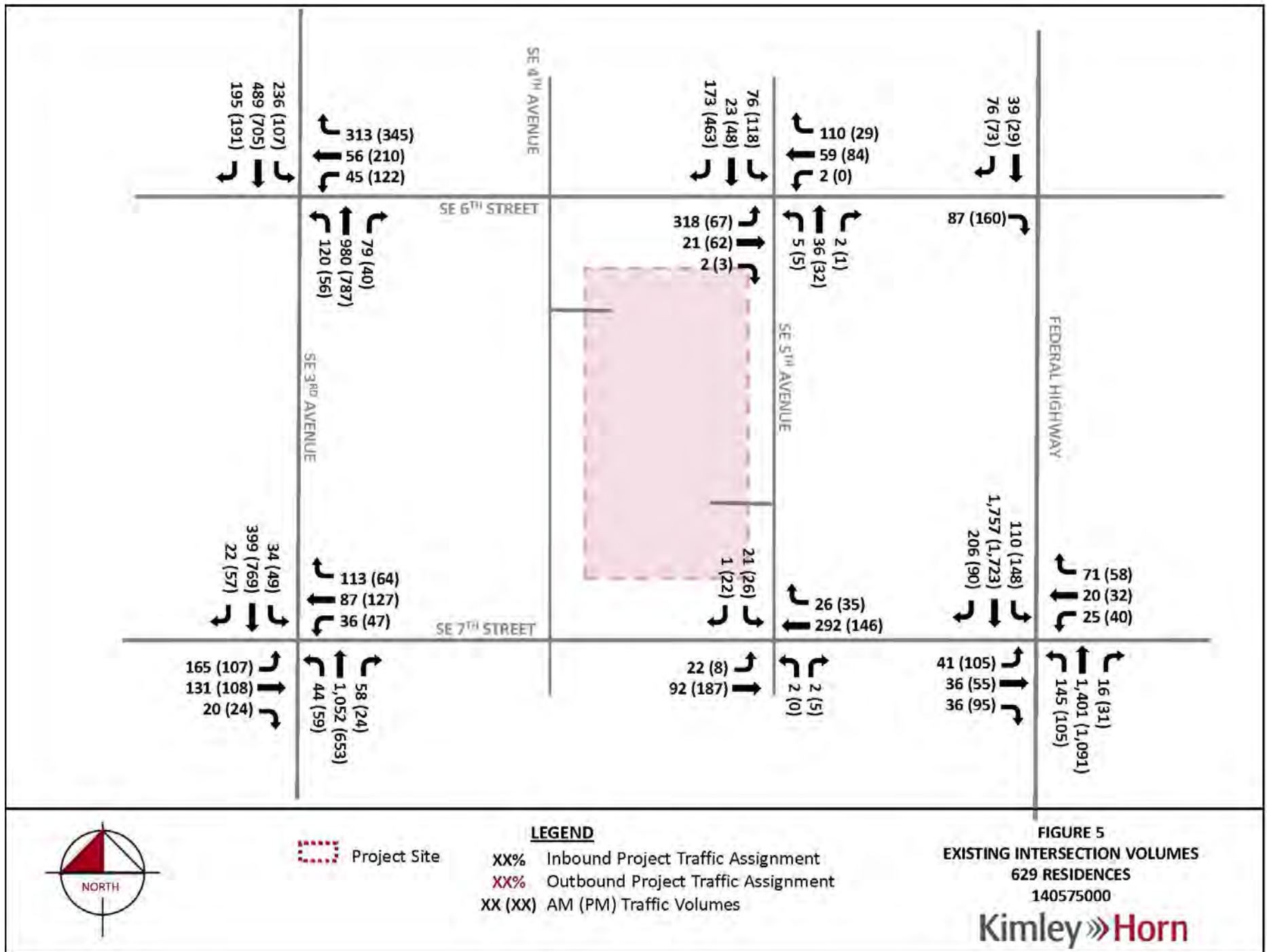
1. Federal Highway & SE 7<sup>th</sup> Street
2. Federal Highway & SE 6<sup>th</sup> Street
3. SE 5<sup>th</sup> Avenue & SE 7<sup>th</sup> Street
4. SE 5 Avenue & SE 6<sup>th</sup> Street
5. SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street
6. SE 3<sup>rd</sup> Avenue & SE 6<sup>th</sup> Street

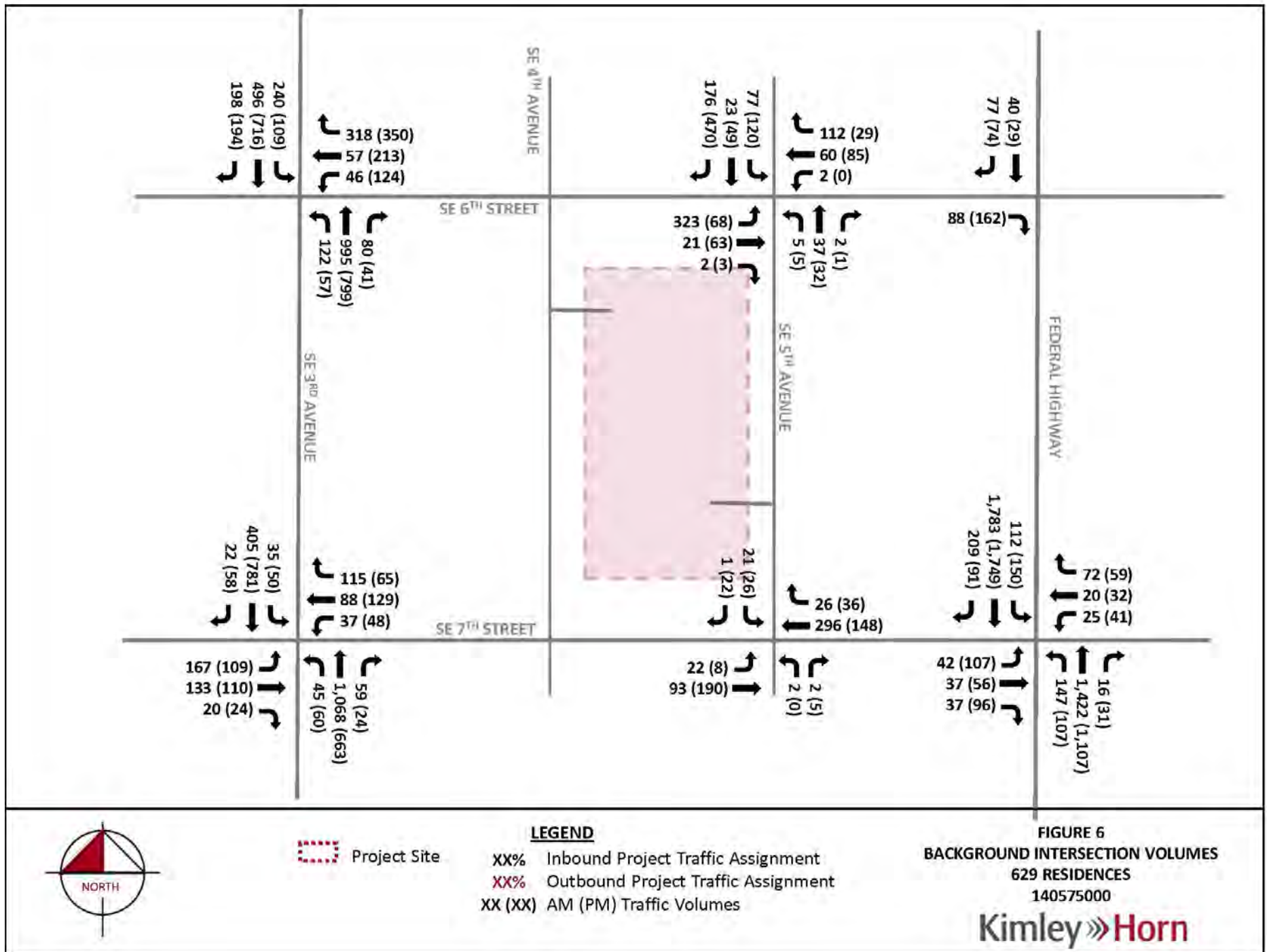
The intersection analyses were based upon year 2019 turning movement counts conducted at the study intersections in January 2019. To determine 2022 background volumes, a 0.5% compounded annual growth rate is applied to the existing 2019 volumes. Future total 2022 volumes were calculated by adding project traffic to background traffic volumes.

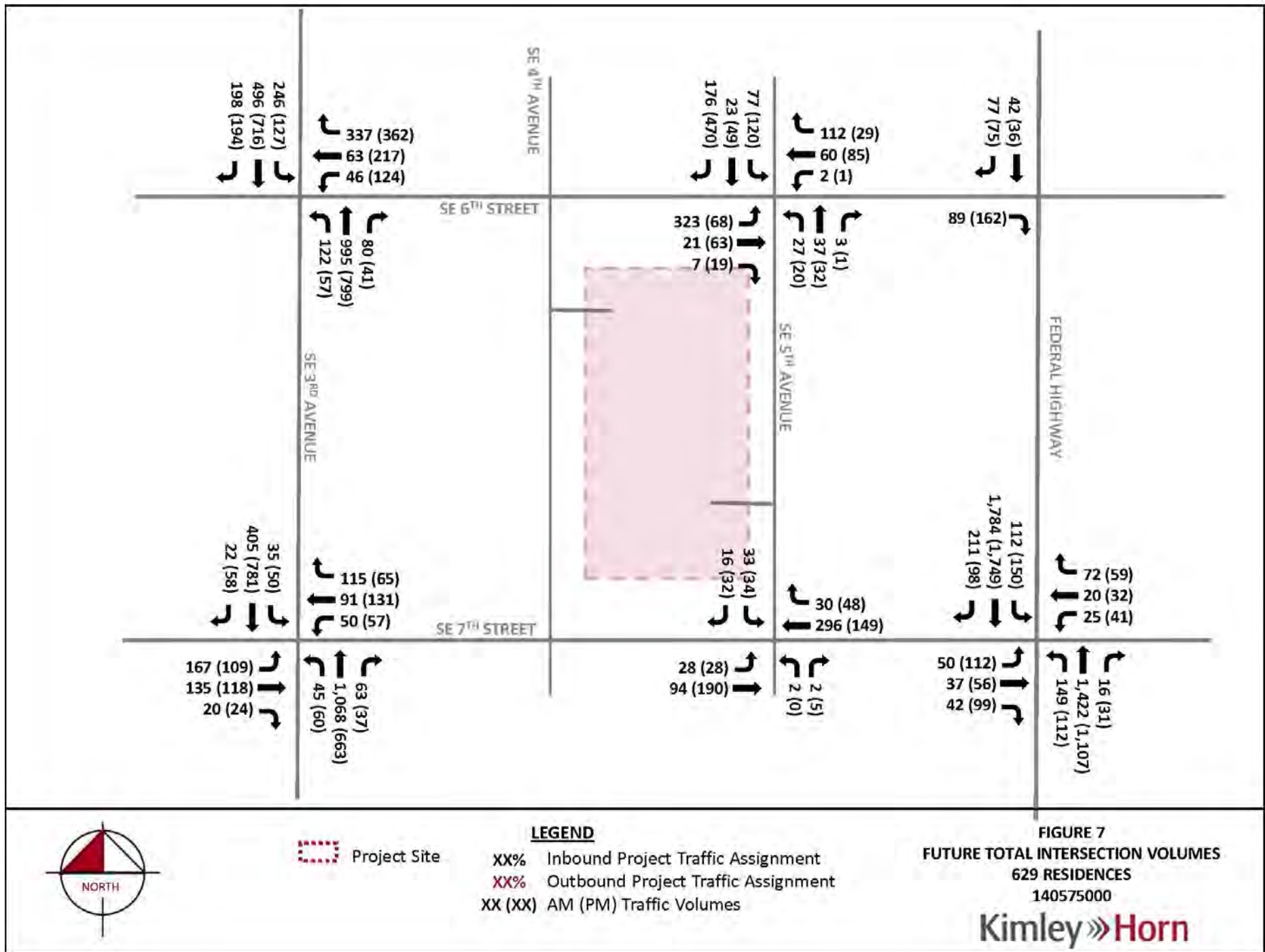
Figure 5, 6, and 7 illustrate the existing, background, and future total volumes at the study intersection, respectively.

Volume development worksheets can be found in *Appendix D*.











## LEVEL OF SERVICE / DELAY ANALYSIS

The intersection analyses use the methodologies outlined in the *Highway Capacity Manual, 6th Edition* in order to determine the overall intersection level of service and delay during the three analysis conditions during AM and PM peak hours. Trafficware's *Synchro 10.0* software was used to analyze the signalized intersections and *HCS 2010* was used to analyze the unsignalized intersections. The Synchro output worksheets and HCS output worksheets are included in *Appendix E* and *Appendix F*, respectively.

Summary tables have been prepared to document the level of service and delay at the intersections for the existing (2019), future background (2022), and future total (2022) conditions. *Table 2A* and *2B* present the findings of the existing AM and PM peak hour analysis, respectively. *Table 3A* and *3B* present the findings of the background AM and PM peak hour analysis, respectively. *Table 4A* and *4B* present the findings of the future total AM and PM peak hour analysis, respectively. As illustrated in *Table 2A* and *2B*, *Table 3A* and *3B* and *Table 4A* and *4B*, the signalized intersections except SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street have an overall Level of Service C in the existing, background, and future total conditions, respectively. The unsignalized intersection approaches are Level of Service D or better. For future conditions, it is appropriate to implement changes to the allocation of signal timing at various intersection approaches. Therefore, optimization of the signal timing was considered during the AM peak hour at the intersection of SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Avenue. *Table 5* summarizes the level of service and delay for the AM peak hour at this intersection with optimized signal timing. As shown in this table, optimized eastbound total delay is a decrease in 22.7 seconds from the future total condition and a decrease in 16.9 seconds from the background condition for this movement.



Table 2A:AM Peak Hour 2019 Existing Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS		Approach Delay	Total Delay /LOS	Delay / LOS		
						Left	Through	Right
AM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	23.4	C	NB	20.9/C	10.6/B	22.5/C	16.4/B
				SB	14.1/B	18.5/B	12.6/B	12.8/B
				EB	0			
				WB	51.1/D	25.8/C	0.0/A	59.2/E
SE 3rd Avenue & SE 7th Street	Signalized	57.9	E	NB	58.7/E	17.8/B	60.6/E	60.1/E
				SB	29.5/C	22.7/C	30.1/C	30.1/C
				EB	99.0/F	99.0/F		
				WB	53.9/D	53.9/D		
Federal Highway & SE 7th Street	Signalized	11.0	B	NB	6.6/A	13.7/B	5.8/A	6.1/A
				SB	7.3/A	4.6/A	7.2/A	7.9/A
				EB	72.7/E	72.7/E	0.0/A	72.8/E
				WB	75.7/E	77.9/E	69.5/E	76.6/E
Intersection	Traffic Control	Approach Delay						
		NB		SB		EB		WB
SE 6th Street & SE 5th Avenue	Unsignalized	25.4/D		25.7/D		7.8/A		0.1/A
SE 6th Street & Federal Highway	Unsignalized					9.1/A		
SE 7th Street & SE 5th Avenue	Unsignalized	10.2/B		11.8/B		1.7/A		

Table 2B:PM Peak Hour 2019 Existing Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS		Approach Delay	Total Delay /LOS	Delay / LOS		
						Left	Through	Right
PM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	19.9	B	NB	1.3/A	9.3/A	0.8/A	0.2/A
				SB	12.0/B	8.9/A	12.6/B	11.6/B
				EB	0			
				WB	55.9/E	27.5/C	27.2/C	83.3/F
SE 3rd Avenue & SE 7th Street	Signalized	33.0	C	NB	25.1/C	18.8/B	25.8/C	25.6/C
				SB	29.3/C	17.7/B	30.1/C	29.9/C
				EB	52.5/D	52.5/D		
				WB	51.3/D	51.3/D		
Federal Highway & SE 7th Street	Signalized	17.2	B	NB	9.2/A	10.9/B	8.9/A	9.2/A
				SB	10.6/B	6.9/A	10.6/B	11.3/B
				EB	77.2/E	77.8/E	0.0/A	76.7/E
				WB	75.4/E	87.8/F	68.6/E	70.6/E
Intersection	Traffic Control	Approach Delay						
		NB		SB		EB		WB
SE 6th Street & SE 5th Avenue	Unsignalized	13.4/B		24.7/C		3.9/A		
SE 6th Street & Federal Highway	Unsignalized					9.4/A		
SE 7th Street & SE 5th Avenue	Unsignalized	9.3/A		10.5/B		0.3/A		

Table 3A: AM Peak Hour 2022 Background Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS		Approach Delay	Total Delay /LOS	Delay / LOS		
						Left	Through	Right
AM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	23.4	C	NB	20.9/C	10.3/B	22.5/C	16.4/B
				SB	14.1/B	18.5/B	12.6/B	12.8/B
				EB	0			
				WB	51.1/D	25.8/C	0.0/A	59.2/E
SE 3rd Avenue & SE 7th Street	Signalized	57.9	E	NB	58.7/E	17.8/B	60.6/E	60.1/E
				SB	29.5/C	22.7/C	30.1/C	30.1/C
				EB	99.0/F	99.0/F		
				WB	53.9/D	53.9/D		
Federal Highway & SE 7th Street	Signalized	11.0	B	NB	6.6/A	13.7/B	5.8/A	6.1/A
				SB	7.3/A	4.6/A	7.2/A	7.9/A
				EB	72.7/E	72.7/E	0.0/A	72.8/E
				WB	75.7/E	77.9/E	69.5/E	76.6/E
Intersection	Traffic Control	Approach Delay						
		NB	SB	EB	WB			
SE 6th Street & SE 5th Avenue	Unsignalized	26.1/D	27.1/D	7.9/A	0.1/A			
SE 6th Street & Federal Highway	Unsignalized			9.1/A				
SE 7th Street & SE 5th Avenue	Unsignalized	10.2/B	11.9/B	1.7/A				

Table 3B: PM Peak Hour 2022 Background Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS	Approach Delay	Total Delay /LOS	Delay / LOS			
					Left	Through	Right	
PM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	20.6	C	NB	1.3/A	9.0/A	0.8/A	0.2/A
				SB	12.5/B	8.9/A	13.2/B	12.1/B
				EB	0			
				WB	57.8/E	27.6/C	27.2/C	87.1/F
SE 3rd Avenue & SE 7th Street	Signalized	33.9	C	NB	25.9/C	19.3/B	26.5/C	26.4/C
				SB	30.5/C	18.0/B	31.3/C	31.1/C
				EB	53.0/D	53.0/D		
				WB	51.9/D	51.9/D		
Federal Highway & SE 7th Street	Signalized	17.4	B	NB	9.4/A	11.6/B	9.1/A	9.4/A
				SB	10.8/B	7.1/A	10.9/B	11.6/B
				EB	77.0/E	77.6/E	0.0/A	76.5/E
				WB	75.2/E	87.7/F	68.3/E	70.3/E
Intersection	Traffic Control	Approach Delay						
		NB	SB	EB	WB			
SE 6th Street & SE 5th Avenue	Unsignalized	13.5/B		26.0/D		3.9/A		
SE 6th Street & Federal Highway	Unsignalized					9.1/A		
SE 7th Street & SE 5th Avenue	Unsignalized	9.3/A		10.5/B		0.3/A		



Table 4A: AM Peak Hour 2022 Future Total Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS		Approach Delay	Total Delay /LOS	Delay / LOS		
						Left	Through	Right
AM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	26.4	C	NB	21.2/C	10.8/B	22.8/C	16.6/B
				SB	14.7/B	20.2/C	12.7/B	12.8/B
				EB	0			
				WB	64.8/E	26.0/C	0.0/A	77.3/E
SE 3rd Avenue & SE 7th Street	Signalized	64.8	E	NB	68.5/E	18.1/B	70.7/F	70.7/F
				SB	29.9/C	22.9/C	30.5/C	30.5/C
				EB	104.8/F	104.8/F		
				WB	59.8/E	59.8/E		
Federal Highway & SE 7th Street	Signalized	11.6	B	NB	7.2/A	17.2/B	6.1/A	6.4/A
				SB	7.7/A	4.8/A	7.6/A	8.4/A
				EB	72.3/E	72.5/E	0.0/A	72.1/E
				WB	74.7/E	77.9/E	68.8/E	75.3/E
Intersection	Traffic Control	Approach Delay						
		NB		SB		EB		WB
SE 6th Street & SE 5th Avenue	Unsignalized	31.8/D		27.3/D		7.8/A		0.1/A
SE 6th Street & Federal Highway	Unsignalized					9.1/A		
SE 7th Street & SE 5th Avenue	Unsignalized	10.4/B		11.8/B		2.0/A		

Table 4B: PM Peak Hour 2022 Future Total Intersection LOS and Delay

Intersection	Traffic Control	Overall Delay / LOS	Approach Delay	Total Delay /LOS	Delay / LOS			
					Left	Through	Right	
PM Peak Hour								
SE 3rd Avenue & SE 6th Street	Signalized	23.3	C	NB	1.7/A	9.6/A	1.1/A	0.5/A
				SB	12.1/B	9.0/A	12.7/B	11.6/B
				EB	0			
				WB	63.8/E	27.7/C	27.3/C	98.0/F
SE 3rd Avenue & SE 7th Street	Signalized	35.4	D	NB	27.3/C	19.8/B	28.0/C	27.8/C
				SB	32.0/C	18.7/B	33.0/C	32.7/C
				EB	54.1/D	54.1/D		
				WB	53.0/D	53.0/D		
Federal Highway & SE 7th Street	Signalized	17.7	B	NB	9.6/A	12.2/B	9.2/A	9.5/A
				SB	11.1/B	7.2/A	11.2/B	11.8/B
				EB	76.9/E	77.7/E	0.0/A	76.4/E
				WB	75.0/E	87.8/F	68.0/E	70.0/E
Intersection	Traffic Control	Approach Delay						
		NB	SB	EB	WB			
SE 6th Street & SE 5th Avenue	Unsignalized	18.0/C	26.4/D	3.5/A	0.1/A			
SE 6th Street & Federal Highway	Unsignalized			9.1/A				
SE 7th Street & SE 5th Avenue	Unsignalized	9.3/A	11.0/B	1.1/A				



Table 5: 2022 Future LOS and Delay Optimized

Intersection	Traffic Control	Overall Delay / LOS	Approach Delay	Total Delay /LOS	Delay / LOS			
					Left	Through	Right	
AM Peak Hour								
SE 3rd Avenue & SE 7th Street	Signalized	63.4	E	NB	68.5/E	18.1/B	70.7/F	70.4/F
				SB	29.9/C	22.9/C	30.5/C	30.5/C
				EB	82.1/F	82.1/F		
				WB	76.3/E	76.3/E		

## TURN LANE ANALYSIS

The 95<sup>th</sup> percentile queue lengths for three conditions (existing, background, and future total) were analyzed at the signalized study intersections during the AM peak hour and PM peak hour using Trafficware's *Synchro 10.0* Software. These analyses use the methodologies outlined in the *Highway Capacity Manual* in order to determine the 95<sup>th</sup> percentile queue lengths. *Table 6, 7, and 8* summarize the existing, background, and future total queue lengths, respectively.

As shown in these tables, the 95<sup>th</sup> percentile queue length does not exceed the storage for any movement during the existing, background and future total conditions except for the eastbound left movement at the intersection of SE 7<sup>th</sup> Street & Federal Highway during PM peak hours. Based upon the analyses undertaken, the storage length is exceeded by only seven (7) feet during future total conditions. Because the queue storage is exceeded by a fraction of one vehicle, it is anticipated that the 95<sup>th</sup> percentile queue will effectively be contained within the storage length provided. Therefore, the queue for this movement is not impacting any conflicting movements.

Table 6: Existing Conditions 95<sup>th</sup> Percentile Queue

Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
AM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	105	300	58	125	15	65	128	155	36	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	32	250		NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	52	200	60	100	54	100	126	350		NA	29	270		NA
PM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	119	300	7	125	0	65	39	155	34	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	40	250		NA	55	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	197	200	94	100	47	100	57	350		NA	60	270		NA

Table 7: Background Conditions 95<sup>th</sup> Percentile Queue

Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
AM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	105	300	58	125	15	65	128	155	36	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	32	250		NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	52	200	60	100	54	100	126	350	29	NA	29	270		NA
PM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	117	300	7	125	0	65	40	155	35	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	41	250		NA	56	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	199	200	95	100	48	100	66	350		NA	61	270		NA

Table 8: Future Total Conditions 95<sup>th</sup> Percentile Queue

Intersection	EBL	Storage Length (ft)	WBL	Storage Length (ft)	WBR	Storage Length (ft)	NBL	Storage Length (ft)	NBR	Storage Length (ft)	SBL	Storage Length (ft)	SBR	Storage Length (ft)
AM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	127	300	56	125	15	65	150	155	36	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	33	250		NA	5	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	62	200	59	100	53	100	142	350		NA	32	270		NA
PM Peak Hour														
SE 3RD AVENUE & SE 6TH STREET		NA		NA	127	300	7	125	0	65	46	155	35	155
SE 3RD AVENUE & SE 7TH STREET		NA		NA		NA	41	250		NA	56	100		NA
SE 7TH STREET & FEDERAL HIGHWAY	207	200	94	100	48	100	78	350		NA	63	270		NA



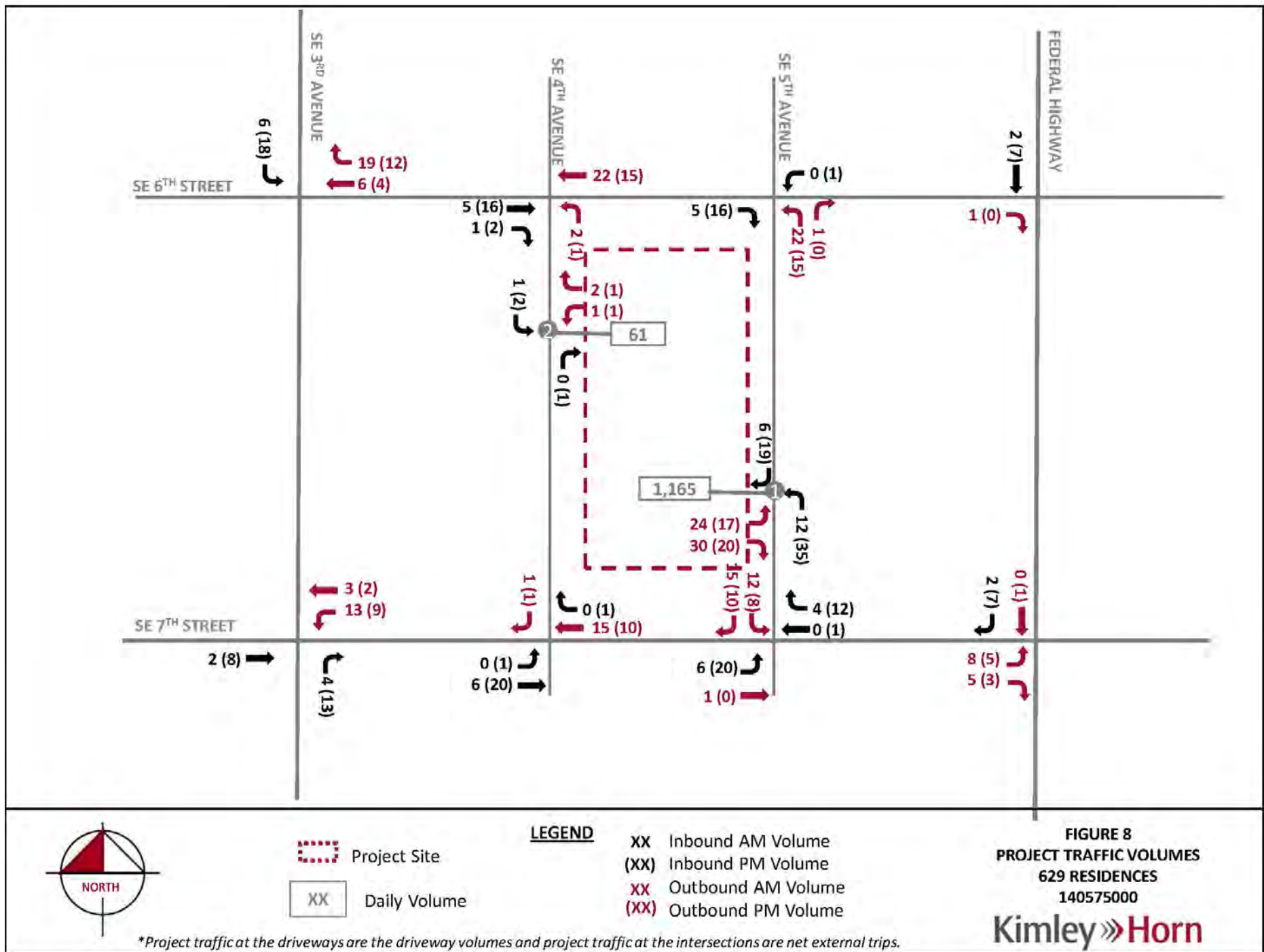
## DRIVEWAY ACCESS

Access to the site is proposed via two full-access driveways: one on SE 5<sup>th</sup> Avenue and one on SE 4<sup>th</sup> Avenue. The driveway on SE 5<sup>th</sup> Avenue will be utilized more because it provides access to the parking garage. The driveway on SE 4<sup>th</sup> Avenue will only provide access to/from a few parking spaces. *Figure 8* illustrates the driveway volumes at the project driveways and the project traffic volumes at the study intersections.

A driveway analysis has been conducted for the main driveway on SE 5<sup>th</sup> Avenue using *HCS 2010* software for future total (2022) conditions. The minor driveway on SE 4<sup>th</sup> Avenue serves fewer than 5 vehicles in the peak hours; therefore, this driveway was not analyzed. The level of service and delay at the main driveway is shown in *Table 9*. As shown in the table, the approach level of service is LOS A and the 95<sup>th</sup> percentile queue for the northbound left movement into the site is 0 feet during the AM peak hour and only 3 feet during the PM peak hour. Therefore, no lane modifications are proposed at the driveway.

**Table 9: Driveway Analysis**

Peak Hour	EB Approach Delay	NB Approach Delay	NBL 95% Queue
AM Peak Hour	8.9/A	1.4/A	0 ft
PM Peak Hour	9.2/A	3.3/A	3 ft



## CONCLUSION

The proposed plan of development will include a high-rise multifamily housing and commercial uses located between SE 6<sup>th</sup> Street and SE 7<sup>th</sup> Street on the west side of SE 5<sup>th</sup> Avenue in Fort Lauderdale, Florida.

Trip generation calculations were prepared to evaluate the volume of trips anticipated to be generated during the weekday AM and PM peak hours. These anticipated trips were then used to analyze the intersections close in proximity to the site. The intersection of SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street, is projected to operate at an overall LOS E during both future background and future total conditions. Further evaluation indicates that optimized signal timing in the future total condition will improve conditions by decreasing delay for the eastbound movement compared to the background condition during the AM peak hour. As noted, it is common for signal timing to be adjusted (optimized), for future conditions to account for changes in intersection volumes. The remaining intersections will all operate at an overall LOS D or better during existing, background, and future total conditions.



