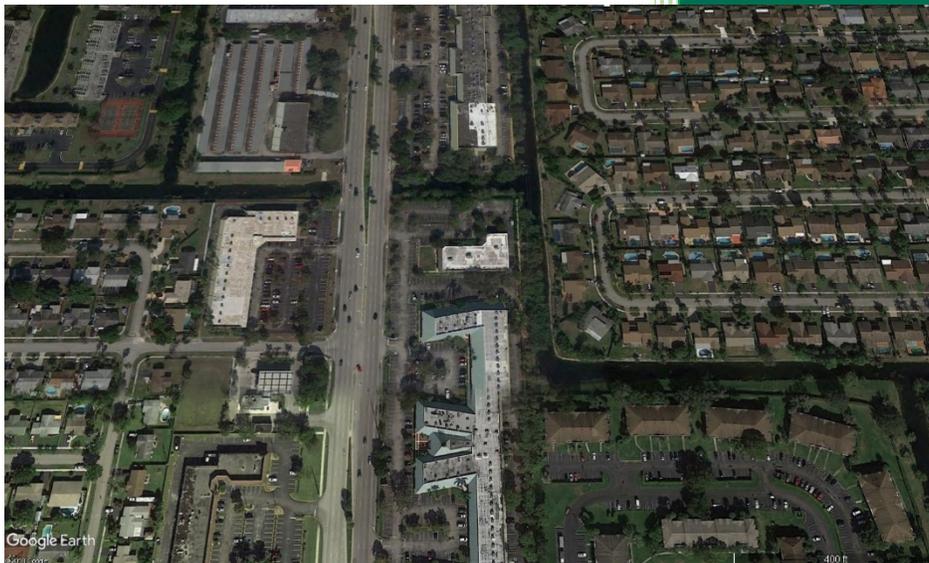


Sunfire High School

4800 North University Drive

Lauderhill, Florida 33351

Traffic Impact Study



September 19, 2019

Revised January 7, 2020

Prepared By:

KEITH

301 East Atlantic Boulevard
Pompano Beach, Florida 33060

Project No: 10979.00



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Lauderhill, Florida 33351

Traffic Impact Study

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January 2020

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TRAFFIC IMPACT STUDY
Sunfire High School
4800 North University Drive
Lauderhill, Florida 33351

Introduction

Sunfire High School is a charter school for grades 9th through 12th for students with all types of learning styles and strengths. They prepare students for modern-world jobs through a pioneering curriculum in a varied learning environment. The school is proposing to open a new location at 4800 North University Drive in Lauderhill, Florida with two (2) school sessions for the students. They will occupy an existing building previously occupied by North University High School.

Existing Conditions

The property is located at 4800 North University Drive between the signalized intersections of Inverrary Boulevard/NW 50 Street and NW 44 Street. The surrounding roadways are as follows:

- North University Drive – A six-lane, divided, north-south roadway. The speed limit is 45 mph.
- Inverrary Boulevard – A four-lane, divided, east-west roadway, east of North University Drive. The speed limit is 30 MPH.
- NW 50 Street – A two-lane, east-west roadway, west of North University Drive. The speed limit is 30 MPH.
- NW 44 Street – A four-lane, divided, east-west roadway. The speed limit is 30 MPH.

The project site currently has a right-in and right-out access driveway and a shared access with the property to the south. The property to the south has a driveway connection to North University Drive. This access is a full median opening with a southbound left turn lane. The project site was previously occupied by North University High School and is now currently a vacant building.

Figure 1 shows the project location.

Proposed Conditions

The Sunfire High School will occupy the existing building space on the site. There will be 350 students, grades 9 through 12, in two (2) shifts of 175 students in each. There are no planned changes to the site. The parking and access will remain the same.

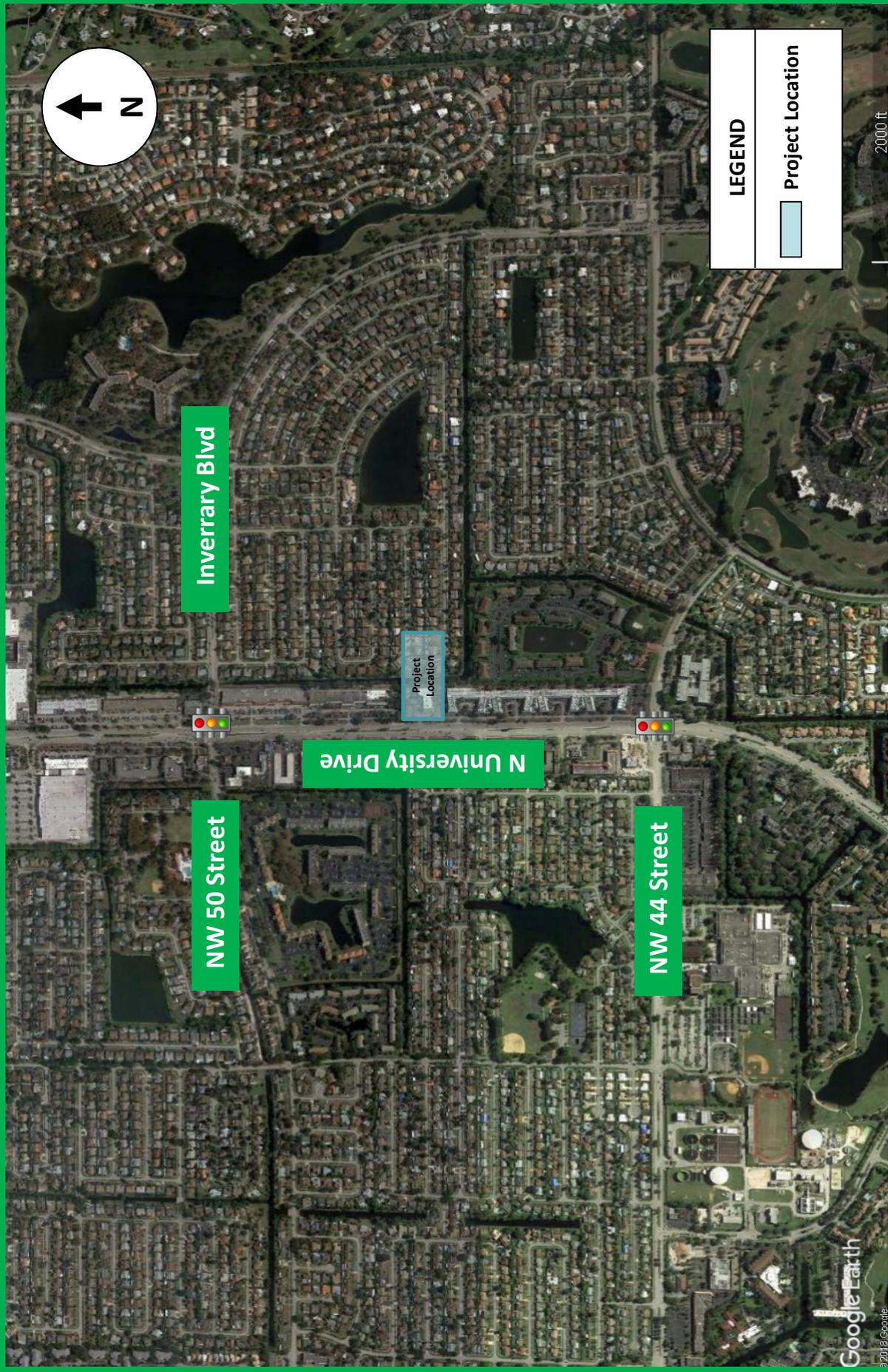


Figure 1
Sunfire High School
Lauderhill, Florida

Project Location

*301 East Atlantic Boulevard
 Pompano Beach, Florida 33060*



Methodology

This Traffic Impact Study consists of a report that will comply with the requirements of City of Lauderhill. The analyses provided are:

- Trip Generation for the proposed project.
- Trip Distribution for the project, including driveways.
- Data collection for the intersections of N University Drive/Inverrary Boulevard and N University Drive/NW 44 Street for the AM and PM Peak Hours.
- Florida Department of Transportation (FDOT) Peak Season Category Factor to convert the data into peak season.
- Growth Rate, for the background traffic, determined from existing FDOT Count Stations in the area.
- Intersection analyses using Synchro of the Existing Conditions, Future Conditions Without the Project and Future Conditions with the Project.
- Provide a signed and sealed report documenting the study methodology and the results of the analyses.

Trip Generation

Trip generation calculations for the proposed conditions are based on trip generation rates and equations published in the Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 10th Edition. Trip generation calculations for the proposed high school are based on ITE Land Use Code (LUC) 530, High School. The previous North University High School had 266 students and trip credit is calculated based on that number of students. The results are summarized in Table 1 for Daily, Table 2 for the AM Peak Hour and Table 3 for the PM Peak Hour.

