

TRANSPORTATION ANALYSIS

RESTORATION BAY

Prepared For

TTGC, LLC

Prepared By



LINCKS & ASSOCIATES, INC.

Engineers – Planners

Tampa, Florida

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Project No. 19145

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Date

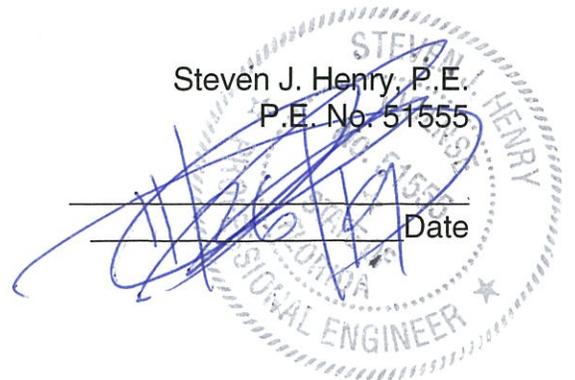


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INTRODUCTION

The purpose of this report is to provide the Transportation Analysis in conjunction with the rezoning of the subject property located west of 113th Street and south of 66th Avenue North in Pinellas County, Florida as shown in Figure 1. The subject property is proposed to be rezoned to allow up to 273 Single Family Homes. The access for the project is proposed to be based on two options as follows:

- Option A: One (1) full access to 66th Avenue North
- Option B: One (1) full access to 66th Avenue North and one (1) full access to Irving Avenue

This report will evaluate the two access options to serve the project.

ESTIMATED DAILY PROJECT TRAFFIC

The trip rates utilized in this report were obtained in the latest computerized version of "OTISS" which utilizes the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition, 2017, as its data base. Based on these trip rates, it is estimated the proposed land use would generate 2,619 daily trip ends, as shown in Table 1.

ESTIMATED AM PEAK HOUR PROJECT TRAFFIC

Based on data contained in the ITE Trip Generation Manual, 10th Edition the proposed land use would generate 199 trip ends during the AM peak hour with 50 inbound and 149 outbound, as shown in Table 1.





FIGURE 1
PROJECT LOCATION





TABLE 1

TRIP GENERATION COMPARISON (1)

<u>Land Use</u>	<u>Size</u>	<u>Daily Trip Ends (1)</u>			<u>AM Peak Hour Trip Ends (1)</u>			<u>PM Peak Hour Trip Ends (1)</u>		
		<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>	<u>In</u>	<u>Out</u>	<u>Total</u>
Single Family	273 DU's	2,619	50	149	199	168	98	266		

(1) Source: ITE Trip Generation Manual, 10th Edition, 2017.

ESTIMATED PM PEAK HOUR PROJECT TRAFFIC

Again, based on data contained in the ITE Trip Generation Manual, 10th Edition, during the PM peak hour, the proposed land use would generate 266 trip ends with 168 inbound and 98 outbound, as shown in Table 1.

PROJECT TRAFFIC DISTRIBUTION

The following distribution of the project traffic was estimated based on existing travel patterns and existing development in the vicinity of the project:

- 40% to and from the North (via 113th Street and 116th Street)
- 60% to and from the South (via 113th Street)

Table 2 provides the project traffic distribution. Figures 2 and 3 illustrates the assignment of the AM and PM peak hour project trip ends for Options A and B respectively.

BUDGETED IMPROVEMENTS

As stated previously the project is located west of 113th Street and South of 66th Avenue North. 66th Avenue North is a two lane undivided roadway and 113th Street is a six lane divided roadway in the vicinity of the project.

According to the Pinellas County Capital Improvement Plan (CIP), there are no capacity adding improvements budgeted for construction in the vicinity of the project.



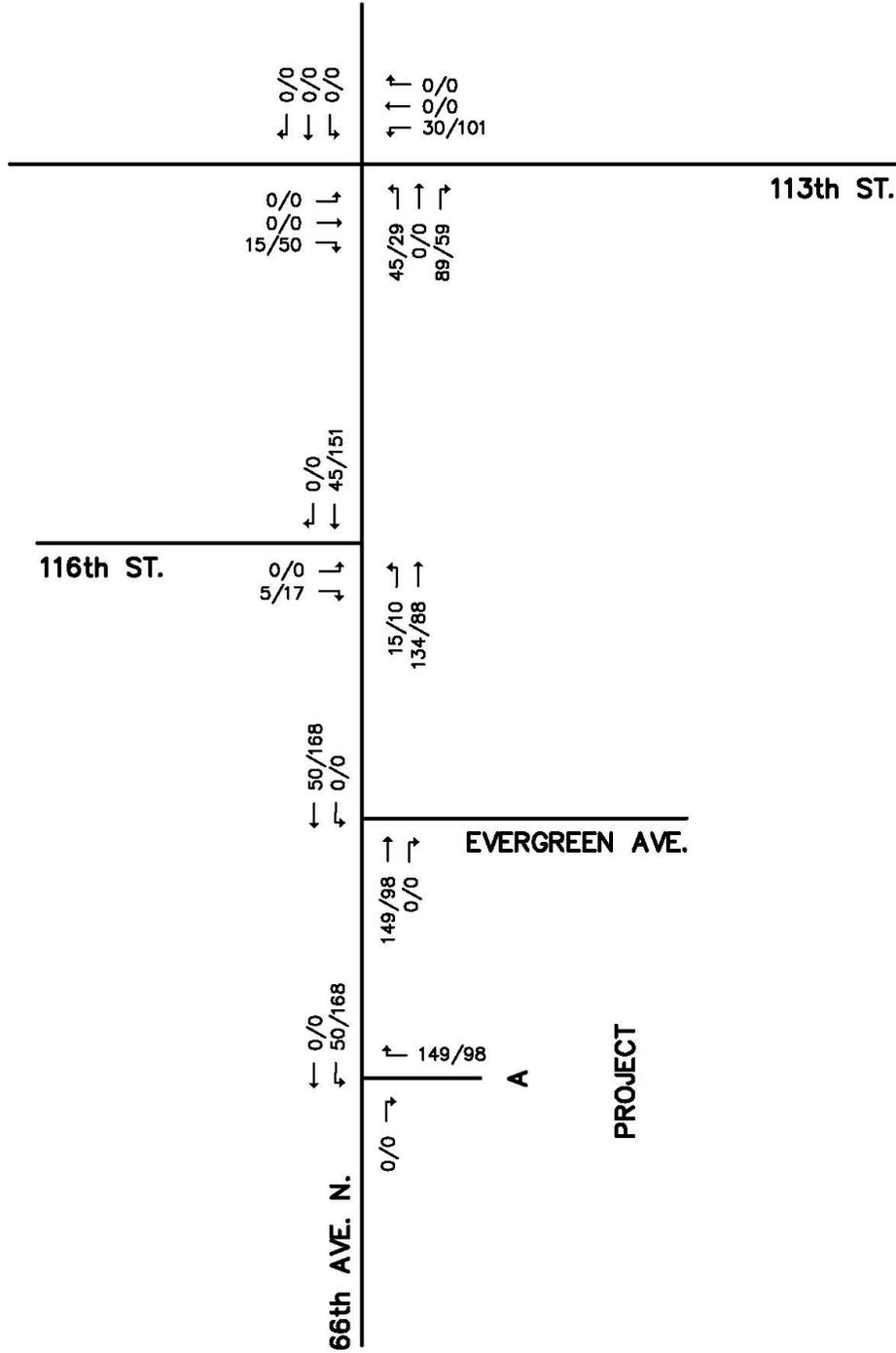
TABLE 2
PROJECT TRAFFIC DISTRIBUTION

Time Period	North (40%)		South (60%)		Total	
	In	Out	In	Out	In	Out
AM	20	60	30	89	50	149
PM	67	39	101	59	168	98



LEGEND

12/23 = AM/PM PEAK HOUR TRAFFIC



**FIGURE 2
OPTION A
PROJECT TRAFFIC**





LEGEND
12/23 = AM/PM PEAK HOUR TRAFFIC

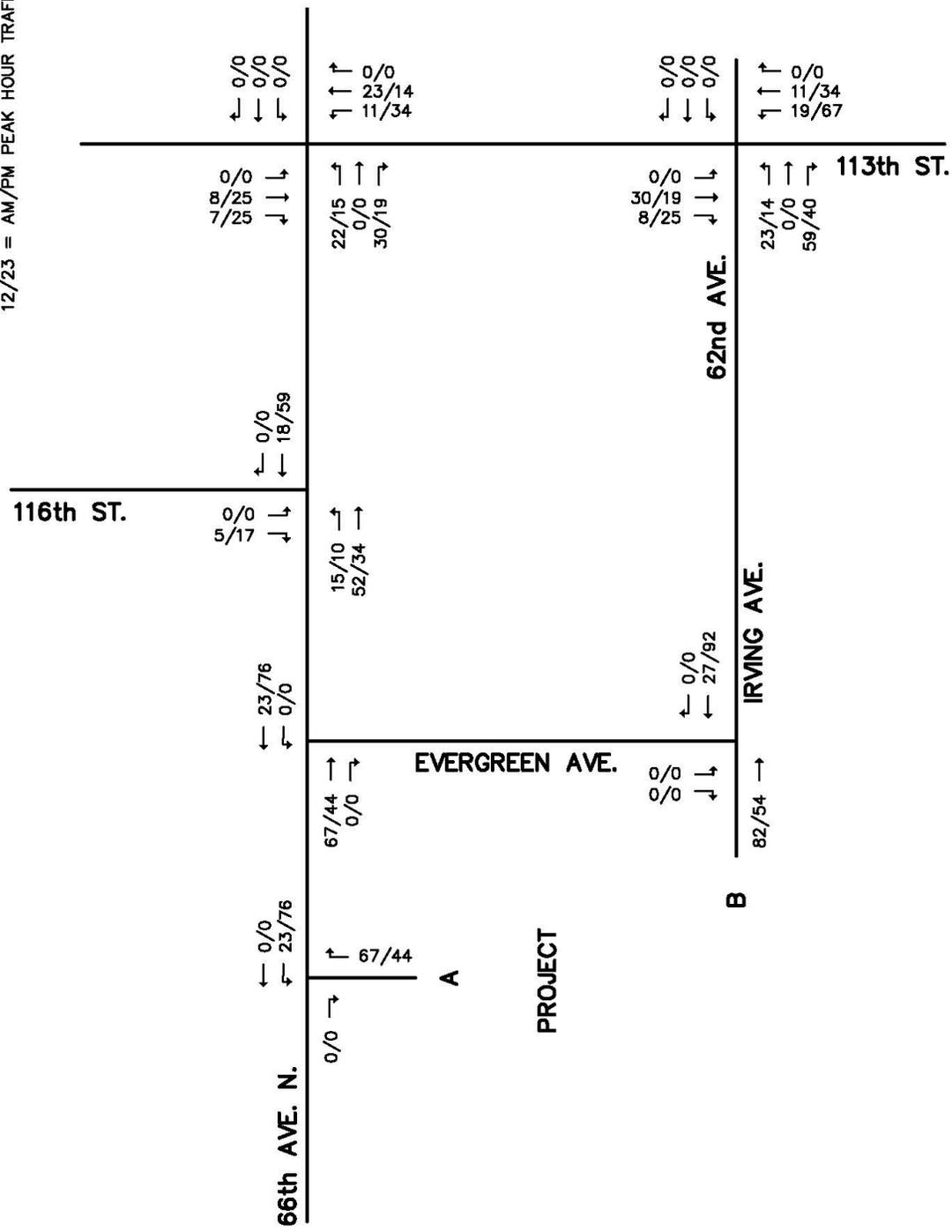


FIGURE 3
OPTION B
PROJECT TRAFFIC



PEAK SEASON TRAFFIC

The following methodology was utilized to estimate the peak season traffic utilized in this analysis:

1. AM (7:00 – 9:00) and PM (4:00-6:00) peak hour turning movement counts were conducted at the following intersections:
 - 113th Street and 66th Avenue North
 - 113th Street and 62nd Avenue
 - 116th Street and 66th Avenue North
 - Evergreen Avenue and 66th Avenue North
 - Evergreen Avenue and Irving Avenue

Figure 4 illustrates the existing counts.

2. The existing counts were adjusted to peak season based on the FDOT Seasonal Adjustment Factors for Pinellas County.

Figure 5 illustrates the peak season traffic. Figures 6 and 7 illustrates the peak season plus project traffic for the AM and PM peak hours for Options A and B respectively.

INTERSECTION ANALYSIS

Intersection analysis was conducted for the AM and PM peak hours for the Options A and B. These calculations were performed utilizing the methodology described in Chapters 18 and 19, Signalized and Unsignalized Intersections, of the Transportation Research Board (TRB) Special Report, the 2010 Highway Capacity Manual. Existing signal timings were used in the analysis. The results of the analysis are described in the following paragraphs for





LEGEND

12/23 = AM/PM PEAK HOUR TRAFFIC

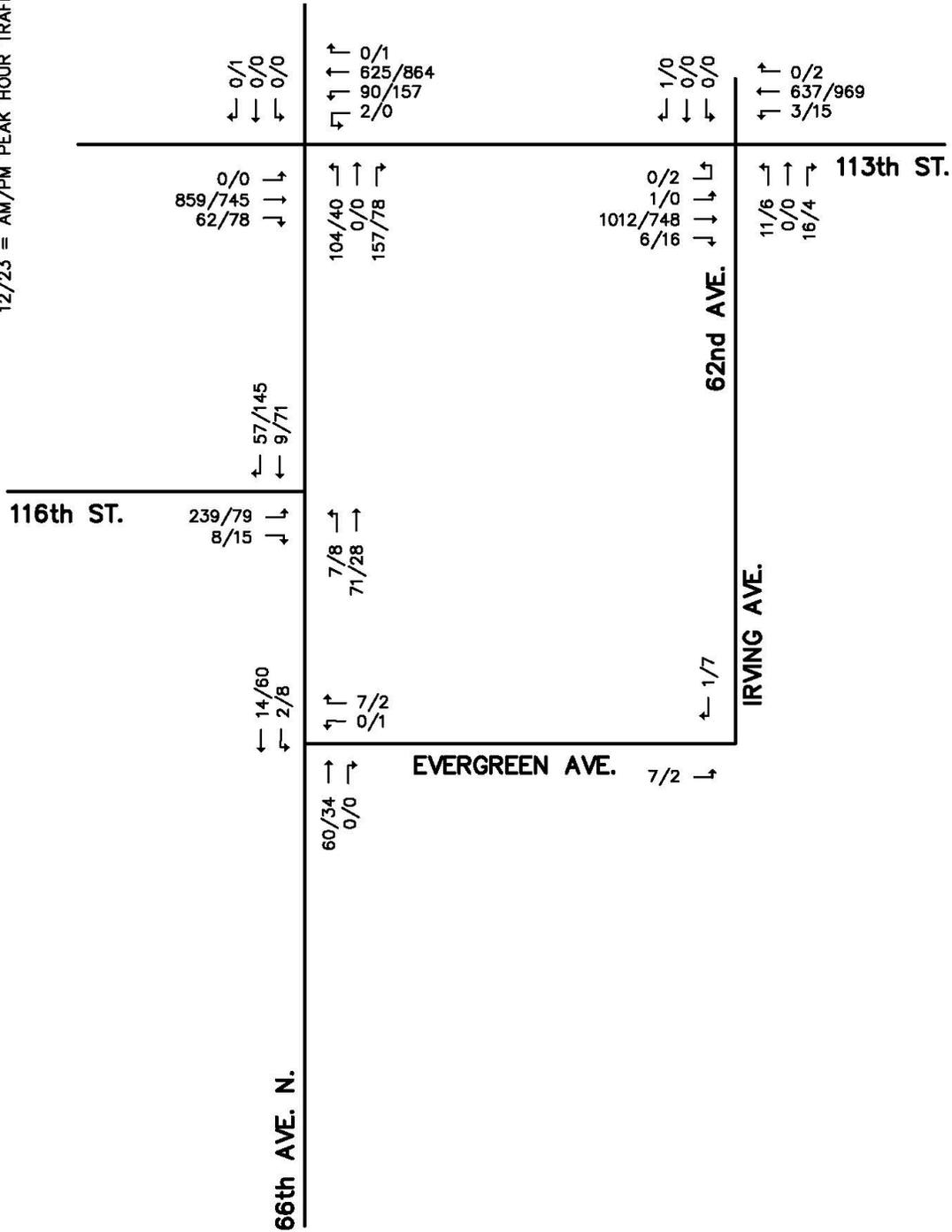


FIGURE 4
EXISTING TRAFFIC





LEGEND

12/23 = AM/PM PEAK HOUR TRAFFIC

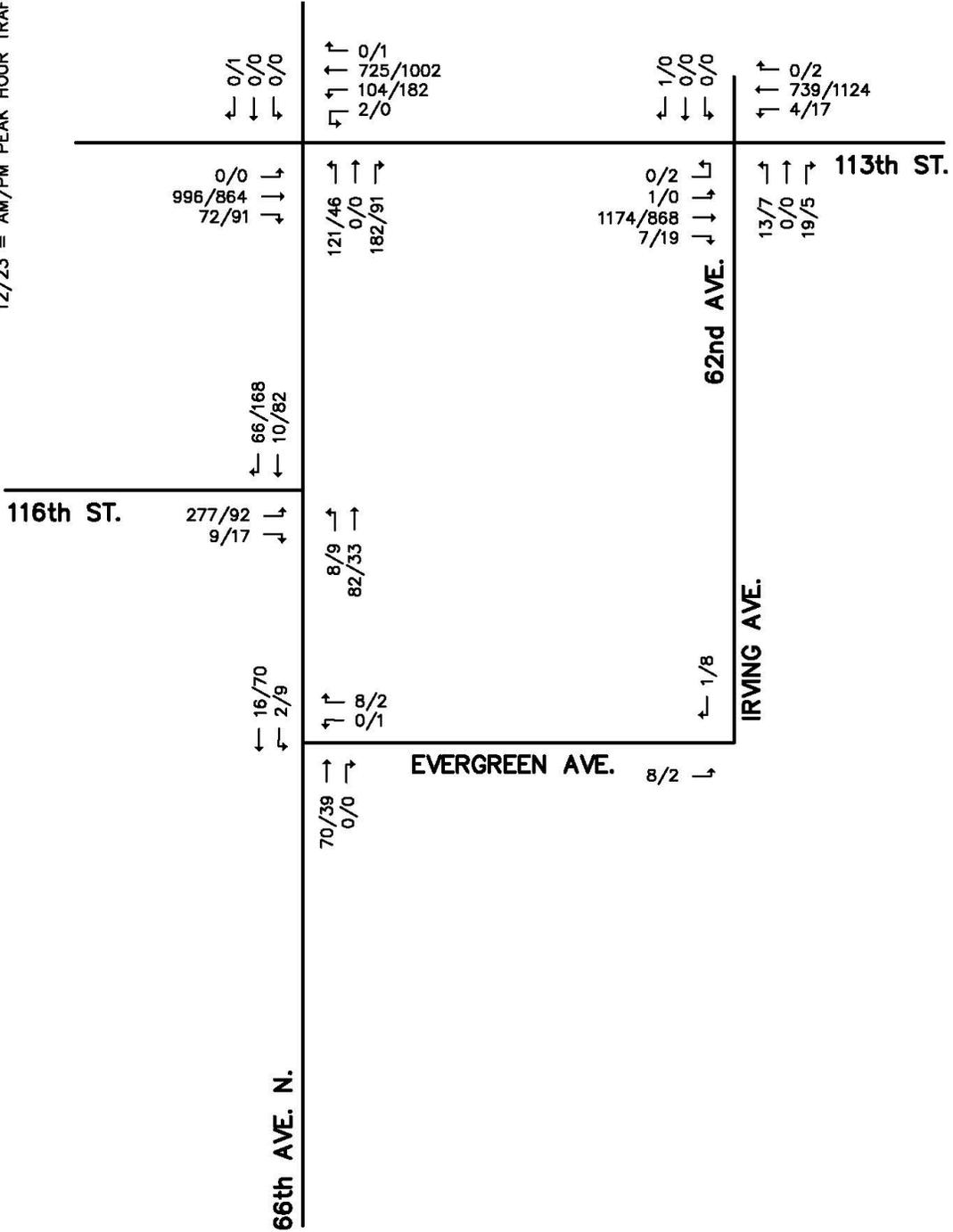


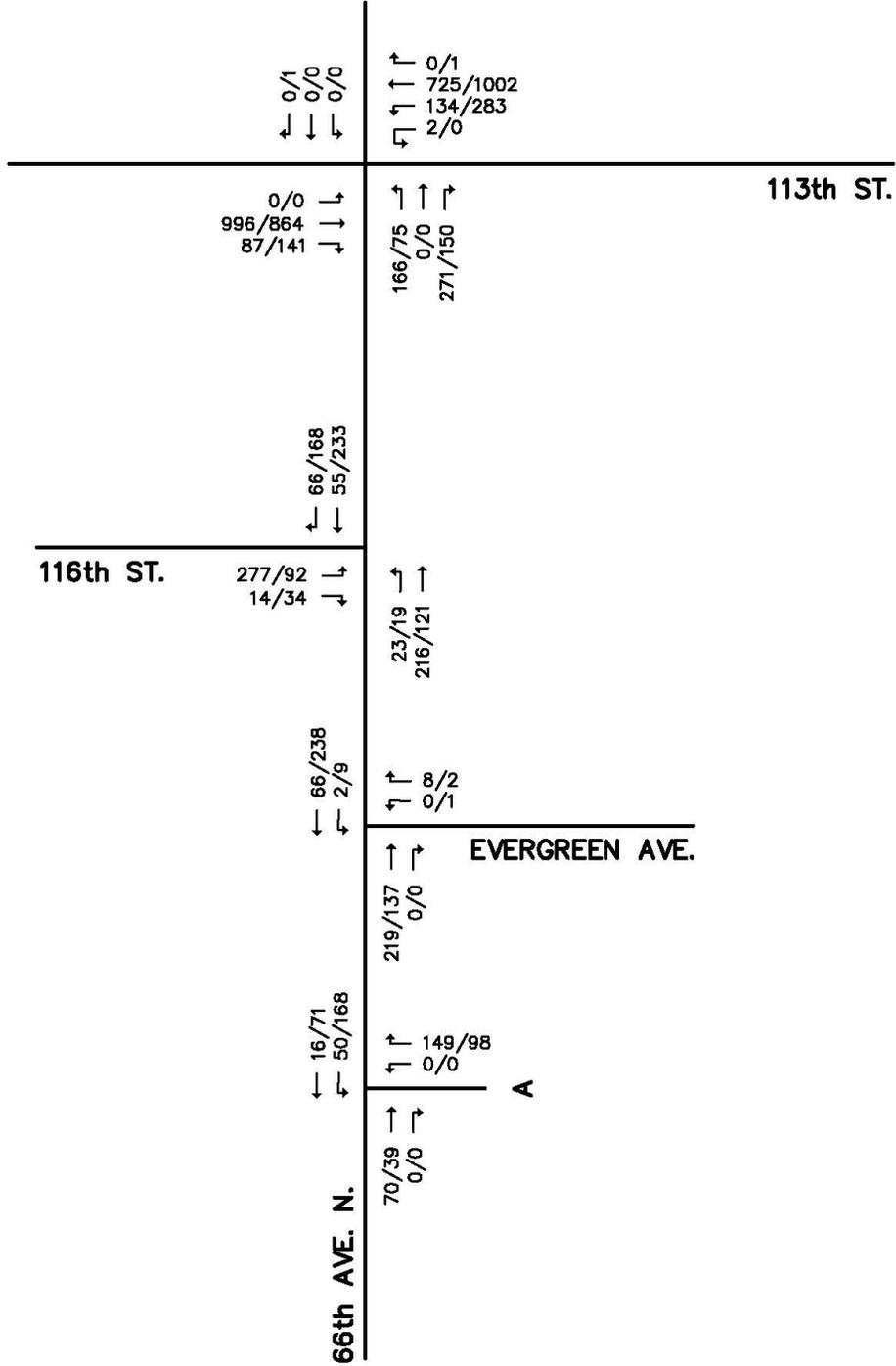
FIGURE 5
PEAK SEASON TRAFFIC





LEGEND

12/23 = AM/PM PEAK HOUR TRAFFIC



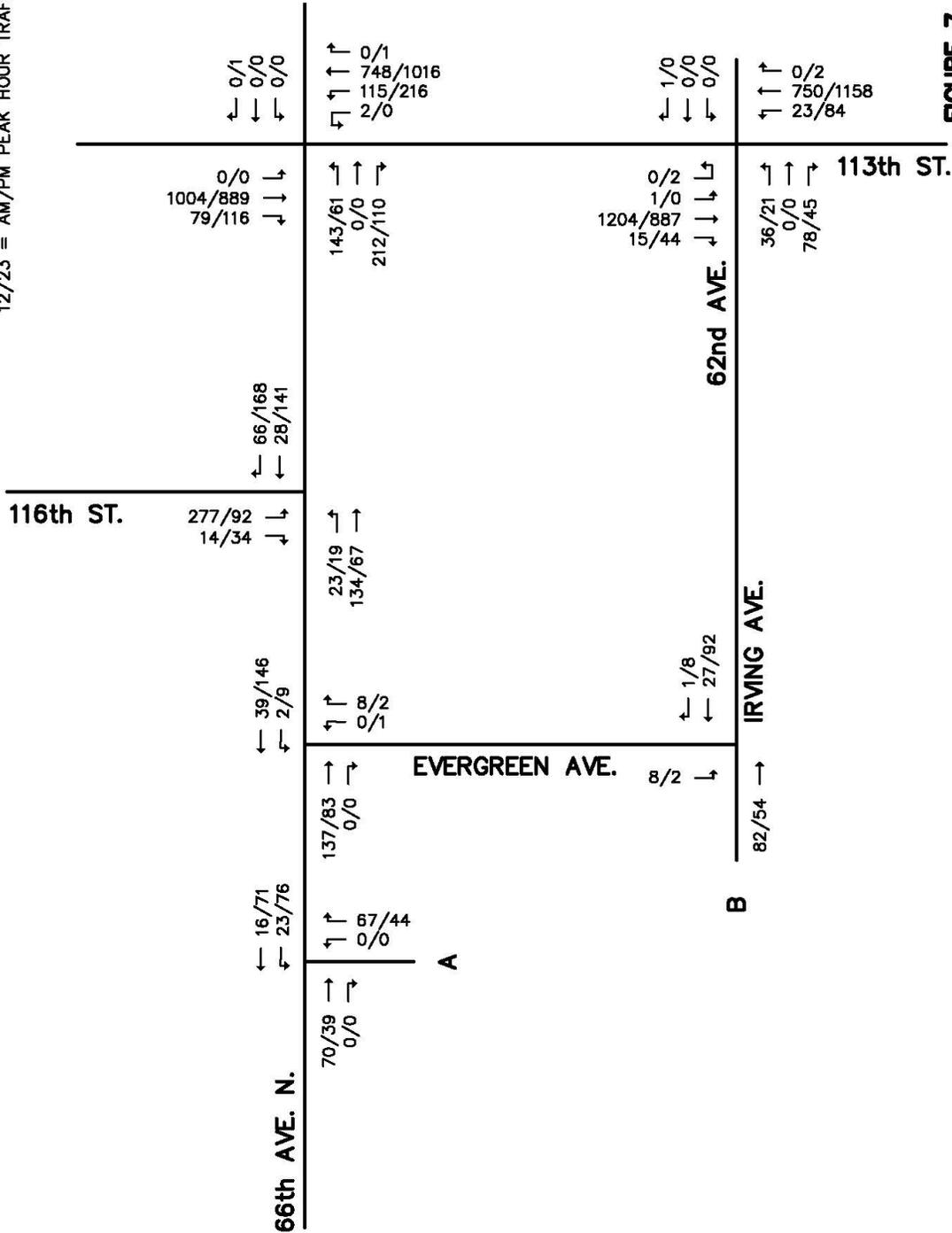
**FIGURE 6
OPTION A
PEAK SEASON PLUS
PROJECT TRAFFIC**





LEGEND

12/23 = AM/PM PEAK HOUR TRAFFIC



**FIGURE 7
OPTION B
PEAK SEASON PLUS
PROJECT TRAFFIC**



Options A and B.