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**APPENDIX A: PROJECT INFORMATION, METHODOLOGY, AND  
INTERNAL CAPTURE WORKSHEET**

[illegible]



Site Address	633 SE 5 AVENUE # 1-4 FORT LAUDERDALE, 33301	ID#	504210580100
Property Owner	LAUDERDALE 629 LLC	Millage	0312
Mailing Address	6400 N ANDREWS AVE #400 FORT LAUDERDALE, FL 33309	Use	08 - Multi-family - less than 10 units

Abbreviated Legal Description	REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 9
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The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values						
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax
2019	\$112,500	\$123,360	0	\$235,860	\$235,860	
2018	\$112,500	\$483,560	0	\$596,060	\$596,060	\$11,845.16
2017	\$112,500	\$271,370	0	\$383,870	\$291,510	\$7,013.73

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$235,860	\$235,860	\$235,860	\$235,860
Portability	0	0	0	0
Assessed / SOH	\$235,860	\$235,860	\$235,860	\$235,860
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wld/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$235,860	\$235,860	\$235,860	\$235,860

Sales History				Land Calculations /		
Date	Type	Price	Book/Page or CIN	Price	Factor	Type
05/02/2017	Warranty Deed Disqualified Sale	\$750,000	114362068	\$15.00	7,500 SqFt	Square Foot
12/01/1993	Quit Claim Deed	\$100	21530 / 589			
07/01/1972	Warranty Deed	\$5,000				
				Adj. Bldg. S.F.:	2787	
				Effective Year:	1976	
				Actual Year:	1975	
				Units/Beds/Baths:	4 / 6 / 6	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Residential (R)								
4								





Site Address	629 SE 5 AVENUE FORT LAUDERDALE, 33301	ID#	504210580090
Property Owner	LAUDERDALE 629 LLC	Millage	9312
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	17 - Office buildings, non-professional services buildings, one-story

Abbreviated Legal Description	REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 8
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The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values						
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax
2019	\$187,500	\$208,550	0	\$396,050	\$396,050	
2018	\$187,500	\$208,550	0	\$396,050	\$396,050	\$7,972.78
2017	\$187,500	\$192,380	0	\$379,880	\$379,880	\$7,787.37

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$396,050	\$396,050	\$396,050	\$396,050
Portability	0	0	0	0
Assessed / SOH	\$396,050	\$396,050	\$396,050	\$396,050
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wild/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$396,050	\$396,050	\$396,050	\$396,050

Sales History				Land Calculations /		
Date	Type	Price	Book/Page or CIN	Price	Factor	Type
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239	\$25,00	7,500 SqFt	Square Foot
08/29/2014	Warranty Deed Qualified Sale	\$500,000	112554167			
05/28/2010	Quit Claim Deed Disqualified Sale	\$900	47135 / 785			
05/21/2002	Warranty Deed	\$275,000	33311 / 33			
11/01/1993	Warranty Deed	\$110,000	21397 / 508			
				Adj. Bldg. S.F.:	1134	
				Effective Year:	1950	
				Actual Year:	1932	
				Units/Beds/Baths:	0 / /	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Commercial (C)								
1,134								



Site Address	625 SE 5 AVENUE FORT LAUDERDALE, 33301	ID#	504210580080
Property Owner	LAUDERDALE 629 LLC	Millage	0312
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	00 - Vacant residential
Abbreviated Legal Description	REARMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 7 E 100		

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values					
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value
2019	\$375,000	0	0	\$375,000	\$375,000
2018	\$375,000	0	0	\$375,000	\$375,000
2017	\$250,000	0	0	\$250,000	\$82,500

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$375,000	\$375,000	\$375,000	\$375,000
Portability	0	0	0	0
Assessed / SOH	\$375,000	\$375,000	\$375,000	\$375,000
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wild/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$375,000	\$375,000	\$375,000	\$375,000

Sales History			
Date	Type	Price	Book/Page or CIN
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$900,000	112553565
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650
07/01/1993	Warranty Deed		20934 / 178
12/01/1976	Warranty Deed	\$25,000	

Land Calculations /		
Price	Factor	Type
\$75.00	5,000 SqFt	Square Foot
Adj. Bldg. S.F.:	0	
Effective Year:	0	
Actual Year:		
Units/Beds/Baths:	0 / /	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Vacant Lots (L)								
1								





**MARTY KIAR**  
**BROWARD**  
 COUNTY  
 PROPERTY APPRAISER

Site Address	624 SE 4 AVENUE FORT LAUDERDALE, 33301	ID#	504210580070
Property Owner	LAUDERDALE 629 LLC % MICHAEL R TILLEY	Millage	0312
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	01 - Single family
Abbreviated Legal Description	REAMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 7 LESS E 100		

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values						
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax
2019	\$62,500	\$83,590	0	\$116,090	\$116,090	
2018	\$62,500	\$53,590	0	\$116,090	\$116,090	\$2,363.56
2017	\$62,500	\$51,520	0	\$114,020	\$114,020	\$2,362.56

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$116,090	\$116,090	\$116,090	\$116,090
Portability	0	0	0	0
Assessed / SOH	\$116,090	\$116,090	\$116,090	\$116,090
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wid/Vet/Dia	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$116,090	\$116,090	\$116,090	\$116,090

Sales History			
Date	Type	Price	Book/Page or CIN
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239
09/23/2014	Warranty Deed Disqualified Sale	\$300,000	112553758
02/17/2000	Warranty Deed	\$70,000	30277 / 739
02/01/1977	Warranty Deed	\$14,000	6918 / 970

Land Calculations /		
Price	Factor	Type
\$25.00	2,500 SqFt	Square Foot
Adj. Bldg. S.F.:	766	
Effective Year:	1947	
Actual Year:	1946	
Units/Beds/Baths:	1 / /	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Residential (R)								
1								





Site Address	620 SE 4 AVENUE # 1-7 FORT LAUDERDALE, 33301	ID#	504210580060
Property Owner	LAUDERDALE 629 LLC	Millage	0312
Mailing Address	6400 N ANDREWS AVE #400 FORT LAUDERDALE, FL 33309	Use	08 - Multi-family - less than 10 units
Abbreviated Legal Description		REARMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 6	

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values						
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value	Tax
2019	\$187,500	\$315,120	0	\$502,620	\$502,620	
2018	\$187,500	\$315,120	0	\$502,620	\$502,620	\$10,916.82
2017	\$187,500	\$268,730	0	\$457,230	\$417,830	\$9,768.18

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$502,620	\$502,620	\$502,620	\$502,620
Portability	0	0	0	0
Assessed / SOH	\$502,620	\$502,620	\$502,620	\$502,620
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wild/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$502,620	\$502,620	\$502,620	\$502,620

Sales History			
Date	Type	Price	Book/Page or CIN
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$900,000	112553565
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650
07/01/1993	Warranty Deed		20934 / 178
10/01/1976	Warranty Deed	\$82,000	

Land Calculations /		
Price	Factor	Type
\$25.00	7,500 SqFt	Square Foot
Adj. Bldg. S.F.:	2513	
Effective Year:	1975	
Actual Year:	1974	
Units/Beds/Baths:	7 / /	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Residential (R)								
7								



Site Address	818 SE 4 AVENUE FORT LAUDERDALE, 33301	ID#	504210580050
Property Owner	LAUDERDALE 629 LLC	Millage	0312
Mailing Address	6400 N ANDREWS AVE #490 FORT LAUDERDALE, FL 33309	Use	00 - Vacant residential
Abbreviated Legal Description	REARMENDED PLAT HENRY SHACKLEFORDS SUB LOT 3 BLK 57 FT LAUDERDALE 2-1 BLOT 5 W 75		

The just values displayed below were set in compliance with Sec. 193.011, Fla. Stat., and include a reduction for costs of sale and other adjustments required by Sec. 193.011(8).

Property Assessment Values					
Year	Land	Building	Agriculture Savings	Just / Market Value	Assessed / SOH Value
2019	\$281,250	0	0	\$281,250	\$281,250
2018	\$281,250	0	0	\$281,250	\$281,250
2017	\$187,500	0	0	\$187,500	\$103,120

2019 Exemptions and Taxable Values by Taxing Authority				
	County	School Board	Municipal	Independent
Just Value	\$281,250	\$281,250	\$281,250	\$281,250
Portability	0	0	0	0
Assessed / SOH	\$281,250	\$281,250	\$281,250	\$281,250
Homestead	0	0	0	0
Add. Homestead	0	0	0	0
Wild/Vet/Dis	0	0	0	0
Senior	0	0	0	0
Exemption Type	0	0	0	0
Taxable	\$281,250	\$281,250	\$281,250	\$281,250

Sales History			
Date	Type	Price	Book/Page or CIN
05/01/2017	Multi Warranty Deed Exception Due to Condition	\$2,500,000	114362239
09/23/2014	Multi Warranty Deed Exception Due to Condition	\$900,000	112553565
03/07/2002	Multi Quit Claim Deed	\$100	32897 / 650
07/01/1993	Warranty Deed		20934 / 178
03/01/1977	Warranty Deed	\$19,000	

Land Calculations /		
Price	Factor	Type
\$75.00	3,750 SqFt	Square Foot
Adj. Bldg. S.F.:	0	
Effective Year:	0	
Actual Year:		
Units/Beds/Baths:	0 / /	

Special Assessments								
Fire	Garb	Light	Drain	Impr	Safe	Storm	Clean	Misc
Ft Lauderdale Fire-rescue (03)								
Vacant Lots (L)								
1								





## MEMORANDUM

To: Benjamin Restrepo, P.E.  
City of Fort Lauderdale

From: Christopher W. Heggen, P.E.  
Kimley-Horn and Associates, Inc.

Date: January 16, 2019

**Subject: 629 Residences - Traffic Impact Analysis Methodology  
Fort Lauderdale, Florida  
Kimley-Horn # 140575000**

629 Residences is a proposed development that is proposed to include 249 multi-family residential units and 1,300 square feet of retail use. The site is located at approximately 616 SE 4<sup>th</sup> Avenue in Ft. Lauderdale, Florida. *Figure 1* illustrates the location of the site. Kimley-Horn and Associates, Inc. has been retained to conduct a traffic impact analysis for the proposed site. Following is a summary of the methodology that we have developed for this analysis.

- Trip generation: The trip generation potential for the residential units will be calculated using rates and equations published for by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, Tenth Edition*.
  - The trip generation potential for the existing uses will be calculated using rates and equations published for Land Use 210 (Single-Family Detached), Land Use 712 (Small Office Building), and Land Use 220 (Multi-family housing (Low Rise)).
  - The trip generation potential for the proposed uses will be calculated using rates and equations published for Land Use 222 (Multi-family housing (High Rise)) Land Use 820 (Commercial). Pass-by determination for the commercial use will use rates outlined in the ITE *Trip Generation Handbook, 3<sup>rd</sup> Edition*.

A preliminary trip generation calculation has been attached as *Table 1*.

- Multi-modal credits: a multi-modal credit of 10% will be applied to the trip generation calculations for the AM and PM peak hours.
- Trip distribution/assignment: Trip distribution will be based on the characteristics of the adjacent roadway network and types of surrounding uses.
- Data collection: Bike, pedestrian and vehicular AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak period turning movement counts will be collected at the following locations:
  - Federal Highway & SE 7<sup>th</sup> Street
  - Federal Highway & SE 6<sup>th</sup> Street
  - SE 5<sup>th</sup> Avenue & SE 7<sup>th</sup> Street
  - SE 5<sup>th</sup> Avenue & SE 6<sup>th</sup> Street
  - SE 3<sup>rd</sup> Avenue & SE 7<sup>th</sup> Street
  - SE 3<sup>rd</sup> Avenue & SE 6<sup>th</sup> Street



- From this count data, peak hour traffic volumes will be determined. For any counts conducted outside of the peak season (January – March), the Peak Season Conversion Factor (PSCF) published by FDOT will be applied.
- Future Background Volumes: Future background volumes will be determined by adding a 0.5% compounded annual growth rate plus, specific development volumes, if any from nearby approved projects to the intersection counts. A list of approved projects along with trip generation and distribution graphic provided by the city of Fort Lauderdale Staff will be utilized in the analysis to determine volumes added at study intersections.
- Total Future Volumes: Total future volumes will be determined by adding project traffic volumes at each of the study intersections.
- Intersection LOS Analysis: Intersection LOS analyses will be conducted for Existing Peak Season, Future Background Peak Season and Future Total Peak Season Conditions using Synchro software for signalized intersections and HCS software for unsignalized intersections. HCM 2010 output will be used to determine LOS and delay at each study intersection.
- An executive summary will include LOS tables for each intersection for the Existing Peak Season, Future Background Peak Season and Future Total Peak Season Conditions
- Driveway LOS and delay will be conducted for Future Total Peak Season Conditions using HCS software.
- Turn lane requirements and vehicular queue storage requirements will be determined at site turn lanes based upon the volumes of traffic anticipated to utilize the site driveways.
- Following a determination of project impacts, the Applicant will review potential mitigation measures with City staff and the City consultant to evaluate feasibility and appropriateness of these measures.
- A buildout of 2022 will be analyzed.

The data collection, calculations, analyses and results will be summarized in a written report for City review. Relevant tables, charts, figures and worksheets will be included in the summary report. Please review the methodology for this analysis as outlined above and indicate your concurrence by signing in the space below. Should you have questions or comments regarding the proposed methodology, please call me via phone at (561) 840-0248 or via e-mail at [chris.heggen@kimley-horn.com](mailto:chris.heggen@kimley-horn.com).

Concur by: \_\_\_\_\_ Date: \_\_\_\_\_  
Benjamin Restrepo, P.E.

K:\WPB\_TPTO\1405\140575000 - 629 SE 5th Ave\2019-01-16 629 Residences Traffic Methodology .docx

## Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour  
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily  
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

### SUMMARY

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail	25	25	1	0	11	12
	Restaurant						
	Cinema/Entertainment						
	Residential	597	597	20	63	57	36
	Hotel						
		621	621	21	63	68	48

INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	3	5	0	0	1	3
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	5	3	0	0	3	1
	Hotel	0	0	0	0	0	0
		8	8	0	0	4	4
	% Reduction	1.3%		0.0%		6.9%	

EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	22	20	1	0	10	9
	Restaurant	0	0	0	0	0	0
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	592	594	20	63	54	35
	Hotel	0	0	0	0	0	0
		613	613	21	63	64	44

## APPENDIX B: TURNING MOVEMENT COUNTS



SE 7TH STREET & US 1  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: JOHN FLOOD  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190005  
 Start Date: 01/16/19  
 File I.D. : 7ST\_US1  
 Page : 1

ALL VEHICLES

US 1 From North				SE 7TH STREET From East				US 1 From South				SE 7TH STREET From West					
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 01/16/19																	
07:00	4	4	302	23	0	6	1	7	2	7	256	2	0	5	1	5	625
07:15	7	5	368	23	0	6	1	18	1	21	253	4	0	6	1	5	719
07:30	4	10	479	43	0	3	2	25	1	32	362	3	0	8	3	9	984
07:45	6	32	469	43	0	10	3	16	5	20	348	2	0	11	8	9	982
Hr Total	21	51	1618	132	0	25	7	66	9	80	1219	11	0	30	13	28	3310
08:00	14	15	448	53	0	6	6	12	6	37	388	7	0	10	7	9	1018
08:15	13	16	361	67	0	6	9	18	3	41	303	4	0	12	18	9	880
08:30	7	11	395	60	0	5	6	7	0	19	308	2	0	14	10	9	853
08:45	10	12	441	64	0	6	6	14	1	22	332	6	0	12	7	12	945
Hr Total	44	54	1645	244	0	23	27	51	10	119	1331	19	0	48	42	39	3696
* BREAK *																	
16:00	10	22	391	21	1	11	11	18	6	30	271	3	0	16	6	12	829
16:15	11	28	425	21	0	4	9	9	1	20	303	8	0	19	6	15	879
16:30	20	27	422	23	0	8	4	10	6	27	290	8	0	21	11	25	902
16:45	10	23	441	24	0	6	8	12	0	29	298	8	0	20	11	18	908
Hr Total	51	100	1679	89	1	29	32	49	13	106	1162	27	0	76	34	70	3518
17:00	13	25	403	23	0	9	8	18	2	26	236	8	0	31	13	22	837
17:15	8	22	457	20	0	17	12	18	0	15	267	7	0	33	20	30	926
17:30	8	24	438	21	0	15	18	12	0	17	258	11	0	24	22	26	894
17:45	12	24	387	41	0	10	7	14	2	21	286	10	0	26	10	15	865
Hr Total	41	95	1685	105	0	51	45	62	4	79	1047	36	0	114	65	93	3522
*TOTAL*	157	300	6627	570	1	128	111	228	36	384	4759	93	0	268	154	230	14046

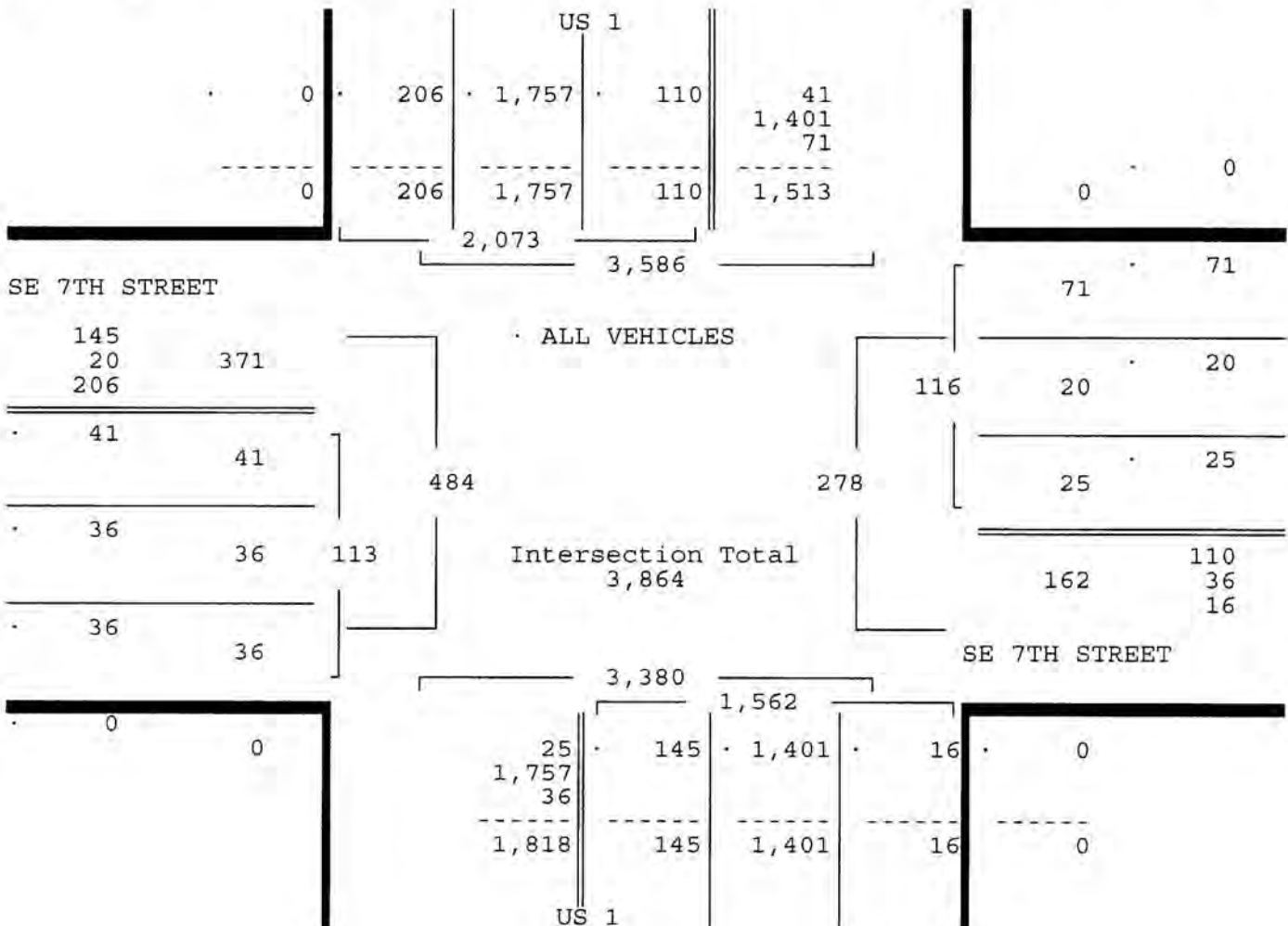
SE 7TH STREET & US 1  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: JOHN FLOOD  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190005  
 Start Date: 01/16/19  
 File I.D. : 7ST\_US1  
 Page : 2

ALL VEHICLES

US 1				SE 7TH STREET				US 1				SE 7TH STREET					
From North				From East				From South				From West					
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/16/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/16/19																	
Peak start 07:30				07:30				07:30				07:30					
Volume	37	73	1757	206	0	25	20	71	15	130	1401	16	0	41	36	36	
Percent	2%	4%	85%	10%	0%	22%	17%	61%	1%	8%	90%	1%	0%	36%	32%	32%	
Pk total	2073			116				1562				113					
Highest	07:45			08:15				08:00				08:15					
Volume	6	32	469	43	0	6	9	18	6	37	388	7	0	12	18	9	
H1 total	550			33				438				39					
PHF	.94			.88				.89				.72					



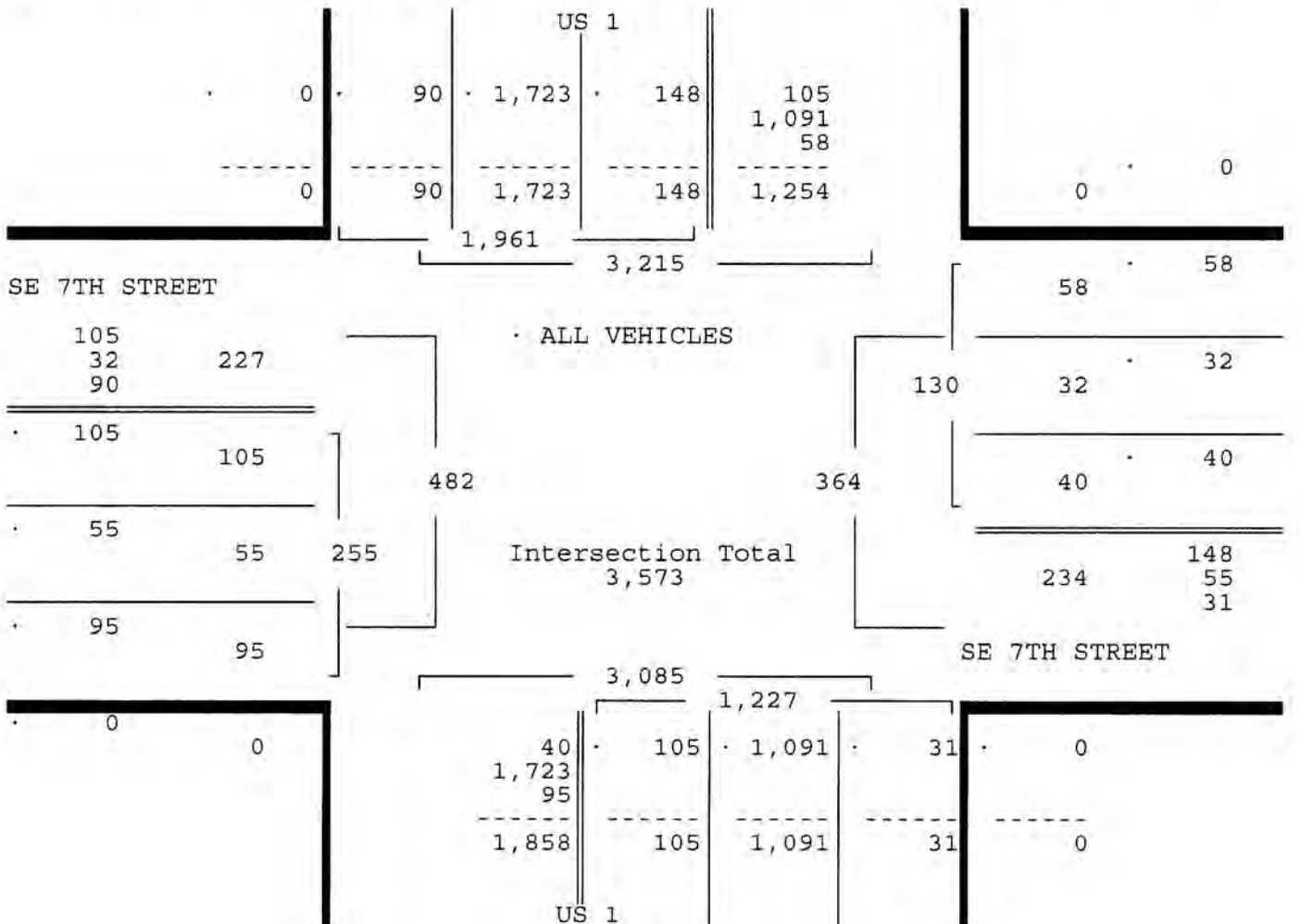
SE 7TH STREET & US 1  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: JOHN FLOOD  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190005  
 Start Date: 01/16/19  
 File I.D. : 7ST\_US1  
 Page : 3

ALL VEHICLES

US 1				SE 7TH STREET				US 1				SE 7TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/16/19																
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/16/19																
Peak start 16:30				16:30				16:30				16:30				
Volume	51	97	1723	90	0	40	32	58	8	97	1091	31	0	105	55	95
Percent	3%	5%	88%	5%	0%	31%	25%	45%	1%	8%	89%	3%	0%	41%	22%	37%
Pk total	1961				130				1227				255			
Highest	17:15				17:15				16:45				17:15			
Volume	8	22	457	20	0	17	12	18	0	29	298	8	0	33	20	30
Hi total	507				47				335				83			
PHF	.97				.69				.92				.77			





SE 7TH STREET & US 1  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: JOHN FLOOD  
 SIGNALIZED

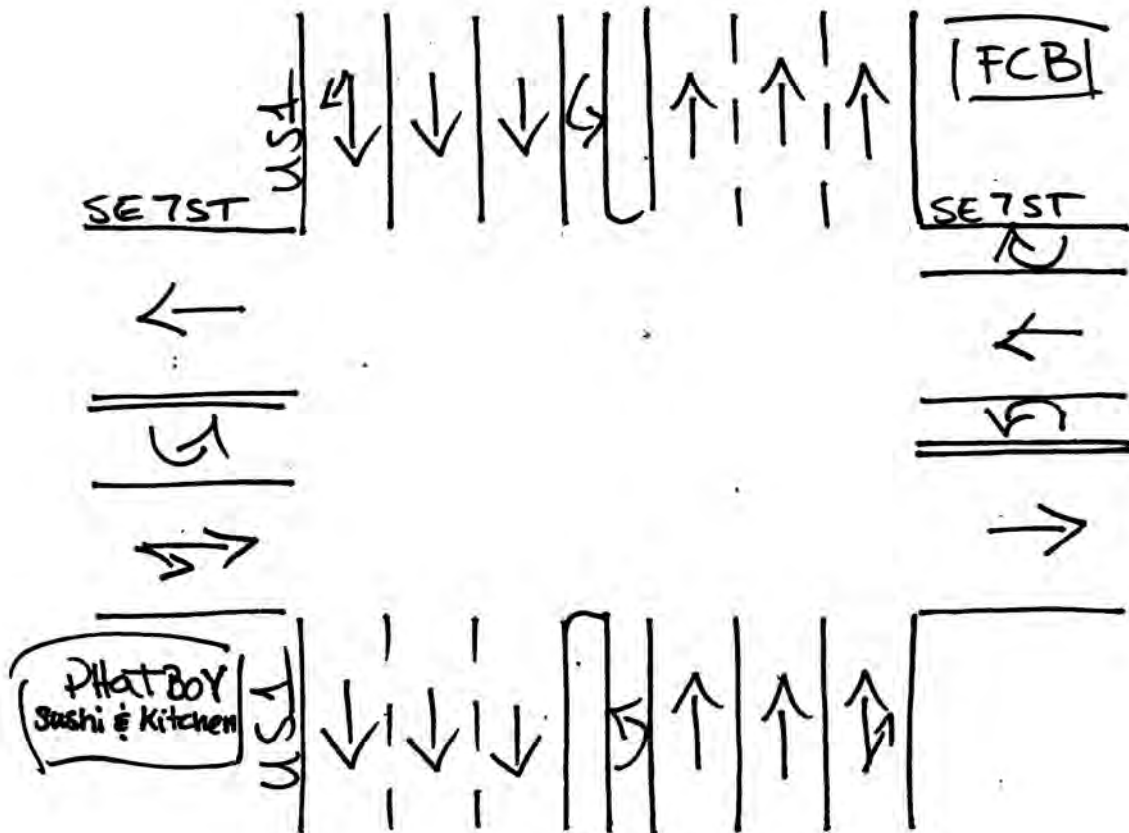
TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190005  
 Start Date: 01/16/19  
 File I.D. : 78T\_US1  
 Page : 1

PEDESTRIANS & BIKES

	US 1 From North				SE 7TH STREET From East				US 1 From South				SE 7TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
Date 01/16/19 -----																	
07:00	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
07:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	2
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	1	0	3	0	0	0	0	4
Hr Total	0	0	0	0	0	2	0	1	0	2	0	3	0	0	0	1	9
-----																	
08:00	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
08:15	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3
08:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
08:45	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3
Hr Total	0	0	0	0	0	1	0	3	0	0	0	5	0	0	0	0	9
-----																	
* BREAK *																	
-----																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
-----																	
17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2	3
17:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Hr Total	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	4	7
-----																	
*TOTAL*	0	0	0	1	0	3	0	5	0	2	0	9	0	3	0	5	28

North



FT. Lauderdale, Florida  
January 16, 2019  
drawn by: Luis Palomino  
Signalized

SE 7TH STREET & SE 3RD AVENUE  
FT LAUDERDALE, FLORIDA  
COUNTED BY: SEBASTIAN SALVO  
SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
85 SE 4TH AVENUE, UNIT 109  
DELRAY BEACH, FLORIDA  
PHONE (561)272-3255

Site Code : 00190015  
Start Date: 01/22/19  
File I.D. : 7STR3AVE  
Page : 1

ALL VEHICLES

SE 3RD AVENUE From North					SE 7TH STREET From East				SE 3RD AVENUE From South				SE 7TH STREET From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	Total
Date 01/22/19																			
07:00	0	4	54	2	0	0	3	7	0	5	131	12	0	19	23	1			261
07:15	0	7	65	3	0	4	16	17	0	6	188	14	0	35	14	1			370
07:30	0	2	73	3	0	1	15	11	0	14	198	23	0	34	30	3			407
07:45	0	13	83	10	0	6	14	12	0	9	252	19	0	34	31	2			485
Hr Total	0	26	275	18	0	11	48	47	0	34	769	68	0	122	98	7			1523
08:00	1	3	89	5	0	12	29	18	0	12	233	15	0	41	27	3			488
08:15	0	10	108	8	0	11	22	32	0	13	259	16	0	35	32	3			549
08:30	0	12	90	7	1	5	20	38	0	12	272	5	0	53	34	6			555
08:45	0	8	112	2	0	7	16	25	0	7	288	22	0	36	38	8			569
Hr Total	1	33	399	22	1	35	87	113	0	44	1052	58	0	165	131	20			2161
* BREAK *																			
16:00	0	4	142	5	0	14	32	11	0	2	110	6	0	12	23	3			364
16:15	0	6	151	16	0	16	24	9	0	4	125	9	0	16	23	9			408
16:30	0	20	177	10	0	10	47	16	0	8	136	4	0	20	15	4			467
16:45	0	8	205	25	0	9	37	9	0	8	112	4	0	16	22	9			464
Hr Total	0	38	675	56	0	49	140	45	0	22	483	23	0	64	83	25			1703
17:00	0	10	219	18	0	20	41	9	0	8	163	7	0	24	26	7			552
17:15	0	16	217	16	0	6	23	15	0	18	164	4	0	21	33	9			542
17:30	0	9	162	14	0	13	41	24	0	21	162	8	0	30	25	2			511
17:45	0	14	171	9	0	8	22	16	0	12	164	5	0	32	24	6			483
Hr Total	0	49	769	57	0	47	127	64	0	59	653	24	0	107	108	24			2088
*TOTAL*	1	146	2118	153	1	142	402	269	0	159	2957	173	0	458	420	76			7475



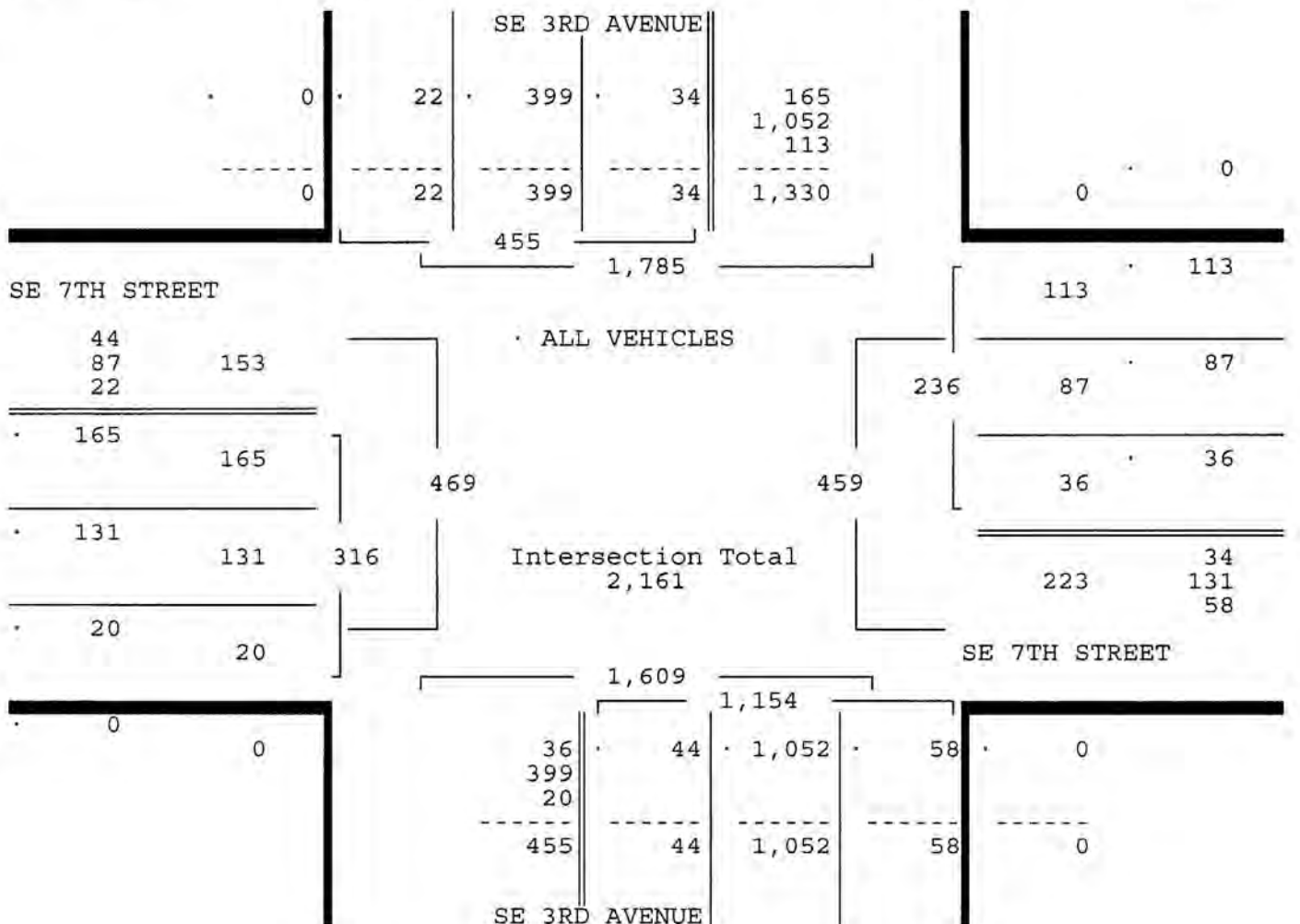
SE 7TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR3AVE  
 Page : 2