Table 1
Trip Generation - Daily

Proposed Land Use	ITE Land Use Code	Intensity	Trip Generation Rate	In	Out	Total Trips		
						In	Out	Total
Existing Use High School	530	266 Students	$\ln(T)=0.76 \ln(X)+2.46$	50%	50%	407	408	815
Proposed Use High School	530	350 Students	$\ln(T)=0.76 \ln(X)+2.46$	50%	50%	502	502	1,004
Net New Trips						95	94	189

Source: ITE Trip Generation Handbook, 10 Edition

Table 2
Trip Generation - AM Peak Hour

Proposed Land Use	ITE Land Use Code	Intensity	Trip Generation Rate	In	Out	Total Trips		
						In	Out	Total
Existing Use High School	530	266 Students	$T=0.52(X)$	67%	33%	92	46	138
Proposed Use High School	530	350 Students	$T=0.52(X)$	67%	33%	122	60	182
Net New Trips						30	14	44

Source: ITE Trip Generation Handbook, 10 Edition

Table 3
Trip Generation - PM Peak Hour

Proposed Land Use	ITE Land Use Code	Intensity	Trip Generation Rate	In	Out	Total Trips		
						In	Out	Total
Existing Use High School	530	266 Students	$T=0.14(X)$	48%	52%	18	19	37
Proposed Use High School	530	350 Students	$T=0.14(X)$	48%	52%	24	25	49
Net New Trips						6	6	12

Source: ITE Trip Generation Handbook, 10 Edition

Using the ITE trip generation rates, the proposed high school, without trip credit and including both sessions, will generate 1,004 Daily trips, 182 AM Peak Hour trips and 49 PM Peak Hour trips. Using the previous high school for trip credit, the Sunfire High School will generate 189 Net New Daily trips, 44 Net New AM Peak Hour trips and 12 Net New PM Peak Hour trips for both sessions.

As the existing building has been vacant, and in order to be conservative, the total trips without trip credits will be used for the analyses. There are two (2) school sessions, each having 175 students which will generate 502 Daily trips, 91 AM Peak Hour Trips (61 In and 30 Out) and 25 PM Peak Hour Trips (12 In and 13 Out) which are one-half of the totals shown in the tables.

Appendix A includes the trip generation worksheets.

Trip Distribution

The trip distribution is based on the data from existing traffic counts, FDOT count stations and general knowledge of the area. Traffic is assumed to access the site via North University Drive, Inverrary Boulevard and NW 44 Street. The trip distribution is:

- North – 35%
- South – 32%
- East – 19%
- West – 14%

Figure 2 illustrates the trip distribution for the proposed development.

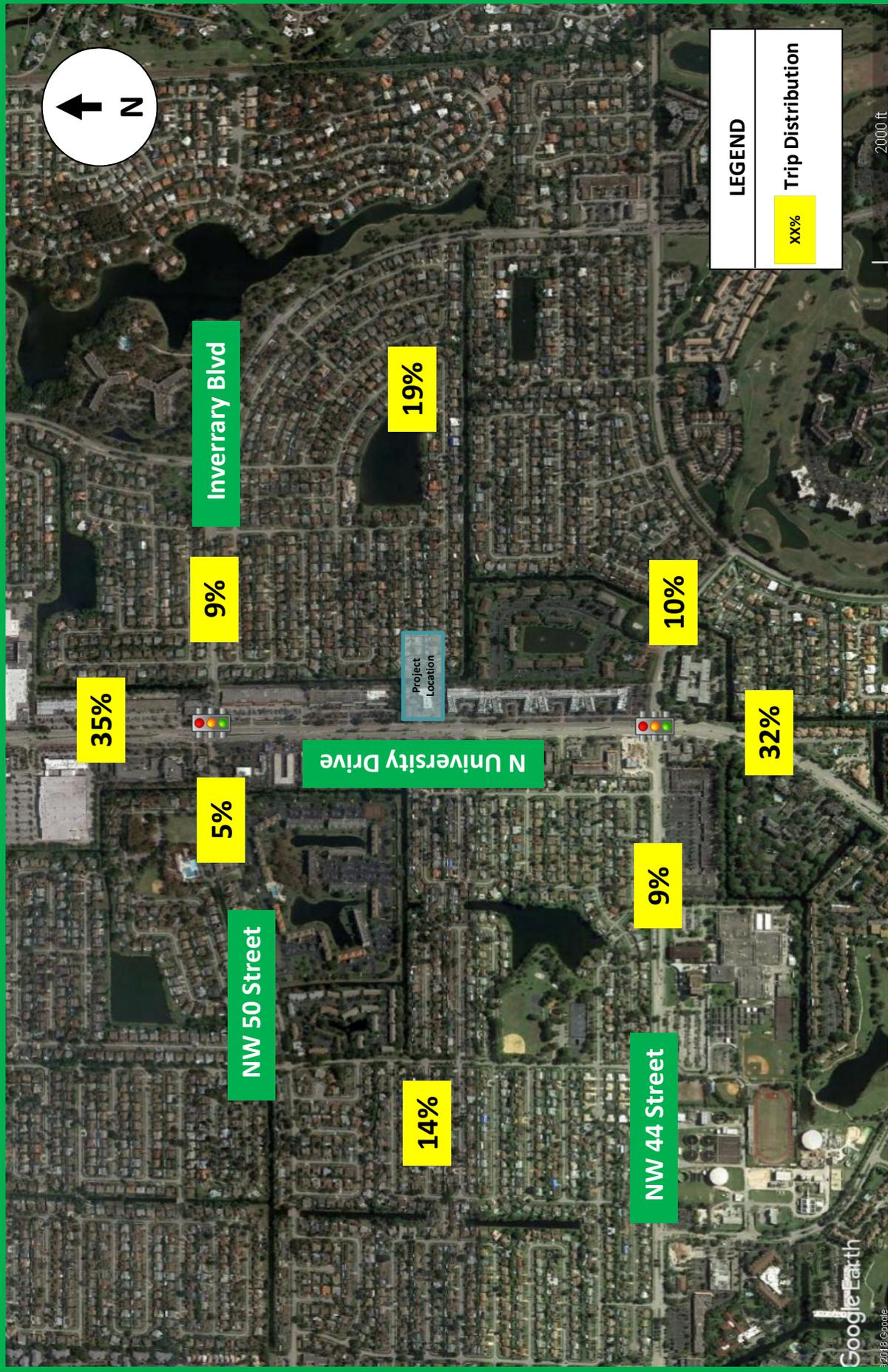


Figure 2
Sunfire High School
Lauderhill, Florida

Project Distribution

*301 East Atlantic Boulevard
 Pompano Beach, Florida 33060*



Intersection Analyses

The following intersections are analyzed for existing, future without the project and future with the project conditions for both the AM and PM Peak Hours:

- North University Drive and Inverrary Boulevard/NW 50 Street
- North University Drive and NW 44 Street

Traffic counts were collected at the above intersections on Tuesday, August 27, 2019 from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM. The counts were collected after the school year started and have been adjusted for the Peak Season Category Factor (PSCF) as provided by FDOT. Appendix B has the actual traffic counts and the PSCF for the project location. Figure 3 details the existing lane geometry at each intersection and Figure 4 details the existing traffic at the subject intersections.

The growth rate of 2.87% is documented through five (5) FDOT count stations around the project the FDOT Traffic Trends Analysis Tool. The five (5) sites yielded growth rate of 1.76%, 6.53%, 2.02%, 1.95% and 2.09%. The average of these rates is 2.87% and is applied for the 2020 background traffic. The FDOT Traffic Trends Analysis Tool spreadsheets, Historical AADT and growth calculations are included in Appendix C. Figure 5 is the 2020 Without Project Traffic.

Figure 6 shows the Project Traffic and Figure 7 shows the 2020 With Project Traffic.

The analyses are done using Synchro. The results of the analyses for the two (2) intersections are summarized in Table 4.