Option A

The following intersections were analyzed for the Option A:

- 113th Street and 66th Avenue North
- 116th Street and 66th Avenue North
- Project Access A and 66th Avenue North

Tables 3 and 4 summarize the results of the analysis for the Option A and described in the following paragraphs:

113th Street and 66th Avenue North

This intersection is currently signalized. Based on signalized intersection analysis this intersection should operate at an acceptable level of service during the AM and PM peak hours with the peak season traffic and with peak season plus project traffic, as shown in Table 3.

116th Street and 66th Avenue North

This intersection is currently unsignalized. Based on unsignalized intersection analysis all movements should operate at an acceptable level of service during AM and PM peak hours with peak season traffic and with peak season plus project traffic, as shown in Table 4.

Project Access A and 66th Avenue North

This project access is proposed to have full access to 66th Avenue North. Based on unsignalized intersection analysis all movements should operate at an acceptable level of service during AM and PM peak hours with peak season plus project traffic, as shown in Table 4.



TABLE 3
 OPTION A
 ESTIMATED INTERSECTION LEVEL OF SERVICE
 (SIGNALIZED)

<u>Intersection</u>	<u>Time Period</u>	<u>Peak Season Traffic</u>	<u>Peak Season Plus Project Traffic</u>
113th Street and 66th Avenue North	AM	B	C
	PM	A	B



TABLE 4
 OPTION A
 ESTIMATED INTERSECTION LEVEL OF SERVICE
 (UNSIGNALIZED)

Intersection	Direction	AM Peak Hour						PM Peak Hour					
		Peak Season		Peak Season Plus		Project Traffic		Peak Season		Peak Season Plus		Project Traffic	
		Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay
116th Street and 66th Avenue North	EB	9.1	9.1	-	13.0	13.0	-	7.7	7.7	-	8.8	8.8	-
	WB	-	8.2	8.2	-	9.9	9.9	-	8.3	8.3	-	11.0	11.0
	SB	12.1	-	12.1	15.5	-	15.5	8.4	-	8.4	9.3	-	9.3
Project Access A and 66th Avenue North	WB	-	-	-	7.5	7.5	-	-	-	-	7.8	7.8	-
	NB	-	-	-	9.5	-	9.5	-	-	-	9.2	-	9.2



Option B

The following intersections were analyzed for the Option B:

- 113th Street and 66th Avenue North
- 116th Street and 66th Avenue North
- 113th Street and 62nd Avenue
- Project Access A and 66th Avenue North
- Project Access B and Evergreen Avenue

Tables 5 and 6 summarizes the results of the analysis for the Option B and described in the following paragraphs:

113th Street and 66th Avenue North

This intersection is currently signalized. Based on signalized intersection analysis this intersection should operate at an acceptable level of service during AM and PM peak hours with peak season traffic and with peak season plus project traffic, as shown in Table 5.

116th Street and 66th Avenue North

This intersection is currently unsignalized. Based on unsignalized intersection analysis all movements should operate at an acceptable level of service during AM and PM peak hours with peak season traffic and with peak season plus project traffic, as shown in Table 6.

113th Street and 62nd Avenue North

This intersection is currently unsignalized. Based on unsignalized intersection analysis all movements should operate at an acceptable level of service during AM and PM peak hours with peak season traffic and with peak season plus project traffic, as shown in table 6.

Project Access A and 66th Avenue North

This project access is proposed to have full access to 66th Avenue North. Based on unsignalized intersection analysis all movements should operate at an acceptable level of



TABLE 5
 OPTION B
 ESTIMATED INTERSECTION LEVEL OF SERVICE
 (SIGNALIZED)

<u>Intersection</u>	<u>Time Period</u>	<u>Peak Season Traffic</u>	<u>Peak Season Plus Project Traffic</u>
113th Street and 66th Avenue north	AM	B	B
	PM	A	A



TABLE 6
 OPTION B
 ESTIMATED INTERSECTION LEVEL OF SERVICE
 (UNSIGNALIZED)

Intersection	Direction	AM Peak Hour						PM Peak Hour					
		Peak Season			Peak Season Plus Project Traffic			Peak Season			Peak Season Plus Project Traffic		
		Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay	Left Delay	Through Delay	Right Delay
116th Street and 66th Avenue North	EB	9.1	9.1	-	10.4	10.4	-	7.7	7.7	-	8.8	8.8	-
	WB	-	8.2	8.2	-	8.8	8.8	8.3	8.3	8.3	-	11.1	11.1
	SB	12.1	-	12.1	13.5	-	13.5	-	-	8.4	8.4	9.7	-
113th Street and 62nd Avenue	EB	30.0	30.0	30.0	63.5	63.5	63.5	24.5	24.5	24.5	31.5	31.5	31.5
	WB	12.1	12.1	12.1	12.2	12.2	12.2	-	-	-	-	-	-
	NB	18.2	*	*	20.0	*	*	13.8	*	*	16.2	*	*
	SB	12.5	*	*	12.6	*	*	16.1	*	*	16.6	*	*
Project Access A and 66th Avenue North	WB	-	-	-	7.4	7.4	-	-	-	-	7.5	7.5	-
	NB	-	-	-	9.0	-	9.0	-	-	-	8.8	-	8.8
Project Access B and Evergreen Avenue	EB	-	-	-	7.9	7.9	-	-	-	-	7.6	7.6	-
	WB	-	-	-	-	7.4	7.4	-	-	-	-	8.0	8.0
	SB	-	-	-	7.7	-	7.7	-	-	-	7.7	-	7.7

* Free flow therefore delay not calculated.



service during AM and PM peak hours with peak season plus project traffic, as shown in table 6.

Project Access B and Evergreen Avenue

This project access is proposed to have full access to Evergreen Avenue and align with Irving Avenue. Based on unsignalized intersection analysis all movements should operate within acceptable level of service during AM and PM peak hours with peak season plus project traffic, as shown in Table 6.

ACCESS RECOMMENDATIONS

The recommendations included in this report are based on a field review of the site, the proposed site plan and the Transportation Analysis. The methodology utilized to determine the need for a left and/or right turn lane was based on NCHRP Report 279. The access recommendations for Options A and B are summarized in Tables 7 and 8 respectively and described in the following paragraphs:

Option A

113th Street and 66th Avenue North

As shown in Table 7, the existing northbound left turn lane is approximately 140 feet. The length to accommodate the peak season plus project traffic would be 360 feet. It should be noted the existing northbound left turn lane does not accommodate the peak season traffic.



TABLE 7
ACCESS RECOMMENDATIONS
OPTION A

<u>Intersection</u>	<u>Movement</u>	<u>Volume (1)</u>	<u>Turn Lane Warranted? (2)</u>	<u>Queue Storage (3)</u>	<u>Deceleration Length (4)</u>	<u>Total Length</u>	<u>Existing Length</u>
113th Street and 66th Avenue North	NBL	136/283	Existing	175'	185'	360'	140'
Project Access A and 66th Avenue North	EBR	0/0	No	-	-	-	-
	WBL	50/168	No	-	-	-	-

(1) Based on Figure 6 of the report

(2) Based on NCHRP Report #279

(3) Based on Sim Traffic

113th Street and 66th Avenue North

NBL - 162' Use 175'

(4) Based on 45 MPH design speed on 113th Street (posted speed plus 5 MPH).



Project Access A and 66th Avenue North

This project access is proposed to have full access to 66th Avenue North. Based on the projected volumes an eastbound right turn lane and a westbound left turn lane are not warranted, as shown in table 7.

Option B

113th Street and 66th Avenue North

As shown in Table 8, the existing northbound left turn lane is approximately 140 feet. The length to accommodate the peak season plus project traffic would be 335+ feet. It should be noted the existing northbound left turn lane does not accommodate the peak season traffic.

113th Street and 62nd Avenue

As shown in Table 8, the existing northbound left turn lane is approximately 145 feet. The length required to accommodate the peak season plus project traffic is 260 feet. It should be noted the existing northbound left turn lane does not accommodate the peak season traffic.

Project Access A and 66th Avenue North

This project access is proposed to have full access to 66th Avenue North. Based on the projected volumes an eastbound right turn lane and a westbound left turn lane are not warranted, as shown in Table 8.

Project Access B and Evergreen Avenue

This project access is proposed to have full access to Evergreen Avenue and align with Irving Avenue. Based on the projected volumes a southbound right turn lane and a westbound right turn lane are not warranted, as shown in Table 8.



TABLE 8
ACCESS RECOMMENDATIONS
OPTION B

<u>Intersection</u>	<u>Movement</u>	<u>Volume (1)</u>	<u>Warranted? (2)</u>	<u>Queue Storage (3)</u>	<u>Deceleration Length (4)</u>	<u>Total Length</u>	<u>Existing Length</u>
113th Street and 66th Avenue North	NBL	115/216	Existing	150'	185'	335'	140'
113th Street and 62nd Avenue	NBL	23/84	Existing	75'	185'	260'	145'
Project Access A and 66th Avenue North	EBR WBL	0/0 23/76	No No	- -	- -	- -	- -
Project Access B and Evergreen Avenue	SBR WBR	0/0 1/8	No No	- -	- -	- -	- -

(1) Based on Figure 7 of the report

(2) Based on NCHRP Report #279

(3) Queue Storage Calculations

113th Street and 66th Avenue North

NBL - 149' Use 150' Based on Sim Traffic

113th Street and 62nd Avenue

NBL - 84/30 x 25' = 70' Use 75'

(4) Based on 45 MPH design speed on 113th Street (posted speed plus 5 MPH).



APPENDIX



PRELIMINARY SITE PLAN



TRIP GENERATION



PERIOD SETTING

Analysis Name : Weekday
Project Name : Restoration Bay-Golf Course **No :**
Date: 11/11/2019 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
430 - Golf Course (General Urban/Suburban)	Holes	18	Weekday	Average 30.38	274 ⁽⁰⁾ 50%	273 ⁽⁰⁾ 50%	547 ⁽⁰⁾

(0) indicates small sample size, use carefully.

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
430 - Golf Course	0 %	274	0 %	273

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
430 - Golf Course	547	0	0	547

ITE DEVIATION DETAILS

Weekday

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 430 - Golf Course (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	274
Total Exiting	273
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	274
Total Exiting Non-Pass-by Trips	273

PERIOD SETTING

Analysis Name : Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Project Name : Restoration Bay-Golf Course **No :**

Date: 11/11/2019 **City:**

State/Province: **Zip/Postal Code:**

Country: **Client Name:**

Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
430 - Golf Course (General Urban/Suburban)	Holes	18	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 1.76	25 78%	7 22%	32

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
430 - Golf Course	0 %	25	0 %	7

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
430 - Golf Course	32	0	0	32

ITE DEVIATION DETAILS

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 430 - Golf Course (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	25
Total Exiting	7
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	25
Total Exiting Non-Pass-by Trips	7

PERIOD SETTING

Analysis Name : Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Project Name : Restoration Bay-Golf Course **No :**

Date: 11/11/2019 **City:**

State/Province: **Zip/Postal Code:**

Country: **Client Name:**

Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
430 - Golf Course (General Urban/Suburban)	Holes	18	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Average 2.91	28 54%	24 46%	52

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
430 - Golf Course	0 %	28	0 %	24

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
430 - Golf Course	52	0	0	52

ITE DEVIATION DETAILS

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 430 - Golf Course (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	28
Total Exiting	24
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	28
Total Exiting Non-Pass-by Trips	24

PERIOD SETTING

Analysis Name : Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Project Name : RESTORATION BAY **No :**

Date: 10/15/2019 **City:**

State/Province: **Zip/Postal Code:**

Country: **Client Name:**

Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
210 - Single-Family Detached Housing (General Urban/Suburban)	Dwelling Units	273	Weekday	Best Fit (LOG) Ln(T) = 0.92Ln(X) +2.71	1310 50%	1309 50%	2619

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
210 - Single-Family Detached Housing	0 %	1310	0 %	1309

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
210 - Single-Family Detached Housing	2619	0	0	2619

ITE DEVIATION DETAILS

Weekday

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 210 - Single-Family Detached Housing (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	1310
Total Exiting	1309
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	1310
Total Exiting Non-Pass-by Trips	1309

PERIOD SETTING

Analysis Name : Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.
Project Name : RESTORATION BAY **No :**
Date: 10/15/2019 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
210 - Single-Family Detached Housing (General Urban/Suburban)	Dwelling Units	273	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) T = 0.71 (X)+4.8	50 25%	149 75%	199

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
210 - Single-Family Detached Housing	0 %	50	0 %	149

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
210 - Single-Family Detached Housing	199	0	0	199

ITE DEVIATION DETAILS

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 210 - Single-Family Detached Housing (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	50
Total Exiting	149
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	50
Total Exiting Non-Pass-by Trips	149

PERIOD SETTING

Analysis Name : Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.
Project Name : RESTORATION BAY **No :**
Date: 10/15/2019 **City:**
State/Province: **Zip/Postal Code:**
Country: **Client Name:**
Analyst's Name: **Edition:** Trip Generation Manual, 10th Ed

Land Use	Independent Variable	Size	Time Period	Method	Entry	Exit	Total
210 - Single-Family Detached Housing (General Urban/Suburban)	Dwelling Units	273	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.96\ln(X) + 0.2$	168 63%	98 37%	266

TRAFFIC REDUCTIONS

Land Use	Entry Reduction	Adjusted Entry	Exit Reduction	Adjusted Exit
210 - Single-Family Detached Housing	0 %	168	0 %	98

EXTERNAL TRIPS

Land Use	External Trips	Pass-by%	Pass-by Trips	Non-pass-by Trips
210 - Single-Family Detached Housing	266	0	0	266

ITE DEVIATION DETAILS

Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.

Landuse No deviations from ITE.

Methods No deviations from ITE.

External Trips 210 - Single-Family Detached Housing (General Urban/Suburban)
ITE does not recommend a particular pass-by% for this case.

SUMMARY

Total Entering	168
Total Exiting	98
Total Entering Reduction	0
Total Exiting Reduction	0
Total Entering Internal Capture Reduction	0
Total Exiting Internal Capture Reduction	0
Total Entering Pass-by Reduction	0
Total Exiting Pass-by Reduction	0
Total Entering Non-Pass-by Trips	168
Total Exiting Non-Pass-by Trips	98

PINELLAS COUNTY CIP



LINCKS & ASSOCIATES, INC.



Capital Improvement Program

Six-Year Work Plan:
FY19 - FY24

www.pinellascounty.org/budget

BEGINNING YEAR OF CONSTRUCTION



* Anticipated construction year for all projects is subject to permit approval from permitting agencies.
 * Only funded projects are shown on the map. See CIP Project Budget Detail Report for more information.

**ATMS Keystone Rd
 US 19 to E of East Lake Rd
 #003771A FY2019**

**ATMS CR 1
 SR 60 to Alderman Road
 #002156A FY2018**

**ATMS Alt US 19 North
 SR60 to Pasco County Line
 #002597A FY2018**

**Betty Ln at Sunset Point Rd
 Intersection Improvements
 #001018A FY2019**

**ATMS Alt US 19 South
 SR60 to 34th St
 #002598A FY2018**

**Forest Lakes Blvd Phase II
 Pavement Rehabilitation
 #002110A FY2018**

**ATMS SR 580 / SR 584
 #000197A FY2018**

**NE Coachman Rd at
 Old Coachman Rd
 Intersection Improvements
 #001020A FY2018**

**Whitney Rd at Wolford Rd
 Intersection Improvements
 #002109A FY2019**

**ATMS South Belcher Road
 Druid Rd to Park Blvd
 #001030A FY2018**

**ATMS 49th St
 SR60 to 46th Ave N
 #002600A FY2020**

**102nd Ave N at Antilles Dr
 Intersection Improvements
 #001022A FY2019**

**131st St N at 82nd Ave N
 & 86th Ave N Int Impr
 #001023A FY2019**

**Haines Road
 Roadway Improvements
 60th Ave to US Highway 19
 #002106A FY2019**

**ATMS SR 693 North
 Park Blvd to US 19
 #003145A FY2019**

**Haines Road
 Roadway Improvements
 51st Ave to 60th Ave
 #000147A FY2017**

**Gulf Boulevard ATMS
 Locations along Gulf Blvd
 #001031A FY2019**

**ATMS St Pete Downtown
 #002599A FY2020**

FY = Fiscal Year
 ATMS = Advanced Traffic Management System

Allocations based on the Adopted Pinellas County CIP Six Year Program FY 2019 - FY 2024



**PINELLAS COUNTY WORK PROGRAM
 FY 2019 through FY 2024
 Major Transportation and ATMS Projects**

In preparing this material, every effort has been made to ensure that the information provided is correct. The information is provided as a public service and Pinellas County assumes no liability for any inaccuracies that it may contain