ALL VEHICLES

SE 3RD AVENUE From North				SE 7TH STREET From East				SE 3RD AVENUE From South				SE 7TH STREET From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/22/19																
Peak start 08:00				08:00				08:00				08:00				
Volume	1	33	399	22	1	35	87	113	0	44	1052	58	0	165	131	20
Percent	0%	7%	88%	5%	0%	15%	37%	48%	0%	4%	91%	5%	0%	52%	41%	6%
Pk total	455				236				1154				316			
Highest	08:15				08:15				08:45				08:30			
Volume	0	10	108	8	0	11	22	32	0	7	288	22	0	53	34	6
Hi total	126				65				317				93			
PHF	.90				.91				.91				.85			



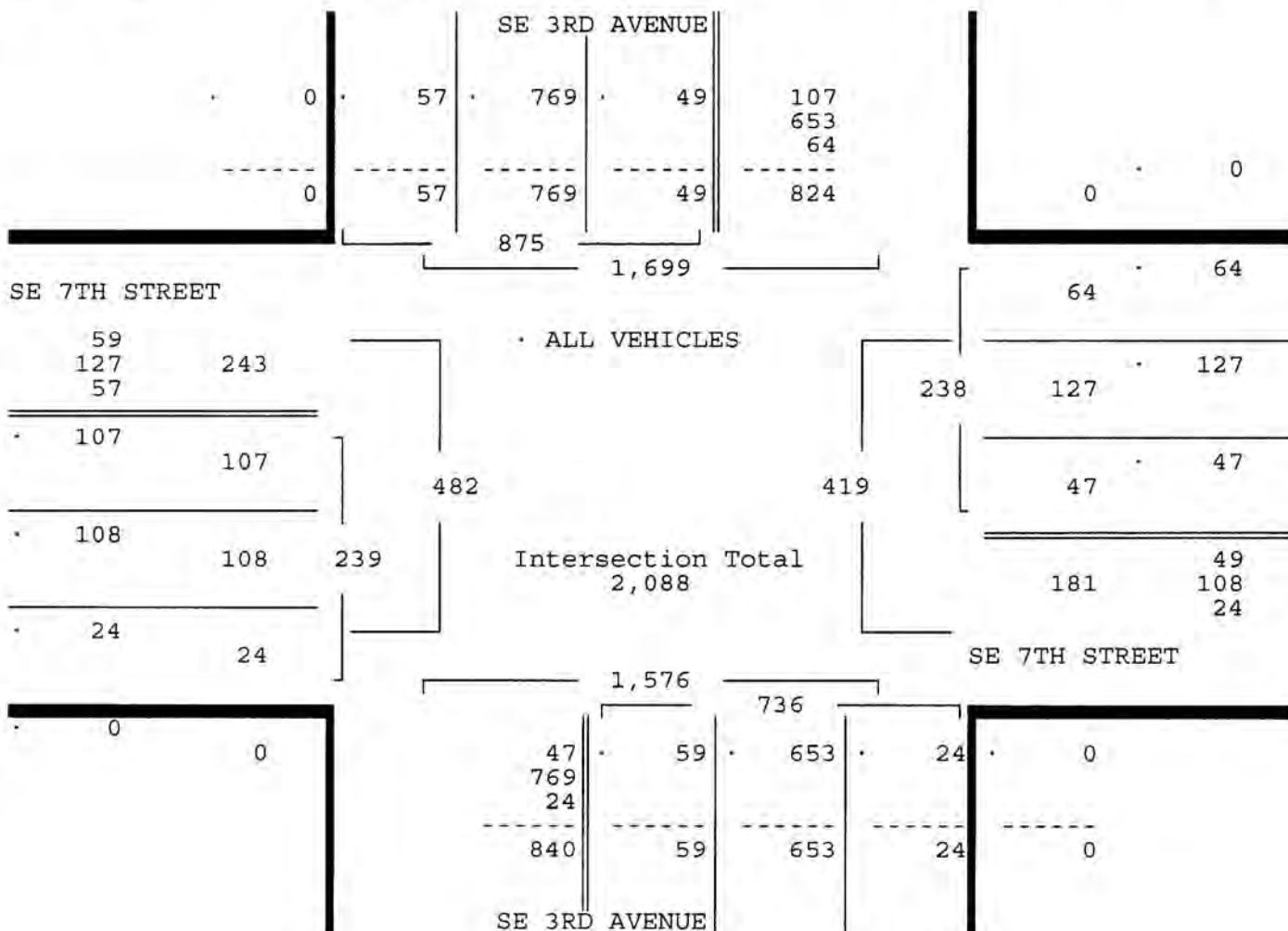
SE 7TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR3AVE  
 Page : 3

ALL VEHICLES

SE 3RD AVENUE From North				SE 7TH STREET From East				SE 3RD AVENUE From South				SE 7TH STREET From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/22/19																
Peak start 17:00				17:00				17:00				17:00				
Volume	0	49	769	57	0	47	127	64	0	59	653	24	0	107	108	24
Percent	0%	6%	88%	7%	0%	20%	53%	27%	0%	8%	89%	3%	0%	45%	45%	10%
Pk total	875				238				736				239			
Highest	17:15				17:30				17:30				17:15			
Volume	0	16	217	16	0	13	41	24	0	21	162	8	0	21	33	9
Hi total	249				78				191				63			
PHF	.88				.76				.96				.95			



TRAFFIC SURVEY SPECIALISTS, INC.

SE 7TH STREET & SE 3RD AVENUE  
FT LAUDERDALE, FLORIDA  
COUNTED BY: SEBASTIAN SALVO  
SIGNALIZED

85 SE 4TH AVENUE, UNIT 109  
DELRAY BEACH, FLORIDA  
PHONE (561)272-3255

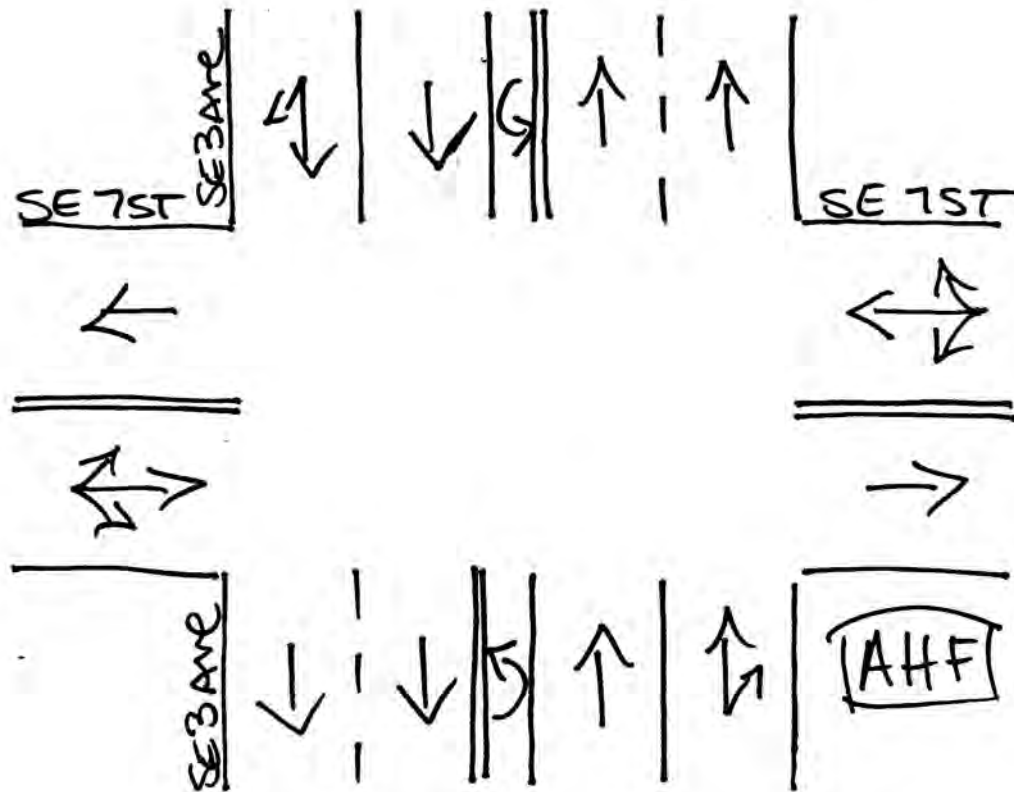
Site Code : 00190015  
Start Date: 01/22/19  
File I.D. : 7STR3AVE  
Page : 1

PEDESTRIANS & BIKES

	SE 3RD AVENUE From North				SE 7TH STREET From East				SE 3RD AVENUE From South				SE 7TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 01/22/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	0	3
07:30	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	3	7
07:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	1	0	4	0	2	0	0	0	1	0	0	0	3	11
08:00	0	0	0	0	0	2	0	1	0	0	0	0	0	1	0	0	4
08:15	0	0	0	0	0	1	0	2	0	0	0	2	0	0	0	1	6
08:30	0	0	0	0	0	1	0	2	0	0	0	1	0	0	0	1	5
08:45	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	4
Hr Total	0	0	0	0	0	4	0	6	0	0	0	4	0	2	0	3	19
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
16:15	0	1	0	0	0	2	0	4	0	0	0	0	0	1	0	1	9
16:30	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3
16:45	0	0	0	3	0	1	0	5	0	0	0	1	0	1	0	4	15
Hr Total	0	1	0	3	0	3	0	10	0	0	0	5	0	2	0	5	29
17:00	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	1	5
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	3
17:30	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
17:45	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	0	0	3	0	2	0	1	0	3	0	0	0	2	11
*TOTAL*																	
	0	1	0	4	0	14	0	20	0	1	0	13	0	4	0	13	70



North



FT. Lauderdale, Florida  
January 22, 2019  
drawn by: Luis Palomino  
Signalized

SE 7TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: LUIS PALOMINO  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR5AVE  
 Page : 1

ALL VEHICLES

SE 5TH AVENUE From North				SE 7TH STREET From East				DRIVEWAY From South				SE 7TH STREET From West					
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 01/22/19																	
07:00	0	1	0	0	0	0	21	1	0	0	0	1	0	3	9	0	36
07:15	0	6	0	1	0	0	40	4	0	0	0	0	0	3	7	0	61
07:30	0	6	0	0	0	0	39	7	0	1	0	0	0	9	26	0	88
07:45	0	7	0	2	0	0	39	4	0	0	0	1	0	4	17	0	74
Hr Total	0	20	0	3	0	0	139	16	0	1	0	2	0	19	59	0	259
08:00	0	4	0	0	0	0	80	4	0	1	0	0	0	1	23	0	113
08:15	0	4	0	1	0	0	82	7	0	0	0	0	0	8	22	0	124
08:30	0	9	0	0	0	0	69	9	0	1	0	1	0	7	25	0	121
08:45	0	4	0	0	0	0	61	6	0	0	0	1	0	6	22	0	100
Hr Total	0	21	0	1	0	0	292	26	0	2	0	2	0	22	92	0	458
* BREAK *																	
16:00	0	6	0	6	0	0	33	3	0	0	0	2	0	1	35	0	86
16:15	0	6	0	2	0	0	29	4	0	2	0	2	0	1	39	0	85
16:30	0	4	0	9	0	0	33	4	0	0	0	1	0	1	50	0	102
16:45	0	9	0	10	0	0	27	3	0	0	0	0	0	2	31	0	82
Hr Total	0	25	0	27	0	0	122	14	0	2	0	5	0	5	155	0	355
17:00	0	8	0	12	0	0	38	4	0	0	0	0	0	2	57	0	121
17:15	0	8	0	5	1	0	38	9	0	0	0	2	0	1	55	0	119
17:30	0	7	0	2	0	0	58	11	0	0	0	0	0	3	34	0	115
17:45	0	3	0	3	0	0	42	11	0	0	0	3	0	2	41	0	105
Hr Total	0	26	0	22	1	0	176	35	0	0	0	5	0	8	187	0	460
*TOTAL*	0	92	0	53	1	0	729	91	0	5	0	14	0	54	493	0	1532

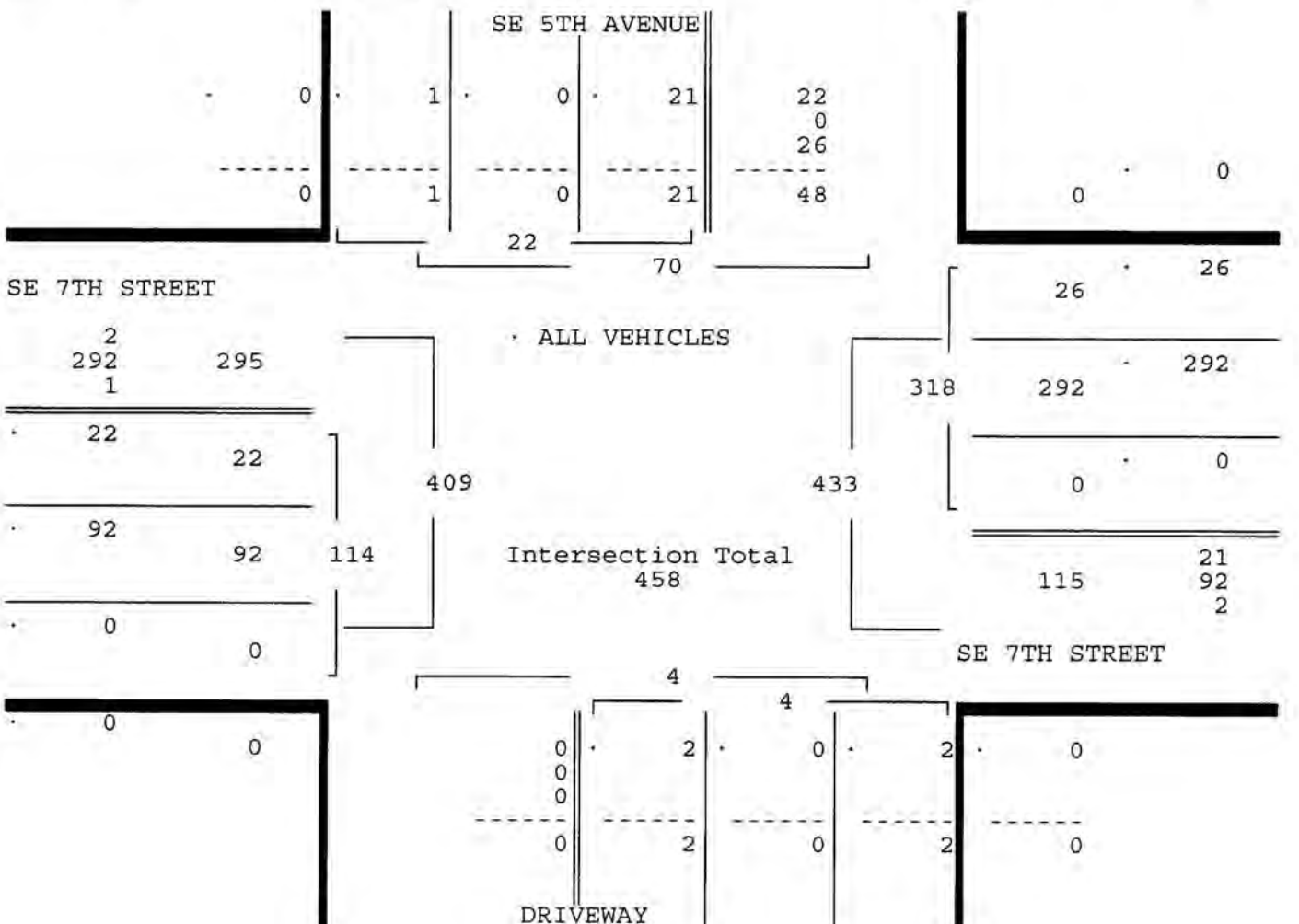
SE 7TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: LUIS PALOMINO  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR5AVE  
 Page : 2

ALL VEHICLES

SE 5TH AVENUE				SE 7TH STREET				DRIVEWAY				SE 7TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/22/19																
Peak start 08:00				08:00				08:00				08:00				
Volume	0	21	0	1	0	0	292	26	0	2	0	2	0	22	92	0
Percent	0%	95%	0%	5%	0%	0%	92%	8%	0%	50%	0%	50%	0%	19%	81%	0%
Pk total	22				318				4				114			
Highest	08:30				08:15				08:30				08:30			
Volume	0	9	0	0	0	0	82	7	0	1	0	1	0	7	25	0
Hi total	9				89				2				32			
PHF	.61				.89				.50				.89			





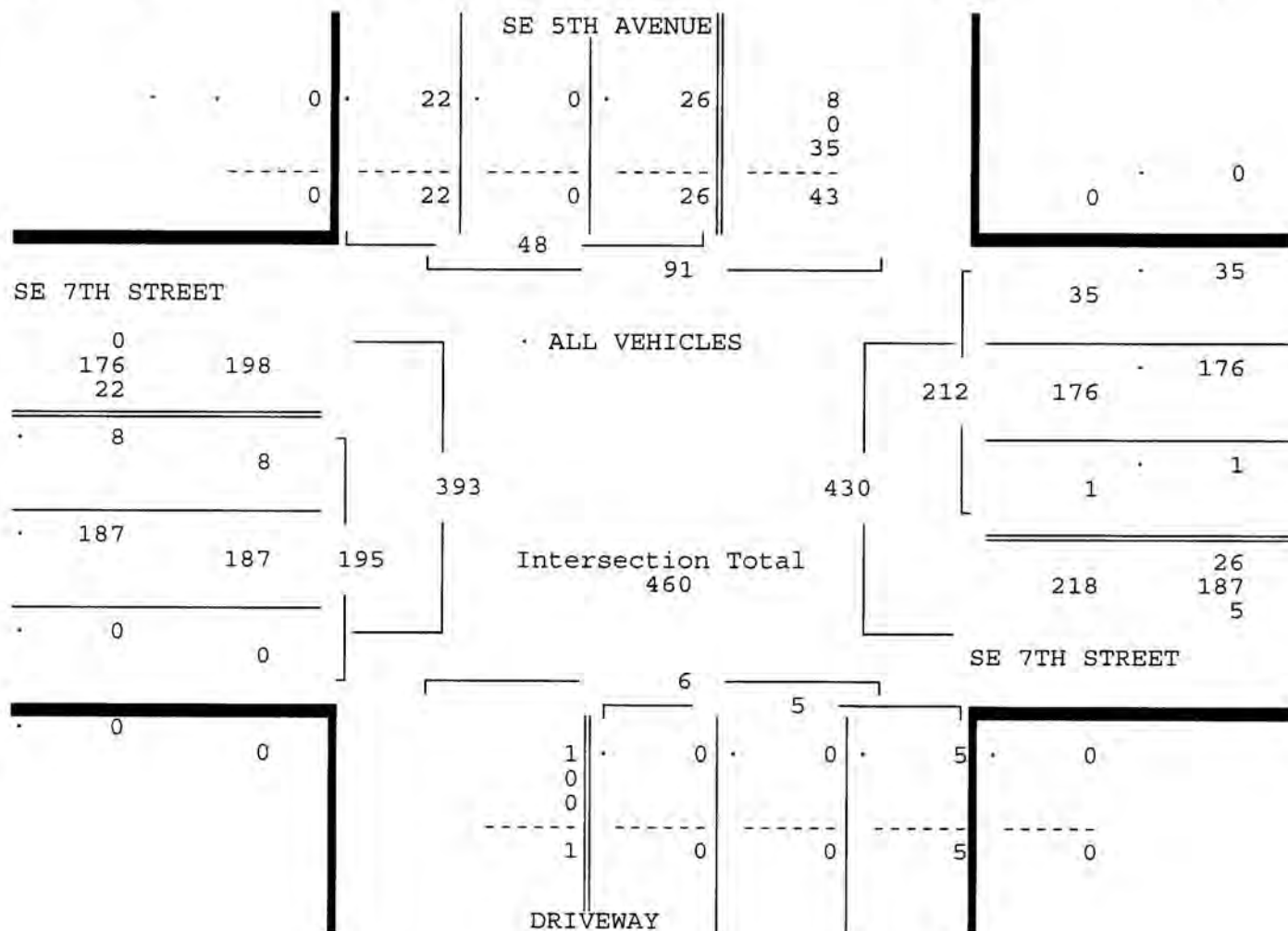
SE 7TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: LUIS PALOMINO  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR5AVE  
 Page : 3

ALL VEHICLES

SE 5TH AVENUE				SE 7TH STREET				DRIVEWAY				SE 7TH STREET					
From North				From East				From South				From West					
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/22/19																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	26	0	22	1	0	176	35	0	0	0	5	0	8	187	0	
Percent	0%	54%	0%	46%	0%	0%	83%	17%	0%	0%	0%	100%	0%	4%	96%	0%	
Pk total	48				212				5				195				
Highest	17:00				17:30				17:45				17:00				
Volume	0	8	0	12	0	0	58	11	0	0	0	3	0	2	57	0	
Hi total	20				69				3				59				
PHF	.60				.77				.42				.83				



SE 7TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: LUIS PALOMINO  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 7STR5AVE  
 Page : 1

PEDESTRIANS & BIKES

Date	SE 5TH AVENUE From North				SE 7TH STREET From East				DRIVEWAY From South				SE 7TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
01/22/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:00	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0	0	3
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
*TOTAL*	0	0	0	0	0	0	0	2	0	3	0	1	0	0	0	1	7

North



FT. Lauderdale, Florida

January 22, 2019

drawn by: Luis Palomino

NOT Signalized



SE 6TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561) 272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_3AVE  
 Page : 1

ALL VEHICLES

SE 3RD AVENUE From North					SE 6TH STREET From East				SE 3RD AVENUE From South				SE 6TH STREET From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	
Date 01/22/19																			
07:00	2	45	60	23	0	9	3	44	0	12	102	31	0	0	0	0	0	0	331
07:15	2	60	72	16	1	9	6	49	0	32	167	40	0	0	0	0	0	0	454
07:30	4	69	88	42	0	7	8	63	0	25	186	21	0	0	0	0	0	0	513
07:45	3	73	108	40	0	6	13	59	0	25	241	39	0	0	0	0	0	0	607
Hr Total	11	247	328	121	1	31	30	215	0	94	696	131	0	0	0	0	0	0	1905
08:00	4	70	111	30	0	8	10	53	1	29	204	29	0	0	0	0	0	0	549
08:15	0	48	147	48	0	13	19	73	0	26	251	17	0	0	0	0	0	0	642
08:30	0	64	134	67	0	12	16	86	0	32	271	20	0	0	0	0	0	0	702
08:45	2	48	97	50	0	12	11	101	0	32	254	13	0	0	0	0	0	0	620
Hr Total	6	230	489	195	0	45	56	313	1	119	980	79	0	0	0	0	0	0	2513
* BREAK *																			
16:00	1	18	153	21	0	25	26	64	0	9	114	12	0	0	0	0	0	0	443
16:15	0	31	130	21	0	22	32	49	0	12	128	8	0	0	0	0	0	0	433
16:30	1	20	180	52	0	19	48	66	0	15	163	11	0	0	0	0	0	0	575
16:45	0	23	204	38	0	23	46	71	0	14	147	10	0	0	0	0	0	0	576
Hr Total	2	92	667	132	0	89	152	250	0	50	552	41	0	0	0	0	0	0	2027
17:00	0	23	185	51	0	45	85	97	0	18	181	11	0	0	0	0	0	0	696
17:15	0	27	201	38	0	36	57	93	0	19	182	7	0	0	0	0	0	0	660
17:30	0	25	148	44	0	23	44	75	0	8	216	8	0	0	0	0	0	0	591
17:45	0	32	171	58	0	18	24	80	0	11	208	14	0	0	0	0	0	0	616
Hr Total	0	107	705	191	0	122	210	345	0	56	787	40	0	0	0	0	0	0	2563
*TOTAL*	19	676	2189	639	1	287	448	1123	1	319	3015	291	0	0	0	0	0	0	9008

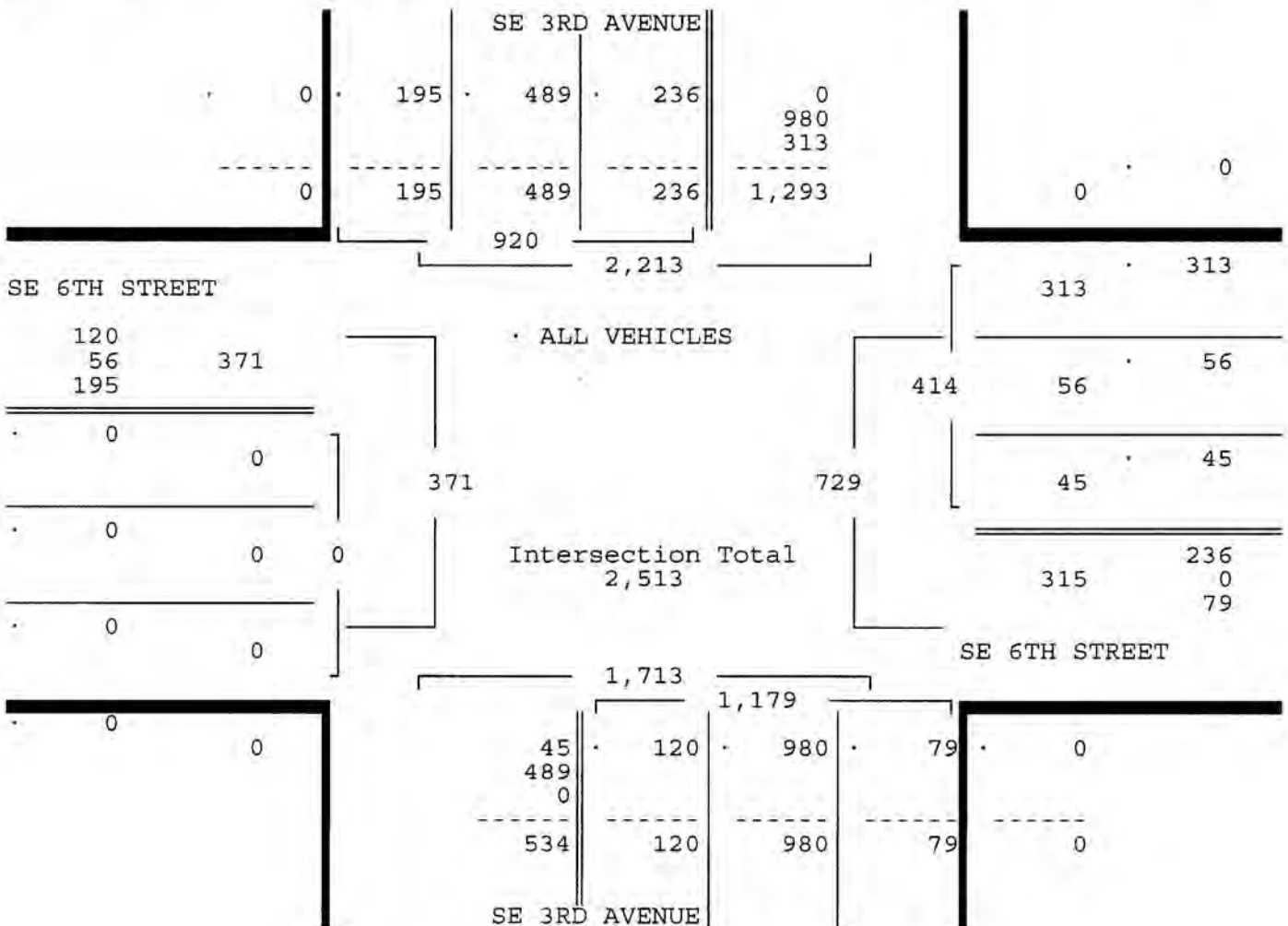
SE 6TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_3AVE  
 Page : 2

ALL VEHICLES

SE 3RD AVENUE				SE 6TH STREET				SE 3RD AVENUE				SE 6TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/22/19																
Peak start 08:00				08:00				08:00				08:00				
Volume	6	230	489	195	0	45	56	313	1	119	980	79	0	0	0	0
Percent	1%	25%	53%	21%	0%	11%	14%	76%	0%	10%	83%	7%	0%	0%	0%	0%
Pk total	920			414				1179				0				
Highest	08:30			08:45				08:30				07:00				
Volume	0	64	134	67	0	12	11	101	0	32	271	20	0	0	0	0
Hi total	265			124				323				0				
PHF	.87			.83				.91				.0				



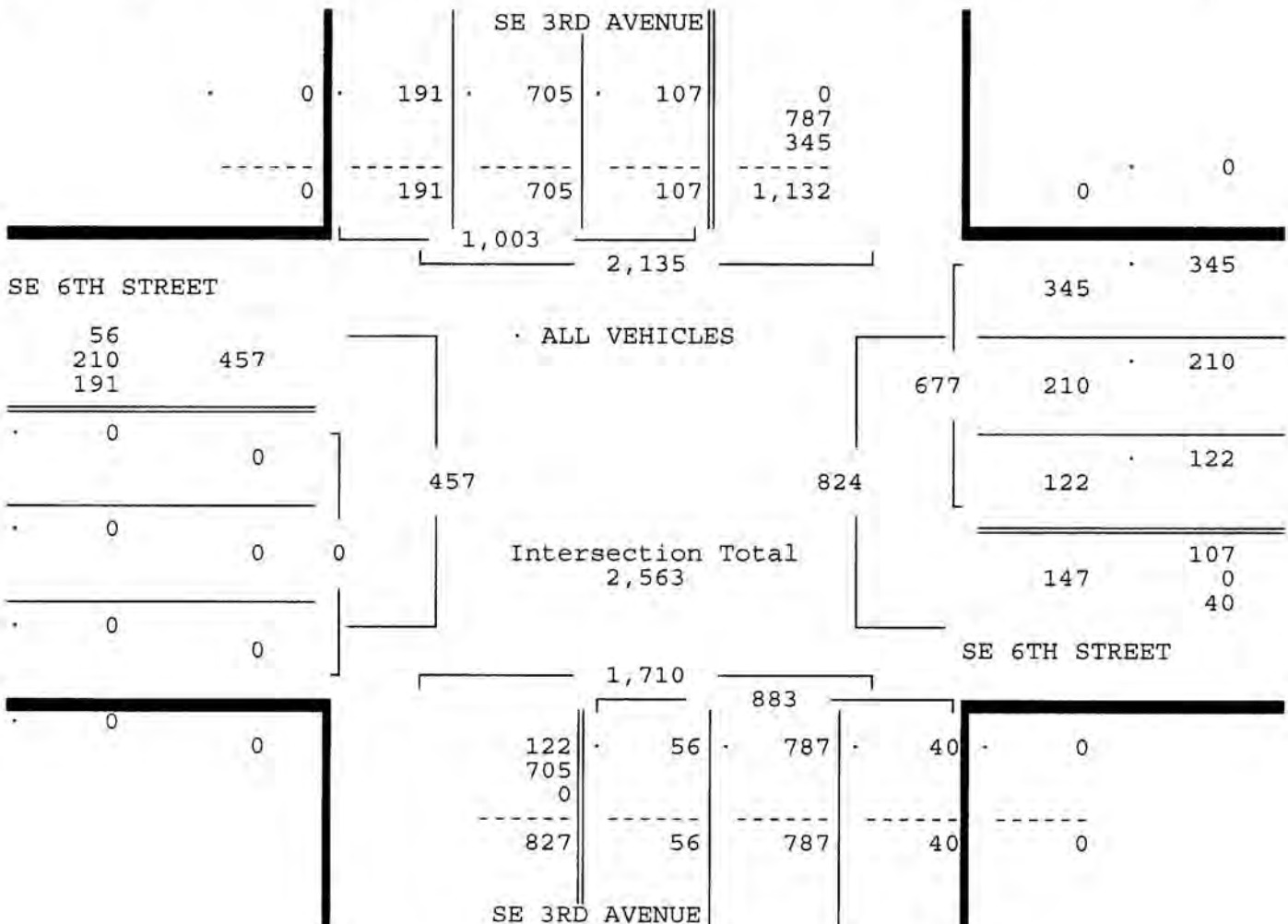
SE 6TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_3AVE  
 Page : 3

ALL VEHICLES

SE 3RD AVENUE				SE 6TH STREET				SE 3RD AVENUE				SE 6TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/22/19																
Peak start 17:00				17:00				17:00				17:00				
Volume	0	107	705	191	0	122	210	345	0	56	787	40	0	0	0	
Percent	0%	11%	70%	19%	0%	18%	31%	51%	0%	6%	89%	5%	0%	0%	0%	
Pk total	1003				677				883				0			
Highest	17:15				17:00				17:45				07:00			
Volume	0	27	201	38	0	45	85	97	0	11	208	14	0	0	0	
Hi total	266				227				233				0			
PHP	.94				.75				.95				.0			