Table 4
Level of Service

Intersection	Existing 2019 (AM/PM)					Future Without Project (AM/PM)					Future With Project (AM/PM)				
	EB	WB	NB	SB	Int.	EB	WB	NB	SB	Int.	EB	WB	NB	SB	Int.
N University Drive and Inverrary Boulevard/NW 50 Street	D/D	D/D	C/D	D/C	D/D	D/D	D/D	C/D	D/C	D/D	D/D	E/D	C/C	D/D	D/D
Delay (s/veh)	52.6/53.7	52.7/48.8	33.1/35.2	35.9/32.8	38.5/36.8	51.7/52.6	54.9/50.0	34.5/37.0	37.0/34.0	39.7/38.1	51.4/52.6	55.2/50.0	34.8/37.0	37.3/34.0	40.0/38.1
Signalized															
N University Drive and NW 44 Street	D/E	D/E	D/D	E/D	D/D	D/E	D/E	D/D	E/D	E/D	D/E	D/E	D/D	E/D	E/D
Delay (s/veh)	49.6/58.8	54.2/59.9	43.1/39.9	59.3/40.5	52.0/45.5	50.1/59.0	54.2/60.4	44.8/41.5	67.7/41.9	55.7/46.7	50.2/58.9	54.1/60.3	45.4/41.6	72.3/42.0	57.6/46.7
Signalized															

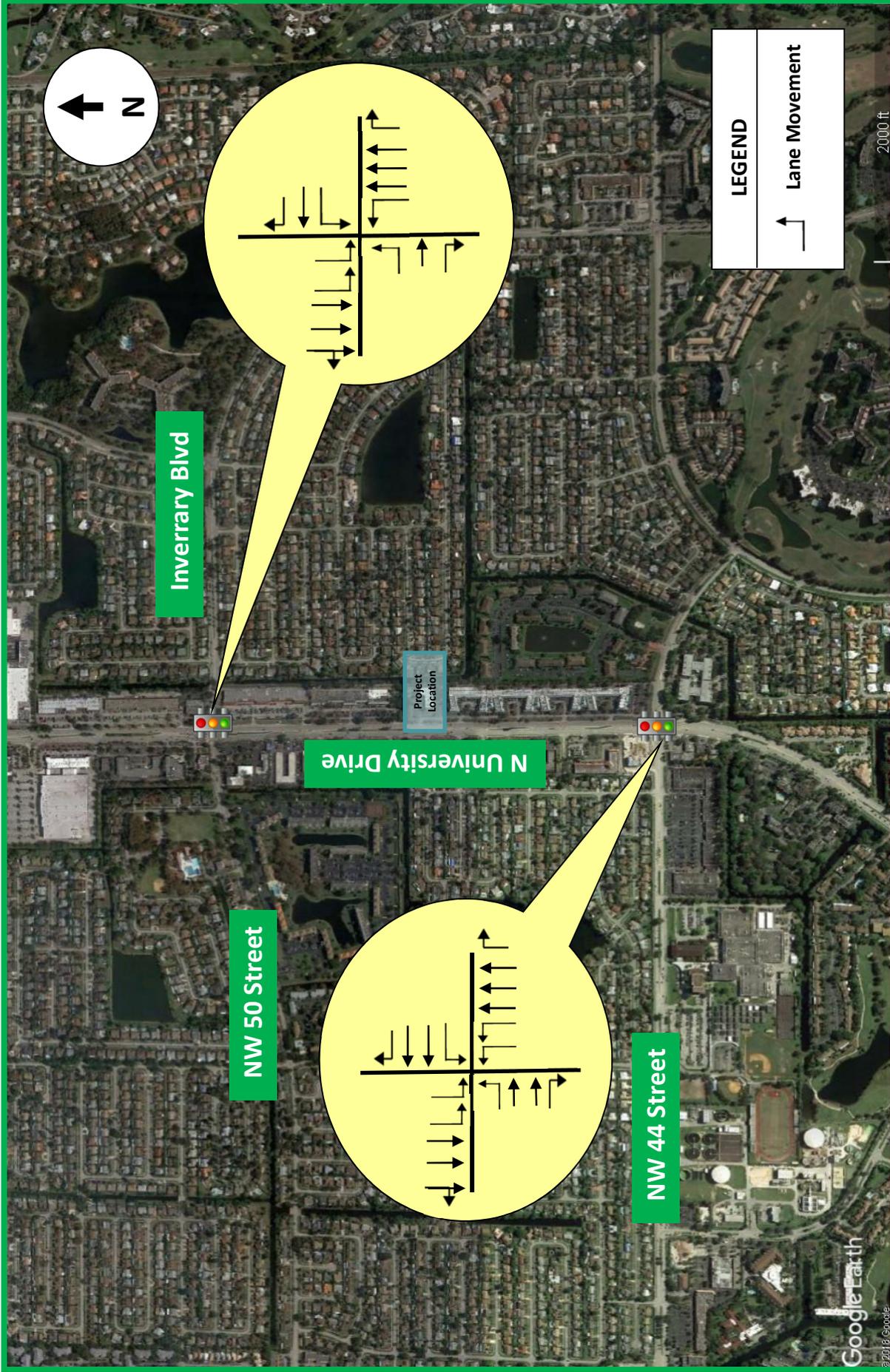
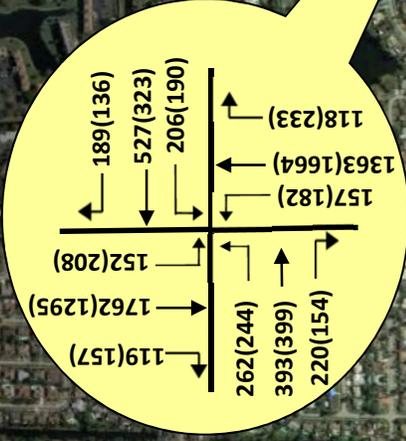
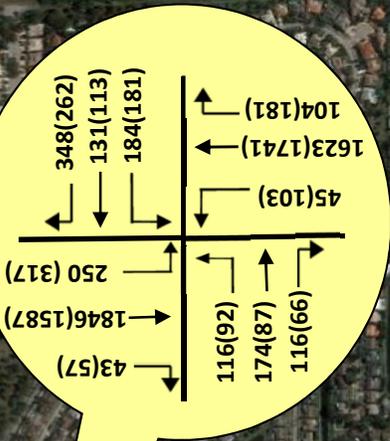


Figure 3
Sunfire High School
Lauderhill, Florida

Lane Geometry

301 East Atlantic Boulevard
 Pompano Beach, Florida 33060





KEITH

301 East Atlantic Boulevard
Pompano Beach, Florida 33060

Existing Traffic

Figure 4
Sunfire High School
Lauderhill, Florida



Figure 5
Sunfire High School
Lauderhill, Florida

2020 Traffic Without Project

301 East Atlantic Boulevard
 Pompano Beach, Florida 33060





Figure 6
Sunfire High School
Lauderhill, Florida

Project Traffic

301 East Atlantic Boulevard
 Pompano Beach, Florida 33060





Figure 7
Sunfire High School
Lauderhill, Florida

2020 Traffic With Project

301 East Atlantic Boulevard
 Pompano Beach, Florida 33060



The overall Level of Service (LOS) for the intersections are acceptable for all conditions. Some of the individual movements operate at a lower level of service in the future (2020) without the project and remain the same with the project.

The turning movement count data, the signal timing and the Synchro summary reports are included in Appendix D.

Broward County Transit Routes

Many of the students that will attend Sunfire High School are expected to use public transportation. The existing north-south transit service along University Drive is Bus Route 2, which runs from NW 207 Street and University Drive in Miami to Westview Drive and University Drive in Coral Springs. There are two (2) existing transit stops, both northbound and southbound, on North University Drive, just south of the site, that are on Route 2.

Route 2 has many connections to east-west routes providing connectivity throughout the County. The Route 2 information is provided in Appendix E.

Pedestrian Access

Pedestrian access to the school would be along North University Drive. During the data collection at the intersections, more pedestrian activity was observed at North University Drive and NW 44 Street. There were 15 pedestrians on northbound North University Drive at NW 44 Street during the AM Peak Hour, four (4) on southbound North University Drive and eight (8) on eastbound NW 44 Street. During the PM Peak Hour there was one (1) pedestrian on northbound North University Drive at NW 44 Street, one (1) on southbound North University Drive and three (3) on eastbound NW 44 Street.

The northbound and southbound transit stops are 1,690 feet from NW 50 Street/Inverrary Boulevard and 1,490 feet from NW 44 Street. The northbound transit stop is 200 feet from the proposed school site. The southbound transit stop would need to be accessed via NW 50 Street/Inverrary Boulevard or NW 44 Street with both routes being about 3,000 feet away.

Conclusions

Sunfire High School is a charter school for grades 9th through 12th for students with all types of learning styles and strengths. They prepare students for modern-world jobs through a pioneering curriculum in a varied learning environment. The school is proposing to open a new location at 4800 North University Drive in Lauderhill, Florida with two (2) school sessions for the students. They will occupy an existing building previously occupied by North University High School.

The existing access to the site is sufficient to accommodate the proposed trips. The signalized intersections to the north and south of the project will provide acceptable gaps for entering and exiting traffic. The trip generation for the project, without deductions, indicates that the new trips anticipated to be generated by the proposed location of the Sunfire High School will not have a significant impact on the surrounding roadways. The intersections around the proposed development will continue to operate at acceptable Levels of Service.

Based on the findings in this report, the proposed development, Sunfire High School, is compatible with the surrounding neighborhood and will not have a significant impact on the surrounding roadways.