TRAFFIC COUNTS





National Data & Surveying Services



N/S Street: 113th St

Speed: 40 MPH

Site Code: 19-3596-003

Date: 9/17/2019

Weather: Sunny

City: Seminole

County: Pinellas

Count Times: 07:00 – 09:00

16:00 - 18:00

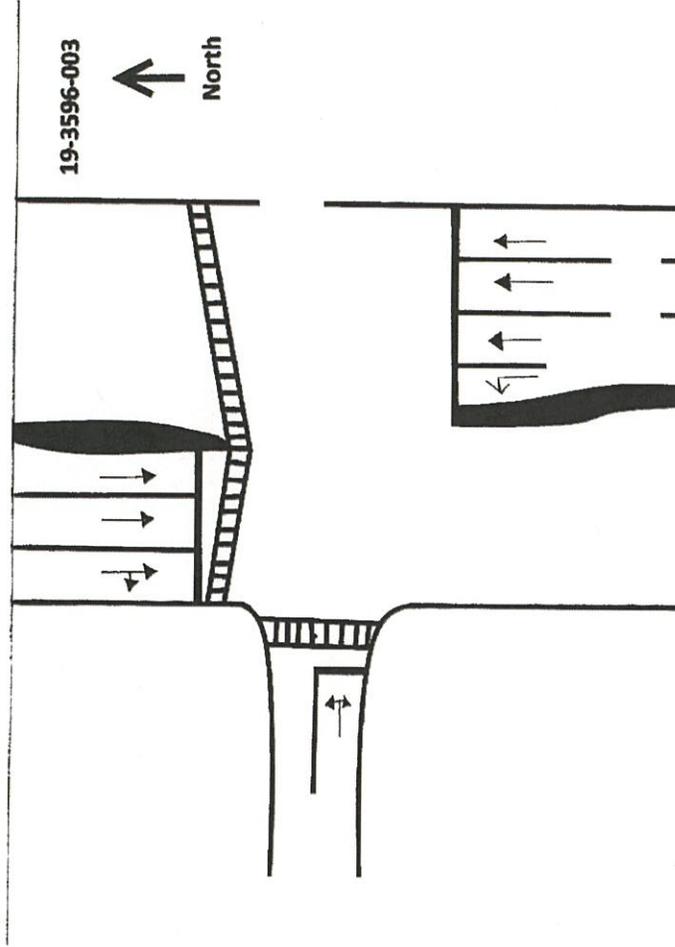
Control: Signalized

SIGNAL TIMING

PHASES	1	2	3
NL/NT	-	00:11	00:18
NT/ST	01:23	01:04	01:24
EL	00:31	00:23	00:17

E/W Street: 66th Ave N

Speed: 30 MPH

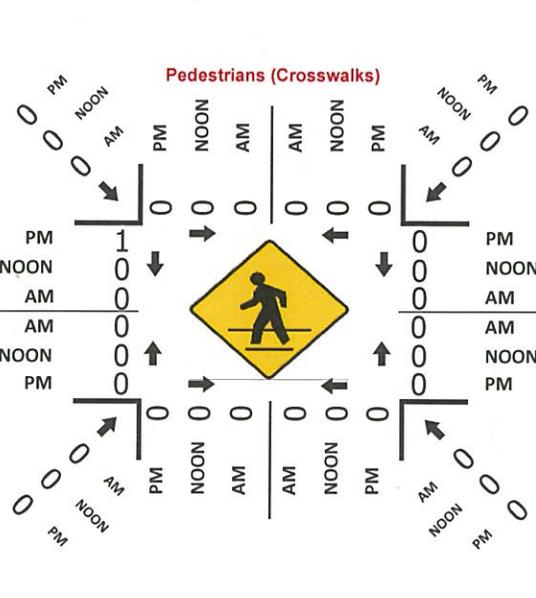
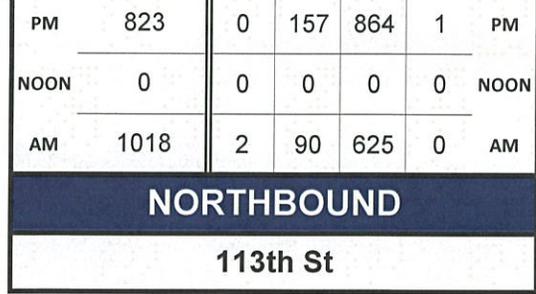
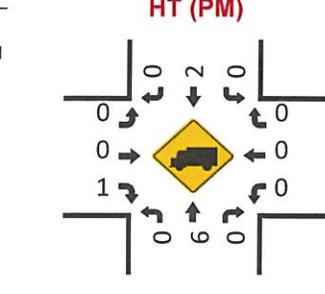
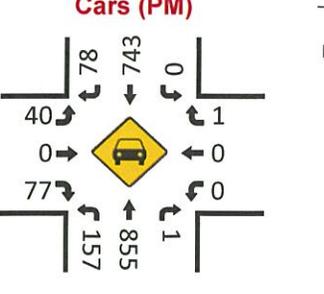
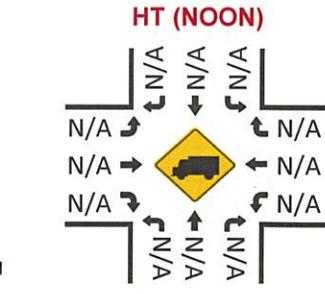
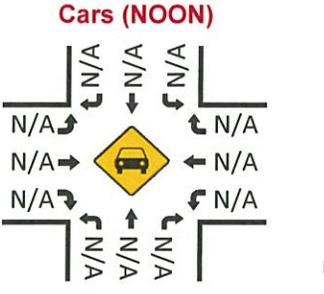
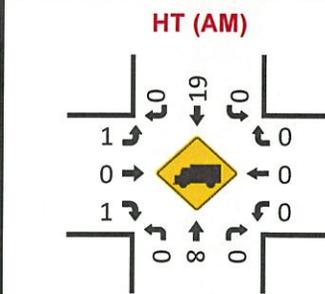
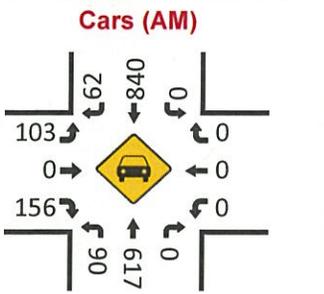
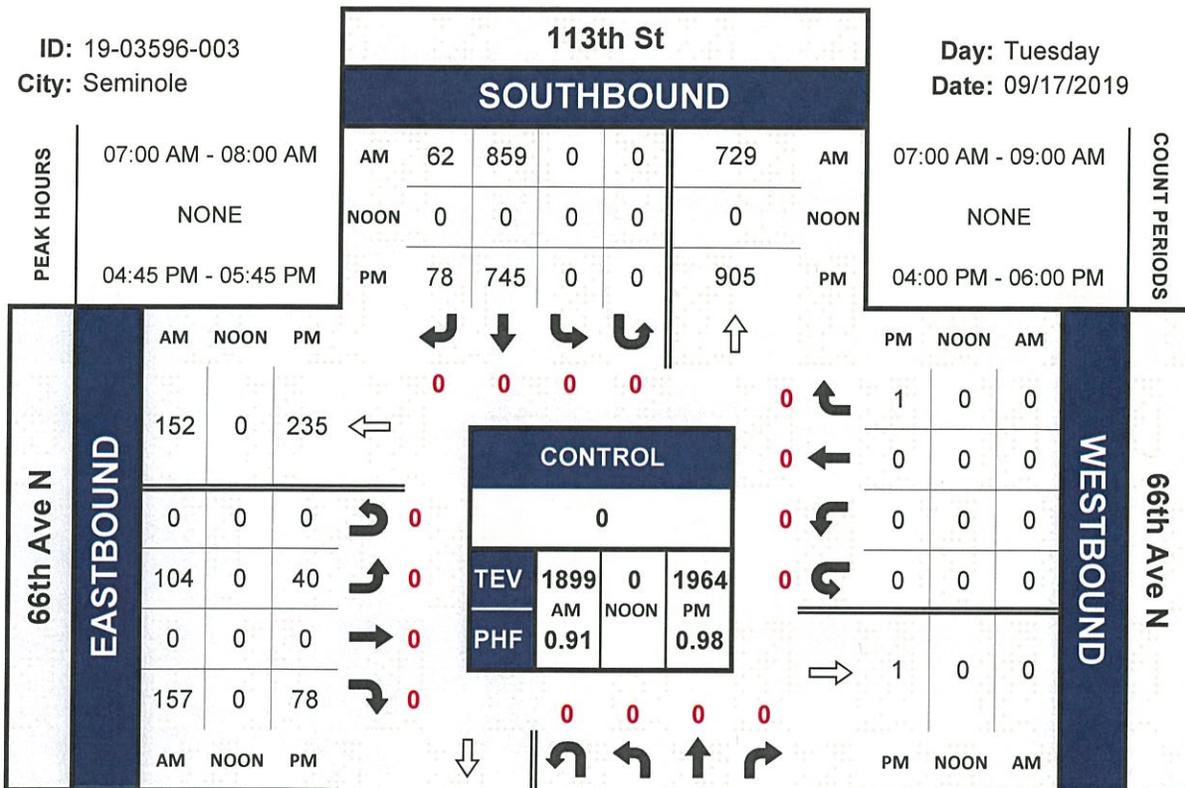


113th St & 66th Ave N

Peak Hour Turning Movement Count

ID: 19-03596-003
City: Seminole

Day: Tuesday
Date: 09/17/2019



National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 66th Ave N
 City: Seminole
 Control:

Project ID: 19-03596-003
 Date: 9/17/2019

Total

NS/EW Streets:	113th St										66th Ave N										66th Ave N									
	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					EASTBOUND					WESTBOUND				
	NL	NT	NR	NU		SL	ST	SR	SU		EL	ET	ER	EU		WL	WT	WR	WU		EL	ET	ER	EU		WL	WT	WR	WU	
AM																														
7:00 AM	14	123	0	1	0	0	227	9	0	0	19	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	23	157	0	1	0	0	242	9	0	0	16	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	33	174	0	0	0	0	202	31	0	0	37	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	20	171	0	0	0	0	188	13	0	0	32	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	18	133	0	0	0	0	190	5	0	0	25	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	22	147	0	0	0	0	172	11	0	0	23	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	10	146	0	0	0	0	178	8	0	0	15	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	8	109	0	0	0	0	165	9	0	0	17	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	148	1160	0	2	0	0	1564	95	0	0	184	0	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	11.30%	88.55%	0.00%	0.15%		0.00%	94.27%	5.73%	0.00%		40.53%	0.00%	59.47%	0.00%		0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.00%	0.00%	
PEAK HR :																														
PEAK HR VOL :	90	625	0	2		0	859	62	0		104	0	157	0		0	0	0	0		0	0	0	0		0	0	0	0	
PEAK HR FACTOR :	0.682	0.898	0.000	0.500		0.000	0.887	0.500	0.000		0.703	0.000	0.872	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000	
						0.917					0.796																			
PM																														
4:00 PM	25	202	1	0	0	0	153	9	0	0	15	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	23	181	0	0	0	0	184	16	0	0	15	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	48	218	0	0	0	0	154	20	0	0	14	0	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	37	218	0	0	0	0	191	24	0	0	15	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	47	227	0	0	0	0	173	15	0	0	9	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	37	224	1	0	0	0	169	21	0	0	8	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	36	195	0	0	0	0	212	18	0	0	8	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	28	185	1	1	0	0	186	14	0	0	9	0	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	281	1650	3	1	0	0	1422	137	0	0	93	0	147	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	14.52%	85.27%	0.16%	0.05%		0.00%	91.21%	8.79%	0.00%		38.75%	0.00%	61.25%	0.00%		0.00%	0.00%	100.00%	0.00%		0.00%	0.00%	100.00%	0.00%		0.00%	0.00%	0.00%	0.00%	
PEAK HR :																														
PEAK HR VOL :	157	864	1	0		0	745	78	0		40	0	78	0		0	0	0	0		0	0	0	0		0	0	0	0	
PEAK HR FACTOR :	0.835	0.952	0.250	0.000		0.000	0.879	0.813	0.000		0.667	0.000	0.780	0.000		0.000	0.000	0.250	0.000		0.000	0.000	0.250	0.000		0.000	0.000	0.250	0.000	
						0.932					0.895					0.894														
TOTAL																														
TOTAL																														

National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 66th Ave N
 City: Seminole
 Control: 0

Project ID: 19-03596-003
 Date: 9/17/2019

HT

NS/EW Streets:	113th St										66th Ave N										66th Ave N									
	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					EASTBOUND					WESTBOUND				
	NL	NT	NR	NU		SL	ST	SR	SU		EL	ET	ER	EU		WL	WT	WR	WU		EL	ET	ER	EU		WL	WT	WR	WU	
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	1	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	2	16	0	0	0	0	26	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	11.11%	88.89%	0.00%	0.00%	0.00%	0.00%	96.30%	3.70%	0.00%	0.00%	40.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	0	8	0	0	0	0	19	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR VOL :	0.000	0.667	0.000	0.000	0.000	0.000	0.475	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PEAK HR FACTOR :							0.667					0.475					0.500													
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	1	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	1	15	0	0	0	0	4	1	0	0	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :	6.25%	93.75%	0.00%	0.00%	0.00%	0.00%	80.00%	20.00%	0.00%	0.00%	40.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
PEAK HR :	0	9	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR VOL :	0.00	0.450	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PEAK HR FACTOR :							0.250					0.250																		

National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 66th Ave N
City: Seminole

Project ID: 19-03596-003
Date: 9/17/2019

Pedestrians (Crosswalks)

NS/EW Streets:	113th St				66th Ave N				66th Ave N					
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	3	0	0	0	0	0	0	0	0	0	0	2	5
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	1	3	0	0	0	0	0	0	0	0	0	0	2	6
APPROACH %'s :	25.00%	75.00%								0.00%	100.00%			
PEAK HR :	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PEAK HR VOL :														
PEAK HR FACTOR :														

NS/EW Streets:	113th St				66th Ave N				66th Ave N					
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		NORTH LEG		WEST LEG		TOTAL	
	EB	WB	EB	WB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	1	1
APPROACH %'s :										0.00%	100.00%			
PEAK HR :	0	0	0	0	0	0	0	0	0	0	0	0	1	1
PEAK HR VOL :													0.250	0.250
PEAK HR FACTOR :													0.250	0.250



National Data & Surveying Services



N/S Street: 116th St N

Speed: 30 MPH

Site Code: 19-3596-002

Date: 9/17/2019

Weather: Sunny

City: Seminole

County: Pinellas

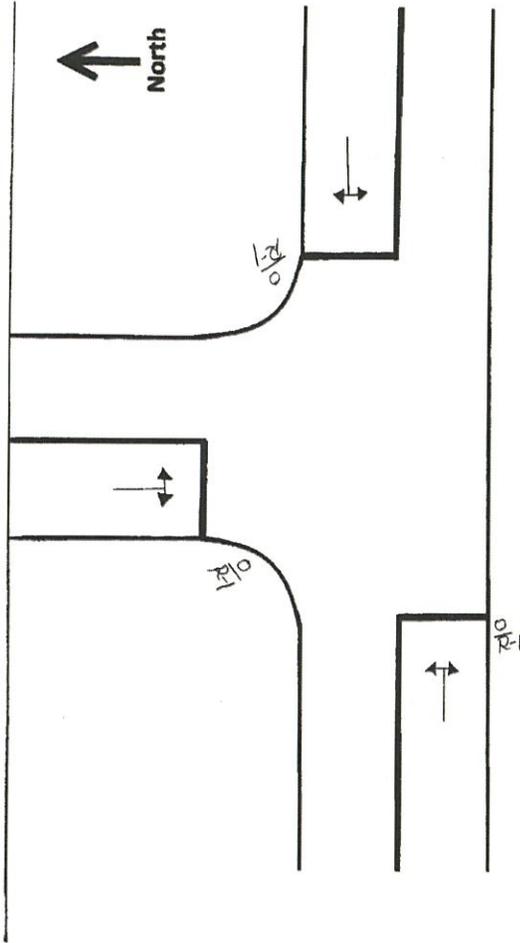
Count Times: 07:00 - 09:00

16:00 - 18:00

Control: 3-Way Stop (SB/EB/WB)

E/W Street: 66th Ave N

Speed: 30 MPH



116th St N & 66th Ave N

Peak Hour Turning Movement Count

ID: 19-03596-002
City: Seminole

Day: Tuesday
Date: 09/17/2019

PEAK HOURS		116th St N							COUNT PERIODS	
		SOUTHBOUND								
07:15 AM - 08:15 AM NONE 04:30 PM - 05:30 PM	AM	8	0	239	0	64		AM	07:00 AM - 09:00 AM	
	NOON	0	0	0	0	0		NOON	NONE	
	PM	15	0	79	0	153		PM	04:00 PM - 06:00 PM	
		AM	NOON	PM	CONTROL			PM	NOON	AM
66th Ave N EASTBOUND		17	0	86	0			145	0	57
		0	0	0	0			71	0	9
		7	0	8	0			0	0	0
		71	0	28	0			0	0	0
		0	0	0	0			107	0	310
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
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		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
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		0	0	0	0			0	0	0
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		0	0	0	0			0	0	0
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		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
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		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
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		0	0	0	0			0	0	0
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		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		0	0	0	0			0	0	0
		AM	NOON	PM	CONTROL			PM	NOON	AM
		0								

National Data & Surveying Services

Intersection Turning Movement Count

Location: 116th St N & 66th Ave N
 City: Seminole
 Control:

Project ID: 19-03596-002
 Date: 9/17/2019

Total

NS/EW Streets:	116th St N						66th Ave N						66th Ave N							
	NORTHBOUND		SOUTHBOUND		SU		ER		EU		WL		WT		WR		WU		TOTAL	
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	66
7:00 AM	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	66
7:15 AM	0	0	0	0	0	0	34	0	0	0	0	0	0	0	0	0	0	0	0	65
7:30 AM	0	0	0	0	0	0	88	0	0	0	0	0	0	0	0	0	0	0	0	123
7:45 AM	0	0	0	0	0	0	89	0	0	0	0	0	0	0	0	0	0	0	0	130
8:00 AM	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	73
8:15 AM	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	64
8:30 AM	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	69
8:45 AM	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	53
TOTAL VOLUMES :	0	0	0	0	0	0	340	0	0	0	0	0	0	0	0	0	0	0	0	643
APPROACH %'s :	97.70%		0.00%		0.00%		11.49%		88.51%		0.00%		0.00%		14.97%		85.03%		0.00%	
PEAK HR :	0		0		0		7		71		0		9		57		0		0	
PEAK HR VOL :	0.000		0.000		0.000		0.438		0.934		0.000		0.450		0.679		0.000		0.000	
PEAK HR FACTOR :	0.000		0.000		0.000		0.679		0.848		0.000		0.635		0.000		0.000		0.752	
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
4:00 PM	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	57
4:15 PM	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	53
4:30 PM	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	83
4:45 PM	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	88
5:00 PM	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	87
5:15 PM	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	0	0	88
5:30 PM	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	0	0	83
5:45 PM	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	68
TOTAL VOLUMES :	0	0	0	0	0	0	146	0	0	0	0	0	0	0	0	0	0	0	0	607
APPROACH %'s :	85.38%		0.00%		0.00%		16.67%		83.33%		0.00%		0.00%		33.24%		66.76%		0.00%	
PEAK HR :	0		0		0		8		28		0		71		145		0		0	
PEAK HR VOL :	0.000		0.000		0.000		0.667		0.875		0.000		0.807		0.863		0.000		0.000	
PEAK HR FACTOR :	0.000		0.000		0.000		0.691		0.818		0.000		0.915		0.000		0.000		0.983	

National Data & Surveying Services

Intersection Turning Movement Count

Location: 116th St N & 66th Ave N
 City: Seminole
 Control: 0

Project ID: 19-03596-002
 Date: 9/17/2019

Bikes

NS/EW Streets:	116th St N						116th St N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
8:15 AM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	4	
TOTAL VOLUMES :	0	0	0	0	5	0	0	0	1	2	0	0	0	1	0	0	9	
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500	

NS/EW Streets:	116th St N						116th St N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	5	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
5:45 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	1	0	0	0	0	0	5	0	8	
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR VOL :	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0	5	
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.250	

National Data & Surveying Services

Intersection Turning Movement Count

Location: 116th St N & 66th Ave N
City: Seminole

Project ID: 19-03596-002
Date: 9/17/2019

Pedestrians (Crosswalks)

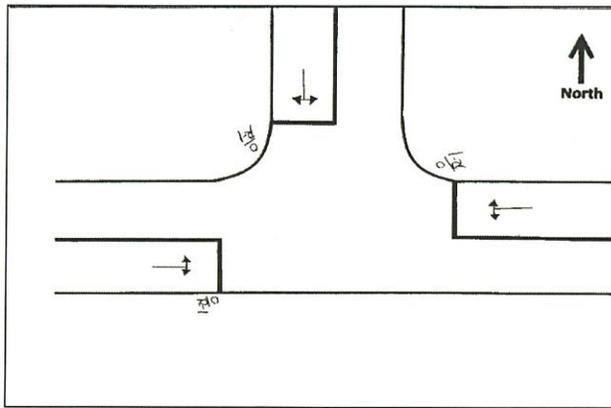
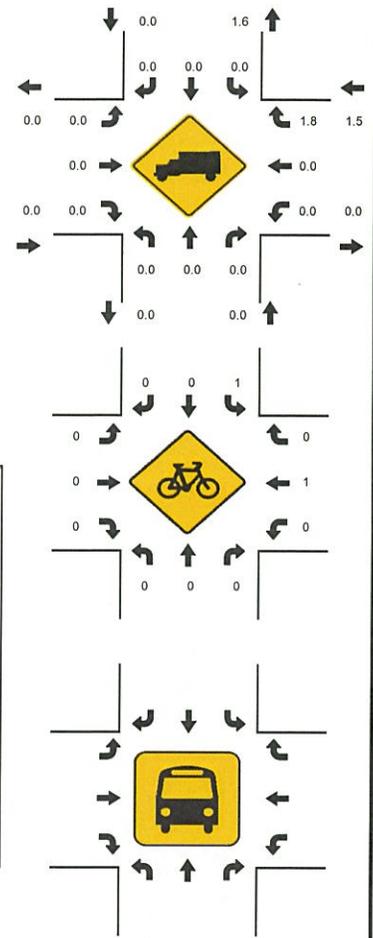
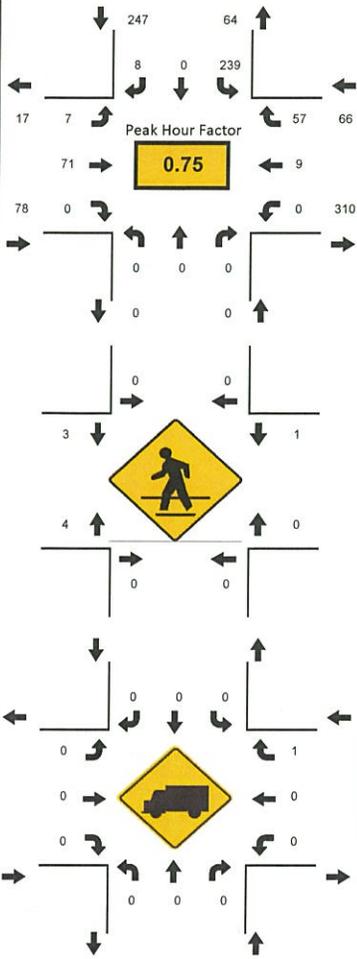
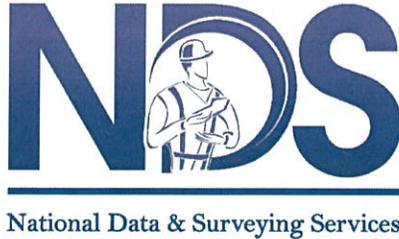
NS/EW Streets:	116th St N		66th Ave N		66th Ave N		TOTAL	
	NORTH LEG		SOUTH LEG		WEST LEG			
AM	EB	WB	EB	WB	NB	SB	SB	
7:00 AM	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	2	
7:30 AM	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	1	
8:00 AM	0	0	0	0	0	1	3	
8:15 AM	1	0	0	0	0	1	2	
8:30 AM	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	1	
TOTAL VOLUMES :	1	0	0	0	4	4	11	
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%	50.00%	50.00%	50.00%	
PEAK HR :	07:15 AM - 08:15 AM							
PEAK HR VOL :	0	0	0	0	0	1	3	
PEAK HR FACTOR :	0.250							0.438

NS/EW Streets:	116th St N		66th Ave N		66th Ave N		TOTAL	
	NORTH LEG		SOUTH LEG		WEST LEG			
PM	EB	WB	EB	WB	NB	SB	SB	
4:00 PM	0	0	0	0	1	0	0	
4:15 PM	2	1	0	0	0	2	0	
4:30 PM	0	0	0	0	0	0	1	
4:45 PM	0	0	0	0	2	0	0	
5:00 PM	0	0	0	0	0	3	0	
5:15 PM	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	
TOTAL VOLUMES :	2	1	0	0	3	5	12	
APPROACH %'s :	66.67%	33.33%	0.00%	0.00%	37.50%	62.50%	100.00%	
PEAK HR :	04:30 PM - 05:30 PM							
PEAK HR VOL :	0	0	0	0	2	3	0	
PEAK HR FACTOR :	0.250							0.250

LOCATION: 116th St N & 66th Ave N
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-002
 DATE: 09/17/2019

Peak-Hour: 07:15 AM - 08:15 AM
 Peak 15-Minute: 07:45 AM - 08:00 AM

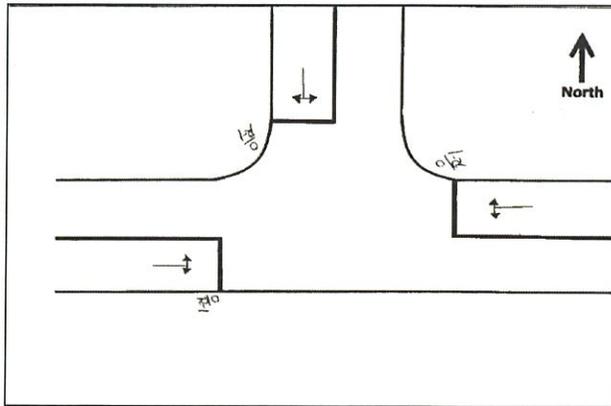
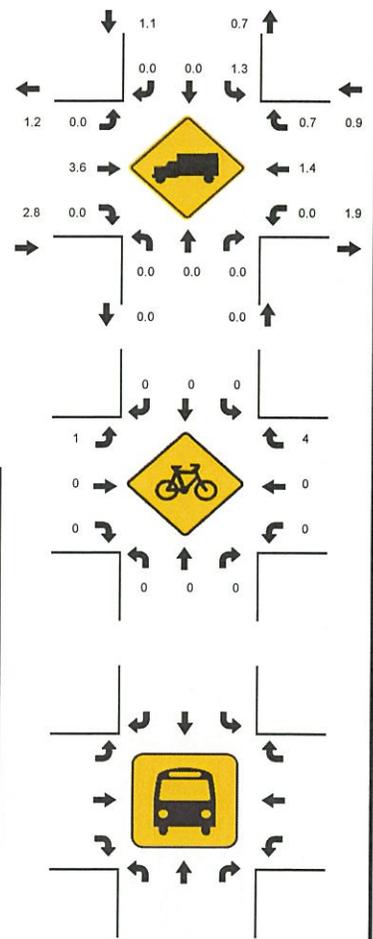
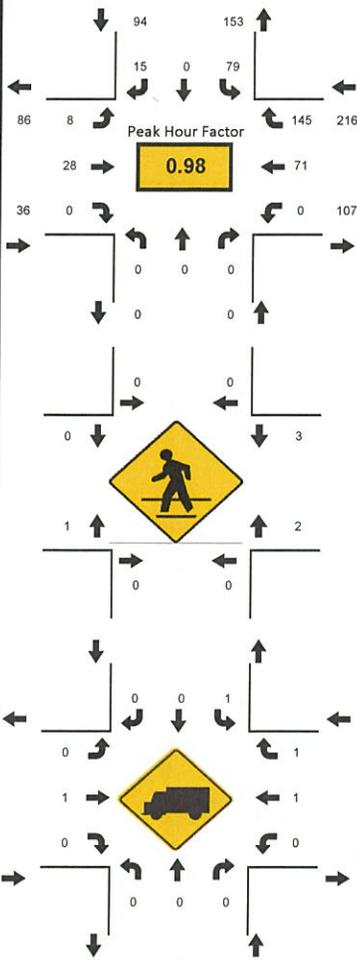
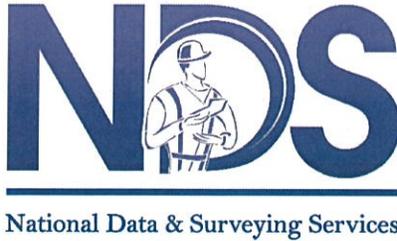


15-Min Count Period Beginning At	116th St N Northbound					116th St N Southbound					66th Ave N Eastbound					66th Ave N Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	0	0	0	0	24	0	0	0	0	5	18	0	0	0	0	1	18	0	0	66	384
07:15 AM	0	0	0	0	0	34	0	2	0	0	0	17	0	0	0	0	0	12	0	0	65	391
07:30 AM	0	0	0	0	0	88	0	2	0	0	4	19	0	0	0	0	1	9	0	0	123	390
07:45 AM	0	0	0	0	0	89	0	2	0	0	3	18	0	0	0	0	3	15	0	0	130	336
08:00 AM	0	0	0	0	0	28	0	2	0	0	0	17	0	0	0	0	5	21	0	0	73	259
08:15 AM	0	0	0	0	0	21	0	0	0	0	0	18	0	0	0	0	6	19	0	0	64	186
08:30 AM	0	0	0	0	0	35	0	0	0	0	3	12	0	0	0	0	4	15	0	0	69	122
08:45 AM	0	0	0	0	0	21	0	0	0	0	2	12	0	0	0	0	2	16	0	0	53	53
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	356	0	8	0	0	16	76	0	0	0	0	20	84	0	0	560	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	4	0	0	0	20	
Bicycles	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0	8	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