SE 6TH STREET & SE 3RD AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

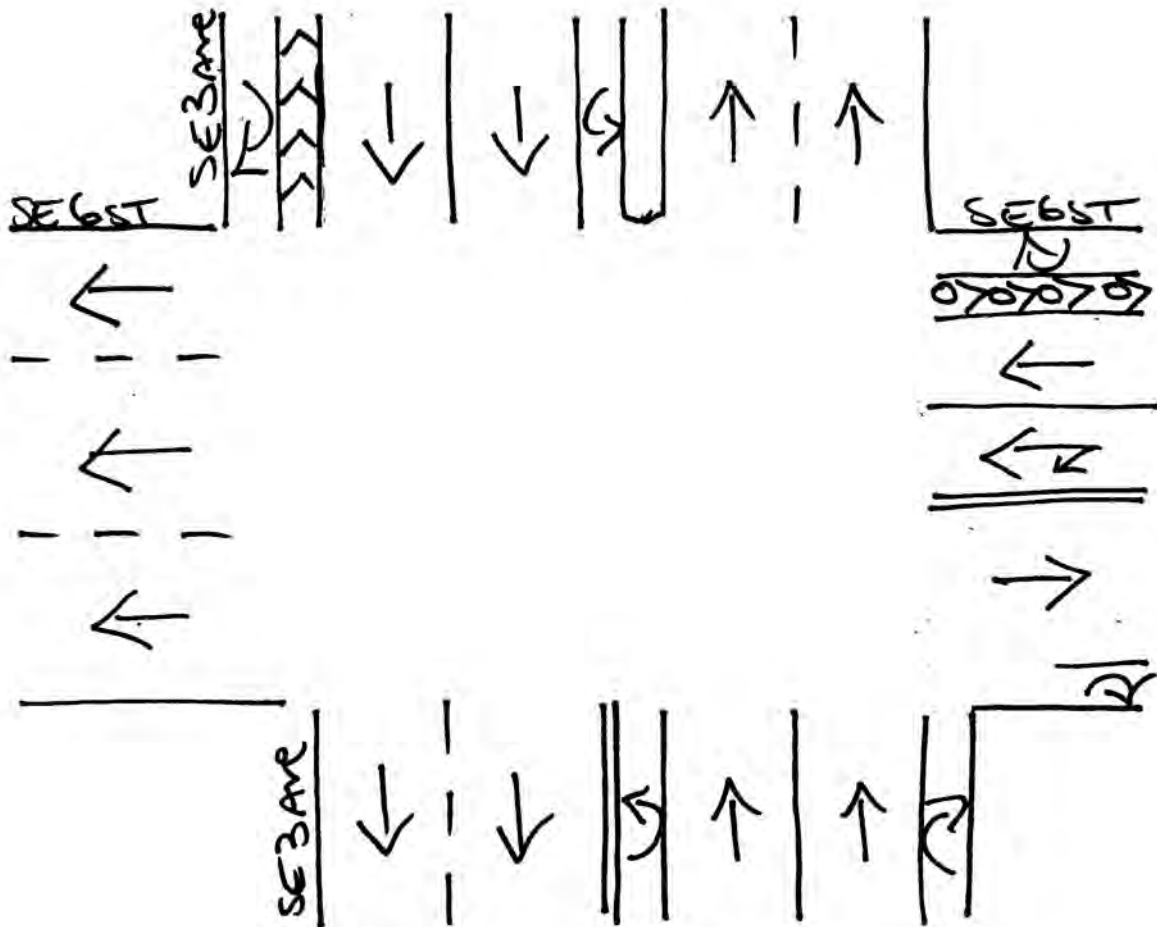
Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_3AVE  
 Page : 1

PEDESTRIANS & BIKES

Date	SE 3RD AVENUE From North				SE 6TH STREET From East				SE 3RD AVENUE From South				SE 6TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
01/22/19																	
07:00	0	0	0	9	0	0	0	1	0	0	0	2	0	0	0	5	17
07:15	0	0	0	9	0	1	0	2	0	1	0	2	0	0	0	0	15
07:30	0	0	0	22	0	2	0	5	0	0	0	5	0	0	0	3	37
07:45	0	0	0	22	0	2	0	7	0	0	0	8	0	0	0	8	47
Hr Total	0	0	0	62	0	5	0	15	0	1	0	17	0	0	0	16	116
08:00	0	0	0	17	0	1	0	5	0	0	0	8	0	1	0	2	34
08:15	0	0	0	19	0	0	0	10	0	0	0	9	0	0	0	2	40
08:30	0	0	0	23	0	1	0	12	0	1	0	26	0	0	0	0	63
08:45	0	0	0	15	0	0	0	4	0	0	0	11	0	3	0	1	34
Hr Total	0	0	0	74	0	2	0	31	0	1	0	54	0	4	0	5	171
* BREAK *																	
16:00	0	0	0	4	0	0	0	5	0	0	0	5	0	0	0	0	14
16:15	0	2	0	16	0	2	0	3	0	1	0	2	0	0	0	0	26
16:30	0	0	0	4	0	0	0	1	0	0	0	1	0	1	0	0	7
16:45	0	1	0	2	0	3	0	8	0	0	0	1	0	0	0	3	18
Hr Total	0	3	0	26	0	5	0	17	0	1	0	9	0	1	0	3	65
17:00	0	0	0	7	0	0	0	3	0	0	0	0	0	0	0	2	12
17:15	0	2	0	2	0	0	0	2	0	0	0	4	0	0	0	0	10
17:30	0	0	0	3	0	1	0	1	0	0	0	3	0	3	0	4	15
17:45	0	0	0	11	0	0	0	7	0	1	0	10	0	0	0	3	32
Hr Total	0	2	0	23	0	1	0	13	0	1	0	17	0	3	0	9	69
*TOTAL*	0	5	0	185	0	13	0	76	0	4	0	97	0	8	0	33	421



North



FT. Lauderdale, Florida  
 January 22, 2019  
 drawn by: Luis Palomino  
 Signalized

SE 6TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: MELISSA INOJOSA  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_SAVE  
 Page : 1

ALL VEHICLES

SE 5TH AVENUE From North					SE 6TH STREET From East				SE 5TH AVENUE From South				SE 6TH STREET From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	
Date 01/22/19																			
07:00	0	6	2	32	0	0	10	18	0	0	4	0	1	58	6	0		137	
07:15	0	10	7	31	0	0	10	18	0	0	8	0	2	67	10	1		164	
07:30	0	19	6	43	0	1	10	30	0	0	16	0	3	78	2	1		209	
07:45	0	18	9	45	0	0	15	37	0	1	8	1	0	105	7	1		247	
Hr Total	0	53	24	151	0	1	45	103	0	1	36	1	6	308	25	3		757	
08:00	0	21	4	38	0	0	16	18	0	2	3	1	0	74	5	0		182	
08:15	0	18	4	47	0	1	18	25	0	2	9	0	0	58	7	0		189	
08:30	0	21	8	46	0	0	22	14	0	3	10	1	0	58	18	3		204	
08:45	0	20	4	39	2	0	29	11	1	1	8	1	1	43	11	0		171	
Hr Total	0	80	20	170	2	1	85	68	1	8	30	3	1	233	41	3		746	
----- * BREAK * -----																			
16:00	0	15	11	76	0	0	11	5	0	1	3	0	0	13	11	2		148	
16:15	0	9	8	58	0	0	6	4	0	0	5	0	0	20	14	0		124	
16:30	0	17	10	84	0	0	12	4	0	0	4	0	0	18	11	0		160	
16:45	0	29	15	96	0	0	21	7	0	0	4	1	0	13	18	2		206	
Hr Total	0	70	44	314	0	0	50	20	0	1	16	1	0	64	54	4		638	
17:00	0	51	14	166	0	0	19	4	0	2	4	0	0	17	14	1		292	
17:15	0	20	12	124	0	0	25	9	0	0	9	0	0	17	15	0		231	
17:30	0	18	7	77	0	0	19	9	0	3	15	0	0	20	15	0		183	
17:45	0	10	5	67	0	0	15	6	0	3	12	0	0	18	11	0		147	
Hr Total	0	99	38	434	0	0	78	28	0	8	40	0	0	72	55	1		853	
*TOTAL*	0	302	126	1069	2	2	258	219	1	18	122	5	7	677	175	11		2994	

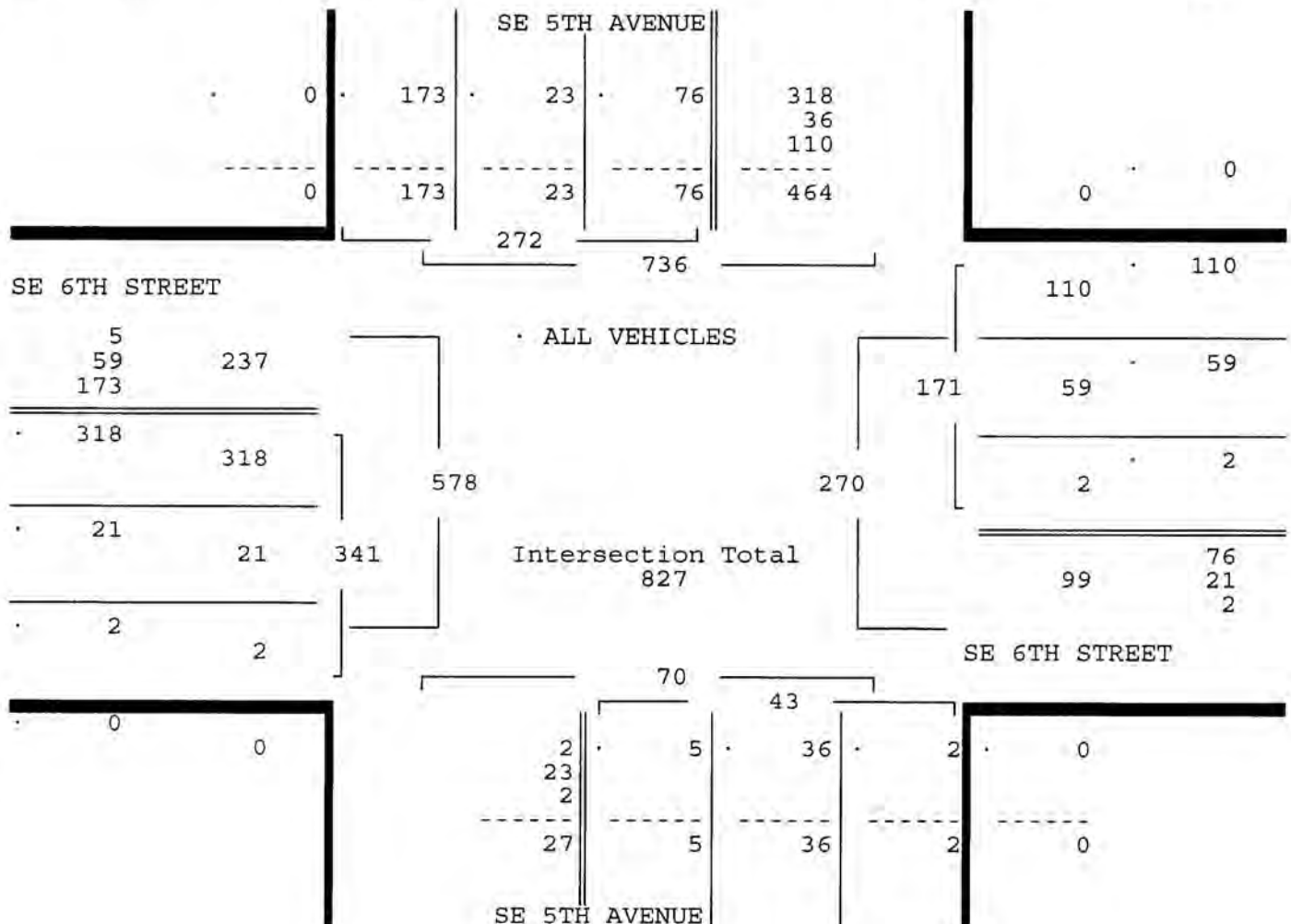
SE 6TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: MELISSA INOJOSA  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_SAVE  
 Page : 2

ALL VEHICLES

SE 5TH AVENUE				SE 6TH STREET				SE 5TH AVENUE				SE 6TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/22/19																
Peak start 07:30				07:30				07:30				07:30				
Volume	0	76	23	173	0	2	59	110	0	5	36	2	3	315	21	2
Percent	0%	28%	8%	64%	0%	1%	35%	64%	0%	12%	84%	5%	1%	92%	6%	1%
Pk total	272			171	171			43	43			341	341			
Highest	07:45			07:45	07:45			07:30	07:30			07:45	07:45			
Volume	0	18	9	45	0	0	15	37	0	0	16	0	0	105	7	1
Hi total	72			52	52			16	16			113	113			
PHF	.94			.82	.82			.67	.67			.75	.75			



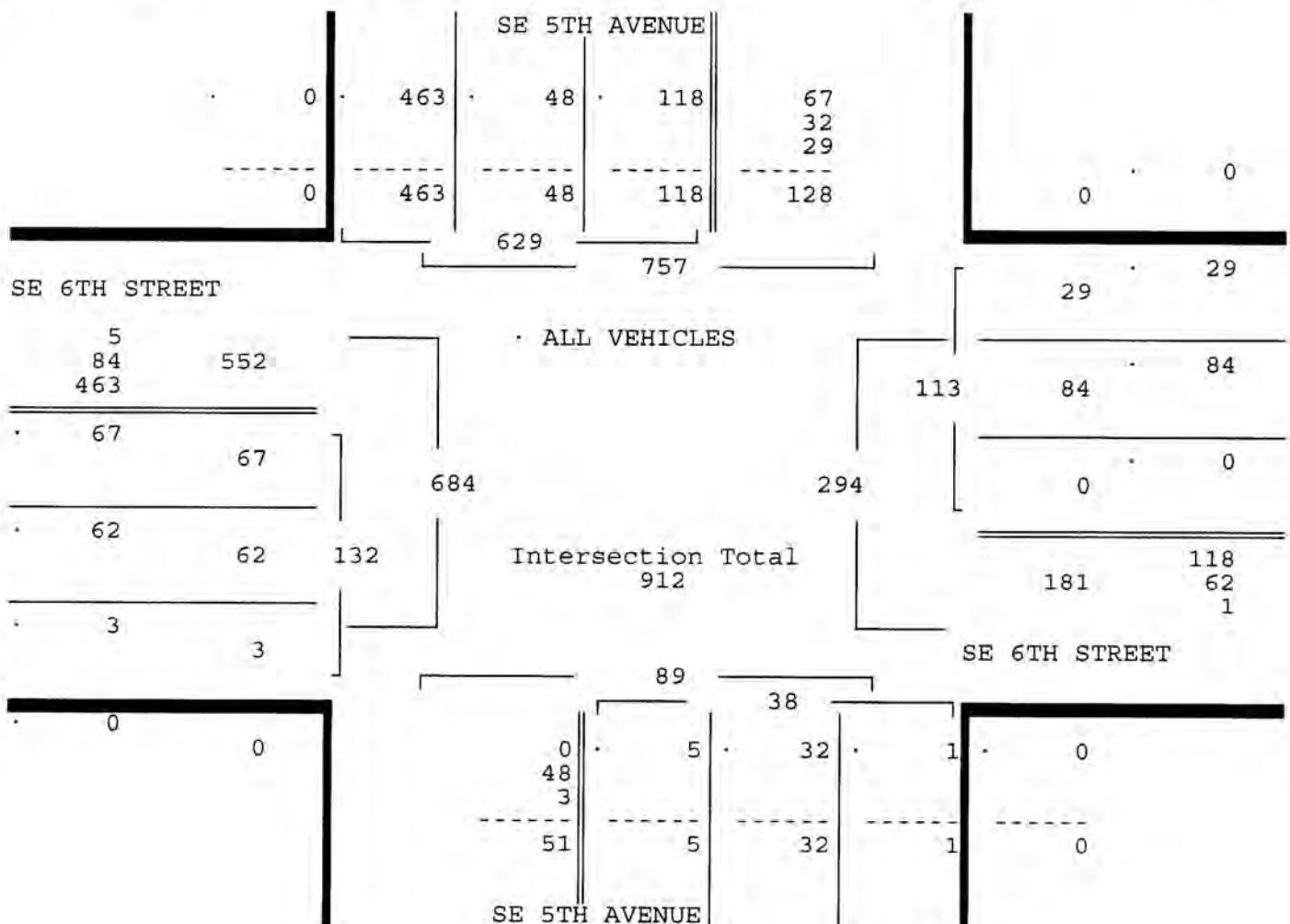
SE 6TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: MELISSA INOJOSA  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_5AVE  
 Page : 3

ALL VEHICLES

SE 5TH AVENUE From North				SE 6TH STREET From East				SE 5TH AVENUE From South				SE 6TH STREET From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 01/22/19																
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/22/19																
Peak start 16:45				16:45				16:45				16:45				
Volume	0	118	48	463	0	0	84	29	0	5	32	1	0	67	62	3
Percent	0%	19%	8%	74%	0%	0%	74%	26%	0%	13%	84%	3%	0%	51%	47%	2%
Pk total	629				113				38				132			
Highest	17:00				17:15				17:30				17:30			
Volume	0	51	14	166	0	0	25	9	0	3	15	0	0	20	15	0
Hi total	231				34				18				35			
PHF	.68				.83				.53				.94			





SE 6TH STREET & SE 5TH AVENUE  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: MELISSA INOJOSA  
 NOT SIGNALIZED

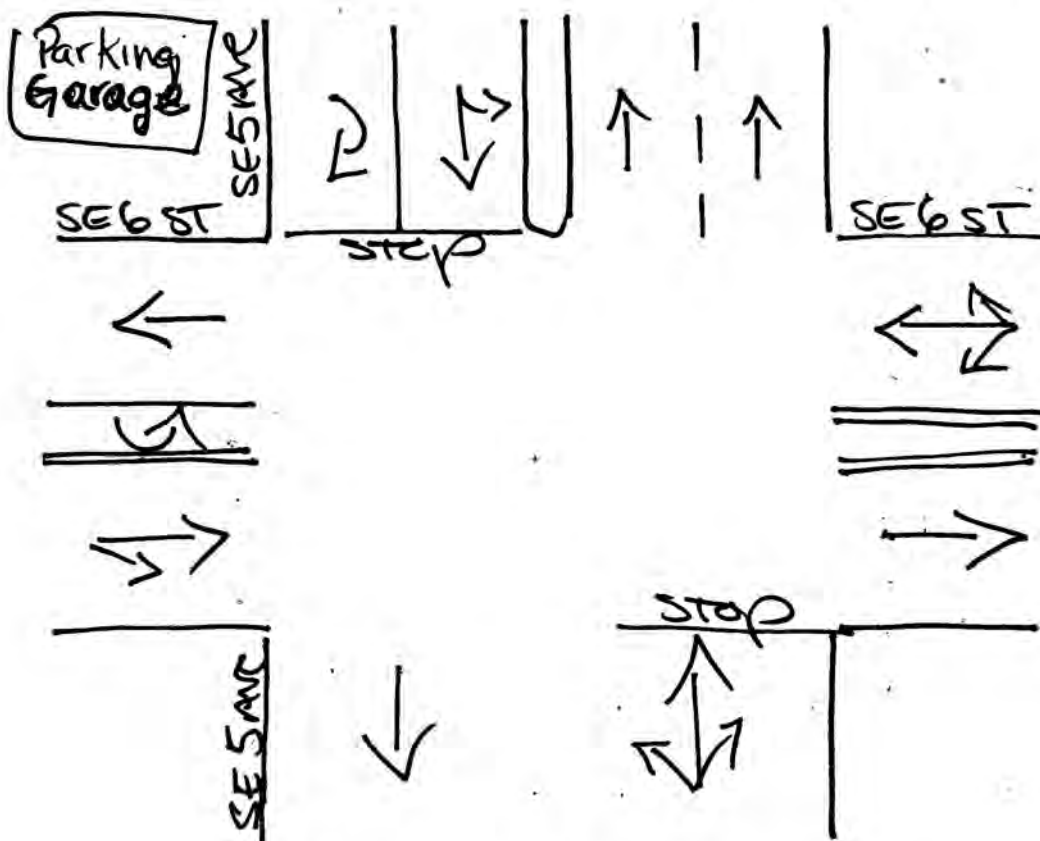
TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_5AVE  
 Page : 1

PEDESTRIANS & BIKES

Date 01/22/19	SE 5TH AVENUE From North				SE 6TH STREET From East				SE 5TH AVENUE From South				SE 6TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
07:45	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
Hr Total	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0	4
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:30	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	6
08:45	0	0	0	1	0	0	0	7	0	0	0	1	0	0	0	0	9
Hr Total	0	3	0	2	0	0	0	7	0	0	0	1	0	0	0	4	17
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	3
16:30	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	2	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	2	7
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	5
17:30	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3
17:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Hr Total	0	2	0	5	0	0	0	1	0	0	0	0	0	1	0	1	10
*TOTAL*	0	5	0	11	0	1	0	9	0	0	0	1	0	4	0	7	38

North ↑



FT. Lauderdale, Florida  
 January 22, 2019  
 drawn by: Luis Palomino

SE 6TH STREET & US 1  
FT LAUDERDALE, FLORIDA  
COUNTED BY: MIKE MALONE  
NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
85 SE 4TH AVENUE, UNIT 109  
DELRAY BEACH, FLORIDA  
PHONE (561) 272-3255

Site Code : 00190015  
Start Date: 01/22/19  
File I.D. : 6ST\_US1  
Page : 1

ALL VEHICLES

Date	US 1		SE 6TH STREET		US 1		SE 6TH STREET		Total
	From North	Thru	From East	Thru	From South	Thru	From West	Thru	
01/22/19	UTurn	Left	Thru	SERV	Right	UTurn	Left	Thru	SERV
07:00	0	0	309	10	14	0	0	0	264
07:15	0	0	427	17	7	0	0	0	324
07:30	0	0	472	21	17	0	0	0	402
07:45	0	0	548	15	25	0	0	0	432
Hr Total	0	0	1756	63	63	0	0	0	1422
08:00	0	0	460	6	16	0	0	0	377
08:15	0	0	469	9	18	0	0	0	368
08:30	0	0	483	9	17	0	0	0	399
08:45	0	0	451	12	24	0	0	0	401
Hr Total	0	0	1863	36	75	0	0	0	1545
* BREAK *									
16:00	0	0	373	5	8	0	0	0	302
16:15	0	0	462	2	2	0	0	0	355
16:30	0	0	359	1	6	0	0	0	349
16:45	0	0	413	8	21	0	0	0	365
Hr Total	0	0	1607	16	37	0	0	0	1371
17:00	0	0	430	7	17	0	0	0	369
17:15	0	0	472	5	19	0	0	0	340
17:30	0	0	460	9	16	0	0	0	328
17:45	0	0	359	2	6	0	0	0	320
Hr Total	0	0	1721	23	58	0	0	0	1357
*TOTAL*	0	0	6947	138	233	0	0	0	5695
									215
									66
									7
									1
									0
									403
									13730

TRAFFIC SURVEY SPECIALISTS, INC.  
85 SE 4TH AVENUE, UNIT 109  
DELRAY BEACH, FLORIDA  
PHONE (561) 272-3255

ALL VEHICLES

Date 01/22/19												
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 01/22/19												
US 1 From North				Thru			US 1 From South			Thru		
Uturn	Left	Thru	SERV	Right	Uturn	Left	Thru	SERV	Right	Uturn	Left	Thru
SE 6TH STREET From East					SE 6TH STREET From West					Total		
Peak start 07:45												
Volume	0	1960	39	76	0	0	0	5	0	0	1576	76
Percent	0%	94%	2%	4%	0%	0%	0%	100%	0%	0%	95%	5%
Pk total	2075				5					1665		
Highest	07:45				08:15					07:45		
Volume	0	548	15	25	0	0	0	4	0	432	19	1
Percent					4					452	23	22
Pk total	588				.31					.92		
Highest	.88										.96	

ALL VEHICLES

SE 6TH STREET

US 1



## ALL VEHICLES

Date 01/22/19											
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 01/22/19											
US 1 From North				US 1 From South				US 1 SE 6TH STREET From West			
Thru		Thru		Thru		Thru		Thru		Thru	
Uturn	Left	Thru	SERV	Right	Uturn	Left	Thru	SERV	Right	Uturn	Left
Peak Start 16:45				16:45				16:45			
Volume	0	1775	29	73	0	0	0	6	0	1402	50
Percent	0%	95%	2%	4%	0%	0%	0%	100%	0%	95%	3%
Pk total	1877				6			1477			
Highest	17:15				16:45			16:45			
Volume	0	0	472	5	19	0	0	3	0	365	11
Ht total	496				3			386			
PHF	.95				.50			.96			
Total				Total				Total			

## SE 6TH STREET

[illegible]

ALL VEHICLES

		ALL VEHICLES			
0	73			0	0
0	73			0	0
73				6	
3	3			0	0
0	0	236		31	
160	163			25	0
160				25	25
Intersection Total					
3,523					
3,441		1,477			
0	0	1,452	25	0	
1,804	160				
1,964	0	1,452	25	0	
US 1					
		SE 6TH STREET			

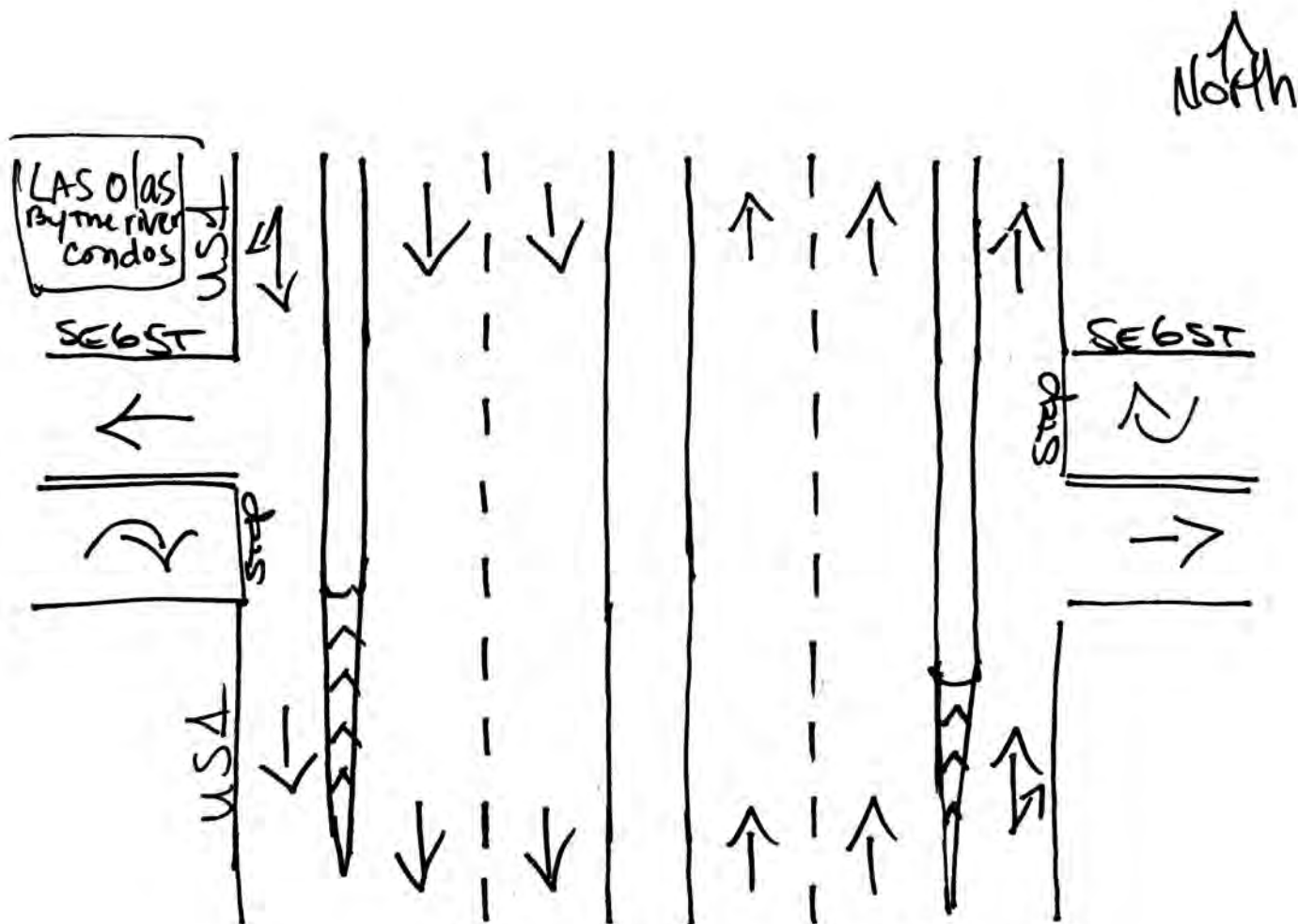
SE 6TH STREET & US 1  
 FT LAUDERDALE, FLORIDA  
 COUNTED BY: MIKE MALONE  
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.  
 85 SE 4TH AVENUE, UNIT 109  
 DELRAY BEACH, FLORIDA  
 PHONE (561)272-3255

Site Code : 00190015  
 Start Date: 01/22/19  
 File I.D. : 6ST\_US1  
 Page : 1

PEDESTRIANS & BIKES

	US 1 From North				SE 6TH STREET From East				US 1 From South				SE 6TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
Date 01/22/19																	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	4
07:30	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	4
07:45	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	4
Hr Total	0	1	0	2	0	4	0	3	0	0	0	1	0	1	0	0	12
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	0	5
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	4	0	2	0	0	0	0	0	0	0	0	0	0	6
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
16:45	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4
Hr Total	0	0	0	0	0	1	0	4	0	1	0	0	0	2	0	0	8
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
Hr Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
*TOTAL*																	
	0	1	0	6	0	7	0	9	0	1	0	1	0	3	0	0	28



FT. Lauderdale, Florida  
 January 22, 2019  
 drawn by: Luis Palomino  
 NOT Signalized

## APPENDIX C: SIGNAL TIMING





**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

Intersection Number	2086	Initial Operation Date	1960
Controller Type	2070 LN	System Number	2086
Modification Number	17	Modification Date	09/11/2018
Drawing/Project No	DES. GRP. 4	FPL Grid Number	87679473907
Intersection	SE 3 AVENUE and SE 6 STREET		
Municipality	FORT LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2			5	6		8
Direction	SBL	NB			NBL	SB		WB
Initial Green(MIN)	4	10			4	10		6
Vehicle Ext.(GAP)	1.5	3.0			1.5	3.0		2.0
Maximum Green I	20	40			20	40		25
Maximum Green II								
Yellow Clearance	4.0	4.0			4.0	4.0		4.0
All Red Clearance	2.0	2.0			2.0	2.0		2.0
Phase Recall	OFF	MIN			OFF	MIN		OFF
Detector Delay								
Walk		7+A				7+A		7+A
Pedestrian Clearance		24				24		23
Permissive	5 SECT				5 SECT			
Flash Operation	YELLOW				YELLOW			
					RED			

Attachment \_\_\_\_\_

**NOTES:**

1. FLASH OPERATION: 2300-0600 M-SAT, ALL DAY, SUN.
2. BRIDGE PREEMPTION NOT USED.
3. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON ---> OMIT PHASES 1+5.
4. AUDIBLE PED SIGNALS: E/W BEEP, N/S TONE.
5. WITH WOIT2013080166 DATED 8/2/13, INSTALLS AUDIBLE PEDS.
6. MOD. 17 UPDATES ALL RED CLEARANCE VALUES & PH. 6 PEDESTRIAN CLEARANCE VALUE.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_

Station : 2086 - SE 3 Ave &amp; SE 6 St ( Standard File )

Phase	1 (SL)	2 (NT)	3	4	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk		7				7		7								
Ped Clearance		24				24		23								
Min Green	4	10			4	10		6								
Gap Ext	1.5	3			1.5	3		2								
Max1	20	40			20	40		25								
Max2																
Yellow Clr	4	4			4	4		4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2			2	2		2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON			ON	ON		ON								
Auto Flash Entry								ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

## Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						ON
Override Higher Preempt						ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	
Min Walk						
Ped Clear						
Track Green						
Min Dwell	6	6	6	6	6	
Max Presence	180	180	180	180	180	
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	8	1		2	
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	8	1	2		2	
Exit 2		5	6		6	
Exit 3						
Exit 4						

## Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

**Station :** 2086 - SE 3 Ave & SE 6 St ( Standard File )

## Coordination

[illegible]

**Station : 2086 - SE 3 Ave & SE 6 St ( Standard File )**

[illegible]

## Scheduler

[illegible]

**User Comments:**



# TRAFFIC ENGINEERING DIVISION SIGNALIZED INTERSECTION

LOCATION : SE 3 AVE AND SE 6 ST

ORDER NO. --- ISSUE DATE --- REVISION NO. --- COMPLETION DATE 10/28/14

DWG. NO. 14-10-05-01 FILE NO. 2086 CITY FORT LAUDERDALE SCALE: 1" = 50'

DWN BY: SRAMOUTAR

2 4 6 8



3-SECT  
1-WAY  
4-REQ'D

1 6  
2 5



5-SECT  
1-WAY  
2-REQ'D

P-2 P-4 P-6 P-8



"WALK" NOT  
OPERATIONAL  
IN FIELD.