Appendix A

Trip Generation

High School (530)

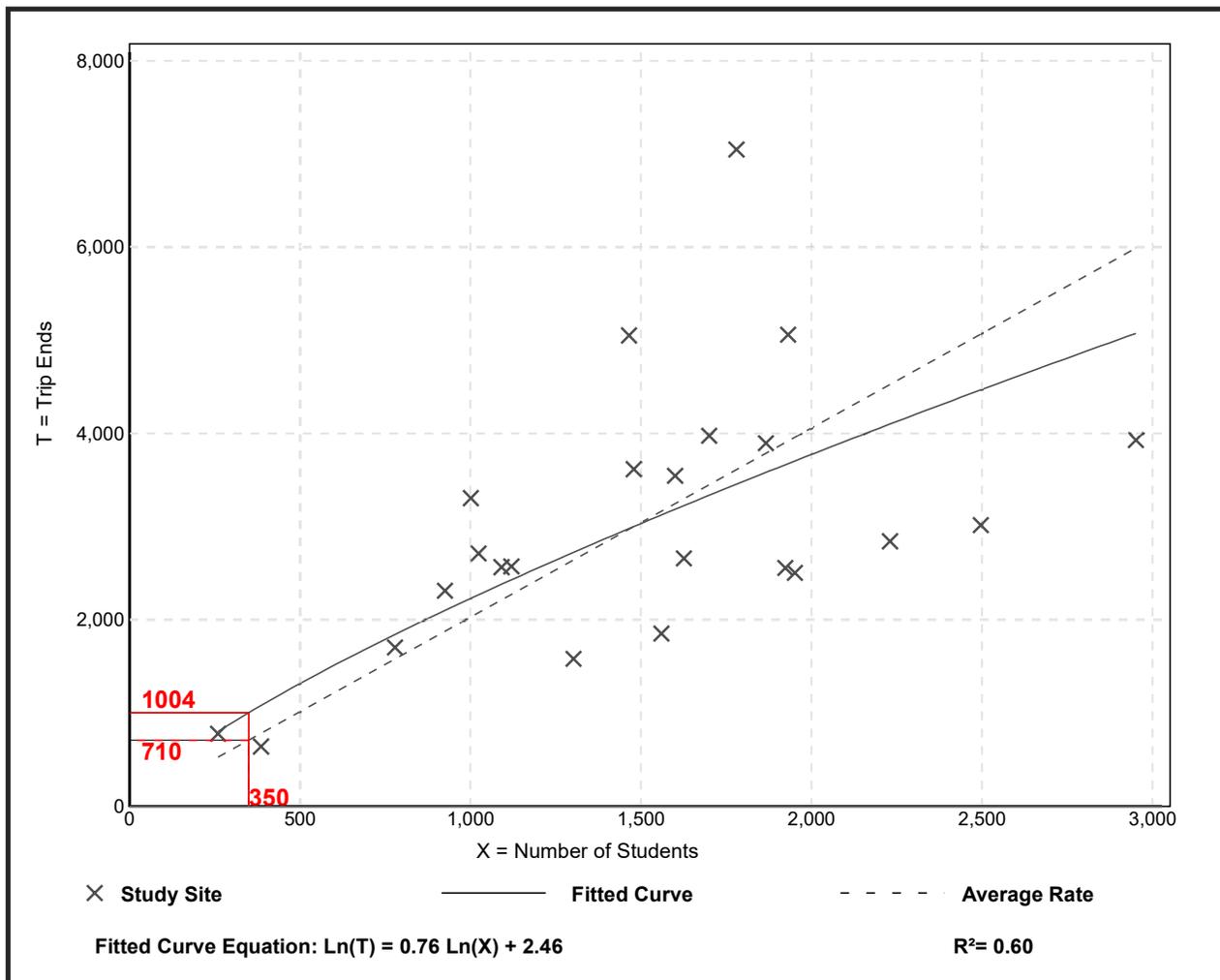
Vehicle Trip Ends vs: Students
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. Num. of Students: 1498
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Student

Average Rate	Range of Rates	Standard Deviation
2.03	1.19 - 3.96	0.82

Data Plot and Equation



Appendix B

Traffic Counts

Peak Season Category Factor

INVERRARY BOULEVRD & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: J. FLOOD & R. MARTINEZ
 SIGNALIZED

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

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : INV_UNIV
 Page : 1

ALL VEHICLES

Date	UNIVERSITY DRIVE From North				INVERRARY BOULEVARD From East				UNIVERSITY DRIVE From South				NW 50TH STREET From West				Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
08/27/19																	
07:00	1	18	416	7	0	31	23	74	5	5	368	19	0	23	23	22	1035
07:15	0	40	421	9	0	61	45	90	4	13	360	33	0	35	43	39	1193
07:30	0	47	506	13	0	43	43	105	2	10	410	19	1	34	47	30	1310
07:45	1	72	376	9	0	48	43	83	0	7	416	22	0	30	46	23	1176
Hr Total	2	177	1719	38	0	183	154	352	11	35	1554	93	1	122	159	114	4714
08:00	1	55	408	7	0	46	27	78	4	8	336	23	0	32	44	32	1101
08:15	2	62	485	12	1	39	13	69	3	9	399	36	0	15	30	27	1202
08:30	3	50	332	5	0	58	24	72	6	7	350	28	0	31	39	27	1032
08:45	0	30	442	6	0	41	24	95	6	6	309	22	0	24	23	24	1052
Hr Total	6	197	1667	30	1	184	88	314	19	30	1394	109	0	102	136	110	4387
* BREAK *																	
16:00	6	69	344	9	1	29	29	60	10	14	387	30	0	18	22	14	1042
16:15	5	78	407	16	0	41	25	55	2	15	457	41	0	18	19	14	1193
16:30	3	60	380	15	2	48	28	70	9	18	379	44	0	24	21	15	1116
16:45	4	78	369	14	0	43	27	63	12	19	406	45	0	22	28	20	1150
Hr Total	18	285	1500	54	3	161	109	248	33	66	1629	160	0	82	90	63	4501
17:00	4	73	370	10	1	39	29	64	3	21	432	44	0	24	16	14	1144
17:15	6	72	382	12	0	45	34	71	6	12	320	43	0	27	40	17	1087
17:30	7	69	404	24	0	46	37	57	4	11	429	51	1	17	25	18	1200
17:45	6	73	320	12	1	37	18	55	1	20	407	41	0	6	35	10	1042
Hr Total	23	287	1476	58	2	167	118	247	14	64	1588	179	1	74	116	59	4473
TOTAL	49	946	6362	180	6	695	469	1161	77	195	6165	541	2	380	501	346	18075

TRAFFIC SURVEY SPECIALISTS, INC.

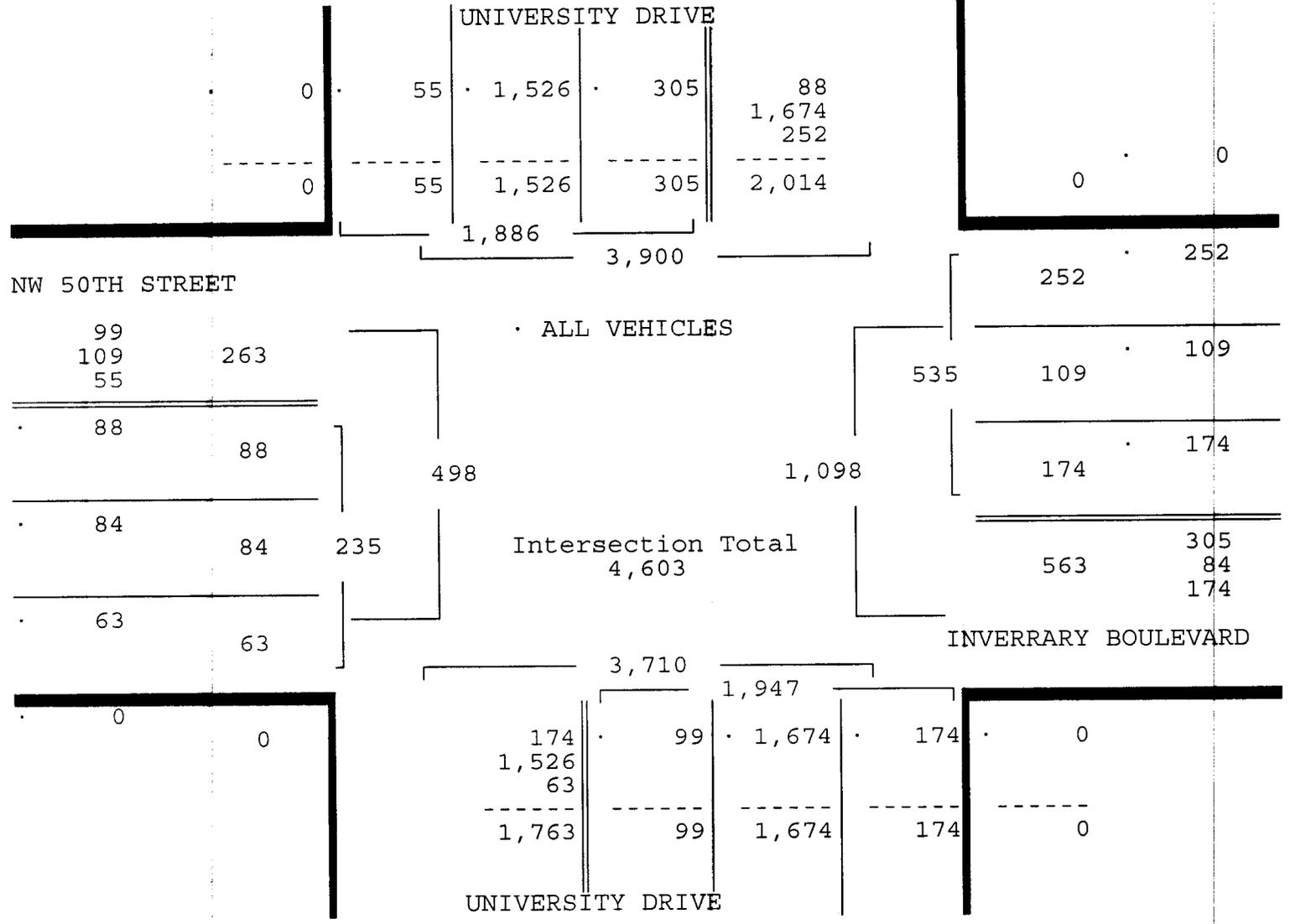
INVERRARY BOULEVRD & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: J. FLOOD & R. MARTINEZ
 SIGNALIZED