LOCATION: 116th St N & 66th Ave N
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-002
 DATE: 09/17/2019

Peak-Hour: 04:30 PM - 05:30 PM
 Peak 15-Minute: 04:45 PM - 05:00 PM



15-Min Count Period Beginning At	116th St N Northbound					116th St N Southbound					66th Ave N Eastbound					66th Ave N Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0	0	15	0	2	0	0	1	8	0	0	0	0	6	25	0	0	57	281
04:15 PM	0	0	0	0	0	11	0	2	0	0	2	7	0	0	0	0	13	18	0	0	53	311
04:30 PM	0	0	0	0	0	15	0	2	0	0	2	6	0	0	0	0	22	36	0	0	83	346
04:45 PM	0	0	0	0	0	16	0	4	0	0	1	8	0	0	0	0	17	42	0	0	88	346
05:00 PM	0	0	0	0	0	19	0	4	0	0	3	8	0	0	0	0	19	34	0	0	87	326
05:15 PM	0	0	0	0	0	29	0	5	0	0	2	6	0	0	0	0	13	33	0	0	88	239
05:30 PM	0	0	0	0	0	24	0	5	0	0	1	5	0	0	0	0	15	33	0	0	83	151
05:45 PM	0	0	0	0	0	17	0	1	0	0	0	12	0	0	0	0	16	22	0	0	68	68
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0	0	116	0	20	0	0	12	32	0	0	0	0	88	168	0	0	436	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	4	0	0	0	0	4	4	0	0	16	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	12	0	0	0	16	
Bicycles	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	16	0	0	20	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



National Data & Surveying Services



N/S Street: Evergreen Ave N

Speed: 25 MPH

Site Code: 19-3596-001

Date: 9/17/2019

Weather: Sunny

City: Seminole

County: Pinellas

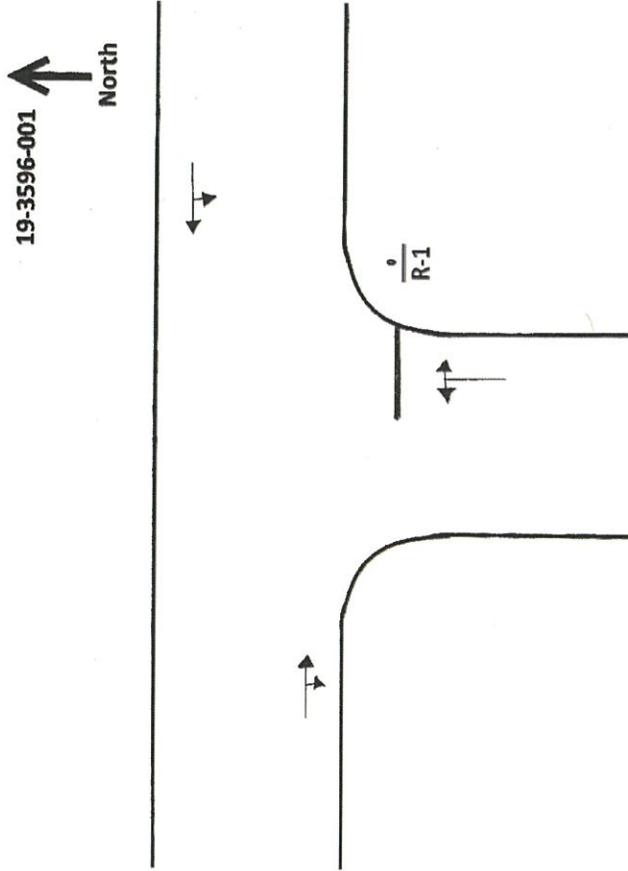
Count Times: 07:00 - 09:00

16:00 - 18:00

Control: 1-Way Stop (NB)

E/W Street: 66th Ave N

Speed: 30 MPH

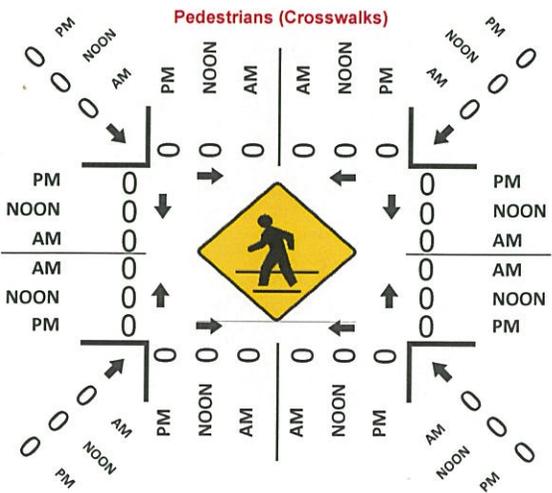
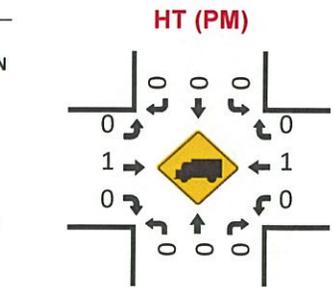
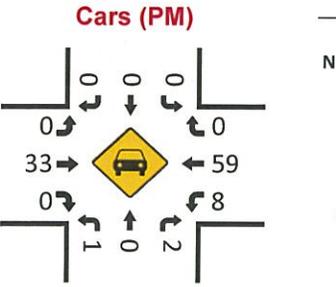
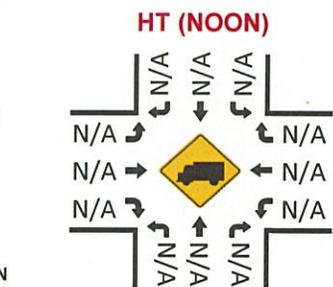
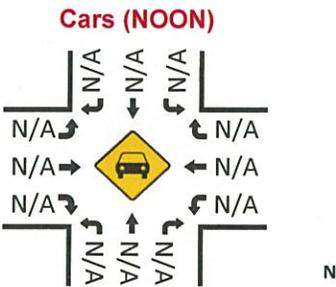
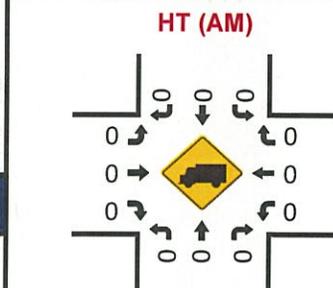
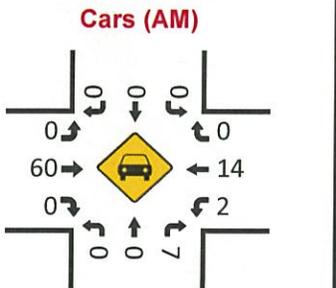
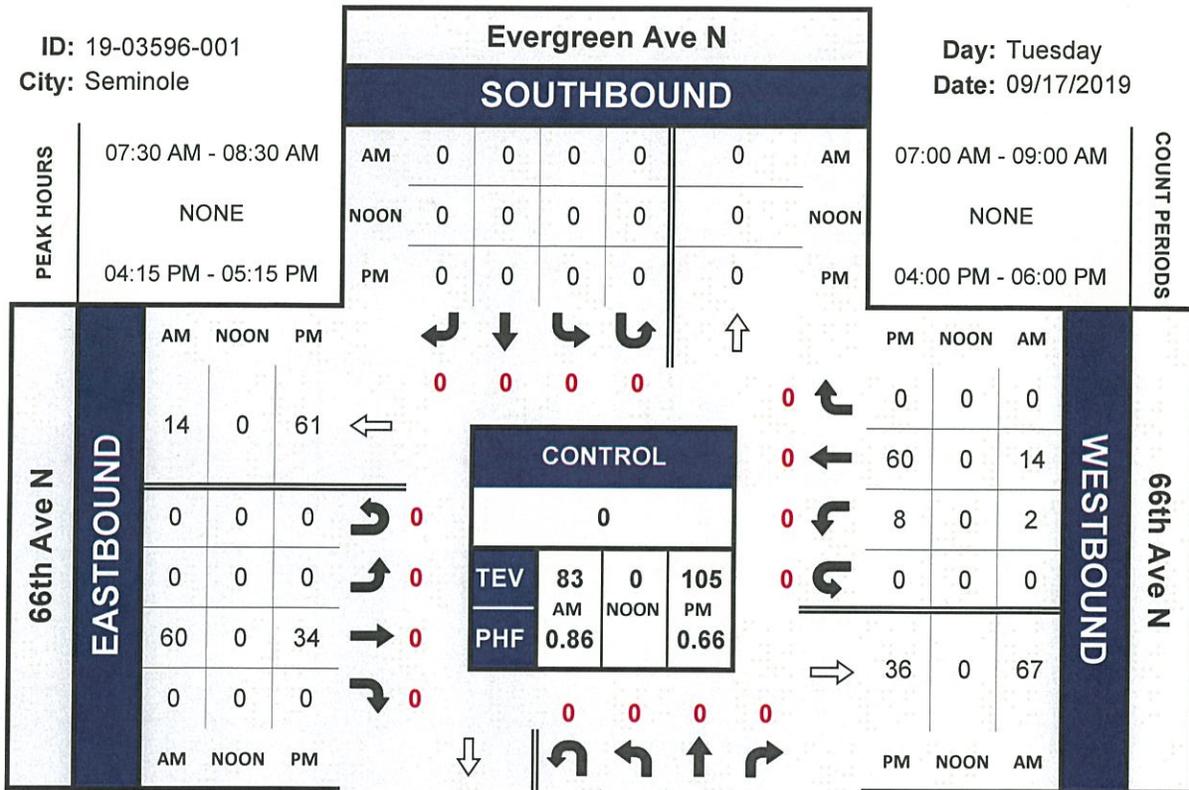


Evergreen Ave N & 66th Ave N

Peak Hour Turning Movement Count

ID: 19-03596-001
City: Seminole

Day: Tuesday
Date: 09/17/2019



National Data & Surveying Services

Intersection Turning Movement Count

Location: Evergreen Ave N & 66th Ave N
 City: Seminole
 Control: 0

Project ID: 19-03596-001
 Date: 9/17/2019

Cars

NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
7:00 AM	0	0	2	0	0	0	0	0	0	16	1	0	0	0	0	0	0	20
7:15 AM	0	0	2	0	0	0	0	0	0	12	0	0	0	0	1	0	0	15
7:30 AM	0	0	3	0	0	0	0	0	0	15	0	0	0	0	0	0	0	18
7:45 AM	0	0	0	0	0	0	0	0	0	19	0	0	0	0	4	0	0	23
8:00 AM	0	0	2	0	0	0	0	0	0	15	0	0	1	6	0	0	0	24
8:15 AM	0	0	2	0	0	0	0	0	0	11	0	0	1	4	0	0	0	18
8:30 AM	1	0	2	0	0	0	0	0	0	12	0	0	1	1	0	0	0	17
8:45 AM	1	0	0	0	0	0	0	0	0	12	0	0	0	1	0	0	0	14
TOTAL VOLUMES :	2	0	13	0	0	0	0	0	0	112	1	0	4	17	0	0	0	149
APPROACH %'s :	13.33%	0.00%	86.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	99.12%	0.88%	0.00%	19.05%	80.95%	0.00%	0.00%	0.00%	
PEAK HR :	0	0	7	0	0	0	0	0	0	60	0	0	2	14	0	0	0	83
PEAK HR VOL :	0.00	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.789	0.000	0.000	0.500	0.583	0.000	0.000	0.000	0.865
PEAK HR FACTOR :			0.583							0.789				0.583				0.571

NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	9
4:15 PM	1	0	1	0	0	0	0	0	0	7	0	0	2	9	0	0	0	20
4:30 PM	0	0	0	0	0	0	0	0	0	8	0	0	3	15	0	0	0	26
4:45 PM	0	0	0	0	0	0	0	0	0	7	0	0	1	9	0	0	0	17
5:00 PM	0	0	1	0	0	0	0	0	0	11	0	0	2	26	0	0	0	40
5:15 PM	0	0	0	0	0	0	0	0	0	6	0	0	1	13	0	0	0	20
5:30 PM	0	0	2	0	0	0	0	0	0	5	0	0	0	12	0	0	0	19
5:45 PM	1	0	0	0	0	0	0	0	0	8	0	0	0	14	0	0	0	23
TOTAL VOLUMES :	2	0	4	0	0	0	0	0	0	56	0	0	10	102	0	0	0	174
APPROACH %'s :	33.33%	0.00%	66.67%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	8.93%	91.07%	0.00%	0.00%	0.00%	
PEAK HR :	1	0	2	0	0	0	0	0	0	33	0	0	8	59	0	0	0	103
PEAK HR VOL :	0.25	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.667	0.567	0.000	0.000	0.000	0.644
PEAK HR FACTOR :			0.375							0.750				0.598				0.598

National Data & Surveying Services

Intersection Turning Movement Count

Location: Evergreen Ave N & 66th Ave N
 City: Seminole
 Control: 0

Project ID: 19-03596-001
 Date: 9/17/2019

HT

NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																		
PEAK HR :																		
PEAK HR VOL :																		
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
APPROACH %'s :																		
PEAK HR :																		
PEAK HR VOL :																		
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500

National Data & Surveying Services

Intersection Turning Movement Count

Location: Evergreen Ave N & 66th Ave N
 City: Seminole
 Control: 0

Project ID: 19-03596-001
 Date: 9/17/2019

Bikes

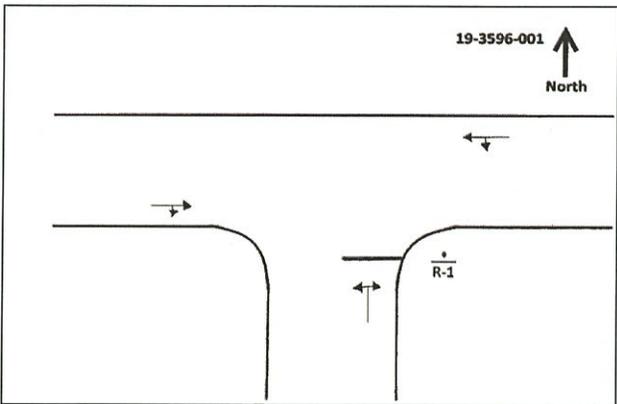
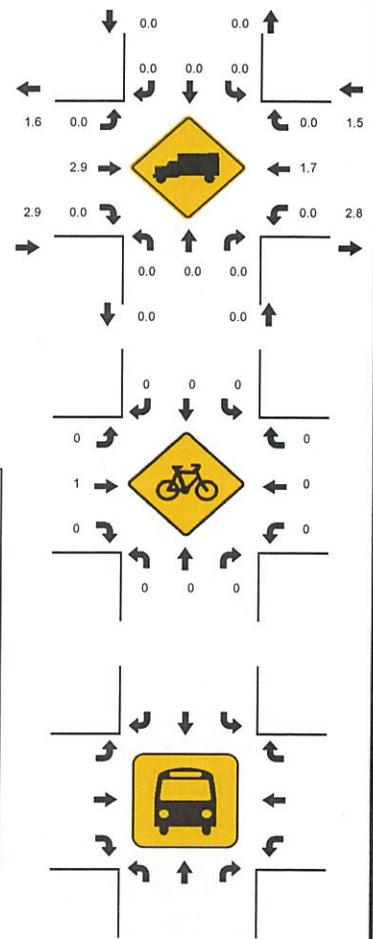
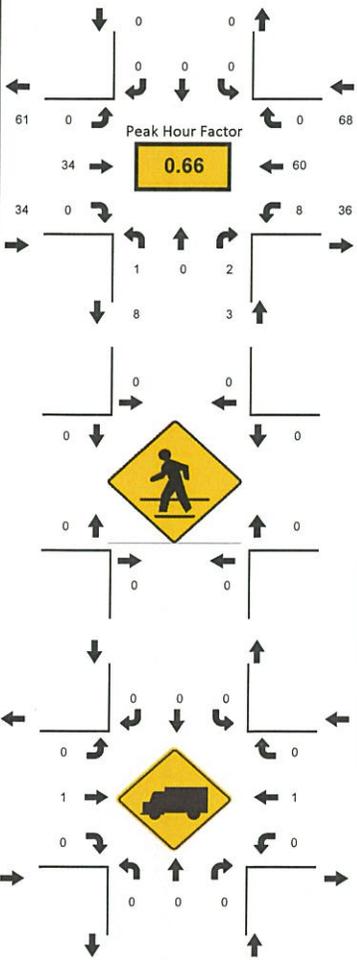
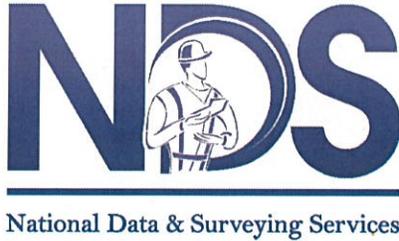
NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N											
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND								
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL							
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1							
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1							
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3							
APPROACH %'s :	0.00%			0.00%			0.00%			100.00%			0.00%			0.00%								
PEAK HR :	0																							
PEAK HR VOL :	0																							
PEAK HR FACTOR :	0.000																							
	0.000						0.000						0.000						0.250					
	0.000																							
	0.000																							

NS/EW Streets:	Evergreen Ave N						66th Ave N						66th Ave N											
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND								
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL							
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1							
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1							
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2							
APPROACH %'s :	0.00%			0.00%			0.00%			50.00%			50.00%			0.00%								
PEAK HR :	0																							
PEAK HR VOL :	0																							
PEAK HR FACTOR :	0.000																							
	0.000						0.000						0.250						0.000					
	0.000																							
	0.000																							

LOCATION: Evergreen Ave N & 66th Ave N
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-001
 DATE: 09/17/2019

Peak-Hour: 04:15 PM - 05:15 PM
 Peak 15-Minute: 05:00 PM - 05:15 PM



15-Min Count Period Beginning At	Evergreen Ave N Northbound					Evergreen Ave N Southbound					66th Ave N Eastbound					66th Ave N Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	4	0	0	0	11	76
04:15 PM	1	0	1	0	0	0	0	0	0	0	0	7	0	0	0	2	9	0	0	0	20	105
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	3	16	0	0	0	27	105
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	1	9	0	0	0	18	97
05:00 PM	0	0	1	0	0	0	0	0	0	0	0	11	0	0	0	2	26	0	0	0	40	102
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	1	13	0	0	0	20	62
05:30 PM	0	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	12	0	0	0	19	42
05:45 PM	1	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	14	0	0	0	23	23
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	4	0	4	0	0	0	0	0	0	0	0	44	0	0	0	12	104	0	0	0	168	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	8	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



National Data & Surveying Services

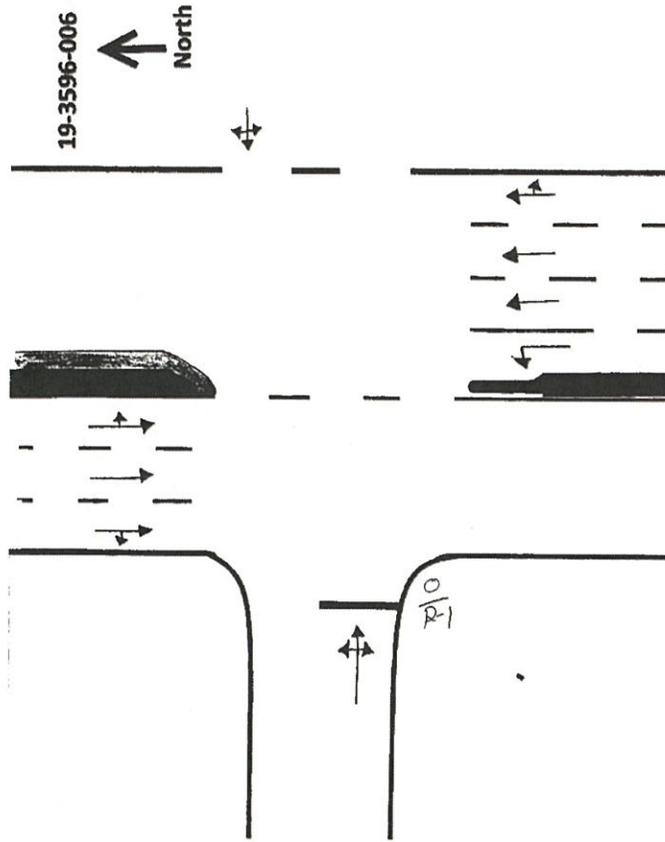


N/S Street: 113th St

Speed: 40 MPH

E/W Street: 62nd Ave

Speed: 25 MPH



Site Code: 19-3596-006

Date: 9/17/2019

Weather: Sunny

City: Seminole

County: Pinellas

Count Times: 07:00 - 09:00

16:00 - 18:00

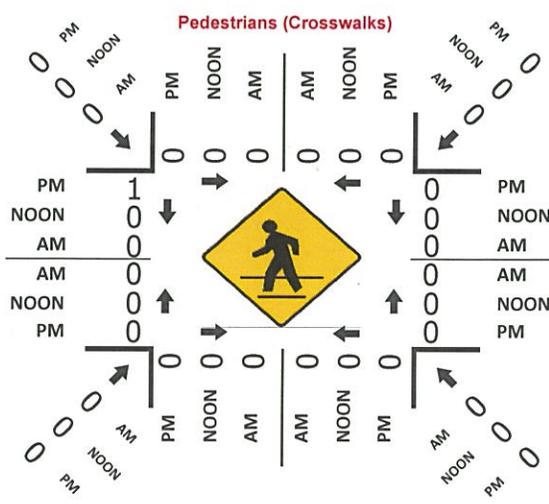
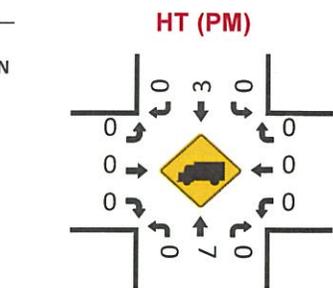
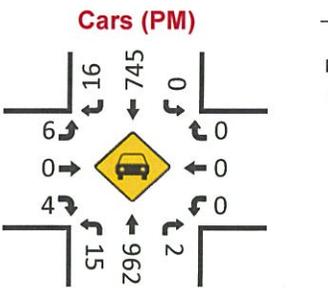
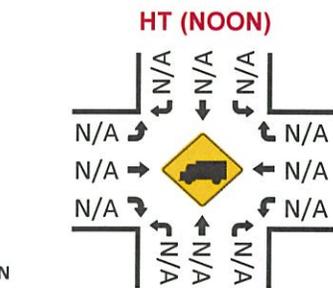
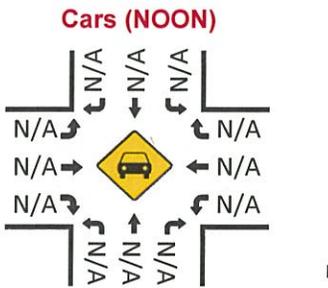
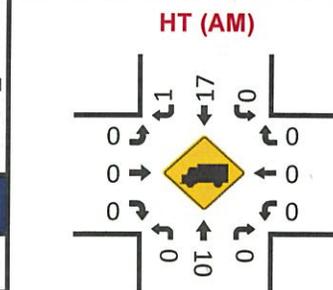
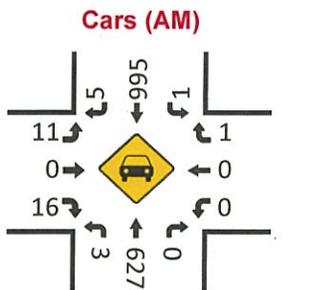
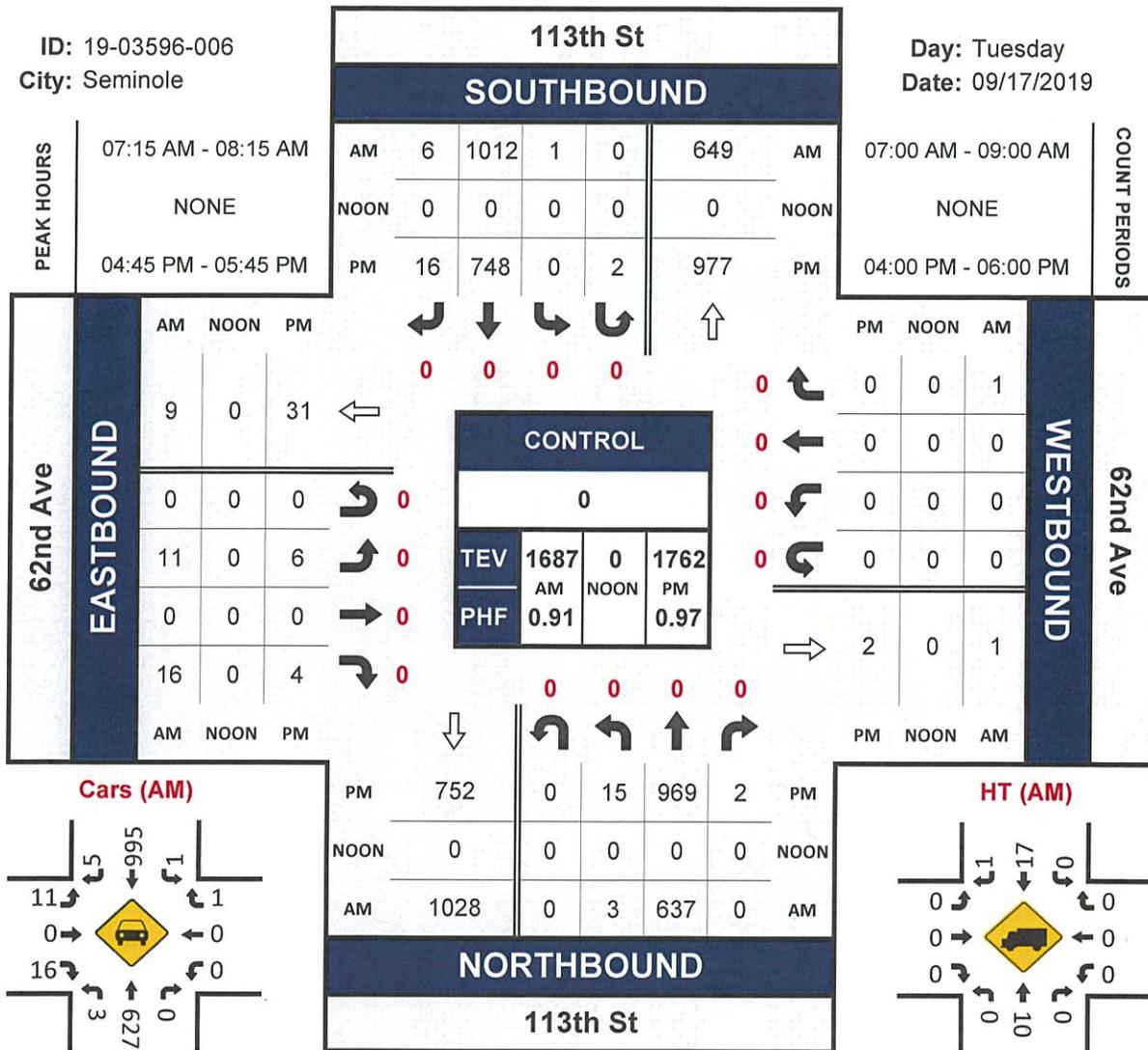
Control: 1-Way Stop (EB)