6-REQ'D

P-2(1) P-4(1)



2-REQ'D

SE 3 AVE



SE 6 ST



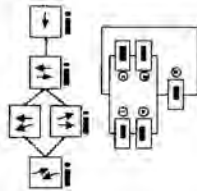
Non-Illuminated  
Street name

3-REQ'D



R3-4

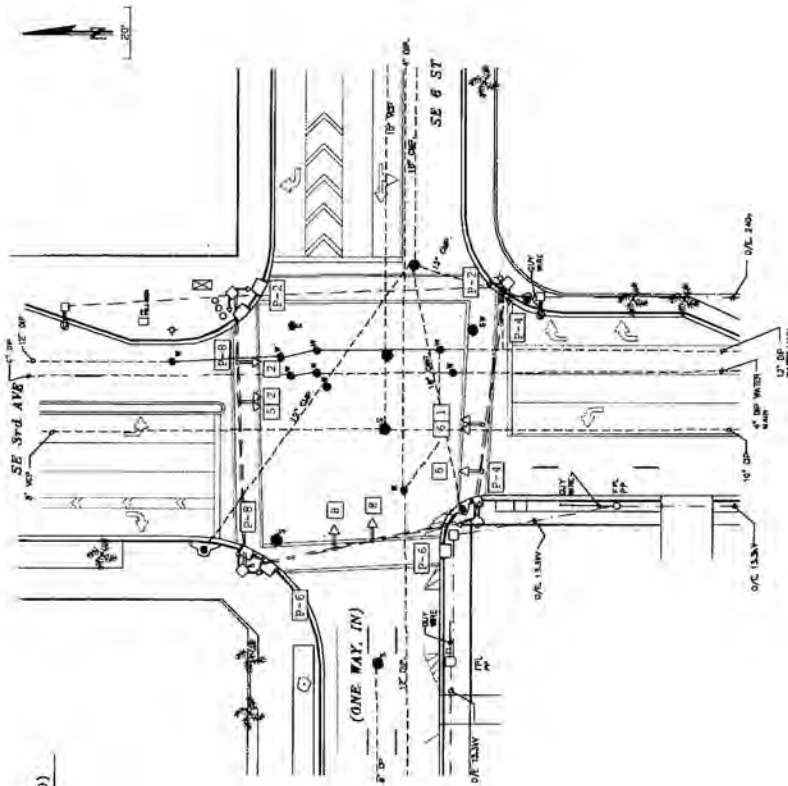
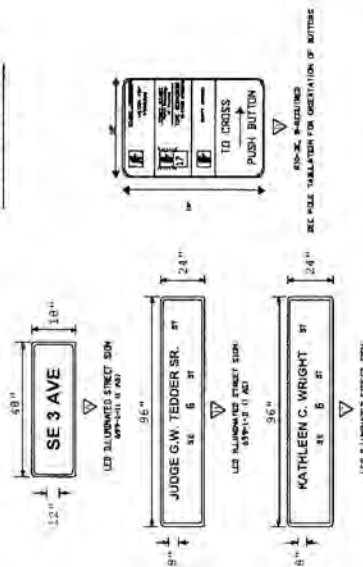
SIGNAL OPERATING PLAN NO. 7 (MODIFIED)



SIGNAL TIMING

CONTROLLED PHASE	1	2	3	4	5	6	7	8
PHASE NAME	1	2	3	4	5	6	7	8
PHASE NUMBER	1	2	3	4	5	6	7	8
PHASE COLOR	RED	RED	RED	RED	RED	RED	RED	RED
PHASE DURATION (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE CLEARANCE (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE TOTAL (SEC)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PHASE NAME	1	2	3	4	5	6	7	8
PHASE NUMBER	1	2	3	4	5	6	7	8
PHASE COLOR	RED	RED	RED	RED	RED	RED	RED	RED
PHASE DURATION (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE CLEARANCE (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE TOTAL (SEC)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
PHASE NAME	1	2	3	4	5	6	7	8
PHASE NUMBER	1	2	3	4	5	6	7	8
PHASE COLOR	RED	RED	RED	RED	RED	RED	RED	RED
PHASE DURATION (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE CLEARANCE (SEC)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
PHASE TOTAL (SEC)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0

SIGN DETAILS



SE 3RD AVENUE AND SE 6TH STREET

SHEET T-1

DRAWING NO. 07050301

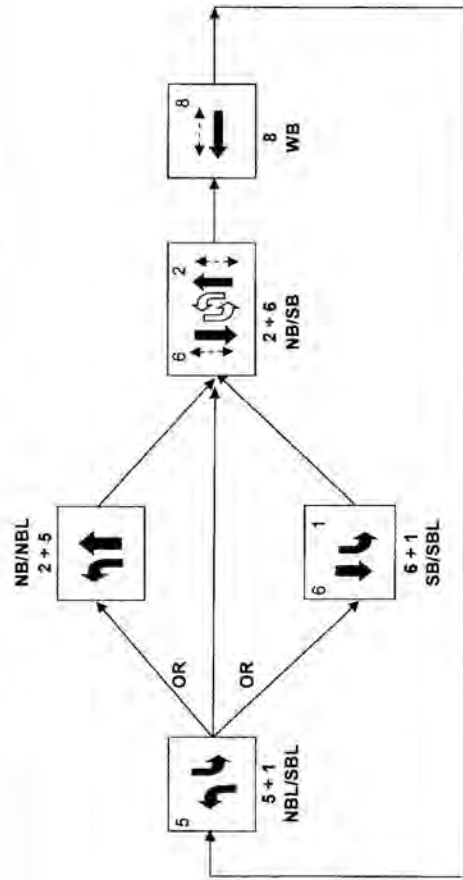
BERNARD COUNTY  
PUBLIC WORKS & TRANSPORTATION DEPT.  
TRAFFIC ENGINEERING DIVISION



DATE	SCALE	BY	CHK	DATE
07/01	1" = 20'	KW	MC	07/01
07/01	1" = 20'	KW	MC	07/01
07/01	1" = 20'	KW	MC	07/01

NAME	DATE	SCALE	BY	CHK	DATE
DESIGNED BY	07/01	1" = 20'	KW	MC	07/01
CHECKED BY	07/01	1" = 20'	KW	MC	07/01
APPROVED BY	07/01	1" = 20'	KW	MC	07/01

Sequence of Operation for 2086
SE 3 Avenue and SE 6 Street Ft. Lauderdale





**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

Intersection Number	2104	Initial Operation Date	1963
Controller Type	2070 LN	System Number	2104
Modification Number	18	Modification Date	09/12/2018
Drawing/Project No	GRP 4	FPL Grid Number	87679494600
Intersection	SE 3 AVENUE and SE 7 STREET		
Municipality	FORT LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3,8	4,7	5	6		
Direction	SBL	NB	WB	EB	NBL	SB		
Initial Green(MIN)	4	10	5	5	4	10		
Vehicle Ext.(GAP)	1.5	3.0	2.0	2.0	1.5	3.0		
Maximum Green I	12	40	25	25	12	40		
Maximum Green II								
Yellow Clearance	4.0	4.0	4.0	4.0	4.0	4.0		
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
Detector Delay								
Walk		7	7	7		7		
Pedestrian Clearance		12	20	20		12		
Permissive	5 SECT				5 SECT			
Flash Operation		YELLOW	RED	RED		YELLOW		

Attachment \_\_\_\_\_

**NOTES:**

1. ANTI-BACKDOWN NORTH/SOUTH, PHASES 2+6 ON ---> OMIT 1+5.
2. NIGHT FLASH: 2100-0600, 7 DAYS.
3. MOD. 18 UPDATES ALL RED, PEDESTRIAN CLEARANCE AND WALK VALUES.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_



Station : 2104 - SE 3 Ave &amp; SE 7 St ( Standard File )

Phase	1 (SL)	2 (NT)	3 (WT)	4 (ET)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk		7	7	7		7										
Ped Clearance		12	20	20		12										
Min Green	4	10	5	5	4	10										
Gap Ext	1.5	3	2	2	1.5	3										
Max1	12	40	25	25	12	40										
Max2																
Yellow Clr	4	4	4	4	4	4			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

## Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	15	8	15	15	15	15
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1			2	4	2	1
Exit 2	3		6		6	5
Exit 3						
Exit 4						

## Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

## Coordination

CAM #19-0351  
Exhibit 4  
Page 82 of 186

**Station : 2104 - SE 3 Ave & SE 7 St ( Standard File )**

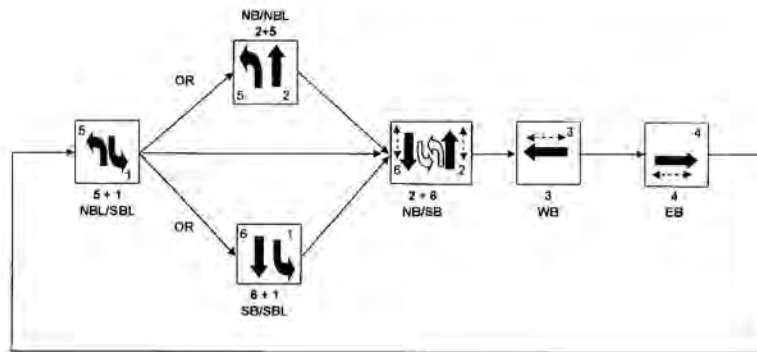
[illegible]

## Scheduler

[illegible]

**User Comments:**

**Sequence of Operation for (2104) SE 3 Avenue and SE 7 Street  
Fort Lauderdale**





# TRAFFIC ENGINEERING DIVISION

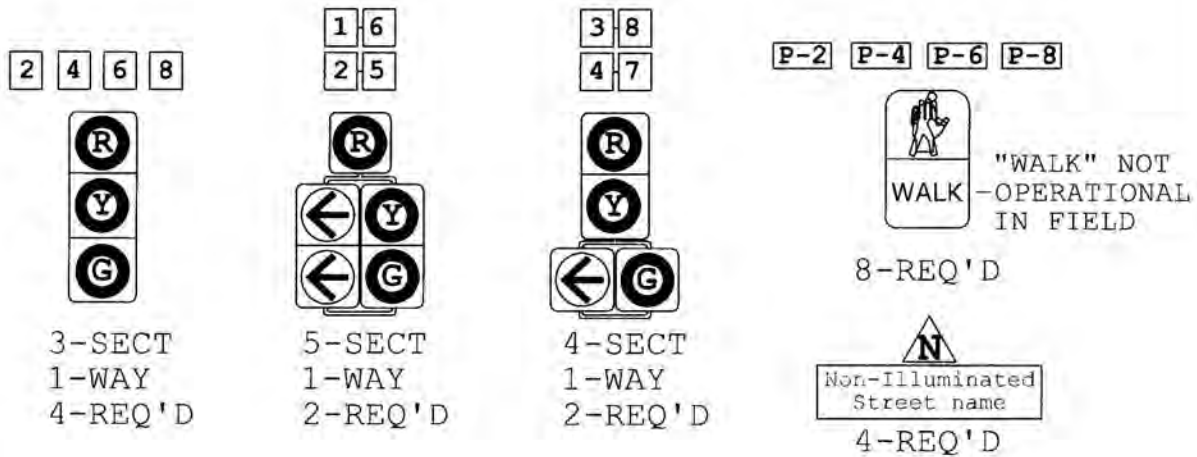
## SIGNALIZED INTERSECTION

LOCATION : **SE 3 AVE AND SE 7 ST**

ORDER NO. --- ISSUE DATE --- REVISION NO. --- COMPLETION DATE **10/28/14**

DWG. NO. **14-10-04-01** FILE NO. **2104** CITY **FORT LAUDERDALE** SCALE: 1' = 50'

DWN BY: SRAMOUTAR





**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

<b>Intersection Number</b>	2118	<b>Initial Operation Date</b>	3/6/64
<b>Controller Type</b>	2070	<b>System Number</b>	2118
<b>Modification Number</b>	20	<b>Modification Date</b>	01/28/2015
<b>Drawing/Project No</b>	DES. GRP. 2	<b>FPL Grid Number</b>	87679654607
<b>Intersection</b>	FEDERAL HWY. (US 1/SR 5) and SE 7 STREET		
<b>Municipality</b>	FORT LAUDERDALE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2		4	5	6		8
Direction	SBL	NB		EB	NBL	SB		WB
Initial Green(MIN)	5	12		6	5	12		6
Vehicle Ext.(GAP)	2.0	3.0		2.0	2.0	3.0		2.0
Maximum Green I	15	50		25	20	50		25
Maximum Green II								
Yellow Clearance	4.5	4.5		4.0	4.5	4.5		4.0
All Red Clearance	2.0	2.0		2.0	2.0	2.0		2.0
Phase Recall	OFF	MIN		OFF	OFF	MIN		OFF
Detector Delay								
Walk		7		5		7		5
Pedestrian Clearance		16		25		16		25
Permissive	NO				NO			
Flash Operation	RED	YELLOW		RED	RED	YELLOW		RED

**Attachment**

**NOTES:**

1. DUAL ENTRY HARDWIRED EAST/WEST.
2. PHOTO ENFORCEMENT, CITY OF FT. LAUDERDALE.
3. MOD. 20 UPDATES PH. 1 & 5 YELLOW CLEARANCE VALUES PER FDOT STANDARDS.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_

Station : 2118 - US 1 &amp; SE 7 St (Ft Lauderdale) ( Standard File )

Phase	1 (SL)	2 (NT)	3	4 (ET)	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		5		7		5								
Ped Clearance		16		25		16		25								
Min Green	5	12		6	5	12		6								
Gap Ext	2	3		2	2	3		2								
Max1	15	50		25	20	50		25								
Max2																
Yellow Clr	4.5	4.5		4	4.5	4.5		4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2		2	2	2		2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON		ON	ON	ON		ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

## Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash				ON	ON	ON
Override Higher Preempt				ON		ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6		6	
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8		8	
Max Presence	180	180	180		180	
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1		2	
Dwell Cyc Veh 2	6	8	6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	4	1	2		2	
Exit 2	8	5	6		6	
Exit 3						
Exit 4						

## Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

**Station : 2118 - US 1 & SE 7 St (Ft Lauderdale) ( Standard File )**

## Coordination

[illegible]



**Station : 2118 - US 1 & SE 7 St (Ft Lauderdale) ( Standard File )**

[illegible]

## Scheduler

[illegible]

**User Comments:**

# BROWARD COUNTY TRAFFIC ENGINEERING DIVISION

LOCATION US 1/Federal Highway & SE 7 Street

ORDER NO. \_\_\_\_\_ ISSUE DATE \_\_\_\_\_ REVISION NO. Mod 20 COMPLETION DATE \_\_\_\_\_

DWG. NO. \_\_\_\_\_ FILE NO. 2118 CITY FORT LAUDERDALE SCALE: 1" = 50'

2	2
4	4
6	6
8	8



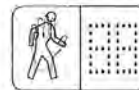
3-SECT  
1-WAY  
8-REQ'D

1	5
---	---



3-SECT  
1-WAY  
2-REQ'D

P-2	P-2
P-4	P-4
P-6	P-6
P-8	P-8



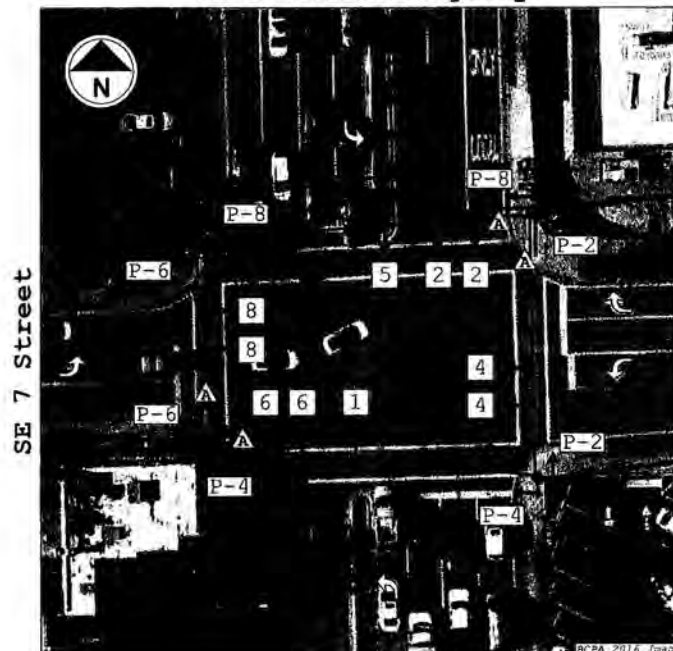
1-WAY  
8-REQ'D



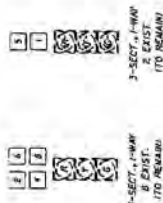
Illuminated  
Street Name

4-REQ'D

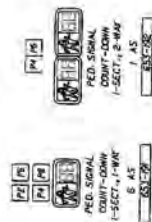
US 1/Federal Highway



SIGNAL HEAD DETAILS



PER-SIGNAL HEAD DETAILS



DELEGATION  
DETECTOR SIGN



EXISTING SIGNAL  
EQUIPMENT TO BE REMOVED

PNL ITEM	UNIT	QUANTITY
580-20	EA	7
580-60	EA	4
580-70	EA	6

NOTES:

1. MAJOR STREET IS SR 545 AND MAJOR STREET IS SE 7TH STREET.
2. EXIST. SPAN WIRE ASSEMBLY INCLUDING SIGNAL HEADS AND SIGNS SHALL REMAIN.
3. VIDEO DETECTION EQUIPMENT SHALL BE MOUNTED ON EXIST. CONCRETE STRAIN POLES AS SHOWN ON THE PLAN AND VIDEO DETECTOR CONNECTION CHART.
4. THE EXISTING STANDARD SIGNAL OPERATING PLAN IS S.O.P. 7. REFER TO STANDARD INDEX FOR S.O.P. 1 DIAGRAM.
5. UNLESS OTHERWISE SPECIFIED BY NOTED AT 100MM-SDMA, EXIST. SIGNAL, THINGS TO REMAIN.

VIDEO DETECTOR CONNECTION CHART

DETECTOR	OPERATION	CONNECTED TO	CONTROLLER	DELAY
V6	PRESERVE	1 AND 6	TIMING FUNCTION	SETTING
V2	PRESERVE	2 AND 5		
V8	PRESERVE	8		
V4	PRESERVE	4		

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION



DESIGN: 03/04/11  
DRAWN: 03/04/11  
CHECKED: 03/04/11  
DATE: 03/04/11  
BY: 03/04/11  
FOR: 03/04/11  
PROJECT: 03/04/11

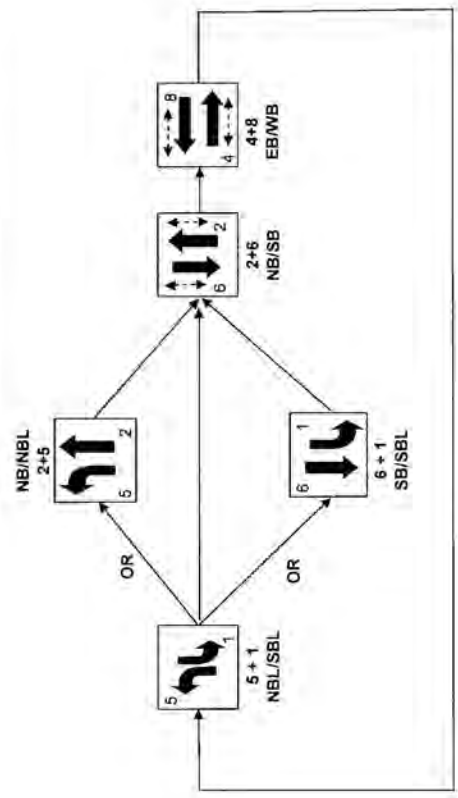
STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION  
ROAD NO. SR 5  
COUNTY BROWARD  
PROJECT ID 421654-1-52-01

SIGNALIZATION PLAN  
2.118  
SR 5 / US 1 AT SE 7TH STREET  
DEPT. OF TRANSPORTATION  
BROWARD OPERATIONS CENTER  
850 N.W. 9TH AVENUE  
FT. LAUDERDALE, FL 33307

SHEET NO. 7-5

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE STORED AND SEALED UNDER RULE 605-23.003, F.A.C.

Sequence of Operation for Federal Hwy (US 1/SR 5) and SE 7 Street (2118)
Fort Lauderdale



## APPENDIX D: VOLUME DEVELOPMENT WORKSHEETS



**SE 3RD AVENUE & SE 6TH STREET  
VOLUME DEVELOPMENT**

SIGNALIZED INTERSECTION

Growth Rate = 0.50%  
Peak Season = 1 1  
Buildout Year = 2022 2022  
Years = 3 3

**AM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	120	980	79	236	489	195	0	0	0	45	56	313
Peak Season Volume	120	980	79	236	489	195	0	0	0	45	56	313
Traffic Volume Growth	2	15	1	4	7	3	0	0	0	1	1	5
0.5% Traffic Volume Growth	2	15	1	4	7	3	0	0	0	1	1	5
Max (Traffic Vol +0.5% or Historic Growth)	2	15	1	4	7	3	0	0	0	1	1	5
Background Traffic Volumes	122	995	80	240	496	198	0	0	0	46	57	318
Project Traffic												
Inbound Traffic Assignment				35.0%								
Inbound Traffic Volumes				6								
Outbound Traffic Assignment										10.0%	35.0%	
Outbound Traffic Volumes										6	19	
Project Traffic				6						6	19	
<b>TOTAL TRAFFIC</b>	<b>122</b>	<b>995</b>	<b>80</b>	<b>246</b>	<b>496</b>	<b>198</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>46</b>	<b>63</b>	<b>337</b>

**PM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	56	787	40	107	705	191	0	0	0	122	210	345
Peak Season Volume	56	787	40	107	705	191	0	0	0	122	210	345
Traffic Volume Growth	1	12	1	2	11	3	0	0	0	2	3	5
0.5% Traffic Volume Growth	1	12	1	2	11	3	0	0	0	2	3	5
Max (Traffic Vol +0.5% or Historic Growth)	1	12	1	2	11	3	0	0	0	2	3	5
Background Traffic Volumes	57	799	41	109	716	194	0	0	0	124	213	350
Project Traffic												
Inbound Traffic Assignment				35.0%								
Inbound Traffic Volumes				18								
Outbound Traffic Assignment										10.0%	35.0%	
Outbound Traffic Volumes										4	12	
Project Traffic				18						4	12	
<b>TOTAL TRAFFIC</b>	<b>57</b>	<b>799</b>	<b>41</b>	<b>127</b>	<b>716</b>	<b>194</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>124</b>	<b>217</b>	<b>362</b>

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**SE 3RD AVENUE & SE 7TH STREET  
VOLUME DEVELOPMENT**

SIGNALIZED INTERSECTION

Growth Rate = 0.50%  
Peak Season = 1 1  
Buildout Year = 2022 2022  
Years = 3 3

**AM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	44	1,052	58	34	399	22	165	131	20	36	87	113
Peak Season Volume	44	1,052	58	34	399	22	165	131	20	36	87	113
Traffic Volume Growth	1	16	1	1	6	0	2	2	0	1	1	2
0.5% Traffic Volume Growth	1	16	1	1	6	0	2	2	0	1	1	2
Max (Traffic Vol +0.5% or Historic Growth)	1	16	1	1	6	0	2	2	0	1	1	2
Background Traffic Volumes	45	1,068	59	35	405	22	167	133	20	37	88	115
Project Traffic												
Inbound Traffic Assignment			25.0%					15.0%				
Inbound Traffic Volumes			4					2				
Outbound Traffic Assignment										25.0%	5.0%	
Outbound Traffic Volumes										13	3	
Project Traffic			4					2		13	3	
<b>TOTAL TRAFFIC</b>	<b>45</b>	<b>1,068</b>	<b>63</b>	<b>35</b>	<b>405</b>	<b>22</b>	<b>167</b>	<b>135</b>	<b>20</b>	<b>50</b>	<b>91</b>	<b>115</b>

**PM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	59	653	24	49	769	57	107	108	24	47	127	64
Peak Season Volume	59	653	24	49	769	57	107	108	24	47	127	64
Traffic Volume Growth	1	10	0	1	12	1	2	2	0	1	2	1
0.5% Traffic Volume Growth	1	10	0	1	12	1	2	2	0	1	2	1
Max (Traffic Vol +0.5% or Historic Growth)	1	10	0	1	12	1	2	2	0	1	2	1
Background Traffic Volumes	60	663	24	50	781	58	109	110	24	48	129	65
Project Traffic												
Inbound Traffic Assignment			25.0%					15.0%				
Inbound Traffic Volumes			13					8				
Outbound Traffic Assignment										25.0%	5.0%	
Outbound Traffic Volumes										9	2	
Project Traffic			13					8		9	2	
<b>TOTAL TRAFFIC</b>	<b>60</b>	<b>663</b>	<b>37</b>	<b>50</b>	<b>781</b>	<b>58</b>	<b>109</b>	<b>118</b>	<b>24</b>	<b>57</b>	<b>131</b>	<b>65</b>

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**SE 7TH STREET & FEDERAL HIGHWAY  
VOLUME DEVELOPMENT**

SIGNALIZED INTERSECTION

Growth Rate = 0.50%  
Peak Season = 1 1  
Buildout Year = 2022 2022  
Years = 3 3

**AM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volumes on 01/16/2019	145	1,401	16	110	1,757	206	41	36	36	25	20	71
Peak Season Volume	145	1,401	16	110	1,757	206	41	36	36	25	20	71
Traffic Volume Growth	2	21	0	2	26	3	1	1	1	0	0	1
0.5% Traffic Volume Growth	2	21	0	2	26	3	1	1	1	0	0	1
Max (Traffic Vol +0.5% or Historic Growth)	2	21	0	2	26	3	1	1	1	0	0	1
Background Traffic Volumes	147	1,422	16	112	1,783	209	42	37	37	25	20	72
Project Traffic												
Inbound Traffic Assignment	10%					14.0%						
Inbound Traffic Volumes	2					2						
Outbound Traffic Assignment					1.0%		15.0%		9.0%			
Outbound Traffic Volumes					1		8		5			
Project Traffic	2				1	2	8		5			
<b>TOTAL TRAFFIC</b>	<b>149</b>	<b>1,422</b>	<b>16</b>	<b>112</b>	<b>1,784</b>	<b>211</b>	<b>50</b>	<b>37</b>	<b>42</b>	<b>25</b>	<b>20</b>	<b>72</b>

**PM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volumes on 01/16/2019	105	1,091	31	148	1,723	90	105	55	95	40	32	58
Peak Season Volume	105	1,091	31	148	1,723	90	105	55	95	40	32	58
Traffic Volume Growth	2	16	0	2	26	1	2	1	1	1	0	1
0.5% Traffic Volume Growth	2	16	0	2	26	1	2	1	1	1	0	1
Max (Traffic Vol +0.5% or Historic Growth)	2	16	0	2	26	1	2	1	1	1	0	1
Background Traffic Volumes	107	1,107	31	150	1,749	91	107	56	96	41	32	59
Project Traffic												
Inbound Traffic Assignment	10%					14.0%						
Inbound Traffic Volumes	5					7						
Outbound Traffic Assignment					1.0%		15.0%		9.0%			
Outbound Traffic Volumes							5		3			
Project Traffic	5					7	5		3			
<b>TOTAL TRAFFIC</b>	<b>112</b>	<b>1,107</b>	<b>31</b>	<b>150</b>	<b>1,749</b>	<b>98</b>	<b>112</b>	<b>56</b>	<b>99</b>	<b>41</b>	<b>32</b>	<b>59</b>

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# SE 6TH STREET & SE 5TH AVENUE VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

Growth Rate = 0.50%  
Peak Season = 1 1  
Buildout Year = 2022 2022  
Years = 3 3

## AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	5	36	2	76	23	173	318	21	2	2	59	110
Peak Season Volume	5	36	2	76	23	173	318	21	2	2	59	110
Traffic Volume Growth	0	1	0	1	0	3	5	0	0	0	1	2
0.5% Traffic Volume Growth	0	1	0	1	0	3	5	0	0	0	1	2
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	1	0	3	5	0	0	0	1	2
Background Traffic Volumes	5	37	2	77	23	176	323	21	2	2	60	112
Project Traffic												
Inbound Traffic Assignment									32.0%	1.0%		
Inbound Traffic Volumes									5			
Outbound Traffic Assignment	42.0%		1.0%									
Outbound Traffic Volumes	22		1									
Project Traffic	22		1						5			
<b>TOTAL TRAFFIC</b>	<b>27</b>	<b>37</b>	<b>3</b>	<b>77</b>	<b>23</b>	<b>176</b>	<b>323</b>	<b>21</b>	<b>7</b>	<b>2</b>	<b>60</b>	<b>112</b>

## PM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019	5	32	1	118	48	463	67	62	3	0	84	29
Peak Season Volume	5	32	1	118	48	463	67	62	3	0	84	29
Traffic Volume Growth	0	0	0	2	1	7	1	1	0	0	1	0
0.5% Traffic Volume Growth	0	0	0	2	1	7	1	1	0	0	1	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	2	1	7	1	1	0	0	1	0
Background Traffic Volumes	5	32	1	120	49	470	68	63	3	0	85	29
Project Traffic												
Inbound Traffic Assignment									32.0%	1.0%		
Inbound Traffic Volumes									16	1		
Outbound Traffic Assignment	42.0%		1.0%									
Outbound Traffic Volumes	15											
Project Traffic	15								16	1		
<b>TOTAL TRAFFIC</b>	<b>20</b>	<b>32</b>	<b>1</b>	<b>120</b>	<b>49</b>	<b>470</b>	<b>68</b>	<b>63</b>	<b>19</b>	<b>1</b>	<b>85</b>	<b>29</b>

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## SE 7TH STREET & SE 5TH AVENUE

### VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

Growth Rate = 0.50%  
 Peak Season = 1 1  
 Buildout Year = 2022 2022  
 Years = 3 3

### AM Peak Hour

	Northbound			Southbound		Eastbound		Westbound	
	LT	Thru	RT	LT	RT	LT	Thru	Thru	RT
Existing Volume on 01/22/2019	2	0	2	21	1	22	92	292	26
Peak Season Volume	2	0	2	21	1	22	92	292	26
Traffic Volume Growth	0	0	0	0	0	0	1	4	0
0.5% Traffic Volume Growth	0	0	0	0	0	0	1	4	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	0	1	4	0
Background Traffic Volumes	2	0	2	21	1	22	93	296	26
Project Traffic									
Inbound Traffic Assignment						39.0%		1.0%	23.0%
Inbound Traffic Volumes						6			4
Outbound Traffic Assignment				23.0%	29.0%		1.0%		
Outbound Traffic Volumes				12	15		1		
Project Traffic				12	15	6	1		4
<b>TOTAL TRAFFIC</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>33</b>	<b>16</b>	<b>28</b>	<b>94</b>	<b>296</b>	<b>30</b>

### PM Peak Hour

	Northbound			Southbound		Eastbound		Westbound	
	LT	Thru	RT	LT	RT	LT	Thru	Thru	RT
Existing Volume on 01/22/2019	0	0	5	26	22	8	187	146	35
Peak Season Volume	0	0	5	26	22	8	187	146	35
Traffic Volume Growth	0	0	0	0	0	0	3	2	1
0.5% Traffic Volume Growth	0	0	0	0	0	0	3	2	1
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	0	3	2	1
Background Traffic Volumes	0	0	5	26	22	8	190	148	36
Project Traffic									
Inbound Traffic Assignment						39.0%		1.0%	23.0%
Inbound Traffic Volumes						20		1	12
Outbound Traffic Assignment				23.0%	29.0%		1.0%		
Outbound Traffic Volumes				8	10				
Project Traffic				8	10	20		1	12
<b>TOTAL TRAFFIC</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>34</b>	<b>32</b>	<b>28</b>	<b>190</b>	<b>149</b>	<b>48</b>

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# SE 6TH STREET & SFEDERAL HIGHWAY

## VOLUME DEVELOPMENT

UNSIGNALIZED INTERSECTION

Growth Rate = 0.50%  
 Peak Season = 1 1  
 Buildout Year = 2022 2022  
 Years = 3 3

### AM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019					39	76	1	0	87			
Peak Season Volume	0	0	0	0	39	76	1	0	87	0	0	0
Traffic Volume Growth	0	0	0	0	1	1	0	0	1	0	0	0
0.5% Traffic Volume Growth	0	0	0	0	1	1	0	0	1	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	1	1	0	0	1	0	0	0
Background Traffic Volumes	0	0	0	0	40	77	1	0	88	0	0	0
Project Traffic												
Inbound Traffic Assignment					14.0%	1.0%						
Inbound Traffic Volumes					2							
Outbound Traffic Assignment									1.0%			
Outbound Traffic Volumes									1			
Project Traffic					2				1			
<b>TOTAL TRAFFIC</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>42</b>	<b>77</b>	<b>1</b>	<b>0</b>	<b>89</b>	<b>0</b>	<b>0</b>	<b>0</b>

### PM Peak Hour

	Northbound			Southbound			Eastbound			Westbound		
	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019				0	29	73	3	0	160			
Peak Season Volume	0	0	0	0	29	73	3	0	160	0	0	0
Traffic Volume Growth	0	0	0	0	0	1	0	0	2	0	0	0
0.5% Traffic Volume Growth	0	0	0	0	0	1	0	0	2	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	0	0	0	0	1	0	0	2	0	0	0
Background Traffic Volumes	0	0	0	0	29	74	3	0	162	0	0	0
Project Traffic												
Inbound Traffic Assignment					14.0%	1.0%						
Inbound Traffic Volumes					7	1						
Outbound Traffic Assignment									1.0%			
Outbound Traffic Volumes												
Project Traffic					7	1						
<b>TOTAL TRAFFIC</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>75</b>	<b>3</b>	<b>0</b>	<b>162</b>	<b>0</b>	<b>0</b>	<b>0</b>

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**DRIVEWAY 1**  
**VOLUME DEVELOPMENT**  
 UNSIGNALIZED INTERSECTION

Growth Rate = 0.50%  
 Peak Season = 1 1  
 Buildout Year = 2022 2022  
 Years = 3 3

**AM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	*Thru	RT	LT	*Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019		46			28							
Peak Season Volume	0	46	0	0	28	0	0	0	0	0	0	0
Traffic Volume Growth	0	1	0	0	0	0	0	0	0	0	0	0
0.5% Traffic Volume Growth	0	1	0	0	0	0	0	0	0	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	0	0	0	0	0	0	0	0	0
Background Traffic Volumes	0	47	0	0	28	0	0	0	0	0	0	0
Project Traffic												
Inbound Traffic Assignment	62.0%				33.0%							
Inbound Traffic Volumes	10				5							
Outbound Traffic Assignment						43.0%		52.0%				
Outbound Traffic Volumes						23		27				
Project Traffic	10				5	23		27				
<b>TOTAL TRAFFIC</b>	<b>10</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>5</b>	<b>23</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>0</b>