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

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : INV_UNIV
 Page : 3

ALL VEHICLES

UNIVERSITY DRIVE From North					INVERRARY BOULEVARD From East				UNIVERSITY DRIVE From South				NW 50TH STREET From West				Total		
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left		Thru	Right
Date 08/27/19																			
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 08/27/19																			
Peak start 16:15					16:15				16:15				16:15						
Volume	16	289	1526	55	3	171	109	252	26	73	1674	174	0	88	84	63			
Percent	1%	15%	81%	3%	1%	32%	20%	47%	1%	4%	86%	9%	0%	37%	36%	27%			
Pk total	1886				535				1947				235						
Highest 16:15																			
Volume	5	78	407	16	2	48	28	70	2	15	457	41	0	22	28	20			
Hi total	506				148				515				70						
PHF	.93				.90				.95				.84						



INVERRARY BOULEVRD & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: J. FLOOD & R. MARTINEZ
 SIGNALIZED

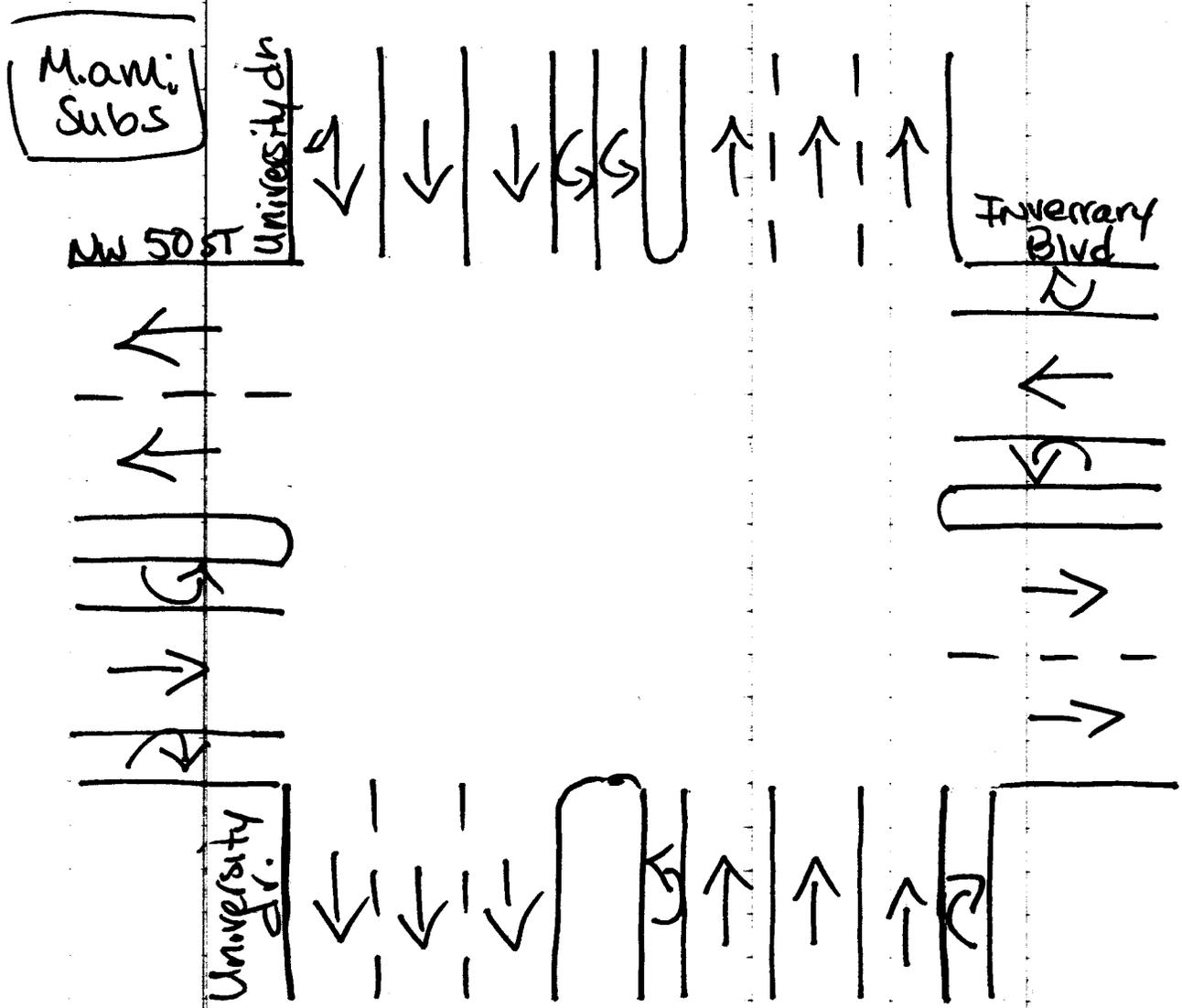
TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : INV_UNIV
 Page : 1

PEDESTRIANS & BIKES

Date	UNIVERSITY DRIVE From North				INVERRARY BOULEVARD From East				UNIVERSITY DRIVE From South				NW 50TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
08/27/19	-----																
07:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	2	0	0	0	2	0	1	0	0	0	0	5
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	2	0	0	0	2	0	1	0	0	0	0	6
08:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
08:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0	3
Hr Total	0	1	0	3	0	0	0	0	0	3	0	0	0	0	0	0	7
----- * BREAK * -----																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
16:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	1	0	1	0	1	0	0	0	0	0	0	0	1	0	1	5
17:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL	0	4	0	5	0	3	0	0	0	5	0	1	0	1	0	1	20

North



Lauderhill, Florida
 August 27, 2019
 drawn by: Luis Palomares
 signalized

TRAFFIC SURVEY SPECIALISTS, INC.