113th St & 62nd Ave

Peak Hour Turning Movement Count

ID: 19-03596-006
City: Seminole

Day: Tuesday
Date: 09/17/2019



National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 62nd Ave
 City: Seminole
 Control:

Project ID: 19-03596-006
 Date: 9/17/2019

Total

NS/EW Streets:	113th St										62nd Ave										62nd Ave														
	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					EASTBOUND					WESTBOUND									
	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0					
AM																																			
7:00 AM	1	112	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	155	0	0	0	0	301	1	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	1	181	0	0	0	0	258	1	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	1	160	0	0	0	1	215	4	0	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	1	141	0	0	0	0	238	1	0	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	138	0	0	0	0	194	3	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	1	134	1	0	0	0	208	5	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	2	124	1	0	0	0	172	2	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0					
APPROACH %'s :	7	1145	2	0	0	1	1798	16	0	0	21	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
PEAK HR :	0.61%	99.22%	0.17%	0.00%	0.00%	0.06%	99.06%	0.88%	0.00%	0.00%	44.68%	0.00%	55.32%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					
PEAK HR VOL :	3	637	0	0	0	1	1012	6	0	0	11	0	16	0	0	0	0	1	0	0	0	0	1	0	0	0	0	1	0	0					
PEAK HR FACTOR :	0.750	0.880	0.000	0.000	0.000	0.250	0.841	0.375	0.000	0.000	0.688	0.000	0.800	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000	0.000					
	0.879					0.844					0.844					0.250																			
PM																																			
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
4:15 PM	5	219	0	0	0	0	169	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
4:30 PM	2	195	0	0	0	0	183	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
4:45 PM	1	263	0	0	0	0	157	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5:00 PM	3	250	0	0	0	0	182	5	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5:15 PM	1	243	0	0	0	0	180	3	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5:30 PM	8	253	0	0	0	0	185	5	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
5:45 PM	3	223	2	0	0	0	201	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
	2	200	0	0	0	0	198	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
TOTAL VOLUMES :	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0					
APPROACH %'s :	25	1846	2	0	0	0	1455	26	2	0	13	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
PEAK HR :	1.33%	98.56%	0.11%	0.00%	0.00%	0.00%	98.11%	1.75%	0.13%	0.13%	72.22%	0.00%	27.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%					
PEAK HR VOL :	15	969	2	0	0	0	748	16	2	0	6	0	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0					
PEAK HR FACTOR :	0.469	0.958	0.250	0.000	0.000	0.000	0.930	0.800	0.500	0.500	0.750	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.833	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
	0.944					0.939					0.833					0.250																			
TOTAL																																			
TOTAL																																			
TOTAL																																			
TOTAL																																			

National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 62nd Ave
 City: Seminole
 Control: 0

Project ID: 19-03596-006
 Date: 9/17/2019

Cars

NS/EW Streets:	113th St										62nd Ave										62nd Ave									
	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					WESTBOUND					TOTAL				
	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	WL	WT	WR	WU	TOTAL					
AM																														
7:00 AM	1	110	0	0	0	0	211	0	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	330			
7:15 AM	0	152	0	0	0	0	300	1	0	0	3	0	3	0	0	0	0	0	1	0	0	0	0	1	0	0	460			
7:30 AM	1	180	0	0	0	0	256	0	0	0	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	443			
7:45 AM	1	159	0	0	0	1	206	3	0	0	4	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	377			
8:00 AM	1	136	0	0	0	0	233	1	0	0	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	379			
8:15 AM	0	137	0	0	0	0	193	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	335			
8:30 AM	1	133	1	0	0	0	205	5	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	351			
8:45 AM	2	124	1	0	0	0	170	2	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	302			
TOTAL VOLUMES :	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	WL	WT	WR	WU	TOTAL					
APPROACH %'S :	7	1131	2	0	0	1	1774	15	0	0	20	0	26	0	0	0	0	1	0	0	0	0	1	0	2977					
	0.61%	99.21%	0.18%	0.00%	0.00%	0.06%	99.11%	0.84%	0.00%	0.00%	43.48%	0.00%	56.52%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%						
PEAK HR VOL :	3	627	0	0	0	1	995	5	0	0	11	0	16	0	0	0	0	1	0	0	0	0	1	0	1659					
PEAK HR FACTOR :	0.75	0.871	0.000	0.000	0.000	0.250	0.829	0.417	0.000	0.000	0.688	0.000	0.800	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.250	0.000						
	0.870					0.831					0.844					0.250					0.902									
PM																														
4:00 PM	5	216	0	0	0	0	169	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	393				
4:15 PM	2	194	0	0	0	0	182	4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	384				
4:30 PM	1	260	0	0	0	0	156	4	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	424				
4:45 PM	3	249	0	0	0	0	180	5	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	440				
5:00 PM	1	241	0	0	0	0	179	3	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	427				
5:15 PM	8	249	0	0	0	0	185	5	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	451				
5:30 PM	3	223	2	0	0	0	201	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	434				
5:45 PM	2	200	0	0	0	0	198	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	402				
TOTAL VOLUMES :	NL	NT	NR	NU	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	WL	WT	WR	WU	0	WL	WT	WR	WU	TOTAL					
APPROACH %'S :	25	1832	2	0	0	0	1450	26	2	0	13	0	5	0	0	0	0	0	0	0	0	0	0	0	3355					
	1.34%	98.55%	0.11%	0.00%	0.00%	0.00%	98.11%	1.76%	0.14%	0.00%	72.22%	0.00%	27.78%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%						
PEAK HR VOL :	15	962	2	0	0	0	745	16	2	0	6	0	4	0	0	0	0	0	0	0	0	0	0	0	1752					
PEAK HR FACTOR :	0.47	0.966	0.250	0.000	0.000	0.000	0.927	0.800	0.500	0.000	0.750	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						
	0.952					0.935					0.833					0.971														

National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 62nd Ave
 City: Seminole
 Control: 0

Project ID: 19-03596-006
 Date: 9/17/2019

Bikes

NS/EW Streets:	113th St										62nd Ave										62nd Ave																												
	NORTHBOUND					SOUTHBOUND					EASTBOUND					WESTBOUND					EASTBOUND					WESTBOUND																							
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			
PEAK HR :	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PEAK HR VOL :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
TOTAL																																																	
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
TOTAL VOLUMES :	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%					
PEAK HR :	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PEAK HR VOL :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
PEAK HR FACTOR :	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
TOTAL																																																	
TOTAL																																																	

National Data & Surveying Services

Intersection Turning Movement Count

Location: 113th St & 62nd Ave
City: Seminole

Project ID: 19-03596-006
Date: 9/17/2019

Pedestrians (Crosswalks)

NS/EW Streets:	113th St		113th St		62nd Ave		62nd Ave		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
AM	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	1	0	0	1	2
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	2	0	0	0	2
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	3	1	0	1	5
PEAK HR :	75.00%		25.00%		0.00%		100.00%		
PEAK HR VOL :	07:15 AM - 08:15 AM								
PEAK HR FACTOR :	0	0	0	0	0	0	0	0	0

NS/EW Streets:	113th St		113th St		62nd Ave		62nd Ave		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
PM	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	1	1
PEAK HR :	04:45 PM - 05:45 PM				0.00%		100.00%		
PEAK HR VOL :	0	0	0	0	0	0	0	1	1
PEAK HR FACTOR :							0.250		0.250

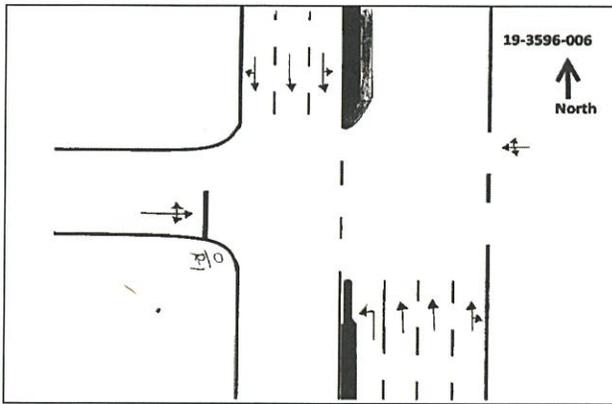
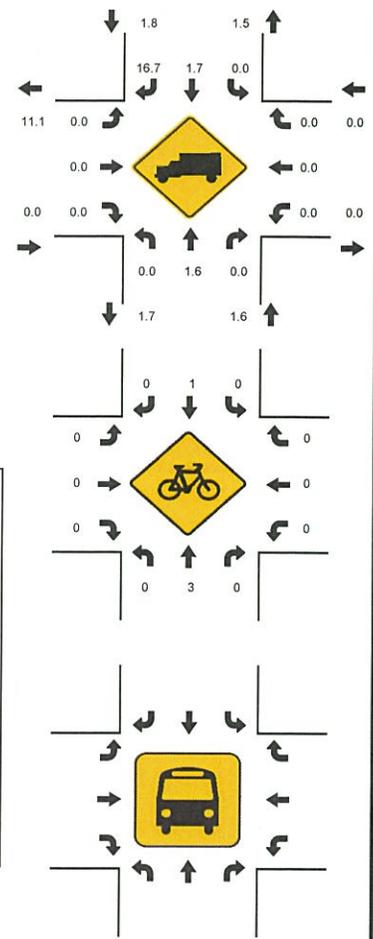
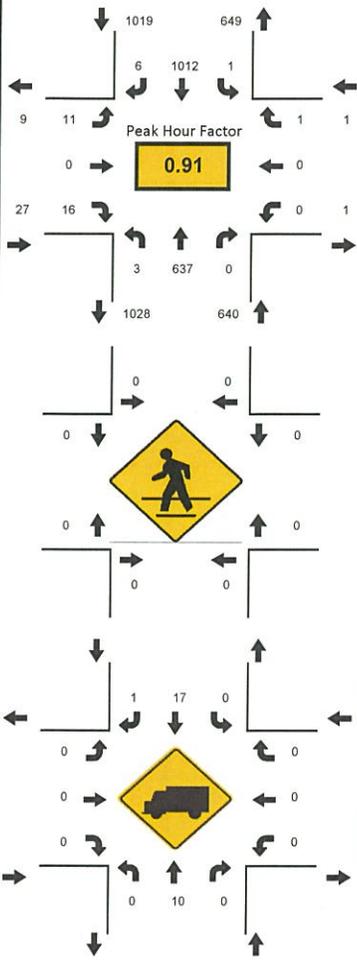
LOCATION: 113th St & 62nd Ave
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-006
 DATE: 09/17/2019

Peak-Hour: 07:15 AM - 08:15 AM
 Peak 15-Minute: 07:15 AM - 07:30 AM



National Data & Surveying Services



15-Min Count Period Beginning At	113th St Northbound					113th St Southbound					62nd Ave Eastbound					62nd Ave Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	1	112	0	0	0	0	212	0	0	0	4	0	4	0	0	0	0	0	0	0	333	1631
07:15 AM	0	155	0	0	0	0	301	1	0	0	3	0	3	0	0	0	0	1	0	0	464	1687
07:30 AM	1	181	0	0	0	0	258	0	0	0	1	0	5	0	0	0	0	0	0	0	446	1561
07:45 AM	1	160	0	0	0	1	215	4	0	0	4	0	3	0	0	0	0	0	0	0	388	1470
08:00 AM	1	141	0	0	0	0	238	1	0	0	3	0	5	0	0	0	0	0	0	0	389	1386
08:15 AM	0	138	0	0	0	0	194	3	0	0	2	0	1	0	0	0	0	0	0	0	338	997
08:30 AM	1	134	1	0	0	0	208	5	0	0	3	0	3	0	0	0	0	0	0	0	355	659
08:45 AM	2	124	1	0	0	0	172	2	0	0	1	0	2	0	0	0	0	0	0	0	304	304
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	4	724	0	0	0	4	1204	16	0	0	16	0	20	0	0	0	0	4	0	0	1992	
Heavy Trucks	0	20	0	0	0	0	36	4	0	0	0	0	0	0	0	0	0	0	0	0	60	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	12	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	16	
Railroad																						
Stopped Buses																						



National Data & Surveying Services



N/S Street: Evergreen Ave N

Speed: 25 MPH

Site Code: 19-3596-005

Date: 9/17/2019

Weather: Sunny

City: Seminole

County: Pinellas

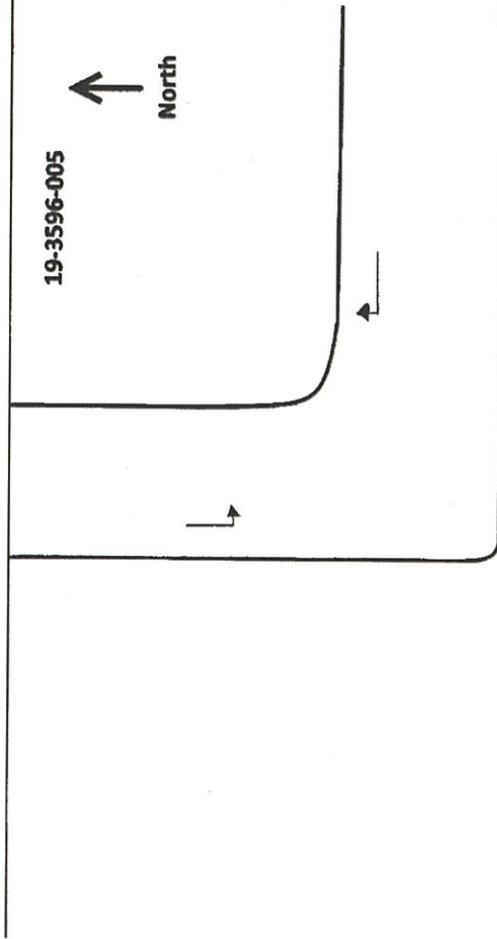
Count Times: 07:00 - 09:00

16:00 - 18:00

Control: No Control

E/W Street: Irving Ave

Speed: 25 MPH



National Data & Surveying Services

Intersection Turning Movement Count

Location: Evergreen Ave N & Irving Ave
 City: Seminole
 Control:

Project ID: 19-03596-005
 Date: 9/17/2019

Total

NS/EW Streets:	Evergreen Ave N						Evergreen Ave N						Irving Ave					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	4
7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1
8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	2
8:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	3
TOTAL VOLUMES :	0	0	0	0	10	0	0	0	0	0	0	0	0	0	6	0	0	16
APPROACH %'s :	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%	0.000%	
PEAK HR :	0	0	0	0	7	0	0	0	0	0	0	0	0	0	1	0	0	8
PEAK HR VOL :	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500
PEAK HR FACTOR :					0.583										0.250			

NS/EW Streets:	Evergreen Ave N						Evergreen Ave N						Irving Ave					
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			EASTBOUND			WESTBOUND		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	3
5:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL VOLUMES :	0	0	0	0	2	0	0	0	0	0	0	0	0	0	9	0	0	11
APPROACH %'s :	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	100.000%	0.000%	0.000%	
PEAK HR :	0	0	0	0	2	0	0	0	0	0	0	0	0	0	7	0	0	9
PEAK HR VOL :	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.563
PEAK HR FACTOR :					0.500										0.583			

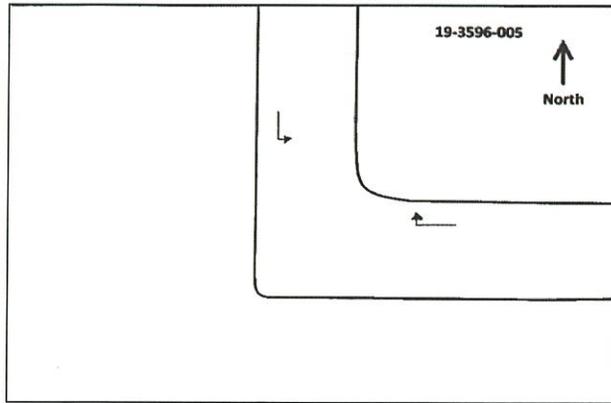
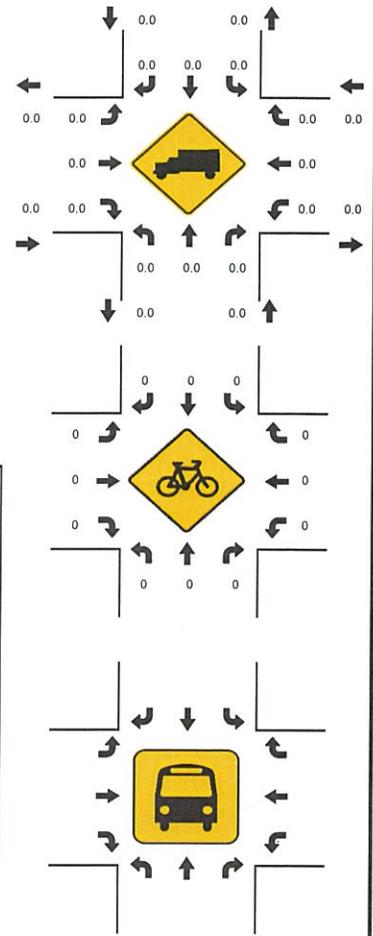
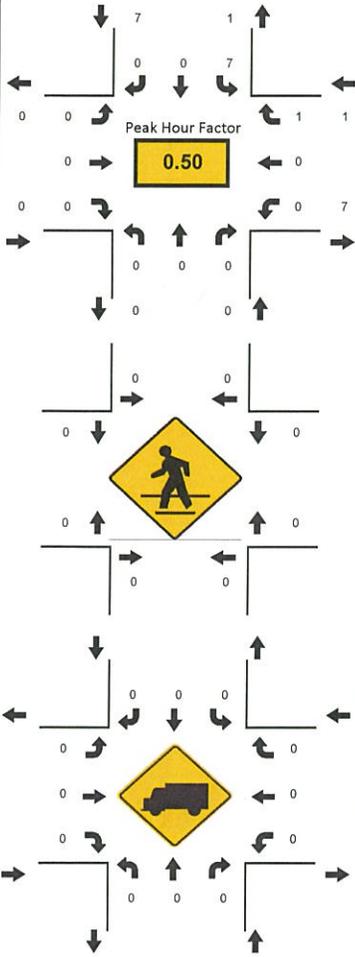
LOCATION: Evergreen Ave N & Irving Ave
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-005
 DATE: 09/17/2019

Peak-Hour: 07:00 AM - 08:00 AM
 Peak 15-Minute: 07:30 AM - 07:45 AM



National Data & Surveying Services

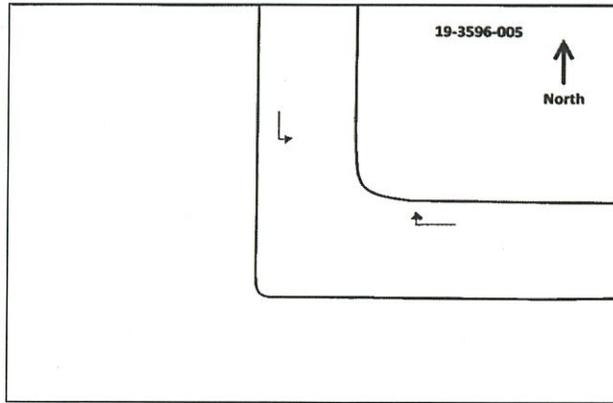
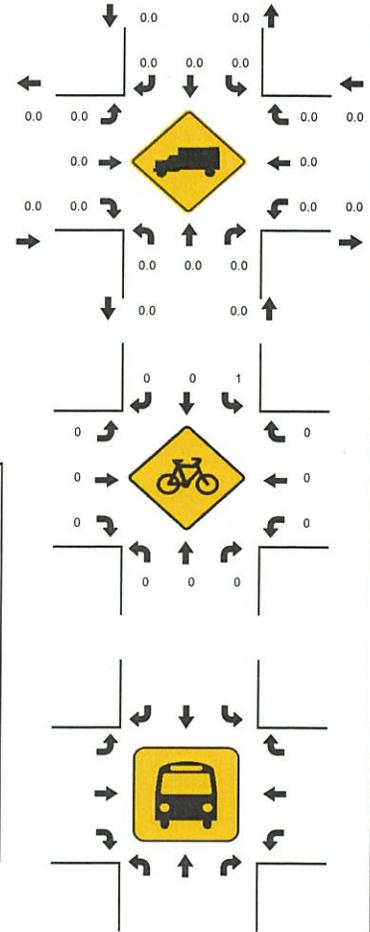
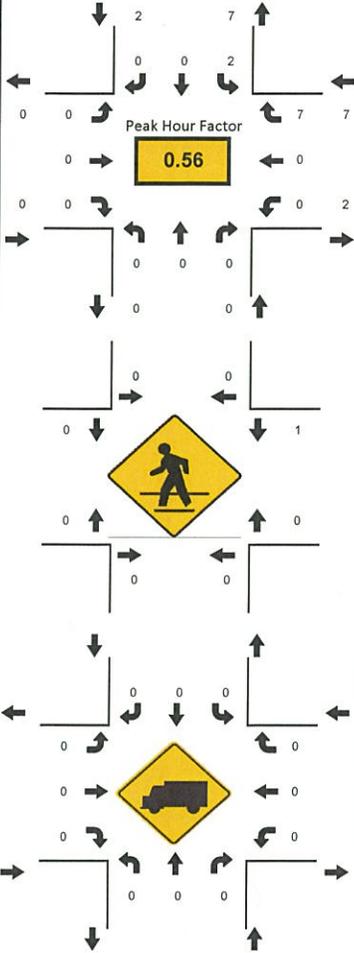
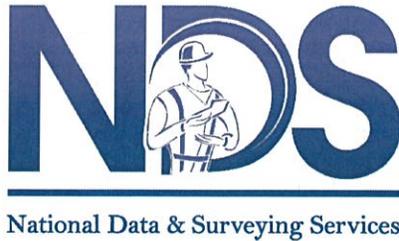


15-Min Count Period Beginning At	Evergreen Ave N Northbound					Evergreen Ave N Southbound					Irving Ave Eastbound					Irving Ave Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8
07:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8
07:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4	8
07:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
08:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	8
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	6
08:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	5
08:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	3
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0	4	0	0	16	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

LOCATION: Evergreen Ave N & Irving Ave
 CITY/STATE: Seminole, FL

PROJECT ID: 19-03596-005
 DATE: 09/17/2019

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



15-Min Count Period Beginning At	Evergreen Ave N Northbound					Evergreen Ave N Southbound					Irving Ave Eastbound					Irving Ave Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	4
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
05:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3	9
05:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	4	6
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	12	0	0	16	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	
Bicycles	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
Railroad																						
Stopped Buses																						