**PM Peak Hour**

	Northbound			Southbound			Eastbound			Westbound		
	LT	*Thru	RT	LT	*Thru	RT	LT	Thru	RT	LT	Thru	RT
Existing Volume on 01/22/2019		41			50							
Peak Season Volume	0	41	0	0	50	0	0	0	0	0	0	0
Traffic Volume Growth	0	1	0	0	1	0	0	0	0	0	0	0
0.5% Traffic Volume Growth	0	1	0	0	1	0	0	0	0	0	0	0
Max (Traffic Vol +0.5% or Historic Growth)	0	1	0	0	1	0	0	0	0	0	0	0
Background Traffic Volumes	0	42	0	0	51	0	0	0	0	0	0	0
Project Traffic												
Inbound Traffic Assignment	62.0%				33.0%							
Inbound Traffic Volumes	32				17							
Outbound Traffic Assignment						43.0%		52.0%				
Outbound Traffic Volumes						15		18				
Project Traffic	32				17	15		18				
<b>TOTAL TRAFFIC</b>	<b>32</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>17</b>	<b>15</b>	<b>0</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*NBT and SBT movements taken from TMCs average of SE 5th Ave & SE 6th Street and SE 5th Ave & SE 7th Street

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## APPENDIX E: SYNCHRO WORKSHEETS

**SE 3<sup>RD</sup> AVENUE & SE 6<sup>TH</sup> STREET**



Timings  
3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↗	↖	↔↔	↗	↖	↔↔	↗
Traffic Volume (vph)	56	313	120	980	79	236	489	195
Future Volume (vph)	56	313	120	980	79	236	489	195
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.9	10.9	48.8	41.6	41.6	54.2	46.1	46.1
Actuated g/C Ratio	0.14	0.14	0.61	0.52	0.52	0.68	0.58	0.58
w/c Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
LOS	C	B	A	C	A	B	B	A
Approach Delay	21.6			23.5			9.9	
Approach LOS	C			C			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 51 (64%), Referenced to phase 2: NBTL and 6: SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.75

Intersection Signal Delay: 18.2

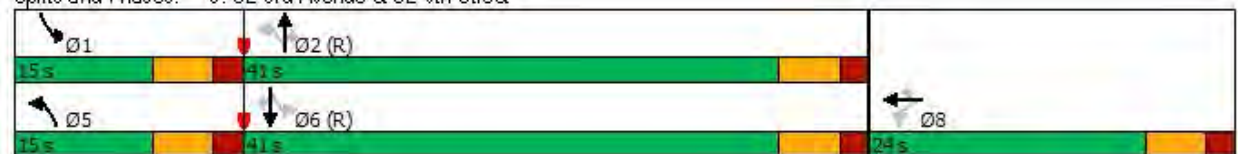
Intersection LOS: B

Intersection Capacity Utilization 60.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street





Queues  
3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	329	126	1032	83	248	515	205
w/c Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Length 50th (ft)	25	32	28	265	14	31	63	0
Queue Length 95th (ft)	43	105	m58	m287	m15	#128	122	36
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	778	557	646	1838	881	418	2041	999
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.14	0.59	0.20	0.56	0.09	0.59	0.25	0.21

Intersection Summary


# 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.

HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Existing AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔↔	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Future Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				47	59	329	126	1032	83	248	515	205
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				183	629	357	492	1604	716	367	1743	778
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				811	2795	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				106	0	329	126	1032	83	248	515	205
Grp Sat Flow(s), veh/h				1830	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Cycle Q Clear(g_c), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Prop In Lane				0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				412	400	357	492	1604	716	367	1743	778
V/C Ratio(X)				0.26	0.00	0.92	0.26	0.64	0.12	0.68	0.30	0.26
Avail Cap(c_a), veh/h				412	400	357	586	1604	716	391	1743	778
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	30.3	10.6	22.3	16.4	14.3	12.1	11.9
Incr Delay (d2), s/veh				0.3	0.0	28.9	0.0	0.2	0.0	4.2	0.4	0.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				1.6	0.0	8.8	1.1	8.7	1.1	2.5	2.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				25.8	0.0	59.2	10.6	22.5	16.4	18.5	12.6	12.8
LnGrp LOS				C	A	E	B	C	B	B	B	B
Approach Vol, veh/h				435			1241			968		
Approach Delay, s/veh				51.1			20.9			14.1		
Approach LOS				D			C			B		
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	13.9	42.1			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	7.8	22.1			5.0	8.9		18.2				
Green Ext Time (p_c), s	0.1	6.2			0.1	4.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.4								
HCM 6th LOS				C								



Timings  
3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↗	↖	↔↔	↗	↖	↔↔	↗
Traffic Volume (vph)	210	345	56	787	40	107	705	191
Future Volume (vph)	210	345	56	787	40	107	705	191
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.5	14.5	47.8	42.5	42.5	50.6	45.7	45.7
Actuated g/C Ratio	0.18	0.18	0.60	0.53	0.53	0.63	0.57	0.57
w/c Ratio	0.55	0.69	0.12	0.44	0.05	0.26	0.37	0.20
Control Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6
LOS	C	B	A	A	A	A	B	A
Approach Delay	23.3			5.2			9.6	
Approach LOS	C			A			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 27 (34%), Referenced to phase 2: NBTL and 6: SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.69

Intersection Signal Delay: 11.7

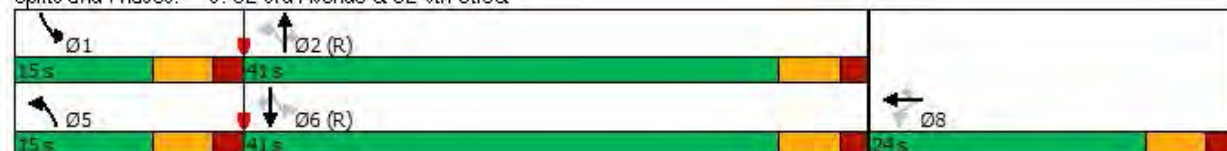
Intersection LOS: B

Intersection Capacity Utilization 53.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street



Queues  
3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	349	363	59	828	42	113	742	201
w/c Ratio	0.55	0.69	0.12	0.44	0.05	0.26	0.37	0.20
Control Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	14.2	2.6	5.6	0.1	7.1	11.9	2.6
Queue Length 50th (ft)	83	30	3	54	0	18	114	0
Queue Length 95th (ft)	119	111	m7	69	m0	39	176	34
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	782	583	530	1878	897	467	2020	990
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.45	0.62	0.11	0.44	0.05	0.24	0.37	0.20


Intersection Summary

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



HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Existing PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	0	0	122	210	345	56	787	40	107	705	191
Future Volume (veh/h)	0	0	0	122	210	345	56	787	40	107	705	191
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				128	221	363	59	828	42	113	742	201
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				282	524	357	384	1770	789	499	1825	814
Arrive On Green				0.22	0.22	0.22	0.07	1.00	1.00	0.05	0.51	0.51
Sat Flow, veh/h				1255	2330	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				184	165	363	59	828	42	113	742	201
Grp Sat Flow(s), veh/h				1808	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.0	6.3	18.0	1.3	0.1	0.0	2.4	10.3	5.7
Cycle Q Clear(g_c), s				7.0	6.3	18.0	1.3	0.1	0.0	2.4	10.3	5.7
Prop In Lane				0.69		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	384	1770	789	499	1825	814
V/C Ratio(X)				0.45	0.41	1.02	0.15	0.47	0.05	0.23	0.41	0.25
Avail Cap(c_a), veh/h				407	400	357	519	1770	789	606	1825	814
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.5	31.0	9.2	0.1	0.1	8.6	12.0	10.8
Incr Delay (d2), s/veh				0.8	0.7	52.3	0.1	0.7	0.1	0.2	0.7	0.7
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				3.0	2.7	11.8	0.4	0.2	0.0	0.9	3.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				27.5	27.2	83.3	9.3	0.8	0.2	8.9	12.6	11.6
LnGrp LOS				C	C	F	A	A	A	A	B	B
Approach Vol, veh/h					712			929			1056	
Approach Delay, s/veh					55.9			1.3			12.0	
Approach LOS					E			A			B	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	10.2	45.8			8.9	47.1		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	4.4	2.1			3.3	12.3		20.0				
Green Ext Time (p_c), s	0.1	7.0			0.0	6.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay											19.9	
HCM 6th LOS											B	

Timings  
3: SE 3rd Avenue & SE 6th Street

Background AM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔	↔	↔↔	↔	↔	↔↔	↔
Traffic Volume (vph)	56	313	120	980	79	236	489	195
Future Volume (vph)	56	313	120	980	79	236	489	195
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.9	10.9	48.8	41.6	41.6	54.2	46.1	46.1
Actuated g/C Ratio	0.14	0.14	0.61	0.52	0.52	0.68	0.58	0.58
w/c Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
LOS	C	B	A	C	A	B	B	A
Approach Delay	21.6			23.5			9.9	
Approach LOS	C			C			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 51 (64%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.75

Intersection Signal Delay: 18.2

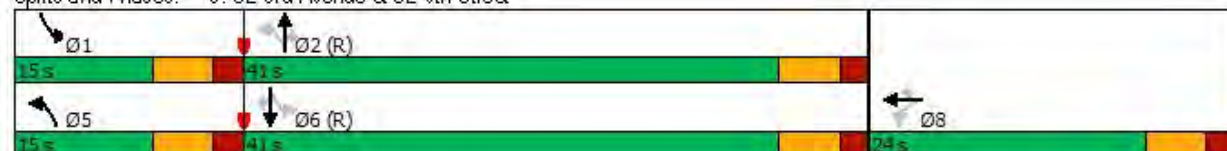
Intersection LOS: B

Intersection Capacity Utilization 60.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street





Queues  
3: SE 3rd Avenue & SE 6th Street

Background AM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	106	329	126	1032	83	248	515	205
w/c Ratio	0.22	0.75	0.21	0.56	0.09	0.61	0.25	0.21
Control Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.0	18.9	8.9	26.4	9.4	14.1	10.7	2.6
Queue Length 50th (ft)	25	32	28	265	14	31	63	0
Queue Length 95th (ft)	43	105	m58	m287	m15	#128	122	36
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	778	557	646	1838	881	418	2041	999
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.14	0.59	0.20	0.56	0.09	0.59	0.25	0.21

Intersection Summary


# 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.

HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Background AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑	↑	↘	↑↑	↑	↘	↑↑	↑
Traffic Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Future Volume (veh/h)	0	0	0	45	56	313	120	980	79	236	489	195
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				47	59	329	126	1032	83	248	515	205
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				183	629	357	492	1604	716	367	1743	778
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				811	2795	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				106	0	329	126	1032	83	248	515	205
Grp Sat Flow(s), veh/h				1830	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Cycle Q Clear(g_c), s				3.8	0.0	16.2	3.0	20.1	3.0	5.8	6.9	6.1
Prop In Lane				0.44		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				412	400	357	492	1604	716	367	1743	778
V/C Ratio(X)				0.26	0.00	0.92	0.26	0.64	0.12	0.68	0.30	0.26
Avail Cap(c_a), veh/h				412	400	357	586	1604	716	391	1743	778
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.11	0.11	0.11	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.5	0.0	30.3	10.6	22.3	16.4	14.3	12.1	11.9
Incr Delay (d2), s/veh				0.3	0.0	28.9	0.0	0.2	0.0	4.2	0.4	0.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				1.6	0.0	8.8	1.1	8.7	1.1	2.5	2.6	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				25.8	0.0	59.2	10.6	22.5	16.4	18.5	12.6	12.8
LnGrp LOS				C	A	E	B	C	B	B	B	B
Approach Vol, veh/h				435			1241			968		
Approach Delay, s/veh				51.1			20.9			14.1		
Approach LOS				D			C			B		
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	13.9	42.1			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	7.8	22.1			5.0	8.9		18.2				
Green Ext Time (p_c), s	0.1	6.2			0.1	4.4		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				23.4								
HCM 6th LOS				C								



Timings  
3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour  
02/22/2019

	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (vph)	213	350	57	799	41	109	716	194
Future Volume (vph)	213	350	57	799	41	109	716	194
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	5.0	10.0	10.0	4.0	5.0	5.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	10.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.6	14.6	47.8	42.3	42.3	50.4	45.5	45.5
Actuated g/C Ratio	0.18	0.18	0.60	0.53	0.53	0.63	0.57	0.57
w/c Ratio	0.66	0.70	0.13	0.45	0.05	0.27	0.37	0.21
Control Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6
LOS	C	B	A	A	A	A	B	A
Approach Delay	23.7			5.2			9.7	
Approach LOS	C			A			A	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 27 (34%), Referenced to phase 2: NBTL and 6: SBTL, Start of Green

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.70

Intersection Signal Delay: 11.9

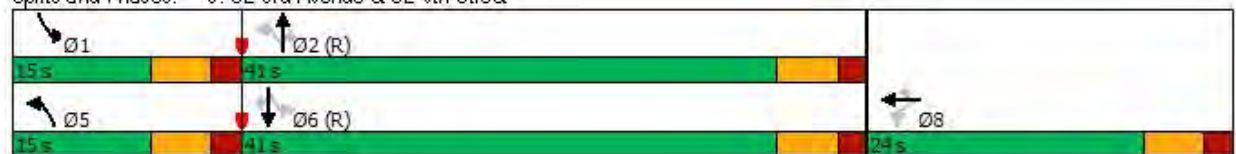
Intersection LOS: B

Intersection Capacity Utilization 53.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street



Queues  
3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	355	368	60	841	43	115	754	204
w/c Ratio	0.66	0.70	0.13	0.46	0.05	0.27	0.37	0.21
Control Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	15.0	2.6	5.7	0.1	7.2	12.0	2.6
Queue Length 50th (ft)	84	34	3	55	0	18	117	0
Queue Length 95th (ft)	121	117	m7	70	m0	40	179	35
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	782	580	523	1873	895	460	2013	988
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.45	0.63	0.11	0.45	0.05	0.25	0.37	0.21


Intersection Summary

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



HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Background PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑	↑	↘	↑↑	↑	↘	↑↑	↑
Traffic Volume (veh/h)	0	0	0	124	213	350	57	799	41	109	716	194
Future Volume (veh/h)	0	0	0	124	213	350	57	799	41	109	716	194
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				131	224	368	60	841	43	115	754	204
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				284	522	357	389	1767	788	495	1791	799
Arrive On Green				0.22	0.22	0.22	0.09	0.99	0.99	0.05	0.50	0.50
Sat Flow, veh/h				1262	2322	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				188	167	368	60	841	43	115	754	204
Grp Sat Flow(s), veh/h				1807	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.2	6.5	18.0	1.3	0.2	0.0	2.5	10.7	5.9
Cycle Q Clear(g_c), s				7.2	6.5	18.0	1.3	0.2	0.0	2.5	10.7	5.9
Prop In Lane				0.70		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	389	1767	788	495	1791	799
V/C Ratio(X)				0.46	0.42	1.03	0.15	0.48	0.05	0.23	0.42	0.26
Avail Cap(c_a), veh/h				407	400	357	507	1767	788	601	1791	799
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.5	31.0	8.9	0.1	0.1	8.7	12.5	11.3
Incr Delay (d2), s/veh				0.8	0.7	56.1	0.1	0.7	0.1	0.2	0.7	0.8
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				3.1	2.7	12.1	0.4	0.2	0.0	0.9	4.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				27.6	27.2	87.1	9.0	0.8	0.2	8.9	13.2	12.1
LnGrp LOS				C	C	F	A	A	A	A	B	B
Approach Vol, veh/h				723				944				1073
Approach Delay, s/veh				57.8				1.3				12.5
Approach LOS				E				A				B
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	10.2	45.8			9.7	46.3		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	4.5	2.2			3.3	12.7		20.0				
Green Ext Time (p_c), s	0.1	7.1			0.0	6.2		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				20.6								
HCM 6th LOS				C								

Timings  
3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour  
02/22/2019

	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (vph)	63	337	122	995	80	246	496	198
Future Volume (vph)	63	337	122	995	80	246	496	198
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	11.8	11.8	48.0	40.6	40.6	53.2	45.1	45.1
Actuated g/C Ratio	0.15	0.15	0.60	0.51	0.51	0.66	0.56	0.56
w/c Ratio	0.22	0.78	0.21	0.58	0.10	0.65	0.26	0.21
Control Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7
LOS	C	C	A	C	A	B	B	A
Approach Delay	23.7			24.3			11.1	
Approach LOS	C			C			B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 51 (64%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.78

Intersection Signal Delay: 19.4

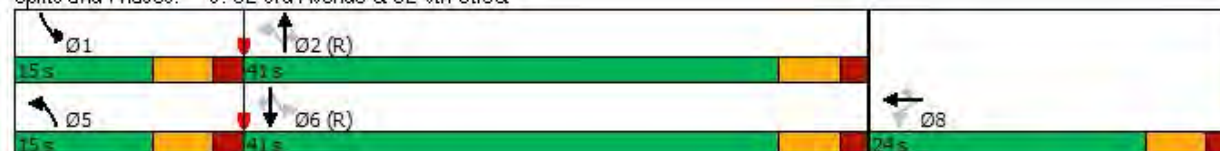
Intersection LOS: B

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street





Queues  
3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	114	355	128	1047	84	259	522	208
w/c Ratio	0.22	0.78	0.21	0.58	0.10	0.65	0.26	0.21
Control Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	22.0	9.6	27.3	9.7	17.2	11.3	2.7
Queue Length 50th (ft)	26	44	37	274	14	38	70	0
Queue Length 95th (ft)	45	127	m56	m285	m15	#150	123	36
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	779	556	632	1795	863	402	1996	983
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.15	0.64	0.20	0.58	0.10	0.64	0.26	0.21

Intersection Summary


# 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.

HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Future AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑	↑	↑	↑↑	↑	↑	↑↑	↑
Traffic Volume (veh/h)	0	0	0	46	63	337	122	995	80	246	496	198
Future Volume (veh/h)	0	0	0	46	63	337	122	995	80	246	496	198
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				48	66	355	128	1047	84	259	522	208
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				174	638	357	489	1591	710	367	1740	776
Arrive On Green				0.22	0.22	0.22	0.04	0.30	0.30	0.10	0.49	0.49
Sat Flow, veh/h				771	2837	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				114	0	355	128	1047	84	259	522	208
Grp Sat Flow(s), veh/h				1832	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				4.1	0.0	17.9	3.0	20.6	3.1	6.1	7.0	6.2
Cycle Q Clear(g_c), s				4.1	0.0	17.9	3.0	20.6	3.1	6.1	7.0	6.2
Prop In Lane				0.42		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				412	400	357	489	1591	710	367	1740	776
V/C Ratio(X)				0.28	0.00	1.00	0.26	0.66	0.12	0.71	0.30	0.27
Avail Cap(c_a), veh/h				412	400	357	582	1591	710	385	1740	776
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00
Uniform Delay (d), s/veh				25.6	0.0	31.0	10.7	22.7	16.5	14.7	12.2	12.0
Incr Delay (d2), s/veh				0.4	0.0	46.4	0.0	0.2	0.0	5.5	0.4	0.3
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				1.8	0.0	11.1	1.1	8.9	1.1	2.7	2.7	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				26.0	0.0	77.3	10.8	22.8	16.6	20.2	12.7	12.8
LnGrp LOS				C	A	E	B	C	B	C	B	B
Approach Vol, veh/h				469			1259			989		
Approach Delay, s/veh				64.8			21.2			14.7		
Approach LOS				E			C			B		
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	14.2	41.8			10.8	45.2		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	8.1	22.6			5.0	9.0		19.9				
Green Ext Time (p_c), s	0.1	6.1			0.1	4.5		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.4								
HCM 6th LOS				C								



Timings  
3: SE 3rd Avenue & SE 6th Street

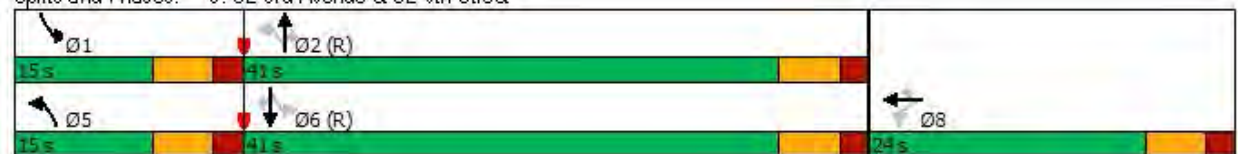
Future PM Peak Hour  
02/22/2019

	←	↖	↗	↑	↘	↙	↓	↘
Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↖	↗	↘	↖↖	↗	↘	↖↖	↗
Traffic Volume (vph)	217	362	57	799	41	127	716	194
Future Volume (vph)	217	362	57	799	41	127	716	194
Turn Type	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8		5	2		1	6	
Permitted Phases		8	2		2	6		6
Detector Phase	8	8	5	2	2	1	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	24.0	11.0	24.0	24.0
Total Split (s)	24.0	24.0	15.0	41.0	41.0	15.0	41.0	41.0
Total Split (%)	30.0%	30.0%	18.8%	51.3%	51.3%	18.8%	51.3%	51.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.7	14.7	46.2	39.7	39.7	50.5	45.5	45.5
Actuated g/C Ratio	0.18	0.18	0.58	0.50	0.50	0.63	0.57	0.57
w/c Ratio	0.56	0.72	0.13	0.48	0.05	0.32	0.37	0.21
Control Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6
LOS	C	B	A	A	A	A	B	A
Approach Delay	24.4			5.7			9.8	
Approach LOS	C			A			A	

Intersection Summary

Cycle Length: 80  
 Actuated Cycle Length: 80  
 Offset: 27 (34%), Referenced to phase 2: NBT and 6: SBT, Start of Green  
 Natural Cycle: 60  
 Control Type: Actuated-Coordinated  
 Maximum w/c Ratio: 0.72  
 Intersection Signal Delay: 12.3  
 Intersection LOS: B  
 Intersection Capacity Utilization 54.5%  
 ICU Level of Service A  
 Analysis Period (min) 15

Splits and Phases: 3: SE 3rd Avenue & SE 6th Street



Queues  
3: SE 3rd Avenue & SE 6th Street

Future PM Peak Hour  
02/22/2019



Lane Group	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	359	381	60	841	43	134	754	204
w/c Ratio	0.66	0.72	0.13	0.48	0.05	0.32	0.37	0.21
Control Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	16.4	2.7	6.2	0.1	7.7	12.1	2.6
Queue Length 50th (ft)	85	40	3	55	0	21	117	0
Queue Length 95th (ft)	122	127	m7	m70	m0	46	179	35
Internal Link Dist (ft)	817			575			243	
Turn Bay Length (ft)		325	125		100	100		150
Base Capacity (vph)	782	580	527	1755	846	445	2011	987
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.46	0.66	0.11	0.48	0.05	0.30	0.37	0.21


Intersection Summary

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



HCM 6th Signalized Intersection Summary  
3: SE 3rd Avenue & SE 6th Street

Future PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕↕	↗	↘	↕↕	↗	↘	↕↕	↗
Traffic Volume (veh/h)	0	0	0	124	217	362	57	799	41	127	716	194
Future Volume (veh/h)	0	0	0	124	217	362	57	799	41	127	716	194
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h				1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h				131	228	381	60	841	43	134	754	204
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				2	2	2	2	2	2	2	2	2
Cap, veh/h				281	526	357	380	1742	777	499	1824	813
Arrive On Green				0.22	0.22	0.22	0.07	0.98	0.98	0.06	0.51	0.51
Sat Flow, veh/h				1249	2336	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h				190	169	381	60	841	43	134	754	204
Grp Sat Flow(s), veh/h				1808	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s				7.3	6.5	18.0	1.3	0.7	0.0	2.9	10.5	5.8
Cycle Q Clear(g_c), s				7.3	6.5	18.0	1.3	0.7	0.0	2.9	10.5	5.8
Prop In Lane				0.69		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h				407	400	357	380	1742	777	499	1824	813
V/C Ratio(X)				0.47	0.42	1.07	0.16	0.48	0.06	0.27	0.41	0.25
Avail Cap(c_a), veh/h				407	400	357	514	1742	777	593	1824	813
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(f)				1.00	1.00	1.00	0.77	0.77	0.77	1.00	1.00	1.00
Uniform Delay (d), s/veh				26.8	26.6	31.0	9.4	0.4	0.4	8.8	12.0	10.9
Incr Delay (d2), s/veh				0.8	0.7	67.0	0.1	0.7	0.1	0.3	0.7	0.7
Initial Q Delay(d3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh				3.1	2.8	13.2	0.5	0.3	0.0	1.1	4.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh				27.7	27.3	98.0	9.6	1.1	0.5	9.0	12.7	11.6
LnGrp LOS				C	C	F	A	A	A	A	B	B
Approach Vol, veh/h					740			944			1092	
Approach Delay, s/veh					63.8			1.7			12.1	
Approach LOS					E			A			B	
Timer - Assigned Phs	1	2			5	6		8				
Phs Duration (G+Y+Rc), s	10.8	45.2			8.9	47.1		24.0				
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0		6.0				
Max Green Setting (Gmax), s	9.0	35.0			9.0	35.0		18.0				
Max Q Clear Time (g_c+I1), s	4.9	2.7			3.3	12.5		20.0				
Green Ext Time (p_c), s	0.1	7.1			0.0	6.3		0.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay					22.3							
HCM 6th LOS					C							

**SE 7<sup>TH</sup> STREET & SE 3<sup>RD</sup> AVENUE**

Timings  
6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↗	↕	↗	↕
Traffic Volume (vph)	131	87	44	1052	34	399
Future Volume (vph)	131	87	44	1052	34	399
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	15.3	12.7	30.4	26.8	30.4	26.8
Actuated g/C Ratio	0.19	0.16	0.38	0.34	0.38	0.34
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
LOS	E	D	B	D	A	B
Approach Delay	74.6	40.2		52.9		14.7
Approach LOS	E	D		D		B

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 78 (98%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.99

Intersection Signal Delay: 46.7

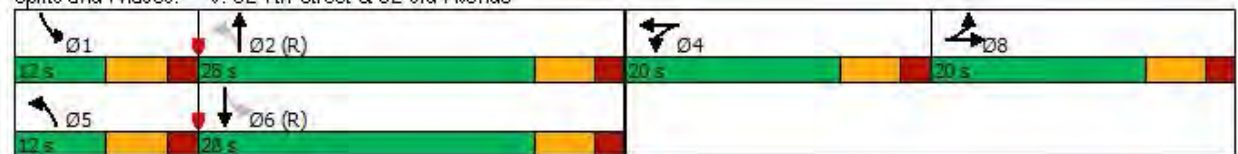
Intersection LOS: D

Intersection Capacity Utilization 82.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue





Queues  
6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	333	249	46	1168	36	443
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Length 50th (ft)	~182	95	13	~381	10	97
Queue Length 95th (ft)	#343	153	32	#607	5	141
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	347	343	387	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.96	0.73	0.12	0.99	0.16	0.38

Intersection Summary

~ 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.



HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Existing AM Peak Hour  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	131	20	36	87	113	44	1052	58	34	399	22
Future Volume (veh/h)	165	131	20	36	87	113	44	1052	58	34	399	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	138	21	38	92	119	46	1107	61	36	420	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	131	20	44	107	139	345	1123	62	142	1108	61
Arrive On Green	0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.33	0.33	0.01	0.11	0.11
Sat Flow, veh/h	942	747	114	261	632	817	1781	3425	189	1781	3426	187
Grp Volume(v), veh/h	333	0	0	249	0	0	46	574	594	36	217	226
Grp Sat Flow(s),veh/h/ln	1803	0	0	1710	0	0	1781	1777	1836	1781	1777	1837
Q Serve(g_s), s	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Cycle Q Clear(g_c), s	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Prop In Lane	0.52		0.06	0.15		0.48	1.00		0.10	1.00		0.10
Lane Grp Cap(c), veh/h	315	0	0	290	0	0	345	583	602	142	575	594
V/C Ratio(X)	1.06	0.00	0.00	0.86	0.00	0.00	0.13	0.99	0.99	0.25	0.38	0.38
Avail Cap(c_a), veh/h	315	0	0	299	0	0	421	583	602	227	575	594
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(f)	1.00	0.00	0.00	0.78	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	33.0	0.0	0.0	36.8	0.0	0.0	17.6	26.7	26.7	21.8	28.2	28.3
Incr Delay (d2), s/veh	66.0	0.0	0.0	17.1	0.0	0.0	0.2	33.9	33.4	0.9	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q(50%),veh/ln	11.7	0.0	0.0	6.6	0.0	0.0	0.6	15.7	16.2	0.5	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.0	0.0	0.0	53.9	0.0	0.0	17.8	60.6	60.1	22.7	30.1	30.1
LnGrp LOS	F	A	A	D	A	A	B	E	E	C	C	C
Approach Vol, veh/h	333			249			1214			479		
Approach Delay, s/veh	99.0			53.9			58.7			29.5		
Approach LOS	F			D			E			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	32.2		19.6	8.6	31.9		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+I1), s	3.1	27.7		13.6	3.4	11.2		16.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	57.9											
HCM 6th LOS	E											
Notes												

Timings  
6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↗	↗	↗	↗
Traffic Volume (vph)	108	127	59	653	49	769
Future Volume (vph)	108	127	59	653	49	769
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	13.4	13.2	31.7	28.1	30.5	25.7
Actuated g/C Ratio	0.17	0.16	0.40	0.35	0.38	0.32
w/c Ratio	0.82	0.81	0.28	0.57	0.18	0.77
Control Delay	54.2	50.5	17.4	25.1	25.7	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	50.5	17.4	25.1	25.7	38.5
LOS	D	D	B	C	C	D
Approach Delay	54.2	50.5		24.5		37.8
Approach LOS	D	D		C		D

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 20 (25%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.82

Intersection Signal Delay: 36.4

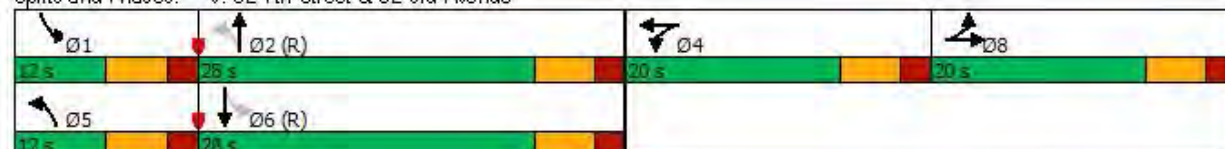
Intersection LOS: D

Intersection Capacity Utilization 67.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue





Queues  
6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour  
02/26/2019




Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	252	250	62	712	52	869
w/c Ratio	0.82	0.81	0.28	0.57	0.18	0.77
Control Delay	54.2	50.5	17.4	25.1	25.7	38.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.2	50.5	17.4	25.1	25.7	38.5
Queue Length 50th (ft)	119	111	18	168	16	180
Queue Length 95th (ft)	#236	#223	40	230	m55	#326
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	320	327	225	1241	288	1133
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.79	0.76	0.28	0.57	0.18	0.77

Intersection Summary

- # 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.

HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Existing PM Peak Hour  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	107	108	24	47	127	64	59	653	24	49	769	57
Future Volume (veh/h)	107	108	24	47	127	64	59	653	24	49	769	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	114	25	49	134	67	62	687	25	52	809	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	132	29	57	155	78	236	1186	43	282	1127	84
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.04	0.34	0.34	0.03	0.34	0.34
Sat Flow, veh/h	806	813	178	346	948	474	1781	3497	127	1781	3354	249
Grp Volume(v), veh/h	252	0	0	250	0	0	62	349	363	52	429	440
Grp Sat Flow(s), veh/h/ln	1798	0	0	1768	0	0	1781	1777	1847	1781	1777	1826
Q Serve(g_s), s	10.9	0.0	0.0	11.0	0.0	0.0	1.8	12.9	12.9	1.5	16.9	16.9
Cycle Q Clear(g_c), s	10.9	0.0	0.0	11.0	0.0	0.0	1.8	12.9	12.9	1.5	16.9	16.9
Prop In Lane	0.45		0.10	0.20		0.27	1.00		0.07	1.00		0.14
Lane Grp Cap(c), veh/h	293	0	0	290	0	0	236	603	627	282	597	613
V/C Ratio(X)	0.86	0.00	0.00	0.86	0.00	0.00	0.26	0.58	0.58	0.18	0.72	0.72
Avail Cap(c_a), veh/h	315	0	0	309	0	0	303	603	627	355	597	613
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	0.00	0.00	0.89	0.00	0.00	1.00	1.00	1.00	0.94	0.94	0.94
Uniform Delay (d), s/veh	32.6	0.0	0.0	32.6	0.0	0.0	18.2	21.7	21.7	17.4	23.2	23.2
Incr Delay (d2), s/veh	19.9	0.0	0.0	18.7	0.0	0.0	0.6	4.0	3.9	0.3	6.8	6.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	6.2	0.0	0.0	6.1	0.0	0.0	0.7	5.8	6.0	0.6	7.8	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.5	0.0	0.0	51.3	0.0	0.0	18.8	25.8	25.6	17.7	30.1	29.9
LnGrp LOS	D	A	A	D	A	A	B	C	C	B	C	C
Approach Vol, veh/h	252			250			774			921		
Approach Delay, s/veh	52.5			51.3			25.1			29.3		
Approach LOS	D			D			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	33.1		19.1	9.0	32.9		19.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+I1), s	3.5	14.9		13.0	3.8	18.9		12.9				
Green Ext Time (p_c), s	0.0	2.5		0.1	0.0	1.6		0.2				

Intersection Summary

HCM 6th Ctrl Delay 33.0  
HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.