NW 44TH STREET & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: S. SALVO & M. CRUZ
 SIGNALIZED

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

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : 44STUNIV
 Page : 1

ALL VEHICLES

Date	UNIVERSITY DRIVE From North				NW 44TH STREET From East				UNIVERSITY DRIVE From South				NW 44TH STREET From West				Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
08/27/19																	
07:00	2	18	380	34	3	48	115	42	0	33	303	13	4	50	57	34	1136
07:15	1	24	474	37	0	55	160	39	4	43	335	24	2	62	94	62	1416
07:30	2	35	407	25	0	54	186	50	2	38	260	17	5	76	132	77	1366
07:45	4	35	434	30	0	45	85	54	3	27	379	31	3	54	94	41	1319
Hr Total	9	112	1695	126	3	202	546	185	9	141	1277	85	14	242	377	214	5237
08:00	4	41	379	22	1	43	76	39	3	31	337	41	4	46	58	32	1157
08:15	4	30	434	24	0	53	96	42	3	27	313	38	13	46	81	40	1244
08:30	4	44	414	33	0	41	66	41	2	29	329	43	2	45	63	23	1179
08:45	2	45	397	22	0	32	94	29	3	27	319	34	3	40	70	27	1144
Hr Total	14	160	1624	101	1	169	332	151	11	114	1298	156	22	177	272	122	4724
* BREAK *																	
16:00	2	40	350	22	1	32	56	45	4	36	413	46	3	31	56	32	1169
16:15	2	61	320	25	1	55	53	44	4	22	364	49	3	42	64	27	1136
16:30	3	37	348	25	1	52	55	45	1	46	401	56	2	40	71	31	1214
16:45	0	49	306	25	0	38	64	30	7	40	349	46	9	67	83	37	1150
Hr Total	7	187	1324	97	3	177	228	164	16	144	1527	197	17	180	274	127	4669
17:00	1	46	313	44	2	50	99	22	4	37	429	50	3	65	96	41	1302
17:15	8	57	332	28	2	46	80	30	9	40	374	48	5	51	98	46	1254
17:30	3	49	293	36	3	37	69	49	5	37	367	72	5	50	101	29	1205
17:45	1	35	307	43	2	41	63	30	4	39	430	54	6	50	89	32	1226
Hr Total	13	187	1245	151	9	174	311	131	22	153	1600	224	19	216	384	148	4987
TOTAL	43	646	5888	475	16	722	1417	631	58	552	5702	662	72	815	1307	611	19617

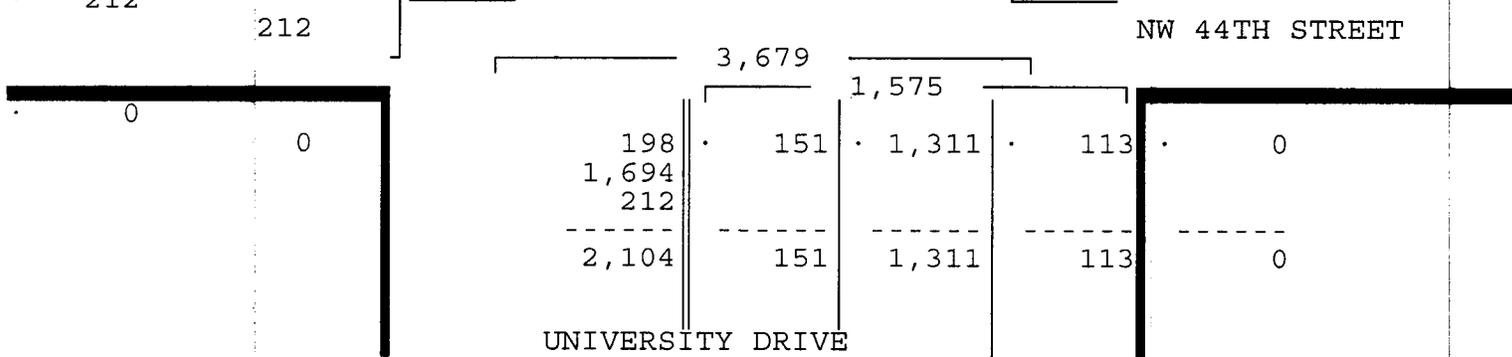
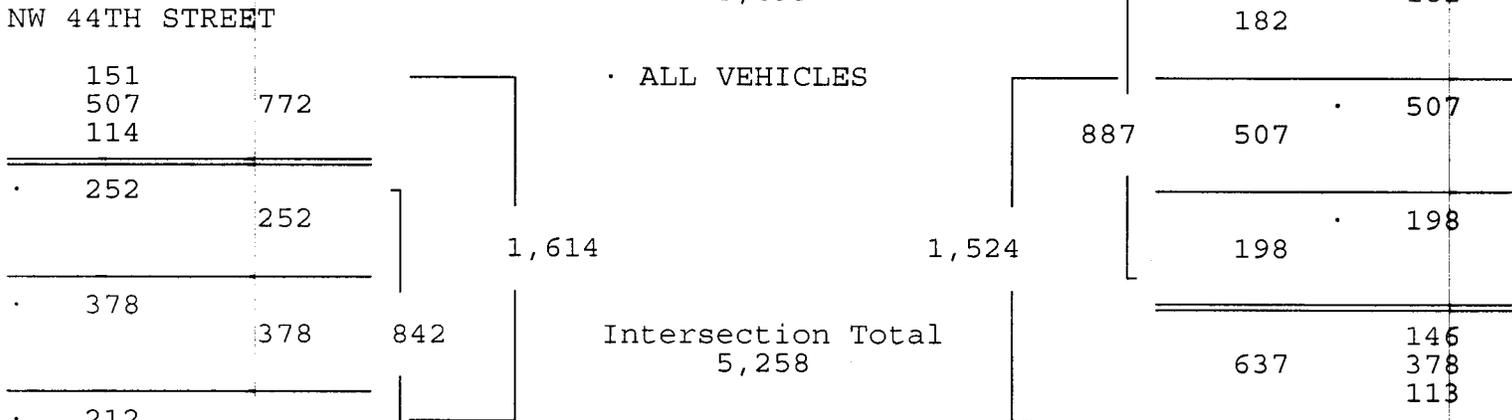
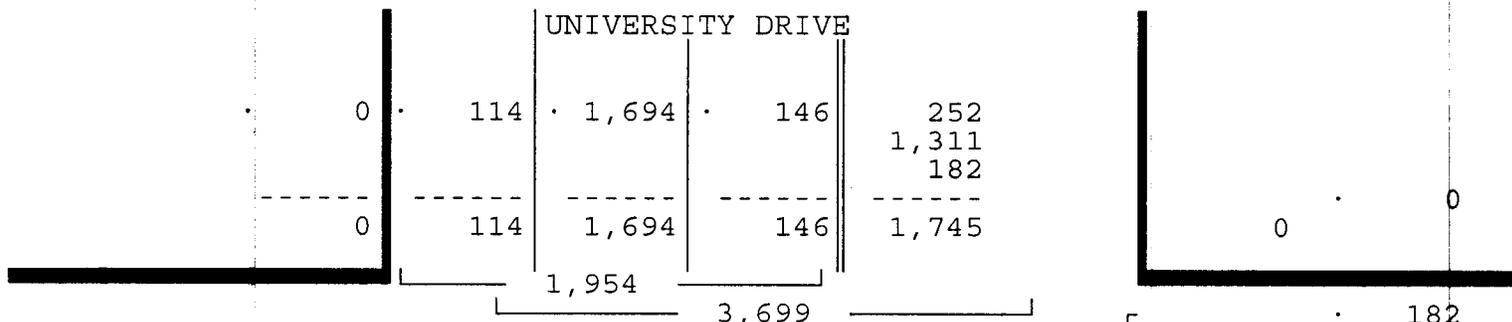
NW 44TH STREET & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: S. SALVO & M. CRUZ
 SIGNALIZED

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

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : 44STUNIV
 Page : 2

ALL VEHICLES

UNIVERSITY DRIVE From North				NW 44TH STREET From East				UNIVERSITY DRIVE From South				NW 44TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
Date 08/27/19																
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 08/27/19																
Peak start 07:15				07:15				07:15				07:15				
Volume	11	135	1694	114	1	197	507	182	12	139	1311	113	14	238	378	212
Percent	1%	7%	87%	6%	0%	22%	57%	21%	1%	9%	83%	7%	2%	28%	45%	25%
Pk total	1954			887			1575			842						
Highest	07:15			07:30			07:45			07:30						
Volume	1	24	474	37	0	54	186	50	3	27	379	31	5	76	132	77
Hi total	536			290			440			290						
PHF	.91			.76			.89			.73						



NW 44TH STREET & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: S. SALVO & M. CRUZ
 SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
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Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : 44STUNIV
 Page : 3