FDOT PEAK SEASON FACTOR



2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 1500 PINELLAS COUNTYWIDE

MOCF: 0.93
 PSCF

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.07	1.15
2	01/07/2018 - 01/13/2018	1.06	1.14
3	01/14/2018 - 01/20/2018	1.04	1.12
4	01/21/2018 - 01/27/2018	1.02	1.10
5	01/28/2018 - 02/03/2018	0.99	1.06
* 6	02/04/2018 - 02/10/2018	0.96	1.03
* 7	02/11/2018 - 02/17/2018	0.93	1.00
* 8	02/18/2018 - 02/24/2018	0.93	1.00
* 9	02/25/2018 - 03/03/2018	0.92	0.99
*10	03/04/2018 - 03/10/2018	0.92	0.99
*11	03/11/2018 - 03/17/2018	0.91	0.98
*12	03/18/2018 - 03/24/2018	0.92	0.99
*13	03/25/2018 - 03/31/2018	0.92	0.99
*14	04/01/2018 - 04/07/2018	0.93	1.00
*15	04/08/2018 - 04/14/2018	0.93	1.00
*16	04/15/2018 - 04/21/2018	0.94	1.01
*17	04/22/2018 - 04/28/2018	0.96	1.03
*18	04/29/2018 - 05/05/2018	0.98	1.05
19	05/06/2018 - 05/12/2018	1.00	1.08
20	05/13/2018 - 05/19/2018	1.02	1.10
21	05/20/2018 - 05/26/2018	1.01	1.09
22	05/27/2018 - 06/02/2018	0.99	1.06
23	06/03/2018 - 06/09/2018	0.98	1.05
24	06/10/2018 - 06/16/2018	0.97	1.04
25	06/17/2018 - 06/23/2018	0.98	1.05
26	06/24/2018 - 06/30/2018	0.98	1.05
27	07/01/2018 - 07/07/2018	0.99	1.06
28	07/08/2018 - 07/14/2018	1.00	1.08
29	07/15/2018 - 07/21/2018	1.00	1.08
30	07/22/2018 - 07/28/2018	1.01	1.09
31	07/29/2018 - 08/04/2018	1.02	1.10
32	08/05/2018 - 08/11/2018	1.02	1.10
33	08/12/2018 - 08/18/2018	1.03	1.11
34	08/19/2018 - 08/25/2018	1.04	1.12
35	08/26/2018 - 09/01/2018	1.06	1.14
36	09/02/2018 - 09/08/2018	1.07	1.15
37	09/09/2018 - 09/15/2018	1.08	1.16
38	09/16/2018 - 09/22/2018	1.08	1.16
39	09/23/2018 - 09/29/2018	1.07	1.15
40	09/30/2018 - 10/06/2018	1.06	1.14
41	10/07/2018 - 10/13/2018	1.05	1.13
42	10/14/2018 - 10/20/2018	1.05	1.13
43	10/21/2018 - 10/27/2018	1.05	1.13
44	10/28/2018 - 11/03/2018	1.05	1.13
45	11/04/2018 - 11/10/2018	1.04	1.12
46	11/11/2018 - 11/17/2018	1.04	1.12
47	11/18/2018 - 11/24/2018	1.05	1.13
48	11/25/2018 - 12/01/2018	1.06	1.14
49	12/02/2018 - 12/08/2018	1.06	1.14
50	12/09/2018 - 12/15/2018	1.07	1.15
51	12/16/2018 - 12/22/2018	1.06	1.14
52	12/23/2018 - 12/29/2018	1.05	1.13
53	12/30/2018 - 12/31/2018	1.04	1.12

* PEAK SEASON

25-FEB-2019 16:26:29

830UPD

7_1500_PKSEASON.TXT

SIGNAL TIMINGS



Intersection **870**

Report Date: **10/15/2019**

Main Street: 113TH ST

Run Time: 06:36 AM

Side Street: 66TH AVE N

Jurisdiction: COUNTY

Section #: 62 MIST

Comm. Addr: IP: 10.198.100.138

Gateway: 10.198.100.254

Subnet: 255.255.255.0

Pre-empt: Y

Phase #	Street Name	Direction		Left Turn Type
		NB	LT	
1	113TH ST.	NB	LT	Protected/Permitted
2	113TH ST. N.	SB		
3				
4				
5				
6	113TH ST. N.	NB		
7				
8	66TH AVE. N.	EB/WB		

Timing Plan 1 (MM,2,1)

PHASE	1	2	3	4	5	6	7	8
Min. Green	7	20				20		7
Walk		7				7		7
Ped Clr		11				11		22
Veh Ext	2	4				4		3
Yellow Clr	4.4	4.4				4.4		3.7
Red Clr	2.1	2.2				2.2		3.6
Max 1	13	45				45		25
Max 2								
Max 3								
Walk 2								
Ped Clr 2								
Lock Det								
Veh Recall								
Ped Recall								
Max Recall		X				X		
CNA 1		X				X		
Phase In Use	X	X				X		X
Flash		Y				Y		R
Delay Det.								8

Last Timing Change Date: 02/11/2019	Database Modified: 02/12/2019
Technician Initials:	Control Room Pers. Initials:

COORD PATTERNS (CYCLE / OFFSET) (MM,3,2)

Cycle	Sec.
1	105
2	90
3	105
4	85

Offset	Sec. / %
1	75
2	23
3	100
4	75

COORD PATTERNS

	Ph 1 Sec / %	Ph 2 Sec / %	Ph 3 Sec / %	Ph 4 Sec / %	Ph 5 Sec / %	Ph 6 Sec / %	Ph 7 Sec / %	Ph 8 Sec / %
PATTERN 1	18	52	0	0	0	70	0	35
PATTERN 2	16	43				59	0	31
PATTERN 3	16	53	0	0	0	69	0	36
PATTERN 4	17	37	0	0	0	54	0	31

DAY PLANS (MM,5,3)

	Event	Action Plan #	Time	Action	On/Off
DAY PLAN1					
	1	1	0600		
	2	2	0930		
	3	3	1430		
	4	4	1830		
	5	100	2100	FRE	ON
DAY PLAN2					
	1	2	0800		
	2	100	2100	FRE	ON

Notes:

INTERSECTION ANALYSIS



Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↕↕			↕↕	
Traffic Volume (vph)	121	0	182	0	0	0	106	725	0	0	996	72
Future Volume (vph)	121	0	182	0	0	0	106	725	0	0	996	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frt		0.919									0.990	
Flt Protected		0.980					0.950					
Satd. Flow (prot)	0	1678	0	0	1863	0	1770	5085	0	0	5034	0
Flt Permitted		0.869					0.175					
Satd. Flow (perm)	0	1488	0	0	1863	0	326	5085	0	0	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98										15
Link Speed (mph)		30			30			30				30
Link Distance (ft)		709			271			694				648
Travel Time (s)		16.1			6.2			15.8				14.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	133	0	200	0	0	0	116	797	0	0	1095	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	333	0	0	0	0	116	797	0	0	1174	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019

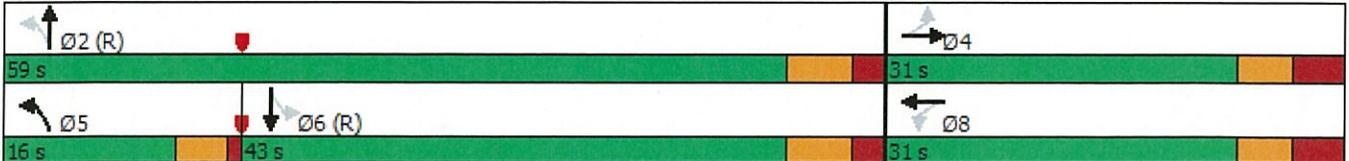


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	31.0	31.0		31.0	31.0		16.0	59.0		43.0	43.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		17.8%	65.6%		47.8%	47.8%	
Maximum Green (s)	23.7	23.7		23.7	23.7		11.5	52.4		36.4	36.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		19.2					59.0	56.9			46.6	
Actuated g/C Ratio		0.21					0.66	0.63			0.52	
v/c Ratio		0.85					0.34	0.25			0.45	
Control Delay		42.9					9.6	8.0			15.9	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		42.9					9.6	8.0			15.9	
LOS		D					A	A			B	
Approach Delay		42.9						8.2			15.9	
Approach LOS		D						A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 16.7
 Intersection Capacity Utilization 69.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 3: 113TH STR & 66TH Ave N



Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↑↑↑			↑↑↑	
Traffic Volume (vph)	46	0	91	0	0	1	182	1002	1	1	864	91
Future Volume (vph)	46	0	91	0	0	1	182	1002	1	1	864	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frt		0.910			0.865						0.986	
Flt Protected		0.983					0.950					
Satd. Flow (prot)	0	1666	0	0	1611	0	1770	5085	0	0	5014	0
Flt Permitted		0.888					0.255				0.939	
Satd. Flow (perm)	0	1505	0	0	1611	0	475	5085	0	0	4708	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		93			112						22	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			271			694			648	
Travel Time (s)		16.1			6.2			15.8			14.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	47	0	93	0	0	1	186	1022	1	1	882	93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	140	0	0	1	0	186	1023	0	0	976	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019

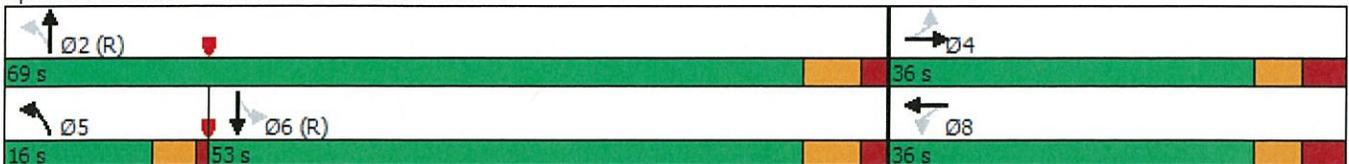


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	36.0	36.0		36.0	36.0		16.0	69.0		53.0	53.0	
Total Split (%)	34.3%	34.3%		34.3%	34.3%		15.2%	65.7%		50.5%	50.5%	
Maximum Green (s)	28.7	28.7		28.7	28.7		11.5	62.4		46.4	46.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		9.4			9.4		83.8	81.7			69.0	
Actuated g/C Ratio		0.09			0.09		0.80	0.78			0.66	
v/c Ratio		0.64			0.00		0.39	0.26			0.31	
Control Delay		30.6			0.0		5.2	3.7			8.5	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		30.6			0.0		5.2	3.7			8.5	
LOS		C			A		A	A			A	
Approach Delay		30.6						3.9			8.5	
Approach LOS		C						A			A	

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 100 (95%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 7.5
 Intersection Capacity Utilization 70.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

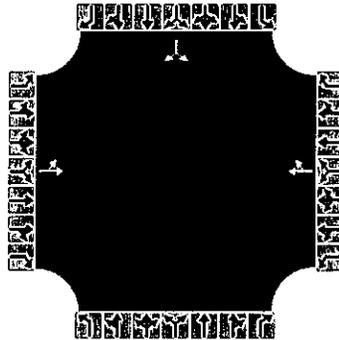
Splits and Phases: 3: 113TH STR & 66TH Ave N



HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.75
Time Analyzed	AM Peak		
Project Description	Background		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	8	82			10	66				277		9
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	120			101						381		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

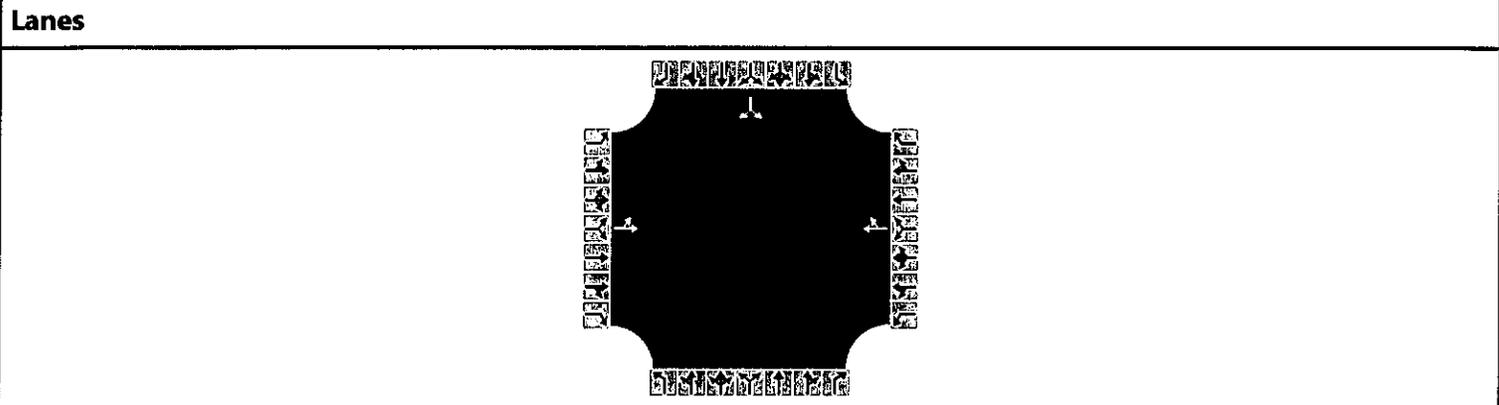
Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.107			0.090						0.339		
Final Departure Headway, hd (s)	5.05			4.54						4.66		
Final Degree of Utilization, x	0.168			0.128						0.494		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	3.05			2.54						2.66		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	120			101						381		
Capacity	713			792						772		
95% Queue Length, Q ₉₅ (veh)	0.6			0.4						2.8		
Control Delay (s/veh)	9.1			8.2						12.1		
Level of Service, LOS	A			A						B		
Approach Delay (s/veh)	9.1			8.2						12.1		
Approach LOS	A			A						B		
Intersection Delay, s/veh LOS	10.9						B					

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.98
Time Analyzed	PM Peak		
Project Description	Background		



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	9	33			82	168				92		17
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	43			255						111		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.038			0.227						0.099		
Final Departure Headway, hd (s)	4.49			3.85						4.61		
Final Degree of Utilization, x	0.053			0.273						0.143		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.49			1.85						2.61		

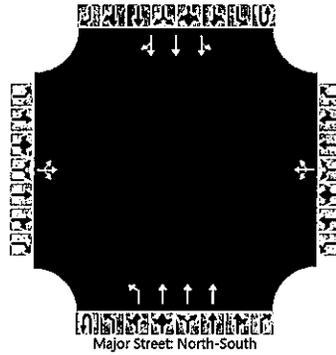
Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	43			255						111		
Capacity	802			935						780		
95% Queue Length, Q ₉₅ (veh)	0.2			1.1						0.5		
Control Delay (s/veh)	7.7			8.3						8.4		
Level of Service, LOS	A			A						A		
Approach Delay (s/veh)	7.7			8.3						8.4		
Approach LOS	A			A						A		
Intersection Delay, s/veh LOS	8.3						A					

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/23/2019	East/West Street	62nd Avenue
Analysis Year	2019	North/South Street	113th Street
Time Analyzed	AM Peak	Peak Hour Factor	0.91
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	1	0		0	1	3	0		0	0	3	0
Configuration			LTR				LTR			L	T			LT	T	TR		
Volume (veh/h)		13	0	19		0	0	1		4	739			1	1174	7		
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3				
Proportion Time Blocked																		
Percent Grade (%)	0				0													
Right Turn Channelized																		
Median Type Storage	Undivided																	

Critical and Follow-up Headways

Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3		
Critical Headway (sec)		6.46	6.56	7.16		6.46	6.56	7.16		5.36				5.36		
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1		
Follow-Up Headway (sec)		3.83	4.03	3.93		3.83	4.03	3.93		3.13				3.13		

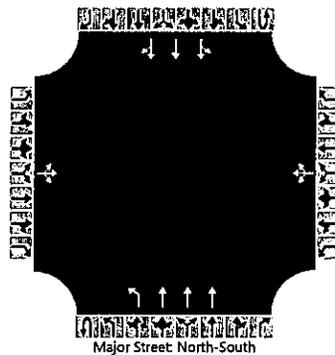
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			35				1				4				1	
Capacity, c (veh/h)			179				506				278				479	
v/c Ratio			0.20				0.00				0.02				0.00	
95% Queue Length, Q ₉₅ (veh)			0.7				0.0				0.0				0.0	
Control Delay (s/veh)			30.0				12.1				18.2				12.5	
Level of Service (LOS)			D				B				C				B	
Approach Delay (s/veh)	30.0				12.1				0.1				0.0			
Approach LOS	D				B											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection					
Agency/Co.		Jurisdiction					
Date Performed	10/23/2019	East/West Street	62nd Avenue				
Analysis Year	2019	North/South Street	113th Street				
Time Analyzed	PM Peak	Peak Hour Factor	0.97				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Background						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	3	0	0	0	3	0
Configuration			LTR				LTR			L	T			LT	T	TR
Volume (veh/h)		7	0	5		0	0	0	0	17	1124			2	868	19
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3		
Critical Headway (sec)		6.46	6.56	7.16		6.46	6.56	7.16		5.36				5.36		
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1		
Follow-Up Headway (sec)		3.83	4.03	3.93		3.83	4.03	3.93		3.13				3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			12				0			18				2		
Capacity, c (veh/h)			197							427				325		
v/c Ratio			0.06							0.04				0.01		
95% Queue Length, Q ₉₅ (veh)			0.2							0.1				0.0		
Control Delay (s/veh)			24.5							13.8				16.1		
Level of Service (LOS)			C							B				C		
Approach Delay (s/veh)	24.5								0.2				0.1			
Approach LOS	C															

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

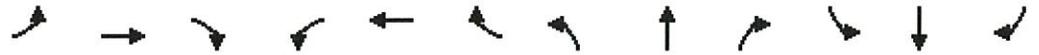
10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↑↑↑			↑↑↑	
Traffic Volume (vph)	166	0	271	0	0	0	136	725	0	0	996	87
Future Volume (vph)	166	0	271	0	0	0	136	725	0	0	996	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frt		0.916									0.988	
Flt Protected		0.981					0.950					
Satd. Flow (prot)	0	1674	0	0	1863	0	1770	5085	0	0	5024	0
Flt Permitted		0.875					0.152					
Satd. Flow (perm)	0	1493	0	0	1863	0	283	5085	0	0	5024	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98										19
Link Speed (mph)		30			30			30				30
Link Distance (ft)		709			271			694				648
Travel Time (s)		16.1			6.2			15.8				14.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	182	0	298	0	0	0	149	797	0	0	1095	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	480	0	0	0	0	149	797	0	0	1191	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
 3: 113TH STR & 66TH Ave N

10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	31.0	31.0		31.0	31.0		16.0	59.0		43.0	43.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		17.8%	65.6%		47.8%	47.8%	
Maximum Green (s)	23.7	23.7		23.7	23.7		11.5	52.4		36.4	36.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		23.7					54.5	52.4			39.1	
Actuated g/C Ratio		0.26					0.61	0.58			0.43	
v/c Ratio		1.03					0.47	0.27			0.54	
Control Delay		78.4					12.8	9.6			19.9	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		78.4					12.8	9.6			19.9	
LOS		E					B	A			B	
Approach Delay		78.4						10.1			19.9	
Approach LOS		E						B			B	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 27.1
 Intersection Capacity Utilization 78.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 3: 113TH STR & 66TH Ave N



Intersection: 3: 113TH STR & 66TH Ave N

Movement	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	T	T	TR	LT	T	TR
Maximum Queue (ft)	355	97	155	123	54	262	225	121
Average Queue (ft)	234	60	104	65	17	189	141	59
95th Queue (ft)	401	103	168	126	58	269	236	126
Link Distance (ft)	651		666	666	666	620	620	620
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		142						
Storage Blk Time (%)			2					
Queuing Penalty (veh)			2					

Network Summary

Network wide Queuing Penalty: 2

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑			↖↖↖	
Traffic Volume (vph)	75	0	150	0	0	1	283	1002	1	1	864	141
Future Volume (vph)	75	0	150	0	0	1	283	1002	1	1	864	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frt		0.910			0.865						0.979	
Flt Protected		0.984					0.950					
Satd. Flow (prot)	0	1668	0	0	1611	0	1770	5085	0	0	4979	0
Flt Permitted		0.888					0.225				0.939	
Satd. Flow (perm)	0	1505	0	0	1611	0	419	5085	0	0	4675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		94			112						38	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			271			694			648	
Travel Time (s)		16.1			6.2			15.8			14.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	77	0	153	0	0	1	289	1022	1	1	882	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	230	0	0	1	0	289	1023	0	0	1027	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/17/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	36.0	36.0		36.0	36.0		16.0	69.0		53.0	53.0	
Total Split (%)	34.3%	34.3%		34.3%	34.3%		15.2%	65.7%		50.5%	50.5%	
Maximum Green (s)	28.7	28.7		28.7	28.7		11.5	62.4		46.4	46.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		15.4			15.4		77.8	75.7			59.4	
Actuated g/C Ratio		0.15			0.15		0.74	0.72			0.57	
v/c Ratio		0.76			0.00		0.63	0.28			0.39	
Control Delay		40.9			0.0		11.4	6.0			14.1	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		40.9			0.0		11.4	6.0			14.1	
LOS		D			A		B	A			B	
Approach Delay		40.9						7.2			14.1	
Approach LOS		D						A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 105
 Actuated Cycle Length: 105
 Offset: 100 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 12.9
 Intersection LOS: B
 Intersection Capacity Utilization 76.4%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: 113TH STR & 66TH Ave N



Intersection: 3: 113TH STR & 66TH Ave N

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	TR	LT	T	TR
Maximum Queue (ft)	242	12	148	204	152	101	242	209	107
Average Queue (ft)	136	2	97	107	79	36	148	100	48
95th Queue (ft)	252	13	162	224	165	100	267	222	105
Link Distance (ft)	651	213		666	666	666	620	620	620
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			142						
Storage Blk Time (%)			4	2					
Queuing Penalty (veh)			12	6					

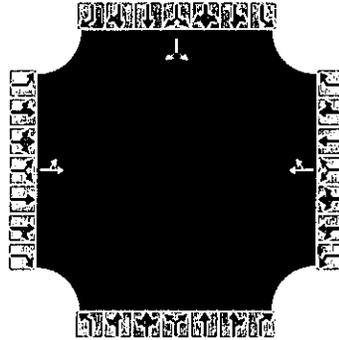
Network Summary

Network wide Queuing Penalty: 18

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.75
Time Analyzed	AM Peak		
Project Description	Option A -Background Plus Project		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	23	216			55	66				277		14
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	319			161						388		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.283			0.143						0.345		
Final Departure Headway, hd (s)	5.34			5.25						5.38		
Final Degree of Utilization, x	0.473			0.235						0.580		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	3.34			3.25						3.38		

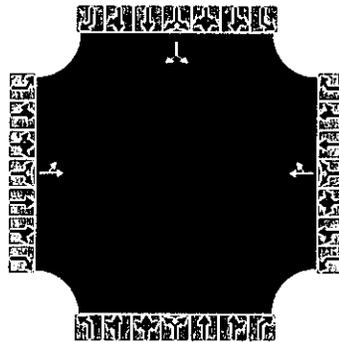
Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	319			161						388		
Capacity	674			686						669		
95% Queue Length, Q ₉₅ (veh)	2.5			0.9						3.7		
Control Delay (s/veh)	13.0			9.9						15.5		
Level of Service, LOS	B			A						C		
Approach Delay (s/veh)	13.0			9.9						15.5		
Approach LOS	B			A						C		
Intersection Delay, s/veh LOS	13.6						B					

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.98
Time Analyzed	PM Peak		
Project Description	Option A -Background Plus Project		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	19	121			233	168				92		34
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	143			409						129		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

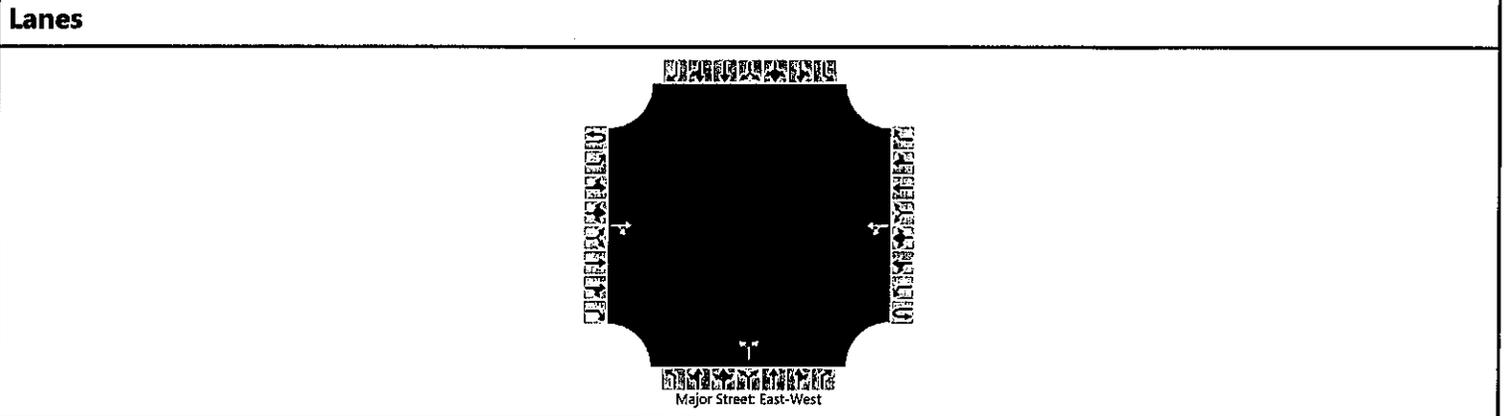
Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.127			0.364						0.114		
Final Departure Headway, hd (s)	4.75			4.21						5.13		
Final Degree of Utilization, x	0.188			0.478						0.183		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.75			2.21						3.13		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	143			409						129		
Capacity	758			856						701		
95% Queue Length, Q ₉₅ (veh)	0.7			2.6						0.7		
Control Delay (s/veh)	8.8			11.0						9.3		
Level of Service, LOS	A			B						A		
Approach Delay (s/veh)	8.8			11.0						9.3		
Approach LOS	A			B						A		
Intersection Delay, s/veh LOS	10.2						B					