Timings  
6: SE 7th Street & SE 3rd Avenue

Background AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	131	87	44	1052	34	399
Future Volume (vph)	131	87	44	1052	34	399
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	15.3	12.7	30.4	26.8	30.4	26.8
Actuated g/C Ratio	0.19	0.16	0.38	0.34	0.38	0.34
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
LOS	E	D	B	D	A	B
Approach Delay	74.6	40.2		52.9		14.7
Approach LOS	E	D		D		B

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 78 (98%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.99

Intersection Signal Delay: 46.7

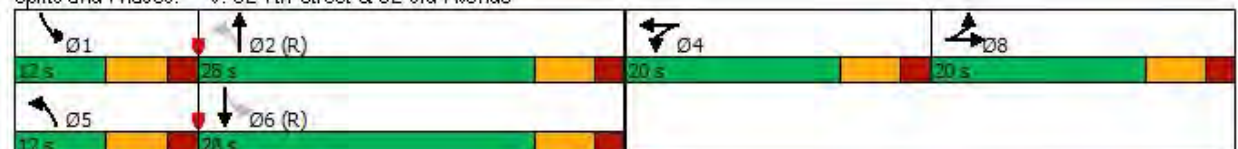
Intersection LOS: D

Intersection Capacity Utilization 82.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue



Queues  
6: SE 7th Street & SE 3rd Avenue

Background AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	333	249	46	1168	36	443
w/c Ratio	0.96	0.79	0.12	0.99	0.16	0.38
Control Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	40.2	14.7	54.4	7.8	15.2
Queue Length 50th (ft)	~132	95	13	~381	10	97
Queue Length 95th (ft)	#343	153	32	#607	5	141
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	347	343	387	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.96	0.73	0.12	0.99	0.16	0.38

Intersection Summary

~ 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.



HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Background AM Peak Hour  
02/26/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↕		↖	↕	
Traffic Volume (veh/h)	165	131	20	36	87	113	44	1052	58	34	399	22
Future Volume (veh/h)	165	131	20	36	87	113	44	1052	58	34	399	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	174	138	21	38	92	119	46	1107	61	36	420	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	131	20	44	107	139	345	1123	62	142	1108	61
Arrive On Green	0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.33	0.33	0.01	0.11	0.11
Sat Flow, veh/h	942	747	114	261	632	817	1781	3425	189	1781	3426	187
Grp Volume(v), veh/h	333	0	0	249	0	0	46	574	594	36	217	226
Grp Sat Flow(s), veh/h/ln	1803	0	0	1710	0	0	1781	1777	1836	1781	1777	1837
Q Serve(g_s), s	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Cycle Q Clear(g_c), s	14.0	0.0	0.0	11.6	0.0	0.0	1.4	25.7	25.7	1.1	9.1	9.2
Prop In Lane	0.52		0.06	0.15		0.48	1.00		0.10	1.00		0.10
Lane Grp Cap(c), veh/h	315	0	0	290	0	0	345	583	602	142	575	594
V/C Ratio(X)	1.06	0.00	0.00	0.86	0.00	0.00	0.13	0.99	0.99	0.25	0.38	0.38
Avail Cap(c_a), veh/h	315	0	0	299	0	0	421	583	602	227	575	594
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(f)	1.00	0.00	0.00	0.78	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	33.0	0.0	0.0	36.8	0.0	0.0	17.6	26.7	26.7	21.8	28.2	28.3
Incr Delay (d2), s/veh	66.0	0.0	0.0	17.1	0.0	0.0	0.2	33.9	33.4	0.9	1.9	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	11.7	0.0	0.0	6.6	0.0	0.0	0.6	15.7	16.2	0.5	4.5	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	99.0	0.0	0.0	53.9	0.0	0.0	17.8	60.6	60.1	22.7	30.1	30.1
LnGrp LOS	F	A	A	D	A	A	B	E	E	C	C	C
Approach Vol, veh/h		333			249			1214			479	
Approach Delay, s/veh		99.0			53.9			58.7			29.5	
Approach LOS		F			D			E			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	32.2		19.6	8.6	31.9		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+I1), s	3.1	27.7		13.6	3.4	11.2		16.0				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	1.9		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				57.9								
HCM 6th LOS				E								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings  
6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↗	↕	↖	↕
Traffic Volume (vph)	110	129	60	663	50	781
Future Volume (vph)	110	129	60	663	50	781
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	13.5	13.3	31.6	28.0	30.4	25.6
Actuated g/C Ratio	0.17	0.17	0.40	0.35	0.38	0.32
w/c Ratio	0.83	0.82	0.28	0.58	0.19	0.78
Control Delay	55.6	51.7	17.4	25.3	26.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	51.7	17.4	25.3	26.1	39.4
LOS	E	D	B	C	C	D
Approach Delay	55.6	51.7		24.7		38.6
Approach LOS	E	D		C		D

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 20 (25%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.83

Intersection Signal Delay: 37.2

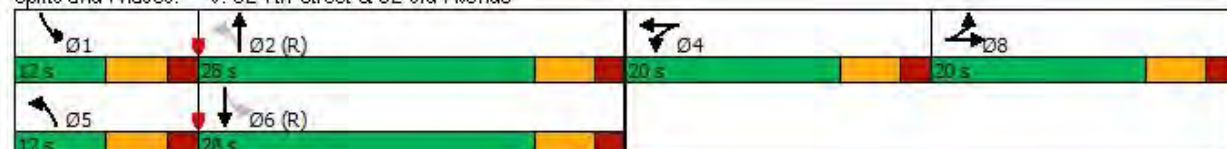
Intersection LOS: D

Intersection Capacity Utilization 68.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue





Queues  
6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour  
02/26/2019





















Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	266	265	63	723	53	883
w/c Ratio	0.83	0.82	0.28	0.58	0.19	0.78
Control Delay	55.6	51.7	17.4	25.3	26.1	39.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.6	51.7	17.4	25.3	26.1	39.4
Queue Length 50th (ft)	121	113	18	172	17	186
Queue Length 95th (ft)	#242	#229	41	234	m56	#336
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	319	327	225	1237	282	1129
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.80	0.78	0.28	0.58	0.19	0.78

Intersection Summary

- # 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.

HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Background PM Peak Hour  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	110	24	48	129	65	60	663	24	50	781	58
Future Volume (veh/h)	109	110	24	48	129	65	60	663	24	50	781	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	116	25	51	136	68	63	698	25	53	822	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	134	29	59	157	78	229	1170	42	275	1111	82
Arrive On Green	0.16	0.16	0.16	0.17	0.17	0.17	0.04	0.33	0.33	0.03	0.33	0.33
Sat Flow, veh/h	808	815	176	354	943	471	1781	3499	125	1781	3354	249
Grp Volume(v), veh/h	256	0	0	255	0	0	63	354	369	53	435	448
Grp Sat Flow(s), veh/h/ln	1798	0	0	1768	0	0	1781	1777	1848	1781	1777	1826
Q Serve(g_s), s	11.1	0.0	0.0	11.2	0.0	0.0	1.9	13.3	13.3	1.6	17.4	17.4
Cycle Q Clear(g_c), s	11.1	0.0	0.0	11.2	0.0	0.0	1.9	13.3	13.3	1.6	17.4	17.4
Prop In Lane	0.45		0.10	0.20		0.27	1.00		0.07	1.00		0.14
Lane Grp Cap(c), veh/h	296	0	0	294	0	0	229	594	618	275	589	605
V/C Ratio(X)	0.86	0.00	0.00	0.87	0.00	0.00	0.28	0.60	0.60	0.19	0.74	0.74
Avail Cap(c_a), veh/h	315	0	0	309	0	0	295	594	618	347	589	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	0.00	0.00	0.89	0.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	32.5	0.0	0.0	32.5	0.0	0.0	18.6	22.1	22.1	17.7	23.7	23.7
Incr Delay (d2), s/veh	20.5	0.0	0.0	19.4	0.0	0.0	0.6	4.4	4.2	0.3	7.6	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%),veh/ln	6.4	0.0	0.0	6.2	0.0	0.0	0.8	6.0	6.2	0.6	8.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	0.0	51.9	0.0	0.0	19.3	26.5	26.4	18.0	31.3	31.1
LnGrp LOS	D	A	A	D	A	A	B	C	C	B	C	C
Approach Vol, veh/h		256			255			786			936	
Approach Delay, s/veh		53.0			51.9			25.9			30.5	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	32.7		19.3	9.0	32.5		19.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+I1), s	3.6	15.3		13.2	3.9	19.4		13.1				
Green Ext Time (p_c), s	0.0	2.5		0.1	0.0	1.4		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			33.9									
HCM 6th LOS			C									
Notes												



Timings  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↗	↕	↗	↕
Traffic Volume (vph)	135	91	45	106	35	405
Future Volume (vph)	135	91	45	106	35	405
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	14.7	13.3	30.4	26.8	30.4	26.8
Actuated g/C Ratio	0.18	0.17	0.38	0.34	0.38	0.34
w/c Ratio	1.01	0.84	0.12	1.01	0.17	0.38
Control Delay	88.4	45.6	14.7	58.9	7.4	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	45.6	14.7	58.9	7.4	14.8
LOS	F	D	B	E	A	B
Approach Delay	88.4	45.6		57.2		14.2
Approach LOS	F	D		E		B

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 78 (98%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 1.01

Intersection Signal Delay: 51.4

Intersection LOS: D

Intersection Capacity Utilization 84.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue



Queues  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	339	270	47	1190	37	449
w/c Ratio	1.01	0.84	0.12	1.01	0.17	0.38
Control Delay	88.4	45.6	14.7	58.9	7.4	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	45.6	14.7	58.9	7.4	14.8
Queue Length 50th (ft)	~189	113	13	~393	5	99
Queue Length 95th (ft)	#350	#202	33	#521	5	143
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	335	339	385	1180	225	1180
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	1.01	0.80	0.12	1.01	0.16	0.38

Intersection Summary

~ 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.



HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Future Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	176	142	21	53	96	121	47	1124	66	37	426	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	132	20	59	107	135	337	1098	64	140	1089	59
Arrive On Green	0.17	0.17	0.17	0.06	0.06	0.06	0.03	0.32	0.32	0.01	0.10	0.10
Sat Flow, veh/h	936	755	112	337	610	769	1781	3411	200	1781	3429	185
Grp Volume(v), veh/h	339	0	0	270	0	0	47	585	605	37	220	229
Grp Sat Flow(s), veh/h/ln	1803	0	0	1715	0	0	1781	1777	1834	1781	1777	1837
Q Serve(g_s), s	14.0	0.0	0.0	12.5	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Cycle Q Clear(g_c), s	14.0	0.0	0.0	12.5	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Prop In Lane	0.52		0.06	0.20		0.45	1.00		0.11	1.00		0.10
Lane Grp Cap(c), veh/h	316	0	0	300	0	0	337	572	591	140	564	583
V/C Ratio(X)	1.07	0.00	0.00	0.90	0.00	0.00	0.14	1.02	1.02	0.26	0.39	0.39
Avail Cap(c_a), veh/h	316	0	0	300	0	0	413	572	591	224	564	583
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(f)	1.00	0.00	0.00	0.76	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	33.0	0.0	0.0	37.0	0.0	0.0	17.9	27.1	27.1	21.9	28.6	28.6
Incr Delay (d2), s/veh	71.8	0.0	0.0	22.8	0.0	0.0	0.2	43.6	43.3	1.0	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%),veh/ln	12.2	0.0	0.0	7.6	0.0	0.0	0.6	17.2	17.7	0.5	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	104.8	0.0	0.0	59.8	0.0	0.0	18.1	70.7	70.4	22.9	30.5	30.5
LnGrp LOS	F	A	A	E	A	A	B	F	F	C	C	C
Approach Vol, veh/h	339			270			1237			486		
Approach Delay, s/veh	104.8			59.8			68.5			29.9		
Approach LOS	F			E			E			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	31.8		20.0	8.6	31.4		20.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	22.0		14.0	6.0	22.0		14.0				
Max Q Clear Time (g_c+H1), s	3.1	27.8		14.5	3.4	11.3		16.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.0		0.0				
Intersection Summary												
HCM 6th Ctrl Delay	64.8											
HCM 6th LOS	E											
Notes												

Timings  
6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↵	↕	↵	↕
Traffic Volume (vph)	118	131	60	663	50	781
Future Volume (vph)	118	131	60	663	50	781
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	20.0	20.0	12.0	28.0	12.0	28.0
Total Split (%)	25.0%	25.0%	15.0%	35.0%	15.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	13.6	13.5	31.4	27.8	30.2	25.4
Actuated g/C Ratio	0.17	0.17	0.39	0.35	0.38	0.32
w/c Ratio	0.85	0.85	0.28	0.60	0.19	0.79
Control Delay	58.0	55.1	17.4	25.6	26.3	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	55.1	17.4	25.6	26.3	39.9
LOS	E	E	B	C	C	D
Approach Delay	58.0	55.1		25.0		39.1
Approach LOS	E	E		C		D

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 20 (25%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.85

Intersection Signal Delay: 38.2

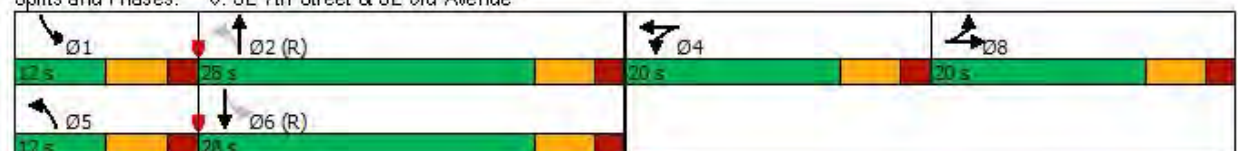
Intersection LOS: D

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue





Queues  
6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	264	266	63	737	53	883
w/c Ratio	0.85	0.85	0.28	0.60	0.19	0.79
Control Delay	58.0	55.1	17.4	25.6	26.3	39.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	55.1	17.4	25.6	26.3	39.9
Queue Length 50th (ft)	126	120	18	175	17	186
Queue Length 95th (ft)	#252	#244	41	239	m56	#336
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	319	326	225	1223	274	1118
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.83	0.82	0.28	0.60	0.19	0.79

Intersection Summary



















# 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.

HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Future PM Peak Hour  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	118	24	57	131	65	60	663	37	50	781	58
Future Volume (veh/h)	109	118	24	57	131	65	60	663	37	50	781	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	115	124	25	60	138	68	63	698	39	53	822	61
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	142	29	68	158	78	221	1113	62	261	1080	80
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.04	0.33	0.33	0.03	0.32	0.32
Sat Flow, veh/h	784	846	170	399	918	452	1781	3422	191	1781	3354	249
Grp Volume(v), veh/h	264	0	0	266	0	0	63	362	375	53	435	448
Grp Sat Flow(s), veh/h/ln	1800	0	0	1769	0	0	1781	1777	1836	1781	1777	1826
Q Serve(g_s), s	11.4	0.0	0.0	11.7	0.0	0.0	1.9	13.8	13.8	1.6	17.6	17.6
Cycle Q Clear(g_c), s	11.4	0.0	0.0	11.7	0.0	0.0	1.9	13.8	13.8	1.6	17.6	17.6
Prop In Lane	0.44		0.09	0.23		0.26	1.00		0.10	1.00		0.14
Lane Grp Cap(c), veh/h	303	0	0	304	0	0	221	578	597	261	572	588
V/C Ratio(X)	0.87	0.00	0.00	0.88	0.00	0.00	0.28	0.63	0.63	0.20	0.76	0.76
Avail Cap(c_a), veh/h	315	0	0	310	0	0	288	578	597	333	572	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	0.00	0.00	0.87	0.00	0.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	32.4	0.0	0.0	32.3	0.0	0.0	19.1	22.9	22.9	18.3	24.3	24.3
Incr Delay (d2), s/veh	21.7	0.0	0.0	20.7	0.0	0.0	0.7	5.1	4.9	0.4	8.6	8.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%),veh/ln	6.7	0.0	0.0	6.6	0.0	0.0	0.8	6.3	6.5	0.6	8.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.1	0.0	0.0	53.0	0.0	0.0	19.8	28.0	27.8	18.7	33.0	32.7
LnGrp LOS	D	A	A	D	A	A	B	C	C	B	C	C
Approach Vol, veh/h	264				266				800			
Approach Delay, s/veh	54.1				53.0				27.3			
Approach LOS	D				D				C			
Timer - Assigned Phs	1	2			4	5	6			8		
Phs Duration (G+Y+Rc), s	8.8	32.0			19.7	9.0	31.8			19.5		
Change Period (Y+Rc), s	6.0	6.0			6.0	6.0	6.0			6.0		
Max Green Setting (Gmax), s	6.0	22.0			14.0	6.0	22.0			14.0		
Max Q Clear Time (g_c+I1), s	3.6	15.8			13.7	3.9	19.6			13.4		
Green Ext Time (p_c), s	0.0	2.4			0.0	0.0	1.3			0.1		
Intersection Summary												
HCM 6th Ctrl Delay	35.4											
HCM 6th LOS	D											
Notes												



Timings  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	135	91	45	106	35	405
Future Volume (vph)	135	91	45	106	35	405
Turn Type	NA	NA	pm+pt	NA	pm+pt	NA
Protected Phases	8	4	5	2	1	6
Permitted Phases			2		6	
Detector Phase	8	4	5	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	4.0	10.0	4.0	10.0
Minimum Split (s)	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	21.0	19.0	11.0	30.0	10.0	29.0
Total Split (%)	26.3%	23.8%	13.8%	37.5%	12.5%	36.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag			Lead	Lag	Lead	Lag
Lead-Lag Optimize?			Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	15.4	12.6	31.0	28.0	29.8	27.4
Actuated g/C Ratio	0.19	0.16	0.39	0.35	0.37	0.34
w/c Ratio	0.97	0.87	0.13	0.97	0.20	0.37
Control Delay	75.7	57.4	14.7	47.5	10.3	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.7	57.4	14.7	47.5	10.3	19.1
LOS	E	E	B	D	B	B
Approach Delay	75.7	57.4		46.3		18.4
Approach LOS	E	E		D		B

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 78 (98%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.97

Intersection Signal Delay: 46.0

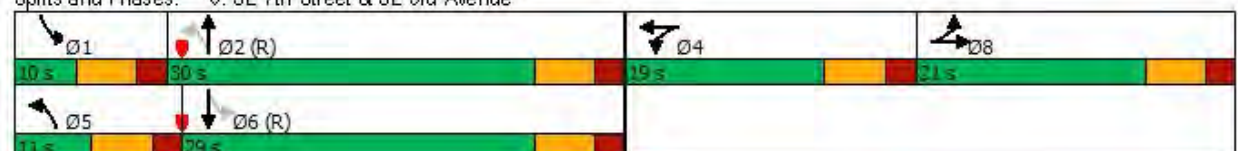
Intersection LOS: D

Intersection Capacity Utilization 84.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 6: SE 7th Street & SE 3rd Avenue



Queues  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized  
02/26/2019



Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	339	270	47	1190	37	449
w/c Ratio	0.97	0.87	0.13	0.97	0.20	0.37
Control Delay	75.7	57.4	14.7	47.5	10.3	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.7	57.4	14.7	47.5	10.3	19.1
Queue Length 50th (ft)	169	126	13	~367	13	107
Queue Length 95th (ft)	#338	#302	33	#195	10	156
Internal Link Dist (ft)	164	963		314		575
Turn Bay Length (ft)			100		100	
Base Capacity (vph)	350	318	374	1233	184	1207
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.97	0.85	0.13	0.97	0.20	0.37

Intersection Summary

~ 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.



HCM 6th Signalized Intersection Summary  
6: SE 7th Street & SE 3rd Avenue

Future AM Peak Hour-Optimized  
02/26/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Future Volume (veh/h)	167	135	20	50	91	115	45	1068	63	35	405	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	176	142	21	53	96	121	47	1124	66	37	426	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	142	21	55	99	125	337	1098	64	140	1089	59
Arrive On Green	0.19	0.19	0.19	0.05	0.05	0.05	0.03	0.32	0.32	0.01	0.10	0.10
Sat Flow, veh/h	936	755	112	337	610	769	1781	3411	200	1781	3429	185
Grp Volume(v), veh/h	339	0	0	270	0	0	47	585	605	37	220	229
Grp Sat Flow(s), veh/h/ln	1803	0	0	1715	0	0	1781	1777	1834	1781	1777	1837
Q Serve(g_s), s	15.0	0.0	0.0	12.6	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Cycle Q Clear(g_c), s	15.0	0.0	0.0	12.6	0.0	0.0	1.4	25.8	25.8	1.1	9.3	9.3
Prop In Lane	0.52		0.06	0.20		0.45	1.00		0.11	1.00		0.10
Lane Grp Cap(c), veh/h	338	0	0	279	0	0	337	572	591	140	564	583
V/C Ratio(X)	1.00	0.00	0.00	0.97	0.00	0.00	0.14	1.02	1.02	0.26	0.39	0.39
Avail Cap(c_a), veh/h	338	0	0	279	0	0	391	572	591	179	564	583
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(f)	1.00	0.00	0.00	0.76	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	32.5	0.0	0.0	37.7	0.0	0.0	17.9	27.1	27.1	21.9	28.6	28.6
Incr Delay (d2), s/veh	49.6	0.0	0.0	38.6	0.0	0.0	0.2	43.6	43.3	1.0	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q(50%),veh/ln	11.0	0.0	0.0	8.7	0.0	0.0	0.6	17.2	17.7	0.5	4.5	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.1	0.0	0.0	76.3	0.0	0.0	18.1	70.7	70.4	22.9	30.5	30.5
LnGrp LOS	F	A	A	E	A	A	B	F	F	C	C	C
Approach Vol, veh/h	339			270			1237			486		
Approach Delay, s/veh	82.1			76.3			68.5			29.9		
Approach LOS	F			E			E			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	31.8		19.0	8.6	31.4		21.0				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	4.0	24.0		13.0	5.0	23.0		15.0				
Max Q Clear Time (g_c+H1), s	3.1	27.8		14.6	3.4	11.3		17.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.0		0.0				

Intersection Summary

HCM 6th Ctrl Delay 63.4  
HCM 6th LOS E

Notes

User approved pedestrian interval to be less than phase max green.

**SE 7<sup>TH</sup> STREET & FEDERAL HIGHWAY**



Timings  
9: SE 7th Street & Federal Highway

Existing AM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↱	↰	↰↱↲	↰	↰↱↲
Traffic Volume (vph)	41	36	25	20	71	145	1401	110	1757
Future Volume (vph)	41	36	25	20	71	145	1401	110	1757
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	135.8	124.4	126.3	119.0
Actuated g/C Ratio	0.06	0.06	0.06	0.06	0.06	0.85	0.78	0.79	0.74
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
LOS	E	E	F	E	C	C	A	A	B
Approach Delay		67.1		42.9			8.5		10.1
Approach LOS		E		D			A		B

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 14 (9%), Referenced to phase 2:NB TL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.65

Intersection Signal Delay: 12.1

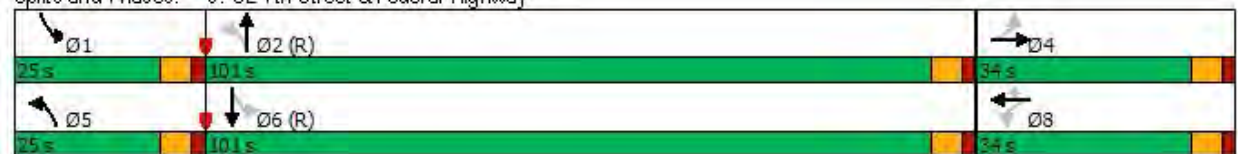
Intersection LOS: B

Intersection Capacity Utilization 70.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: SE 7th Street & Federal Highway



Queues  
9: SE 7th Street & Federal Highway

Existing AM Peak Hour  
02/22/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	76	26	21	75	153	1492	116	2066
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Length 50th (ft)	44	56	27	21	0	44	157	14	306
Queue Length 95th (ft)	m52	m68	60	51	54	126	216	29	450
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	242	323	217	326	338	305	3945	424	3728
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 w/c Ratio	0.18	0.24	0.12	0.06	0.22	0.50	0.38	0.27	0.55













Intersection Summary

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



HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Existing AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Future Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	38	38	26	21	75	153	1475	17	116	1849	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	66	66	90	143	121	230	4058	47	345	3610	421
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.78	0.78	0.03	0.78	0.78
Sat Flow, veh/h	1300	858	858	1323	1870	1585	1781	5204	60	1781	4637	541
Grp Volume(v), veh/h	43	0	76	26	21	75	153	965	527	116	1354	712
Grp Sat Flow(s), veh/h/ln	1300	0	1716	1323	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	5.1	0.0	6.8	3.1	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Cycle Q Clear(g_c), s	6.8	0.0	6.8	9.9	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.03	1.00		0.30
Lane Grp Cap(c), veh/h	131	0	131	90	143	121	230	2655	1450	345	2651	1381
V/C Ratio(X)	0.33	0.00	0.58	0.29	0.15	0.62	0.67	0.36	0.36	0.34	0.51	0.52
Avail Cap(c_a), veh/h	259	0	300	220	327	277	384	2655	1450	501	2651	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.35	0.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	0.0	71.4	76.2	69.0	71.6	10.4	5.4	5.4	4.0	6.5	6.5
Incr Delay (d2), s/veh	0.5	0.0	1.4	1.8	0.5	5.0	3.3	0.4	0.7	0.6	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	1.7	0.0	3.1	1.1	0.8	3.2	2.6	4.8	5.4	0.7	8.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.7	0.0	72.8	77.9	69.5	76.6	13.7	5.8	6.1	4.6	7.2	7.9
LnGrp LOS	E	A	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h		119			122			1645			2182	
Approach Delay, s/veh		72.7			75.7			6.6			7.3	
Approach LOS		E			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	130.8		18.3	11.2	130.6		18.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95.0		28.0				
Max Q Clear Time (g_c+H1), s	4.1	15.9		8.8	4.8	25.8		11.9				
Green Ext Time (p_c), s	0.2	16.6		0.4	0.3	31.3		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			B									



Timings  
9: SE 7th Street & Federal Highway

Existing PM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	105	55	40	32	58	105	1091	148	1723
Future Volume (vph)	105	55	40	32	58	105	1091	148	1723
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	19.9	19.9	19.9	19.9	19.9	142.5	133.3	141.7	133.0
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.79	0.74	0.79	0.74
w/c Ratio	0.74	0.71	0.59	0.17	0.27	0.53	0.31	0.41	0.51
Control Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
LOS	F	E	F	E	B	B	A	A	B
Approach Delay		85.4		57.8			9.2		10.9
Approach LOS		F		E			A		B

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 65 (36%), Referenced to phase 2: NBTL and 6: SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.74

Intersection Signal Delay: 17.4

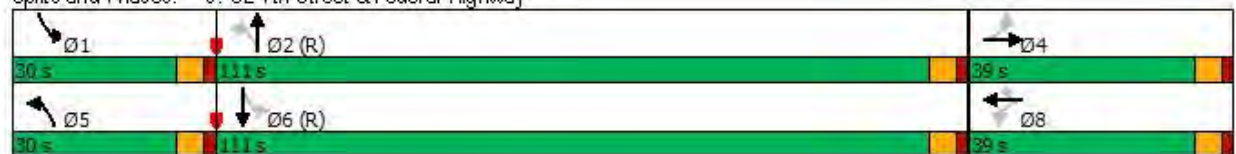
Intersection LOS: B

Intersection Capacity Utilization 74.8%

ICU Level of Service D

Analysis Period (min) 15










Splits and Phases: 9: SE 7th Street & Federal Highway






Queues  
9: SE 7th Street & Federal Highway

Existing PM Peak Hour  
02/22/2019

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	111	158	42	34	61	111	1181	156	1909
w/c Ratio	0.74	0.71	0.59	0.17	0.27	0.53	0.31	0.41	0.51
Control Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.4	72.7	106.4	71.6	16.7	15.5	8.6	7.1	11.2
Queue Length 50th (ft)	129	135	48	37	0	21	157	31	307
Queue Length 95th (ft)	197	213	94	73	47	57	224	60	456
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	250	343	118	341	340	346	3753	509	3732
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 w/c Ratio	0.44	0.46	0.36	0.10	0.18	0.32	0.31	0.31	0.51
Intersection Summary									

HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Existing PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	→	→	←	→	→	←	→	→	←	→	→
Traffic Volume (veh/h)	105	55	95	40	32	58	105	1091	31	148	1723	90
Future Volume (veh/h)	105	55	95	40	32	58	105	1091	31	148	1723	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A <sub>pbT</sub> )	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/hln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	58	100	42	34	61	111	1148	33	156	1814	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	84	145	97	255	216	228	3714	107	412	3653	191
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.73	0.73	0.04	0.74	0.74
Sat Flow, veh/h	1301	616	1063	1228	1870	1585	1781	5101	147	1781	4968	260
Grp Volume(v), veh/h	111	0	158	42	34	61	111	766	415	156	1242	667
Grp Sat Flow(s), veh/hln	1301	0	1679	1228	1870	1585	1781	1702	1844	1781	1702	1824
Q Serve(g_s), s	14.8	0.0	16.2	6.1	2.9	6.2	2.9	14.2	14.2	4.1	27.4	27.5
Cycle Q Clear(g_c), s	17.7	0.0	16.2	22.2	2.9	6.2	2.9	14.2	14.2	4.1	27.4	27.5
Prop In Lane	1.00		0.63	1.00		1.00	1.00		0.08	1.00		0.14
Lane Grp Cap(c), veh/h	196	0	229	97	255	216	228	2478	1343	412	2503	1341
V/C Ratio(X)	0.57	0.00	0.69	0.43	0.13	0.28	0.49	0.31	0.31	0.38	0.50	0.50
Avail Cap(c_a), veh/h	258	0	308	155	343	291	415	2478	1343	586	2503	1341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.63	0.00	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	0.0	74.1	84.7	68.4	69.9	9.3	8.6	8.6	6.3	9.9	9.9
Incr Delay (d2), s/veh	1.6	0.0	2.6	3.0	0.2	0.7	1.6	0.3	0.6	0.6	0.7	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	5.1	0.0	7.2	2.0	1.4	2.6	1.2	5.4	6.0	1.6	10.4	11.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.8	0.0	76.7	87.8	68.6	70.6	10.9	8.9	9.2	6.9	10.6	11.3
LnGrp LOS	E	A	E	F	E	E	B	A	A	A	B	B
Approach Vol, veh/h	269			137			1292			2065		
Approach Delay, s/veh	77.2			75.4			9.2			10.6		
Approach LOS	E			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	137.1		30.5	11.1	138.4		30.5				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (G <sub>max</sub> ), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (g_c+I1), s	6.1	16.2		19.7	4.9	29.5		24.2				
Green Ext Time (p_c), s	0.4	11.1		1.0	0.2	27.2		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.2								
HCM 6th LOS				B								



Timings  
9: SE 7th Street & Federal Highway

Background AM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↗	↖	↖↗↘	↖	↖↗↘
Traffic Volume (vph)	41	36	25	20	71	145	1401	110	1757
Future Volume (vph)	41	36	25	20	71	145	1401	110	1757
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	10.4	10.4	10.4	10.4	10.4	135.8	124.4	126.3	119.0
Actuated g/C Ratio	0.06	0.06	0.06	0.06	0.06	0.85	0.78	0.79	0.74
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
LOS	E	E	F	E	C	C	A	A	B
Approach Delay		67.1		42.9			8.5		10.1
Approach LOS		E		D			A		B

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 14 (9%), Referenced to phase 2:NB TL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.65

Intersection Signal Delay: 12.1

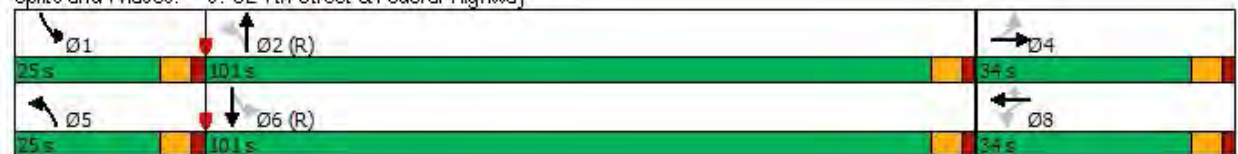
Intersection LOS: B

Intersection Capacity Utilization 70.5%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: SE 7th Street & Federal Highway





Queues  
9: SE 7th Street & Federal Highway

Background AM Peak Hour  
02/22/2019




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	43	76	26	21	75	153	1492	116	2066
w/c Ratio	0.48	0.55	0.33	0.17	0.44	0.65	0.38	0.39	0.55
Control Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.6	60.0	80.8	72.2	21.5	31.1	6.2	6.9	10.3
Queue Length 50th (ft)	44	56	27	21	0	44	157	14	306
Queue Length 95th (ft)	m52	m68	60	51	54	126	216	29	450
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	242	323	217	326	338	305	3945	424	3728
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 w/c Ratio	0.18	0.24	0.12	0.06	0.22	0.50	0.38	0.27	0.55