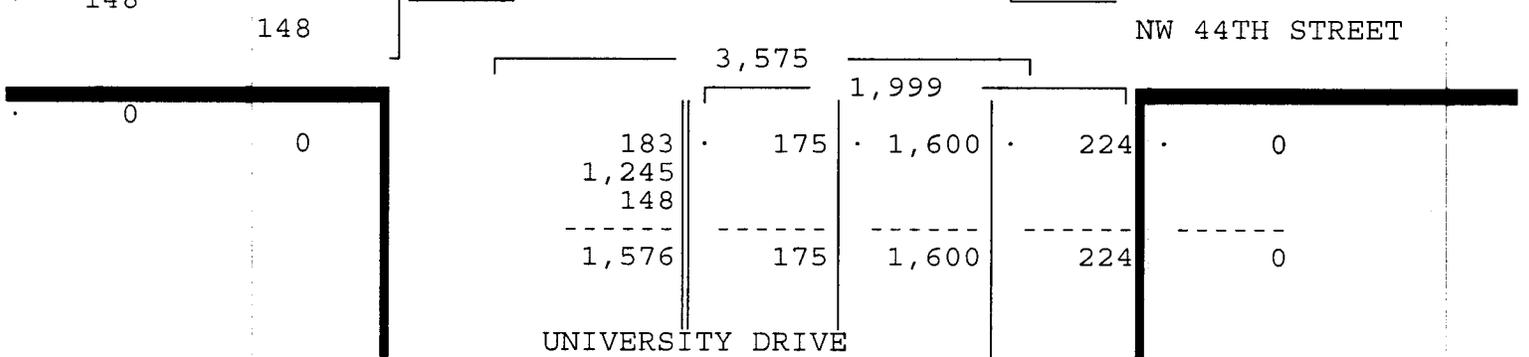
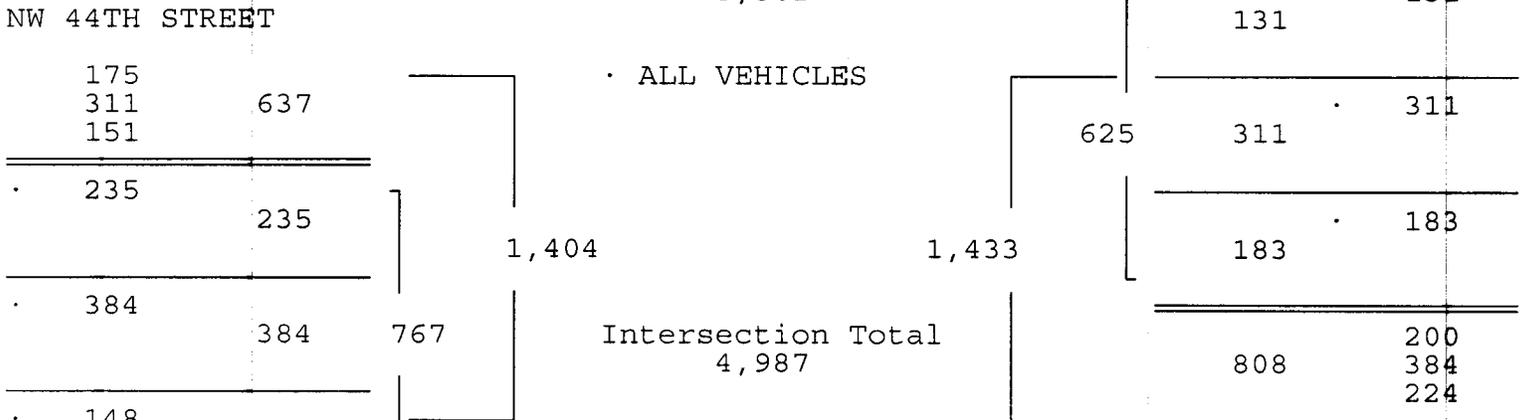
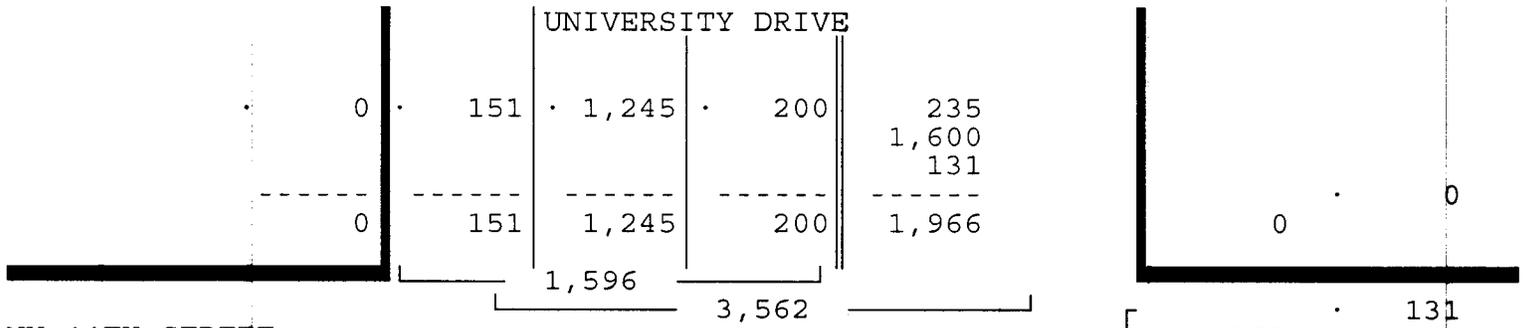
ALL VEHICLES

UNIVERSITY DRIVE From North				NW 44TH STREET From East				UNIVERSITY DRIVE From South				NW 44TH STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 08/27/19

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 08/27/19

Peak start 17:00				17:00				17:00				17:00				
Volume	13	187	1245	151	9	174	311	131	22	153	1600	224	19	216	384	148
Percent	1%	12%	78%	9%	1%	28%	50%	21%	1%	8%	80%	11%	2%	28%	50%	19%
Pk total	1596			625	1999			767								
Highest	17:15			17:00	17:45			17:00								
Volume	8	57	332	28	2	50	99	22	4	39	430	54	3	65	96	41
Hi total	425			173	527			205								
PHF	.94			.90	.95			.94								



NW 44TH STREET & UNIVERSITY DRIVE
 LAUDERHILL, FLORIDA
 COUNTED BY: S. SALVO & M. CRUZ
 SIGNALIZED

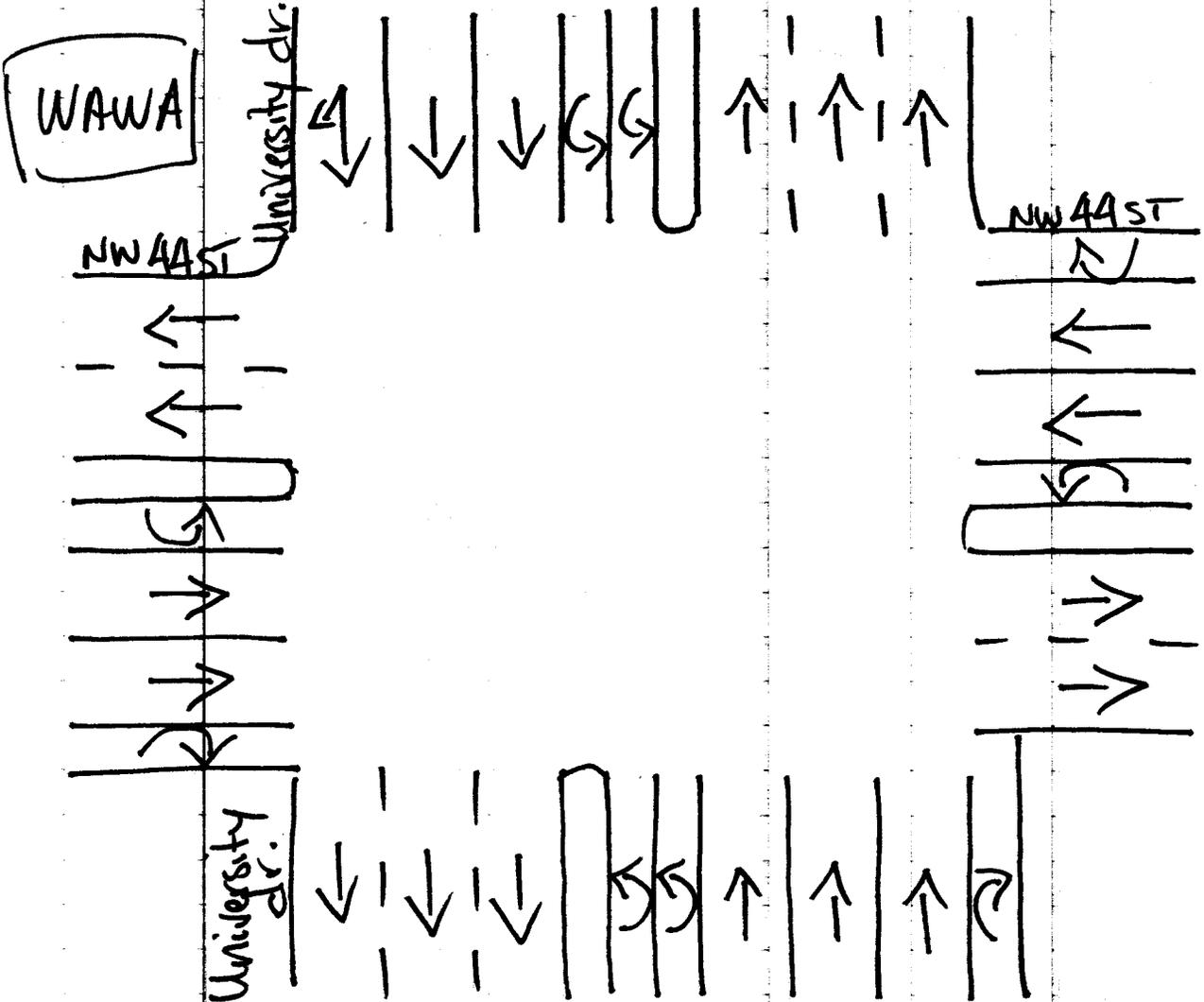
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00190146
 Start Date: 08/27/19
 File I.D. : 44STUNIV
 Page : 1