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection					
Agency/Co.		Jurisdiction					
Date Performed	10/18/2019	East/West Street	66th Avenue North				
Analysis Year	2019	North/South Street	Project Access A				
Time Analyzed	AM Peak	Peak Hour Factor	0.86				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Option A-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			70	0	50	16				0		149				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

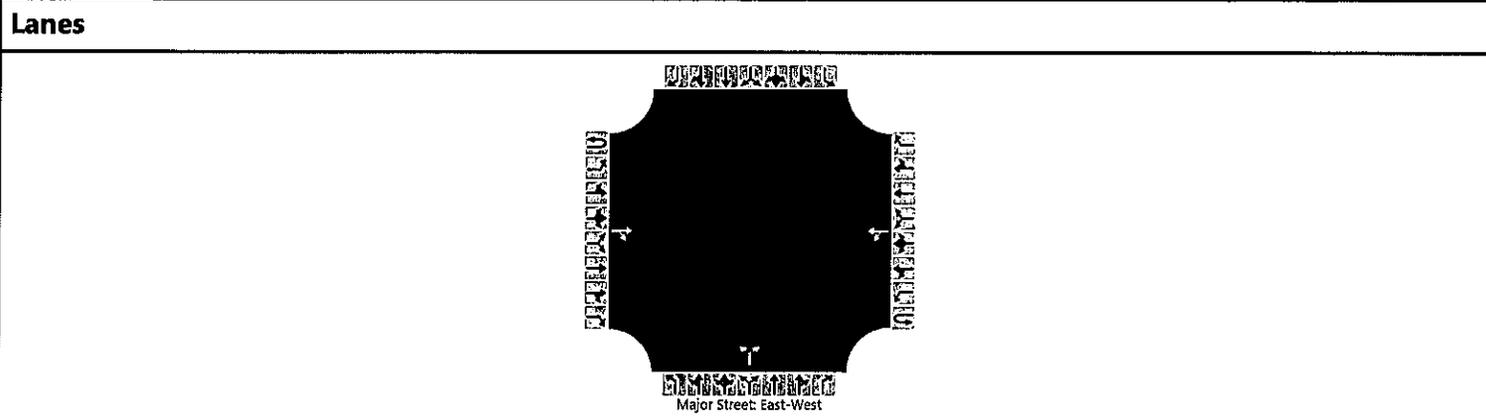
Base Critical Headway (sec)					4.1					7.1		6.2				
Critical Headway (sec)					4.13					6.43		6.23				
Base Follow-Up Headway (sec)					2.2					3.5		3.3				
Follow-Up Headway (sec)					2.23					3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					58					173						
Capacity, c (veh/h)					1510					976						
v/c Ratio					0.04					0.18						
95% Queue Length, Q ₉₅ (veh)					0.1					0.6						
Control Delay (s/veh)					7.5					9.5						
Level of Service (LOS)					A					A						
Approach Delay (s/veh)					5.7				9.5							
Approach LOS									A							

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection		Agency/Co.		Jurisdiction	
Date Performed	10/18/2019	East/West Street	66th Avenue North	Analysis Year	2019	North/South Street	Project Access A
Time Analyzed	PM Peak	Peak Hour Factor	0.66	Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Option A-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			39	0		168	71			0		98				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1			6.2		
Critical Headway (sec)						4.13					6.43			6.23		
Base Follow-Up Headway (sec)						2.2					3.5			3.3		
Follow-Up Headway (sec)						2.23					3.53			3.33		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						255						148				
Capacity, c (veh/h)						1538						1004				
v/c Ratio						0.17						0.15				
95% Queue Length, Q ₉₅ (veh)						0.6						0.5				
Control Delay (s/veh)						7.8						9.2				
Level of Service (LOS)						A						A				
Approach Delay (s/veh)					5.9				9.2							
Approach LOS					A				A							

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑			↖↖↖	
Traffic Volume (vph)	143	0	212	0	0	0	117	748	0	0	1004	79
Future Volume (vph)	143	0	212	0	0	0	117	748	0	0	1004	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frnt		0.919									0.989	
Flt Protected		0.980					0.950					
Satd. Flow (prot)	0	1678	0	0	1863	0	1770	5085	0	0	5029	0
Flt Permitted		0.868					0.160					
Satd. Flow (perm)	0	1486	0	0	1863	0	298	5085	0	0	5029	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98										17
Link Speed (mph)		30			30			30				30
Link Distance (ft)		709			271			694				648
Travel Time (s)		16.1			6.2			15.8				14.7
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	157	0	233	0	0	0	129	822	0	0	1103	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	390	0	0	0	0	129	822	0	0	1190	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA					pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
 3: 113TH STR & 66TH Ave N

10/23/2019

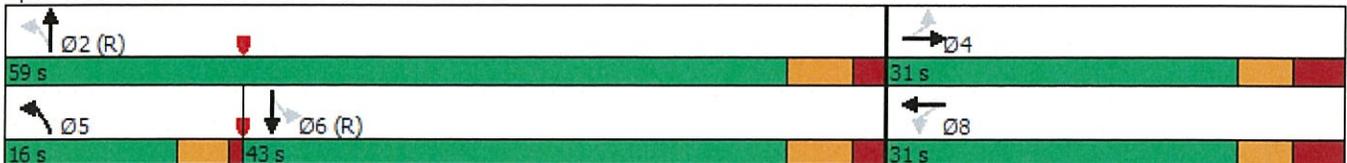


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	31.0	31.0		31.0	31.0		16.0	59.0		43.0	43.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		17.8%	65.6%		47.8%	47.8%	
Maximum Green (s)	23.7	23.7		23.7	23.7		11.5	52.4		36.4	36.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		21.6					56.6	54.5			41.8	
Actuated g/C Ratio		0.24					0.63	0.61			0.46	
v/c Ratio		0.90					0.40	0.27			0.51	
Control Delay		50.6					11.1	9.0			18.3	
Queue Delay		0.0					0.0	0.0			0.0	
Total Delay		50.6					11.1	9.0			18.3	
LOS		D					B	A			B	
Approach Delay		50.6						9.3			18.3	
Approach LOS		D						A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 23 (26%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 19.9
 Intersection Capacity Utilization 73.6%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service D

Splits and Phases: 3: 113TH STR & 66TH Ave N



Intersection: 3: 113TH STR & 66TH Ave N

Movement	EB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	T	T	TR	LT	T	TR
Maximum Queue (ft)	276	92	149	115	46	256	217	133
Average Queue (ft)	165	55	98	63	15	177	122	58
95th Queue (ft)	295	97	164	118	46	268	223	133
Link Distance (ft)	651		666	666	666	620	620	620
Upstream Blk Time (%)								
Queuing Penalty (veh)								
Storage Bay Dist (ft)		142						
Storage Blk Time (%)			1					
Queuing Penalty (veh)			1					

Network Summary

Network wide Queuing Penalty: 1

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↑↑↑			↖↖↖	
Traffic Volume (vph)	61	0	110	0	0	1	216	1016	1	1	889	116
Future Volume (vph)	61	0	110	0	0	1	216	1016	1	1	889	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	142		0	0		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	0.91	0.91
Frt		0.913			0.865						0.983	
Flt Protected		0.982					0.950					
Satd. Flow (prot)	0	1670	0	0	1611	0	1770	5085	0	0	4999	0
Flt Permitted		0.882					0.235				0.939	
Satd. Flow (perm)	0	1500	0	0	1611	0	438	5085	0	0	4694	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		85			108						28	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		709			271			694			648	
Travel Time (s)		16.1			6.2			15.8			14.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	62	0	112	0	0	1	220	1037	1	1	907	118
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	174	0	0	1	0	220	1038	0	0	1026	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 113TH STR & 66TH Ave N

10/23/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.3	25.3		25.3	25.3		9.5	24.6		24.6	24.6	
Total Split (s)	36.0	36.0		36.0	36.0		16.0	69.0		53.0	53.0	
Total Split (%)	34.3%	34.3%		34.3%	34.3%		15.2%	65.7%		50.5%	50.5%	
Maximum Green (s)	28.7	28.7		28.7	28.7		11.5	62.4		46.4	46.4	
Yellow Time (s)	3.7	3.7		3.7	3.7		3.5	4.4		4.4	4.4	
All-Red Time (s)	3.6	3.6		3.6	3.6		1.0	2.2		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		7.3			7.3		4.5	6.6			6.6	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		12.1			12.1		81.1	79.0			65.3	
Actuated g/C Ratio		0.12			0.12		0.77	0.75			0.62	
v/c Ratio		0.70			0.00		0.48	0.27			0.35	
Control Delay		37.6			0.0		7.4	4.7			10.6	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		37.6			0.0		7.4	4.7			10.6	
LOS		D			A		A	A			B	
Approach Delay		37.6						5.2			10.6	
Approach LOS		D						A			B	

Intersection Summary

Area Type:	Other
Cycle Length:	105
Actuated Cycle Length:	105
Offset:	100 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.70
Intersection Signal Delay:	9.7
Intersection Capacity Utilization	73.3%
Analysis Period (min)	15
Intersection LOS:	A
ICU Level of Service	D

Splits and Phases: 3: 113TH STR & 66TH Ave N



Queuing and Blocking Report
 Option B-Background Plus Project

10/23/2019

Intersection: 3: 113TH STR & 66TH Ave N

Movement	EB	WB	NB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	LTR	L	T	T	TR	LT	T	TR
Maximum Queue (ft)	187	9	144	173	135	72	237	192	84
Average Queue (ft)	103	1	85	79	65	26	142	100	40
95th Queue (ft)	193	12	149	182	147	76	260	226	105
Link Distance (ft)	651	213		666	666	666	620	620	620
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)			142						
Storage Blk Time (%)			0	2					
Queuing Penalty (veh)			1	4					

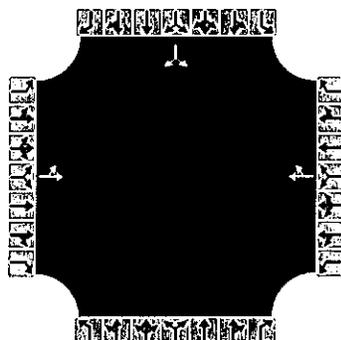
Network Summary

Network wide Queuing Penalty: 5

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.75
Time Analyzed	AM Peak		
Project Description	Option B-Background +Project		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	23	134			28	66				277		14
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	209			125						388		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.186			0.111						0.345		
Final Departure Headway, hd (s)	5.18			4.86						4.96		
Final Degree of Utilization, x	0.301			0.169						0.534		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	3.18			2.86						2.96		

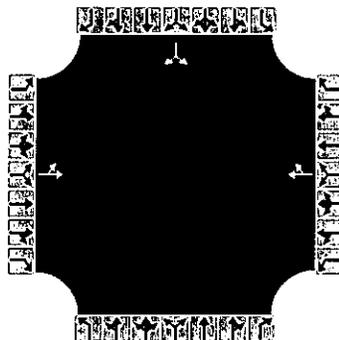
Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	209			125						388		
Capacity	695			741						726		
95% Queue Length, Q ₉₅ (veh)	1.3			0.6						3.2		
Control Delay (s/veh)	10.4			8.8						13.5		
Level of Service, LOS	B			A						B		
Approach Delay (s/veh)	10.4			8.8						13.5		
Approach LOS	B			A						B		
Intersection Delay, s/veh LOS	11.8						B					

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/17/2019	East/West Street	66th Ave North
Analysis Year	2019	North/South Street	116th St
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.75
Time Analyzed	PM Peak		
Project Description	Option B-Background +Project		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	19	67			141	168				92		34
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	115			412						168		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

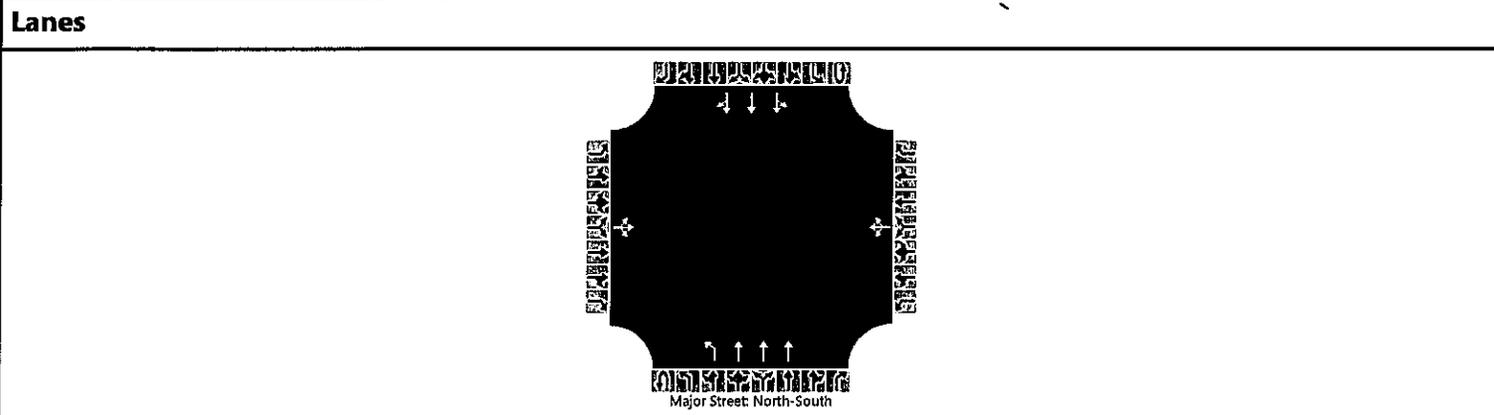
Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.102			0.366						0.149		
Final Departure Headway, hd (s)	4.89			4.21						5.09		
Final Degree of Utilization, x	0.156			0.482						0.237		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.89			2.21						3.09		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	115			412						168		
Capacity	737			855						708		
95% Queue Length, Q ₉₅ (veh)	0.5			2.7						0.9		
Control Delay (s/veh)	8.8			11.1						9.7		
Level of Service, LOS	A			B						A		
Approach Delay (s/veh)	8.8			11.1						9.7		
Approach LOS	A			B						A		
Intersection Delay, s/veh LOS	10.3						B					

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection					
Agency/Co.		Jurisdiction					
Date Performed	10/23/2019	East/West Street	62nd Avenue				
Analysis Year	2019	North/South Street	113th Street				
Time Analyzed	AM Peak	Peak Hour Factor	0.91				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Option B-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	1	0	0	1	3	0	0	0	3	0
Configuration			LTR				LTR			L	T			LT	T	TR
Volume (veh/h)		36	0	78		0	0	1	0	23	750			1	1204	15
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3				3		
Proportion Time Blocked																
Percent Grade (%)	0				0											
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

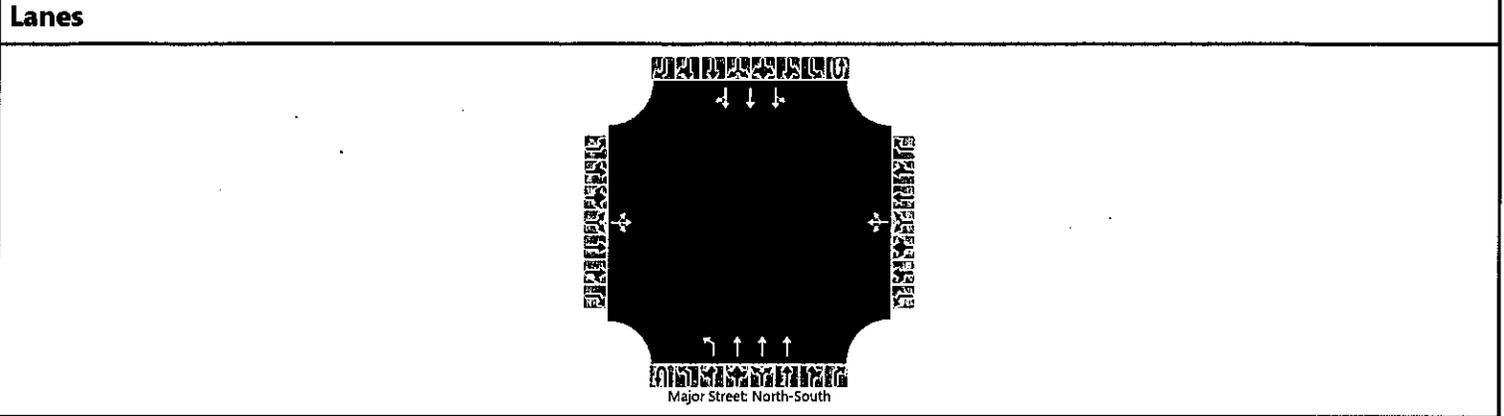
Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3		
Critical Headway (sec)		6.46	6.56	7.16		6.46	6.56	7.16		5.36				5.36		
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1		
Follow-Up Headway (sec)		3.83	4.03	3.93		3.83	4.03	3.93		3.13				3.13		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			125				1			25				1		
Capacity, c (veh/h)			177				501			265				472		
v/c Ratio			0.71				0.00			0.10				0.00		
95% Queue Length, Q ₉₅ (veh)			4.3				0.0			0.3				0.0		
Control Delay (s/veh)			63.5				12.2			20.0				12.6		
Level of Service (LOS)			F				B			C				B		
Approach Delay (s/veh)	63.5				12.2				0.6				0.0			
Approach LOS	F				B											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection		Agency/Co.		Jurisdiction	
Date Performed	10/23/2019	East/West Street	62nd Avenue				
Analysis Year	2019	North/South Street	113th Street				
Time Analyzed	PM Peak	Peak Hour Factor	0.97				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	Option B-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	1	0	0	1	3	0	0	0	3	0	
Configuration			LTR				LTR			L	T			LT	T	TR	
Volume (veh/h)		21	0	45		0	0	0	0	84	1158			2	887	44	
Percent Heavy Vehicles (%)		3	3	3		3	3	3	3	3				3			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

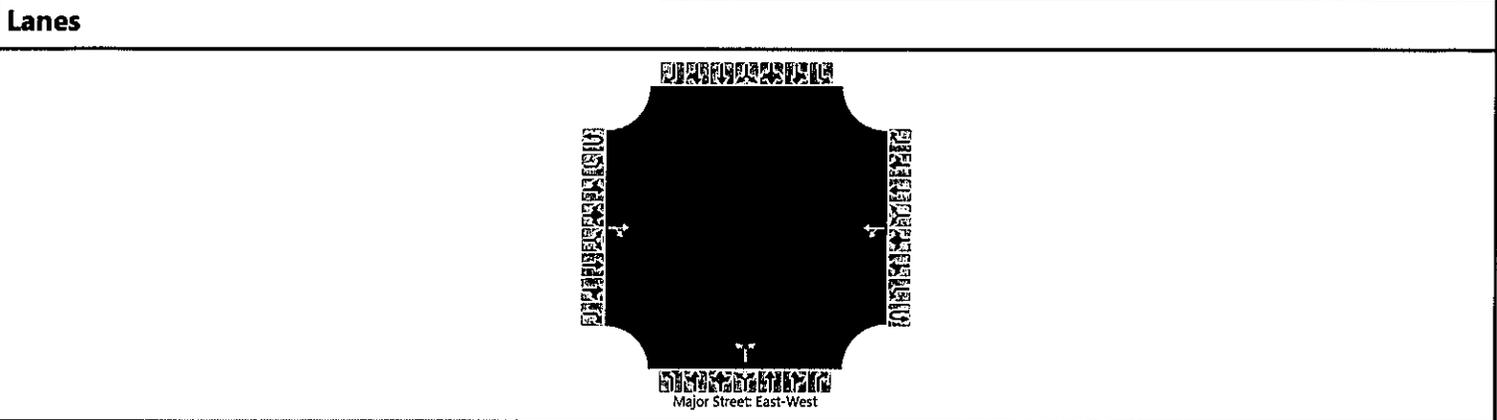
Base Critical Headway (sec)		6.4	6.5	7.1		6.4	6.5	7.1		5.3				5.3			
Critical Headway (sec)		6.46	6.56	7.16		6.46	6.56	7.16		5.36				5.36			
Base Follow-Up Headway (sec)		3.8	4.0	3.9		3.8	4.0	3.9		3.1				3.1			
Follow-Up Headway (sec)		3.83	4.03	3.93		3.83	4.03	3.93		3.13				3.13			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			68				0			87				2			
Capacity, c (veh/h)			203							406				313			
v/c Ratio			0.34							0.21				0.01			
95% Queue Length, Q ₉₅ (veh)			1.4							0.8				0.0			
Control Delay (s/veh)			31.5							16.2				16.6			
Level of Service (LOS)			D							C				C			
Approach Delay (s/veh)		31.5								1.1				0.1			
Approach LOS		D															

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection					
Agency/Co.		Jurisdiction					
Date Performed	10/23/2019	East/West Street	66th Ave North				
Analysis Year	2019	North/South Street	Project Access A				
Time Analyzed	AM Peak	Peak Hour Factor	0.86				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Option B-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			70	0		23	16			0		67				
Percent Heavy Vehicles (%)						3				3		3				
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

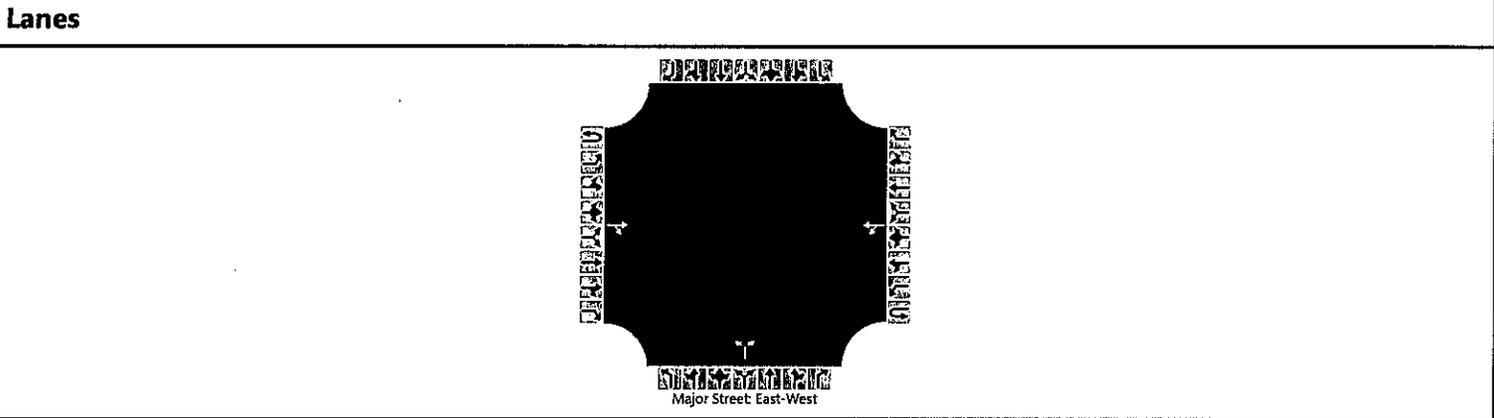
Base Critical Headway (sec)					4.1					7.1		6.2				
Critical Headway (sec)					4.13					6.43		6.23				
Base Follow-Up Headway (sec)					2.2					3.5		3.3				
Follow-Up Headway (sec)					2.23					3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					27					78						
Capacity, c (veh/h)					1510					976						
v/c Ratio					0.02					0.08						
95% Queue Length, Q ₉₅ (veh)					0.1					0.3						
Control Delay (s/veh)					7.4					9.0						
Level of Service (LOS)					A					A						
Approach Delay (s/veh)					4.4				9.0							
Approach LOS					A				A							

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst		Intersection					
Agency/Co.		Jurisdiction					
Date Performed	10/23/2019	East/West Street	66th Ave North				
Analysis Year	2019	North/South Street	Project Access A				
Time Analyzed	PM Peak	Peak Hour Factor	0.66				
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25				
Project Description	Option B-Background Plus Project						



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			39	0	76	71				0		44				
Percent Heavy Vehicles (%)						3					3		3			
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