Intersection Summary

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

HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Background AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	→	→	←	→	→	←	→	→	←	→	→
Traffic Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Future Volume (veh/h)	41	36	36	25	20	71	145	1401	16	110	1757	206
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	38	38	26	21	75	153	1475	17	116	1849	217
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	131	66	66	90	143	121	230	4058	47	345	3610	421
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.78	0.78	0.03	0.78	0.78
Sat Flow, veh/h	1300	858	858	1323	1870	1585	1781	5204	60	1781	4637	541
Grp Volume(v), veh/h	43	0	76	26	21	75	153	965	527	116	1354	712
Grp Sat Flow(s), veh/h	1300	0	1716	1323	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	5.1	0.0	6.8	3.1	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Cycle Q Clear(g_c), s	6.8	0.0	6.8	9.9	1.7	7.3	2.8	13.9	13.9	2.1	23.4	23.8
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.03	1.00		0.30
Lane Grp Cap(c), veh/h	131	0	131	90	143	121	230	2655	1450	345	2651	1381
V/C Ratio(X)	0.33	0.00	0.58	0.29	0.15	0.62	0.67	0.36	0.36	0.34	0.51	0.52
Avail Cap(c_a), veh/h	259	0	300	220	327	277	384	2655	1450	501	2651	1381
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.35	0.00	0.35	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.2	0.0	71.4	76.2	69.0	71.6	10.4	5.4	5.4	4.0	6.5	6.5
Incr Delay (d2), s/veh	0.5	0.0	1.4	1.8	0.5	5.0	3.3	0.4	0.7	0.6	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/m	1.7	0.0	3.1	1.1	0.8	3.2	2.6	4.8	5.4	0.7	8.1	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.7	0.0	72.8	77.9	69.5	76.6	13.7	5.8	6.1	4.6	7.2	7.9
LnGrp LOS	E	A	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h		119			122			1645			2182	
Approach Delay, s/veh		72.7			75.7			6.6			7.3	
Approach LOS		E			E			A			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	130.8		18.3	11.2	130.6		18.3				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95.0		28.0				
Max Q Clear Time (g_c+H1), s	4.1	15.9		8.8	4.8	25.8		11.9				
Green Ext Time (p_c), s	0.2	16.6		0.4	0.3	31.3		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			11.0									
HCM 6th LOS			B									



Timings  
9: SE 7th Street & Federal Highway

Background PM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	107	56	41	32	59	107	1107	150	1749
Future Volume (vph)	107	56	41	32	59	107	1107	150	1749
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	20.2	20.2	20.2	20.2	20.2	142.6	133.0	141.1	132.3
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.11	0.79	0.74	0.78	0.74
w/c Ratio	0.74	0.71	0.61	0.16	0.27	0.55	0.32	0.42	0.52
Control Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
LOS	F	E	F	E	B	B	A	A	B
Approach Delay		85.5		57.9			9.5		11.4
Approach LOS		F		E			A		B

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 65 (36%), Referenced to phase 2: NBTL and 6: SBTL, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.74

Intersection Signal Delay: 17.7

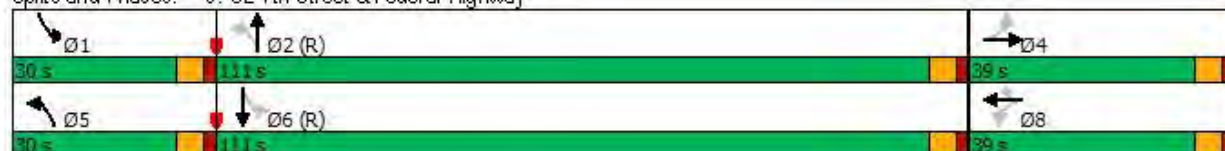
Intersection LOS: B

Intersection Capacity Utilization 75.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: SE 7th Street & Federal Highway





Queues  
9: SE 7th Street & Federal Highway


Background PM Peak Hour  
02/22/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	113	160	43	34	62	113	1198	158	1937
w/c Ratio	0.74	0.71	0.61	0.16	0.27	0.55	0.32	0.42	0.52
Control Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.6	72.7	107.2	71.3	16.4	17.3	8.8	7.5	11.7
Queue Length 50th (ft)	132	137	49	37	0	22	162	32	322
Queue Length 95th (ft)	199	216	95	73	48	66	230	61	476
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	250	343	117	341	340	341	3744	503	3713
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 w/c Ratio	0.45	0.47	0.37	0.10	0.18	0.33	0.32	0.31	0.52
Intersection Summary									

HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Background PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	→	↱	↰	→	↱	↰	↰↱↲	→	↰	↰↱↲	↱
Traffic Volume (veh/h)	107	56	96	41	32	59	107	1107	31	150	1749	91
Future Volume (veh/h)	107	56	96	41	32	59	107	1107	31	150	1749	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	59	101	43	34	62	113	1165	33	158	1841	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	85	146	98	258	219	223	3704	105	406	3642	190
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.73	0.73	0.04	0.73	0.73
Sat Flow, veh/h	1300	619	1060	1226	1870	1585	1781	5104	145	1781	4969	259
Grp Volume(v), veh/h	113	0	160	43	34	62	113	777	421	158	1260	677
Grp Sat Flow(s), veh/h/ln	1300	0	1680	1226	1870	1585	1781	1702	1844	1781	1702	1824
Q Serve(g_s), s	15.0	0.0	16.3	6.2	2.9	6.3	3.0	14.6	14.6	4.2	28.2	28.4
Cycle Q Clear(g_c), s	17.9	0.0	16.3	22.6	2.9	6.3	3.0	14.6	14.6	4.2	28.2	28.4
Prop In Lane	1.00		0.63	1.00		1.00	1.00		0.08	1.00		0.14
Lane Grp Cap(c), veh/h	199	0	232	98	258	219	223	2470	1338	406	2495	1337
V/C Ratio(X)	0.57	0.00	0.69	0.44	0.13	0.28	0.51	0.31	0.31	0.39	0.51	0.51
Avail Cap(c_a), veh/h	258	0	308	154	343	291	409	2470	1338	579	2495	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.62	0.00	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	73.9	84.7	68.1	69.6	9.8	8.8	8.8	6.5	10.2	10.2
Incr Delay (d2), s/veh	1.6	0.0	2.6	3.1	0.2	0.7	1.8	0.3	0.6	0.6	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	5.2	0.0	7.3	2.1	1.4	2.6	1.2	5.6	6.1	1.6	10.7	11.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.6	0.0	76.5	87.7	68.3	70.3	11.6	9.1	9.4	7.1	10.9	11.6
LnGrp LOS	E	A	E	F	E	E	B	A	A	A	B	B
Approach Vol, veh/h	273			139			1311			2095		
Approach Delay, s/veh	77.0			75.2			9.4			10.8		
Approach LOS	E			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	136.6		30.8	11.2	137.9		30.8				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (g_c+H1), s	6.2	16.6		19.9	5.0	30.4		24.6				
Green Ext Time (p_c), s	0.4	11.4		1.0	0.3	27.9		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.4								
HCM 6th LOS				B								



Timings  
9: SE 7th Street & Federal Highway

Future AM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↱	↰	↰↱↲	↰	↰↱↲
Traffic Volume (vph)	50	37	25	20	72	149	1422	112	1784
Future Volume (vph)	50	37	25	20	72	149	1422	112	1784
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	34.0	34.0	34.0	34.0	34.0	25.0	101.0	25.0	101.0
Total Split (%)	21.3%	21.3%	21.3%	21.3%	21.3%	15.6%	63.1%	15.6%	63.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	11.5	11.5	11.5	11.5	11.5	134.9	123.1	124.7	117.3
Actuated g/C Ratio	0.07	0.07	0.07	0.07	0.07	0.84	0.77	0.78	0.73
w/c Ratio	0.54	0.55	0.31	0.16	0.41	0.67	0.39	0.40	0.57
Control Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4
LOS	E	E	E	E	B	D	A	A	B
Approach Delay		65.7		40.9			9.5		11.2
Approach LOS		E		D			A		B

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 14 (9%), Referenced to phase 2:NB TL and 6:SBTL, Start of Green

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.67

Intersection Signal Delay: 13.2

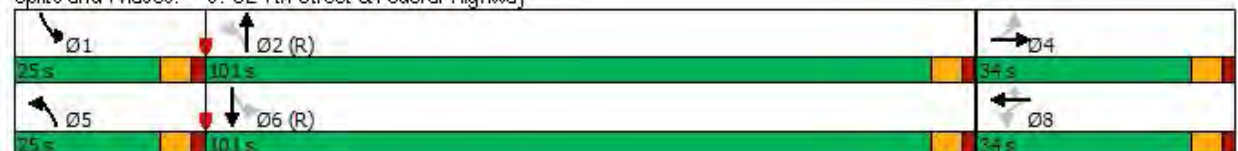
Intersection LOS: B

Intersection Capacity Utilization 71.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 9: SE 7th Street & Federal Highway





Queues  
9: SE 7th Street & Federal Highway

Future AM Peak Hour  
02/22/2019















Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	53	83	26	21	76	157	1514	118	2100
w/c Ratio	0.54	0.55	0.31	0.16	0.41	0.67	0.39	0.40	0.57
Control Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.5	56.8	78.4	70.3	20.0	36.4	6.7	7.5	11.4
Queue Length 50th (ft)	55	60	26	21	0	59	167	15	334
Queue Length 95th (ft)	m62	m68	59	50	53	142	235	32	487
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	242	325	205	326	339	298	3904	416	3673
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 w/c Ratio	0.22	0.26	0.13	0.06	0.22	0.53	0.39	0.28	0.57

Intersection Summary

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

HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Future AM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	37	42	25	20	72	149	1422	16	112	1784	211
Future Volume (veh/h)	50	37	42	25	20	72	149	1422	16	112	1784	211
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	53	39	44	26	21	76	157	1497	17	118	1878	222
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	65	73	90	151	128	225	4036	46	337	3583	420
Arrive On Green	0.08	0.08	0.08	0.08	0.08	0.08	0.03	0.78	0.78	0.03	0.77	0.77
Sat Flow, veh/h	1298	802	905	1315	1870	1585	1781	5205	59	1781	4633	544
Grp Volume(v), veh/h	53	0	83	26	21	76	157	979	535	118	1376	724
Grp Sat Flow(s), veh/h/ln	1298	0	1707	1315	1870	1585	1781	1702	1860	1781	1702	1773
Q Serve(g_s), s	6.3	0.0	7.5	3.1	1.7	7.4	3.0	14.5	14.5	2.2	24.6	25.0
Cycle Q Clear(g_c), s	8.0	0.0	7.5	10.6	1.7	7.4	3.0	14.5	14.5	2.2	24.6	25.0
Prop In Lane	1.00		0.53	1.00		1.00	1.00		0.03	1.00		0.31
Lane Grp Cap(c), veh/h	136	0	138	90	151	128	225	2640	1442	337	2633	1371
V/C Ratio(X)	0.39	0.00	0.60	0.29	0.14	0.59	0.70	0.37	0.37	0.35	0.52	0.53
Avail Cap(c_a), veh/h	259	0	299	213	327	277	377	2640	1442	493	2633	1371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.25	0.00	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.1	0.0	71.0	76.2	68.8	71.0	13.3	5.7	5.7	4.2	6.9	6.9
Incr Delay (d2), s/veh	0.5	0.0	1.1	1.8	0.4	4.3	3.9	0.4	0.7	0.6	0.7	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	2.1	0.0	3.4	1.1	0.8	3.2	3.5	5.0	5.6	0.8	8.6	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	72.5	0.0	72.1	77.9	68.8	75.3	17.2	6.1	6.4	4.8	7.6	8.4
LnGrp LOS	E	A	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h	136			123			1671			2218		
Approach Delay, s/veh	72.3			74.7			7.2			7.7		
Approach LOS	E			E			A			A		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	130.1		18.9	11.3	129.7		18.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	95.0		28.0	19.0	95.0		28.0				
Max Q Clear Time (g_c+I1), s	4.2	16.5		10.0	5.0	27.0		12.6				
Green Ext Time (p_c), s	0.2	17.1		0.5	0.3	32.0		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay	11.6											
HCM 6th LOS	B											



Timings  
9: SE 7th Street & Federal Highway

Future PM Peak Hour  
02/22/2019

	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↰	↱	↰	↱	↱	↰	↰↱↲	↰	↰↱↲
Traffic Volume (vph)	113	56	41	32	59	112	1107	150	1749
Future Volume (vph)	113	56	41	32	59	112	1107	150	1749
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	5.0	12.0	5.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0	30.0	111.0	30.0	111.0
Total Split (%)	21.7%	21.7%	21.7%	21.7%	21.7%	16.7%	61.7%	16.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lead	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	20.9	20.9	20.9	20.9	20.9	142.2	132.2	140.0	131.0
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.12	0.79	0.73	0.78	0.73
w/c Ratio	0.75	0.70	0.57	0.16	0.26	0.57	0.32	0.43	0.53
Control Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
LOS	F	E	F	E	B	B	A	A	B
Approach Delay		84.7		56.1			10.0		12.0
Approach LOS		F		E			B		B

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 65 (36%), Referenced to phase 2: NBT and 6: SBT, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum w/c Ratio: 0.75

Intersection Signal Delay: 18.3

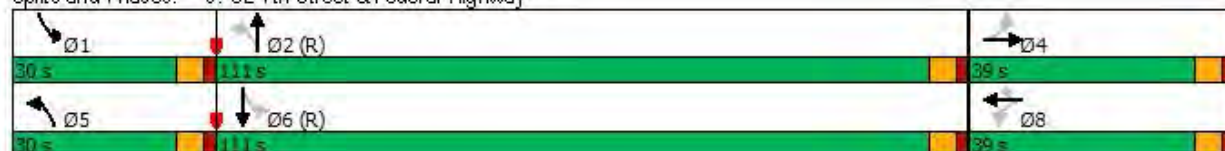
Intersection LOS: B

Intersection Capacity Utilization 76.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 9: SE 7th Street & Federal Highway

















Queues  
9: SE 7th Street & Federal Highway

Future PM Peak Hour  
02/22/2019

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	119	163	43	34	62	118	1198	158	1944
w/c Ratio	0.75	0.70	0.57	0.16	0.26	0.57	0.32	0.43	0.53
Control Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.5	71.0	102.6	70.4	16.1	19.4	9.1	7.7	12.4
Queue Length 50th (ft)	139	139	49	37	0	24	165	32	335
Queue Length 95th (ft)	207	217	94	72	48	78	235	63	495
Internal Link Dist (ft)		963		222			320		153
Turn Bay Length (ft)	200		75		75	350		250	
Base Capacity (vph)	250	343	118	341	340	337	3719	502	3675
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 w/c Ratio	0.48	0.48	0.36	0.10	0.18	0.35	0.32	0.31	0.53
Intersection Summary									

HCM 6th Signalized Intersection Summary  
9: SE 7th Street & Federal Highway

Future PM Peak Hour  
02/22/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	56	99	41	32	59	112	1107	31	150	1749	98
Future Volume (veh/h)	113	56	99	41	32	59	112	1107	31	150	1749	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	59	104	43	34	62	118	1165	33	158	1841	103
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	85	150	98	262	222	223	3693	105	405	3613	202
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.72	0.72	0.04	0.73	0.73
Sat Flow, veh/h	1300	607	1070	1223	1870	1585	1781	5104	145	1781	4948	276
Grp Volume(v), veh/h	119	0	163	43	34	62	118	777	421	158	1265	679
Grp Sat Flow(s), veh/h/ln	1300	0	1678	1223	1870	1585	1781	1702	1844	1781	1702	1821
Q Serve(g_s), s	15.9	0.0	16.7	6.2	2.9	6.3	3.1	14.7	14.7	4.2	28.7	28.9
Cycle Q Clear(g_c), s	18.8	0.0	16.7	22.9	2.9	6.3	3.1	14.7	14.7	4.2	28.7	28.9
Prop In Lane	1.00		0.64	1.00		1.00	1.00		0.08	1.00		0.15
Lane Grp Cap(c), veh/h	201	0	235	98	262	222	223	2463	1335	405	2486	1329
V/C Ratio(X)	0.59	0.00	0.69	0.44	0.13	0.28	0.53	0.32	0.32	0.39	0.51	0.51
Avail Cap(c_a), veh/h	258	0	308	151	343	291	407	2463	1335	577	2486	1329
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.59	0.00	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	73.8	84.7	67.8	69.3	10.3	8.9	8.9	6.6	10.4	10.4
Incr Delay (d2), s/veh	1.6	0.0	2.7	3.1	0.2	0.7	1.9	0.3	0.6	0.6	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back Of Q (50%), veh/ln	5.4	0.0	7.4	2.1	1.4	2.6	1.3	5.6	6.2	1.6	10.9	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	77.7	0.0	76.4	87.8	68.0	70.0	12.2	9.2	9.5	7.2	11.2	11.8
LnGrp LOS	E	A	E	F	E	E	B	A	A	A	B	B
Approach Vol, veh/h	282			139			1316			2102		
Approach Delay, s/veh	76.9			75.0			9.6			11.1		
Approach LOS	E			E			A			B		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	136.3		31.2	11.4	137.4		31.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	24.0	105.0		33.0	24.0	105.0		33.0				
Max Q Clear Time (g_c+H1), s	6.2	16.7		20.8	5.1	30.9		24.9				
Green Ext Time (p_c), s	0.4	11.4		1.0	0.3	28.1		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				17.7								
HCM 6th LOS				B								

## APPENDIX F: HCS WORKSHEETS



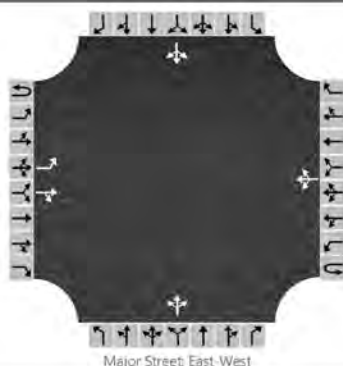
**SE 6<sup>TH</sup> STREET & SE 5<sup>TH</sup> AVENUE**

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 6th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		318	21	2		2	59	110		5	36	2		76	23	173
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		335				2					45					286
Capacity		1397				1590					221					452
v/c Ratio		0.24				0.00					0.20					0.63
95% Queue Length		0.9				0.0					0.7					4.3
Control Delay (s/veh)		8.4				7.3					25.4					25.7
Level of Service (LOS)		A				A					D					D
Approach Delay (s/veh)	7.8				0.1				25.4				25.7			
Approach LOS	A				A				D				D			

# HCS 2010 Two-Way Stop Control Summary Report

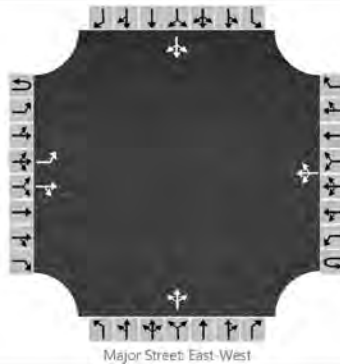
## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	1/25/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

## Site Information

Intersection	SE 6th St & SE 5th Ave
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	SE 5th Avenue
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		67	62	3		0	84	29		5	32	1		118	48	463
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		71									40				662	
Capacity		1468				1532					468				822	
v/c Ratio		0.05									0.09				0.80	
95% Queue Length		0.2									0.3				8.6	
Control Delay (s/veh)		7.6				7.3					13.4				24.7	
Level of Service (LOS)		A				A					B				C	
Approach Delay (s/veh)	3.9								13.4				24.7			
Approach LOS	A								B				C			

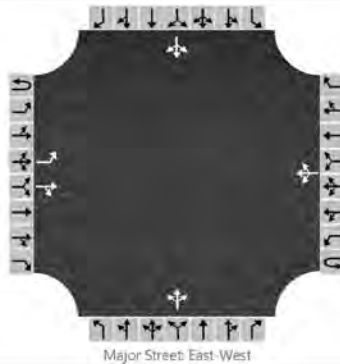


# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 6th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Background		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		323	21	2		2	60	112		5	37	2		77	23	176
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		340				2					46				290	
Capacity		1393				1590					216				444	
v/c Ratio		0.24				0.00					0.21				0.65	
95% Queue Length		1.0				0.0					0.8				4.6	
Control Delay (s/veh)		8.4				7.3					26.1				27.1	
Level of Service (LOS)		A				A					D				D	
Approach Delay (s/veh)	7.9				0.1				26.1				27.1			
Approach LOS	A				A				D				D			

# HCS 2010 Two-Way Stop Control Summary Report

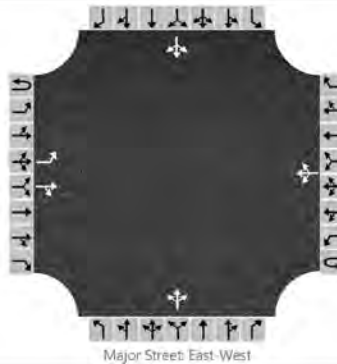
## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Background

## Site Information

Intersection	SE 6th St & SE 5th Ave
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	SE 5th Avenue
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		68	63	3		0	85	29		5	32	1		120	49	470
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		72									40				673	
Capacity		1467				1531					462				821	
v/c Ratio		0.05									0.09				0.82	
95% Queue Length		0.2									0.3				9.1	
Control Delay (s/veh)		7.6				7.4					13.5				26.0	
Level of Service (LOS)		A				A					B				D	
Approach Delay (s/veh)	3.9								13.5				26.0			
Approach LOS	A								B				D			

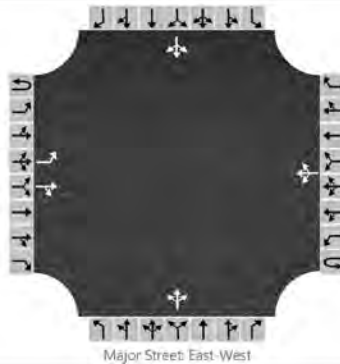


# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 6th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Future		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		323	21	7		2	60	112		27	37	3		77	23	176
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		340				2					70				290	
Capacity		1393				1583					203				443	
v/c Ratio		0.24				0.00					0.34				0.65	
95% Queue Length		1.0				0.0					1.5				4.6	
Control Delay (s/veh)		8.4				7.3					31.8				27.3	
Level of Service (LOS)		A				A					D				D	
Approach Delay (s/veh)	7.8				0.1				31.8				27.3			
Approach LOS	A				A				D				D			



# HCS 2010 Two-Way Stop Control Summary Report

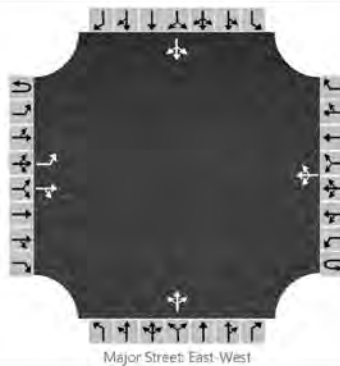
## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Future

## Site Information

Intersection	SE 6th St & SE 5th Ave
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	SE 5th Avenue
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	1	0		0	1	0
Configuration		L		TR			LTR				LTR				LTR	
Volume (veh/h)		68	63	19		1	85	29		20	32	1		120	48	470
Percent Heavy Vehicles		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		72				1					56				672	
Capacity		1467				1509					333				816	
v/c Ratio		0.05				0.00					0.17				0.82	
95% Queue Length		0.2				0.0					0.6				9.3	
Control Delay (s/veh)		7.6				7.4					18.0				26.4	
Level of Service (LOS)		A				A					C				D	
Approach Delay (s/veh)	3.5				0.1				18.0				26.4			
Approach LOS	A				A				C				D			

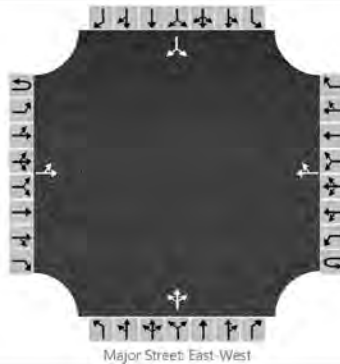
**SE 7<sup>TH</sup> STREET & SE 5<sup>TH</sup> AVENUE**

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 7th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		22	92				292	26		2	0	2		21		1
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

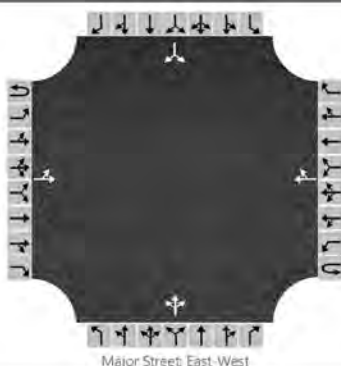
Flow Rate (veh/h)		120									4				23	
Capacity		1224									697				552	
v/c Ratio		0.10									0.01				0.04	
95% Queue Length		0.1									0.0				0.1	
Control Delay (s/veh)		8.0									10.2				11.8	
Level of Service (LOS)		A									B				B	
Approach Delay (s/veh)	1.7								10.2				11.8			
Approach LOS	A								B				B			



# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	MAG	Intersection	SE 7th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		8	187				146	35		0	0	5		26		22
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

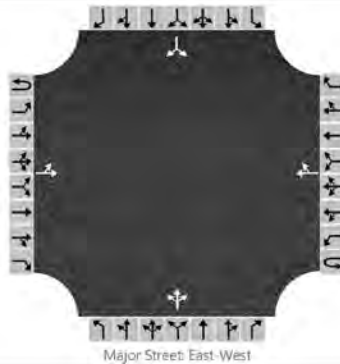
Flow Rate (veh/h)		205									5				50	
Capacity		1382									844				707	
v/c Ratio		0.15									0.01				0.07	
95% Queue Length		0.0									0.0				0.2	
Control Delay (s/veh)		7.6									9.3				10.5	
Level of Service (LOS)		A									A				B	
Approach Delay (s/veh)	0.3								9.3				10.5			
Approach LOS	A								A				B			

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 7th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Background		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		22	93				296	26		2	0	2		21		1
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		121									4				23	
Capacity		1219									693				548	
v/c Ratio		0.10									0.01				0.04	
95% Queue Length		0.1									0.0				0.1	
Control Delay (s/veh)		8.0									10.2				11.9	
Level of Service (LOS)		A									B				B	
Approach Delay (s/veh)	1.7								10.2				11.9			
Approach LOS	A								B				B			



# HCS 2010 Two-Way Stop Control Summary Report

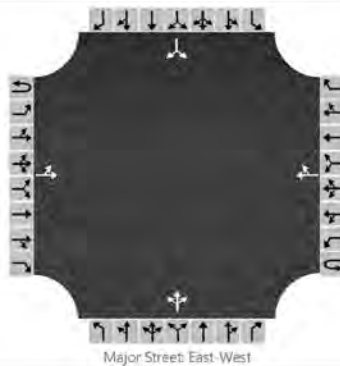
## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Background

## Site Information

Intersection	SE 7th St & SE 5th Ave
Jurisdiction	Broward County
East/West Street	SE 7th Street
North/South Street	SE 5th Avenue
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



Major Street: East-West

## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		8	190				148	36		0	0	5		26		22
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		208									5				50	
Capacity		1378									841				702	
v/c Ratio		0.15									0.01				0.07	
95% Queue Length		0.0									0.0				0.2	
Control Delay (s/veh)		7.6									9.3				10.5	
Level of Service (LOS)		A									A				B	
Approach Delay (s/veh)	0.3								9.3				10.5			
Approach LOS	A								A				B			



# HCS 2010 Two-Way Stop Control Summary Report

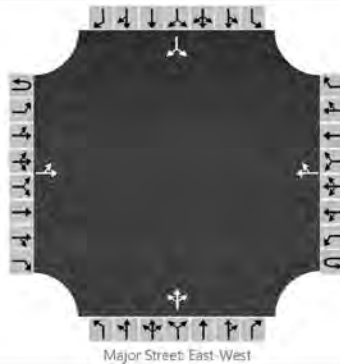
## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	Future

## Site Information

Intersection	SE 7th St & SE 5th Ave
Jurisdiction	Broward County
East/West Street	SE 7th Street
North/South Street	SE 5th Avenue
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		28	94				296	30		2	0	2		33		16
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

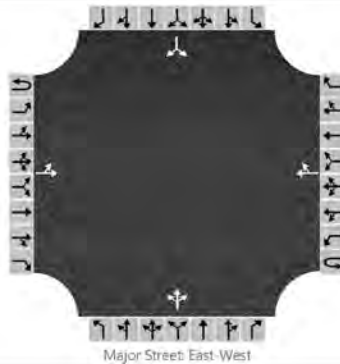
Flow Rate (veh/h)		128									4				52	
Capacity		1214									667				577	
v/c Ratio		0.11									0.01				0.09	
95% Queue Length		0.1									0.0				0.3	
Control Delay (s/veh)		8.0									10.4				11.8	
Level of Service (LOS)		A									B				B	
Approach Delay (s/veh)	2.0								10.4				11.8			
Approach LOS	A								B				B			

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG	Intersection	SE 7th St & SE 5th Ave
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	SE 7th Street
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Future		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration		LT						TR			LTR				LR	
Volume (veh/h)		28	190				149	48		0	0	5		34		32
Percent Heavy Vehicles		2								2	2	2		2		2
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)		229									5				70	
Capacity		1362									841				673	
v/c Ratio		0.17									0.01				0.10	
95% Queue Length		0.1									0.0				0.3	
Control Delay (s/veh)		7.7									9.3				11.0	
Level of Service (LOS)		A									A				B	
Approach Delay (s/veh)	1.1								9.3				11.0			
Approach LOS	A								A				B			

**SE 6<sup>TH</sup> STREET & FEDERAL HIGHWAY**



# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	1/25/2019
Analysis Year	2019
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Existing

## Site Information

Intersection	Federal Hwy & SE 6th St
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	Federal Highway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				87											39	76
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				92												
Capacity				975												
v/c Ratio				0.09												
95% Queue Length				0.3												
Control Delay (s/veh)				9.1												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.1															
Approach LOS	A															

## HCS 2010 Two-Way Stop Control Summary Report

### General Information

Analyst	MAG	Intersection	Federal Hwy & SE 6th St
Agency/Co.	KHA	Jurisdiction	Broward County
Date Performed	1/25/2019	East/West Street	SE 6th Street
Analysis Year	2019	North/South Street	Federal Highway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Existing		

### Lanes



### Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				160											29	73
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

### Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				168												
Capacity				989												
v/c Ratio				0.17												
95% Queue Length				0.6												
Control Delay (s/veh)				9.4												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.4															
Approach LOS	A															



# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	1/25/2019
Analysis Year	2019
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Background

## Site Information

Intersection	Federal Hwy & SE 6th St
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	Federal Highway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				88											40	77
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				93												
Capacity				974												
v/c Ratio				0.10												
95% Queue Length				0.3												
Control Delay (s/veh)				9.1												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.1															
Approach LOS	A															



# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Background

## Site Information

Intersection	Federal Hwy & SE 6th St
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	Federal Highway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				162											29	74
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				171												
Capacity				989												
v/c Ratio				0.17												
95% Queue Length				0.6												
Control Delay (s/veh)				9.4												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.4															
Approach LOS	A															

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	Future

## Site Information

Intersection	Federal Hwy & SE 6th St
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	Federal Highway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				89											42	77
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				94												
Capacity				972												
v/c Ratio				0.10												
95% Queue Length				0.3												
Control Delay (s/veh)				9.1												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.1															
Approach LOS	A															



# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	MAG
Agency/Co.	KHA
Date Performed	2/22/2019
Analysis Year	2019
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Future

## Site Information

Intersection	Federal Hwy & SE 6th St
Jurisdiction	Broward County
East/West Street	SE 6th Street
North/South Street	Federal Highway
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	1		0	0	0	0	0	0	0	0	0	1	0
Configuration				R												TR
Volume (veh/h)				162											36	75
Percent Heavy Vehicles				3												
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)				171												
Capacity				979												
v/c Ratio				0.17												
95% Queue Length				0.6												
Control Delay (s/veh)				9.5												
Level of Service (LOS)				A												
Approach Delay (s/veh)	9.5															
Approach LOS	A															



**DRIVEWAY 1**

# HCS 2010 Two-Way Stop Control Summary Report

General Information		Site Information	
Analyst	KHA	Intersection	Driveway & SE 5th Avenue
Agency/Co.		Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	Driveway
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future		

## Lanes



## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		23		27						10	47				28	5
Percent Heavy Vehicles		2		2						2						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

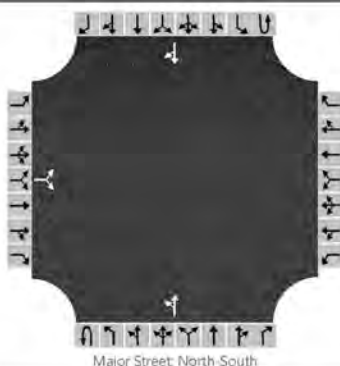
Flow Rate (veh/h)			52							60						
Capacity			965							1576						
v/c Ratio			0.05							0.04						
95% Queue Length			0.2							0.0						
Control Delay (s/veh)			8.9							7.3						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	8.9								1.4							
Approach LOS	A								A							

# HCS 2010 Two-Way Stop Control Summary Report

## General Information

Analyst	KHA	Intersection	Driveway & SE 5th Avenue
Agency/Co.		Jurisdiction	Broward County
Date Performed	2/22/2019	East/West Street	Driveway
Analysis Year	2019	North/South Street	SE 5th Avenue
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Future		

## Lanes



Major Street: North-South

## Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		15		18						32	42				51	17
Percent Heavy Vehicles		2		2						2						
Proportion Time Blocked																
Right Turn Channelized	No				No				No				No			
Median Type	Undivided															
Median Storage																

## Delay, Queue Length, and Level of Service

Flow Rate (veh/h)			35							78						
Capacity			896							1527						
v/c Ratio			0.04							0.05						
95% Queue Length			0.1							0.1						
Control Delay (s/veh)			9.2							7.4						
Level of Service (LOS)			A							A						
Approach Delay (s/veh)	9.2								3.3							
Approach LOS	A								A							