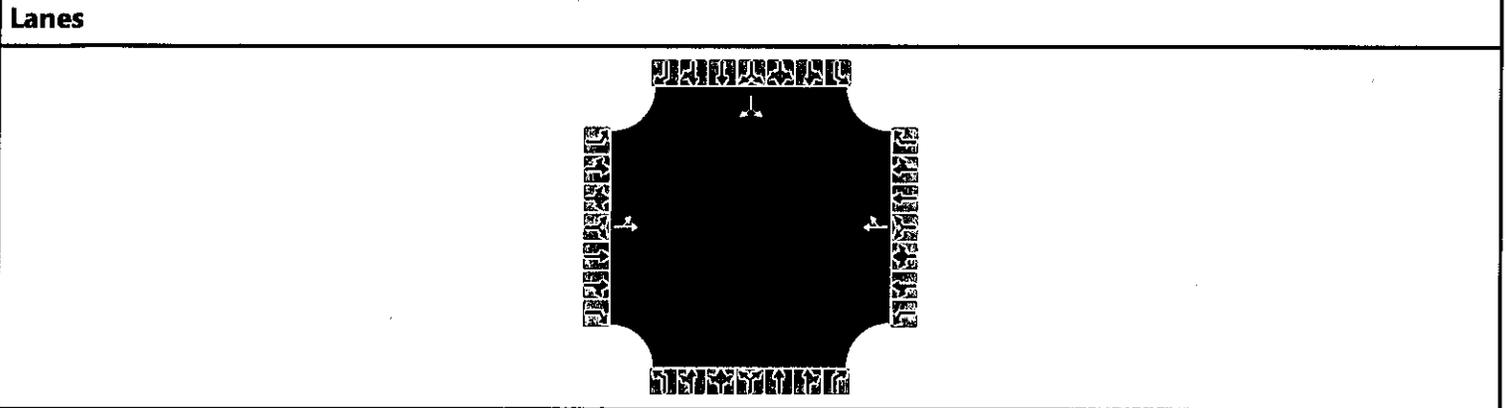
Base Critical Headway (sec)					4.1					7.1		6.2				
Critical Headway (sec)					4.13					6.43		6.23				
Base Follow-Up Headway (sec)					2.2					3.5		3.3				
Follow-Up Headway (sec)					2.23					3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					115					67						
Capacity, c (veh/h)					1538					1004						
v/c Ratio					0.07					0.07						
95% Queue Length, Q ₉₅ (veh)					0.2					0.2						
Control Delay (s/veh)					7.5					8.8						
Level of Service (LOS)					A					A						
Approach Delay (s/veh)					4.2				8.8							
Approach LOS					A				A							

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/25/2019	East/West Street	Access B/Irving Ave
Analysis Year	2019	North/South Street	Evergreen Ave
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.50
Time Analyzed	AM Peak		
Project Description	Option B- Background Plus Project		



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	0	82			27	1				8		0
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	164			56						16		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.146			0.050						0.014		
Final Departure Headway, hd (s)	4.03			4.10						4.60		
Final Degree of Utilization, x	0.183			0.064						0.020		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.03			2.10						2.60		

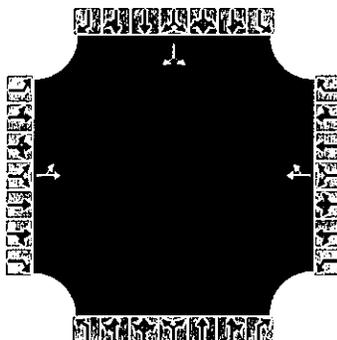
Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	164			56						16		
Capacity	894			877						783		
95% Queue Length, Q ₉₅ (veh)	0.7			0.2						0.1		
Control Delay (s/veh)	7.9			7.4						7.7		
Level of Service, LOS	A			A						A		
Approach Delay (s/veh)	7.9			7.4						7.7		
Approach LOS	A			A						A		
Intersection Delay, s/veh LOS	7.8						A					

HCS7 All-Way Stop Control Report

General Information		Site Information	
Analyst		Intersection	
Agency/Co.		Jurisdiction	
Date Performed	10/25/2019	East/West Street	Access B/Irving Ave
Analysis Year	2019	North/South Street	Evergreen Ave
Analysis Time Period (hrs)	0.25	Peak Hour Factor	0.56
Time Analyzed	PM Peak		
Project Description	Option B- Background Plus Project		

Lanes



Vehicle Volume and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume	0	54			92	8				2		0
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT			TR						LR		
Flow Rate, v (veh/h)	96			179						4		
Percent Heavy Vehicles	2			2						2		

Departure Headway and Service Time

Initial Departure Headway, hd (s)	3.20			3.20						3.20		
Initial Degree of Utilization, x	0.086			0.159						0.003		
Final Departure Headway, hd (s)	4.11			3.99						4.71		
Final Degree of Utilization, x	0.110			0.198						0.005		
Move-Up Time, m (s)	2.0			2.0						2.0		
Service Time, ts (s)	2.11			1.99						2.71		

Capacity, Delay and Level of Service

Flow Rate, v (veh/h)	96			179						4		
Capacity	877			903						765		
95% Queue Length, Q ₉₅ (veh)	0.4			0.7						0.0		
Control Delay (s/veh)	7.6			8.0						7.7		
Level of Service, LOS	A			A						A		
Approach Delay (s/veh)	7.6			8.0						7.7		
Approach LOS	A			A						A		
Intersection Delay, s/veh LOS	7.8						A					

NCHRP 279



Am - option A
 Project Access / 66th Ave
 NORTH

$V_A = 66$

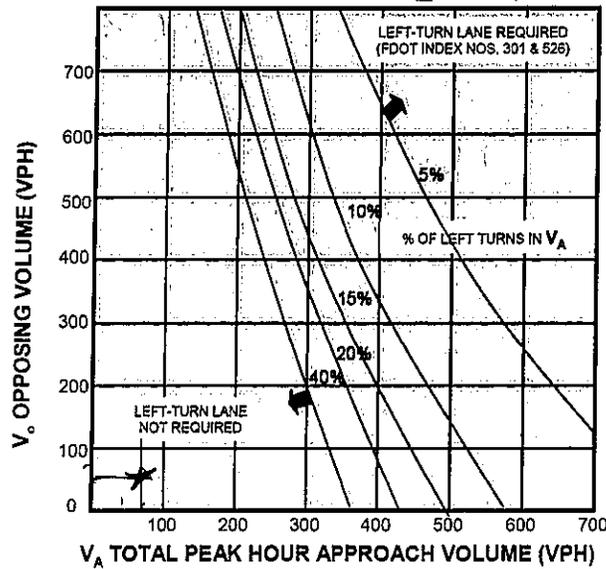
$V_O = 70$

% left turn in $V_A =$

$50/66 = 76$

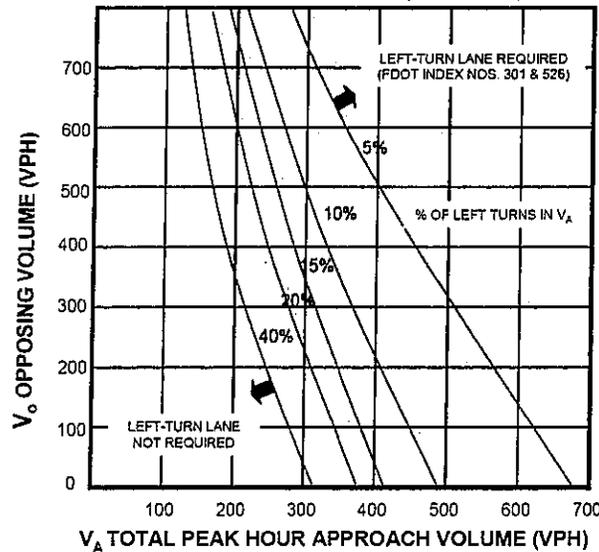
WBL turn lane not warranted

GRAPH 2A. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (≤ 40 MPH)



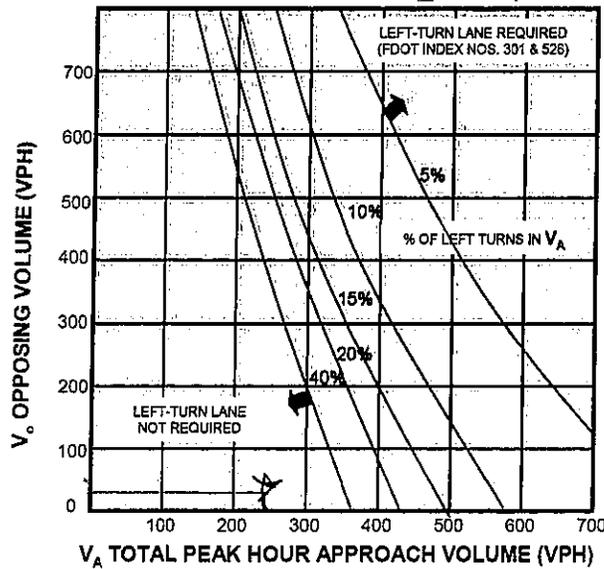
NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .

GRAPH 2B. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (45-50 MPH)



NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .

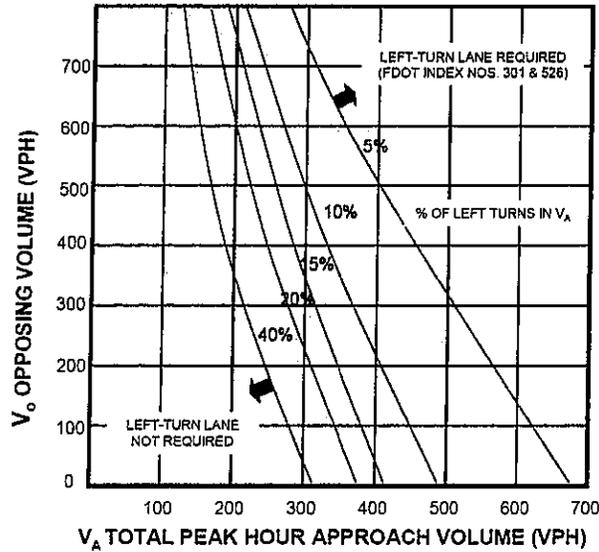
GRAPH 2A. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (≤ 40 MPH)



NOTE: Left-turn lane not required when intersection of V_A and V_o is below the curve corresponding to the % of left turns in V_A .

*Pm - option A
 project Access/66th Ave
 NORTH*
 $V_A = 239$
 $V_o = 39$
 % OF LEFT TURNS IN $V_A =$
 $168/239 = 70$
 WBL turn lane not warranted

GRAPH 2B. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (45-50 MPH)



NOTE: Left-turn lane not required when intersection of V_A and V_o is below the curve corresponding to the % of left turns in V_A .

Graphs 2A & 2B Source: National Cooperative Highway Research Program, Report No. 279.

AM-option B

Project A users / Beth Avenue N

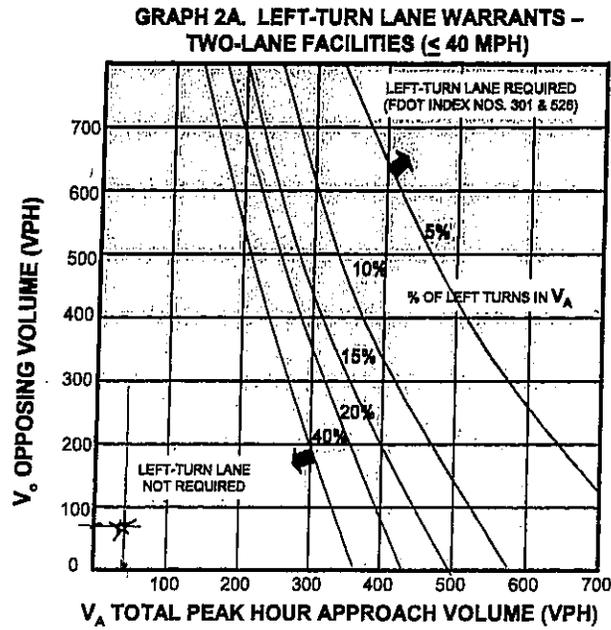
$$V_A = 39$$

$$V_O = 70$$

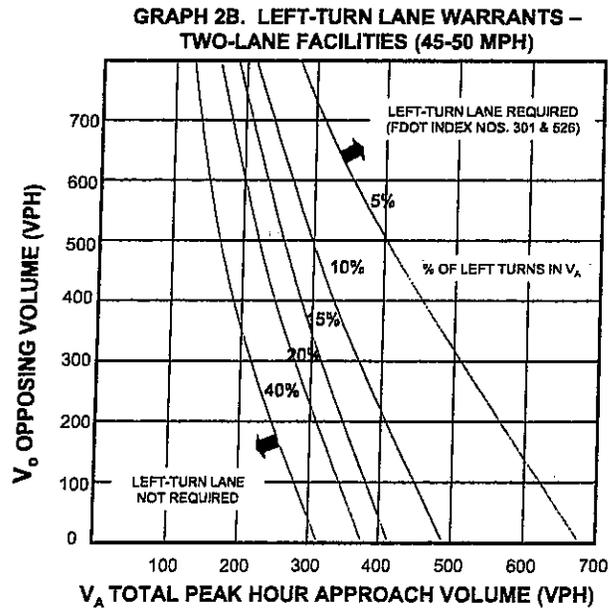
% of left turns in V_A

$$\frac{23}{39} = 59$$

WBL is not warranted



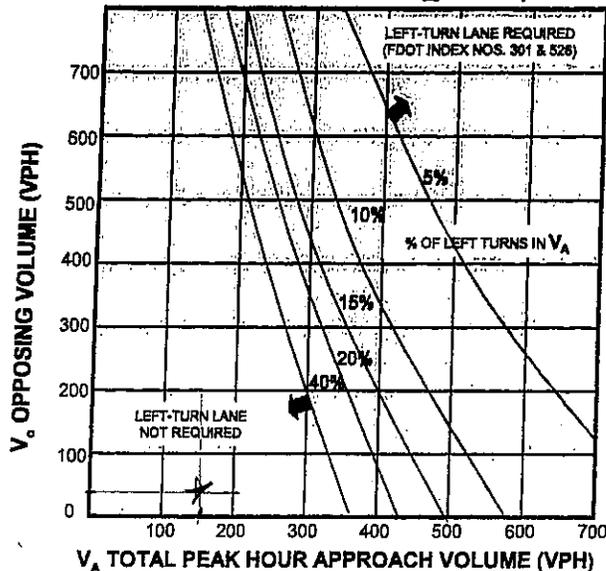
NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .



NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .

Graphs 2A & 2B Source: National Cooperative Highway Research Program, Report No. 279.

GRAPH 2A. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (≤ 40 MPH)

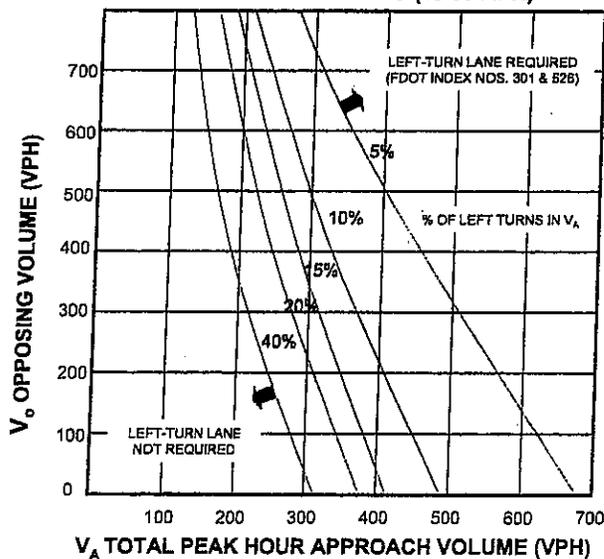


NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .

pm - option B
Project Access /
66th Ave N.

$V_A = 147$
 $V_O = 39$
% of left turns in V_A
 $\frac{76}{147} = 52$
WBL is not warranted.

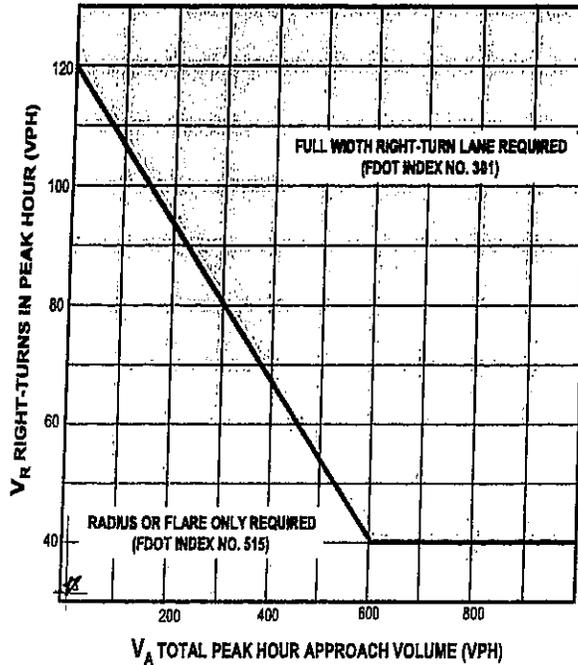
GRAPH 2B. LEFT-TURN LANE WARRANTS - TWO-LANE FACILITIES (45-50 MPH)



NOTE: Left-turn lane not required when intersection of V_A and V_O is below the curve corresponding to the % of left turns in V_A .

Graphs 2A & 2B Source: National Cooperative Highway Research Program, Report No. 279.

GRAPH 1A. RIGHT-TURN LANE WARRANTS - TWO-LANE FACILITIES

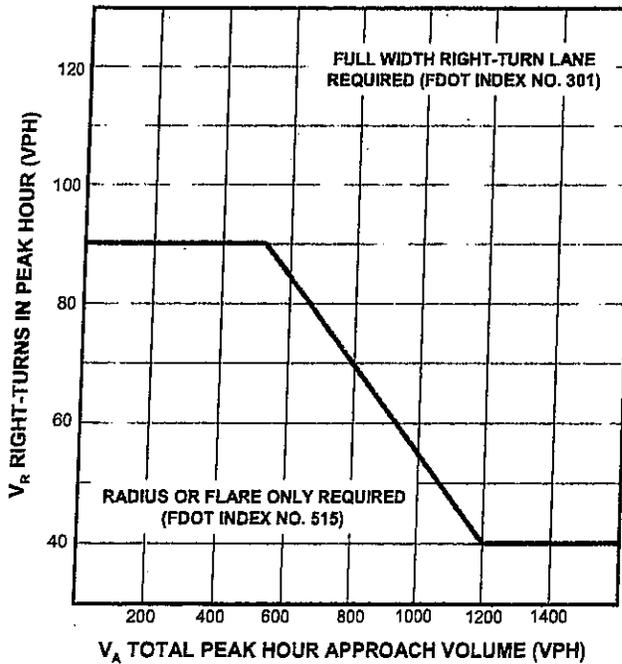


Am - option B
 Project access B
 Evergreen Avenue

VA = 28
 VR = 1
 WBR is not warranted

NOTE: For posted speeds at or under forty-five (45) mph, peak hour right turns greater than forty (40) VPH, and total peak hour approach less than 300 VPH, adjust right turn volumes. Adjust peak hour right turns = peak hour right turns-twenty (20).

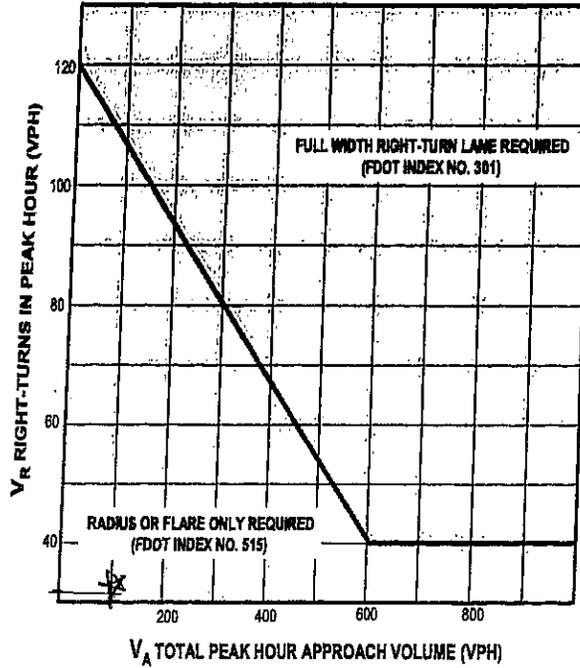
GRAPH 1B. RIGHT-TURN LANE WARRANTS
 FOUR- OR SIX-LANE FACILITIES



NOTE: For application on high speed highways.

Graphs 1A & 1B Source: National Cooperative Highway Research Program, Report No. 279.

GRAPH 1A. RIGHT-TURN LANE WARRANTS - TWO-LANE FACILITIES

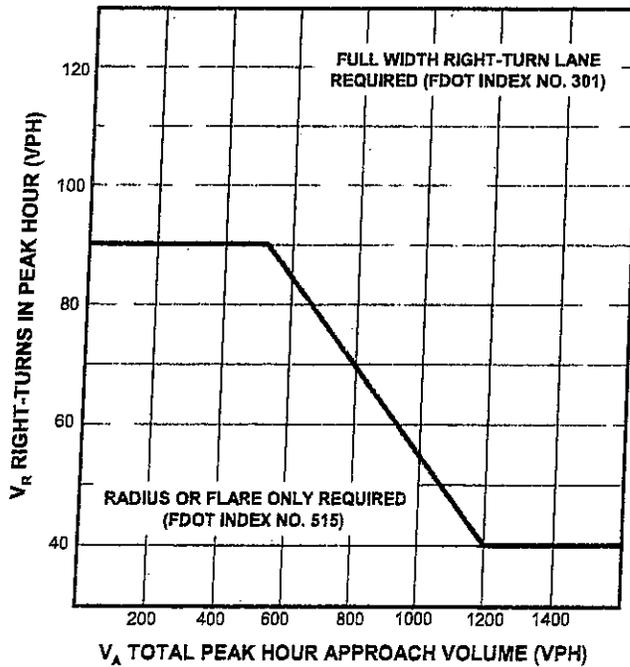


Pm - option B
Project Access B
Evergreen Avenue

VA = 100
VR = 8
WBR is not warranted

NOTE: For posted speeds at or under forty-five (45) mph, peak hour right turns greater than forty (40) VPH, and total peak hour approach less than 300 VPH, adjust right turn volumes. Adjust peak hour right turns = peak hour right turns-twenty (20).

GRAPH 1B. RIGHT-TURN LANE WARRANTS
 FOUR- OR SIX-LANE FACILITIES



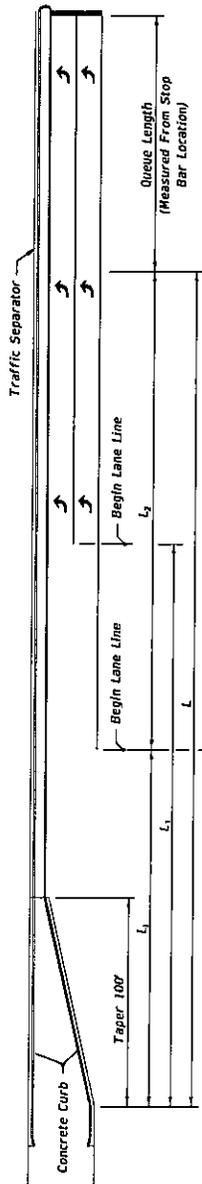
NOTE: For application on high speed highways.

Graphs 1A & 1B Source: National Cooperative Highway Research Program, Report No. 279.

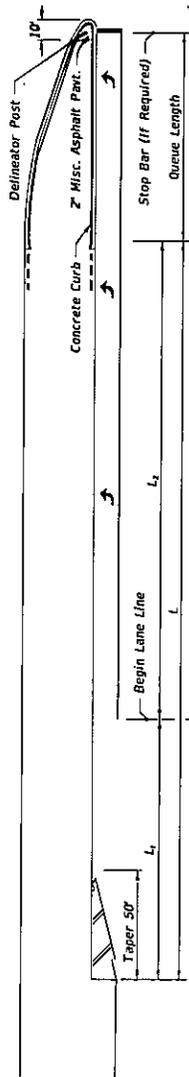
FDOT EXHIBIT 212-1



MEDIAN TURN LANES MINIMUM DECELERATION LENGTHS



Brakes Applied After Turning
Vehicle Clears Through Lane:
Entry Speed:
10 mph Below Design Speed
For Urban Condition
Average Running Speed For
Rural Condition



Brakes Applied After Turning
Vehicle Clears Through Lane:
Entry Speed:
10 mph Below Design Speed
For Urban Condition
Average Running Speed For
Rural Condition

Design Speed (mph)	URBAN CONDITIONS				RURAL CONDITIONS			
	Clearance Distance L_1 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)	Brake To Stop Distance L_2 (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L_3 (ft.)	
35	70	75	145	110	—	—	—	
40	80	75	155	120	—	—	—	
45	85	100	185	135	—	—	—	
50	105	135	240	160	185	290	160	
55	125	—	—	—	225	350	195	
60	145	—	—	—	260	405	230	
65	170	—	—	—	290	460	270	

NOT TO SCALE

EXHIBIT 212-1
01/01/2018