PEDESTRIANS & BIKES

Date	UNIVERSITY DRIVE From North				NW 44TH STREET From East				UNIVERSITY DRIVE From South				NW 44TH STREET From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
08/27/19																	
07:00	0	1	0	2	0	0	0	1	0	0	0	5	0	0	0	2	11
07:15	0	5	0	3	0	0	0	0	0	2	0	6	0	1	0	2	19
07:30	0	0	0	0	0	0	0	0	0	3	0	9	0	1	0	0	13
07:45	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	3	6
Hr Total	0	6	0	6	0	0	0	1	0	5	0	20	0	4	0	7	49
08:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	4
08:15	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	3
08:30	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	3
08:45	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	3
Hr Total	0	0	0	4	0	2	0	0	0	3	0	0	0	0	0	4	13
* BREAK *																	
16:00	0	0	0	4	0	0	0	1	0	0	0	6	0	0	0	1	12
16:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
16:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	4
16:45	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1	4
Hr Total	0	1	0	4	0	1	0	3	0	0	0	9	0	0	0	4	22
17:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	4
TOTAL	0	7	0	15	0	3	0	4	0	8	0	29	0	4	0	18	88

North ↑



Lauderhill, Florida
August 27, 2019
drawn by: Luis Palomino
Signalized

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8630 WEST-W OF US441

MOCF: 0.97
 PSCF

WEEK	DATES	SF	PSCF
1	01/01/2018 - 01/06/2018	1.02	1.05
2	01/07/2018 - 01/13/2018	1.02	1.05
3	01/14/2018 - 01/20/2018	1.01	1.04
4	01/21/2018 - 01/27/2018	1.00	1.03
* 5	01/28/2018 - 02/03/2018	0.98	1.01
* 6	02/04/2018 - 02/10/2018	0.97	1.00
* 7	02/11/2018 - 02/17/2018	0.95	0.98
* 8	02/18/2018 - 02/24/2018	0.95	0.98
* 9	02/25/2018 - 03/03/2018	0.96	0.99
*10	03/04/2018 - 03/10/2018	0.96	0.99
*11	03/11/2018 - 03/17/2018	0.96	0.99
*12	03/18/2018 - 03/24/2018	0.97	1.00
*13	03/25/2018 - 03/31/2018	0.97	1.00
*14	04/01/2018 - 04/07/2018	0.97	1.00
*15	04/08/2018 - 04/14/2018	0.97	1.00
*16	04/15/2018 - 04/21/2018	0.97	1.00
*17	04/22/2018 - 04/28/2018	0.99	1.02
18	04/29/2018 - 05/05/2018	1.00	1.03
19	05/06/2018 - 05/12/2018	1.02	1.05
20	05/13/2018 - 05/19/2018	1.03	1.06
21	05/20/2018 - 05/26/2018	1.03	1.06
22	05/27/2018 - 06/02/2018	1.04	1.07
23	06/03/2018 - 06/09/2018	1.04	1.07
24	06/10/2018 - 06/16/2018	1.04	1.07
25	06/17/2018 - 06/23/2018	1.04	1.07
26	06/24/2018 - 06/30/2018	1.05	1.08
27	07/01/2018 - 07/07/2018	1.05	1.08
28	07/08/2018 - 07/14/2018	1.05	1.08
29	07/15/2018 - 07/21/2018	1.06	1.09
30	07/22/2018 - 07/28/2018	1.04	1.07
31	07/29/2018 - 08/04/2018	1.03	1.06
32	08/05/2018 - 08/11/2018	1.02	1.05
33	08/12/2018 - 08/18/2018	1.01	1.04
34	08/19/2018 - 08/25/2018	1.01	1.04
35	08/26/2018 - 09/01/2018	1.01	1.04
36	09/02/2018 - 09/08/2018	1.01	1.04
37	09/09/2018 - 09/15/2018	1.01	1.04
38	09/16/2018 - 09/22/2018	1.01	1.04
39	09/23/2018 - 09/29/2018	1.00	1.03
40	09/30/2018 - 10/06/2018	1.00	1.03
41	10/07/2018 - 10/13/2018	0.99	1.02
42	10/14/2018 - 10/20/2018	0.99	1.02
43	10/21/2018 - 10/27/2018	0.99	1.02
44	10/28/2018 - 11/03/2018	1.00	1.03
45	11/04/2018 - 11/10/2018	1.00	1.03
46	11/11/2018 - 11/17/2018	1.00	1.03
47	11/18/2018 - 11/24/2018	1.01	1.04
48	11/25/2018 - 12/01/2018	1.01	1.04
49	12/02/2018 - 12/08/2018	1.02	1.05
50	12/09/2018 - 12/15/2018	1.02	1.05
51	12/16/2018 - 12/22/2018	1.02	1.05
52	12/23/2018 - 12/29/2018	1.01	1.04
53	12/30/2018 - 12/31/2018	1.01	1.04

* PEAK SEASON

25-FEB-2019 16:26:26

830UPD

4_8630_PKSEASON.TXT

Appendix C

Historic AADT
Growth Trends
Growth Factor

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0051 - SR 817 / UNIV DR - S OF COMMERCIAL BLVD

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	60000	C	N 31000		S 29000	9.00	56.30	2.30
2017	59500	C	N 28000		S 31500	9.00	57.10	2.30
2016	57500	C	N 30000		S 27500	9.00	56.10	2.50
2015	55500	C	N 28500		S 27000	9.00	56.20	2.50
2014	56500	C	N 28500		S 28000	9.00	56.80	1.60
2013	59500	C	N 30000		S 29500	9.00	56.20	1.60
2012	62000	C	N 32000		S 30000	9.00	57.00	1.60
2011	55000	C	N 28000		S 27000	9.00	59.10	1.80
2010	55500	C	N 27000		S 28500	9.60	57.92	1.80
2009	52000	C	N 26500		S 25500	9.71	58.42	3.50
2008	55500	C	N 27500		S 28000	9.67	56.67	3.50
2007	54500	C	N 27500		S 27000	10.19	60.63	1.70
2006	58000	C	N 29500		S 28500	9.61	59.08	1.80
2005	60000	C	N 30500		S 29500	10.00	58.10	2.00
2004	58500	C	N 29000		S 29500	10.00	59.00	2.00
2003	61000	C	N 30500		S 30500	8.30	52.80	2.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7544 - NW 44 ST, E OF UNIVERSITY DR

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2018	16900	S	E	8400	W	8500	9.00	56.30	6.00
2017	16700	F	E	8300	W	8400	9.00	57.10	6.20
2016	16300	C	E	8100	W	8200	9.00	56.10	2.90
2015	14000	V		0		0	9.00	56.20	3.40
2014	13500	R					9.00	56.80	7.40
2013	13000	T		0		0	9.00	56.20	7.60
2012	13000	S		0		0	9.00	57.00	5.90
2011	12700	F		0		0	9.00	59.10	6.30
2010	12500	C	E	6300	W	6200	9.60	57.92	9.30
2009	13000	F	E	6500	W	6500	9.71	58.42	5.30
2008	13000	C	E	6500	W	6500	9.67	56.67	6.50
2007	18000	C	E	8200	W	9800	10.19	60.63	4.80
2006	14600	C	E	7500	W	7100	9.61	59.08	2.90
2005	15600	C	E	7400	W	8200	10.00	58.10	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7545 - NW 44 ST, W OF UNIVERSITY DR

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2018	15700	T	E	8200	W	7500	9.00	56.30	6.00
2017	15500	S	E	8100	W	7400	9.00	57.10	6.20
2016	15100	F	E	7900	W	7200	9.00	56.10	2.90
2015	14700	C	E	7700	W	7000	9.00	56.20	3.40
2014	14500	X					9.00	56.80	7.40
2013	14000	X		0		0	9.00	56.20	7.60
2012	14000	T		0		0	9.00	57.00	5.90
2011	14000	S		0		0	9.00	59.10	6.30
2010	13700	F	E	7300	W	6400	9.60	57.92	9.30
2009	13400	C	E	7100	W	6300	9.71	58.42	5.30
2008	13800	C	E	7100	W	6700	9.67	56.67	6.50
2007	17600	C	E	9000	W	8600	10.19	60.63	4.80
2006	16800	C	E	8800	W	8000	9.61	59.08	2.90
2005	19100	C	E	9600	W	9500	10.00	58.10	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9140 - INVERRARY BLVD., E OF UNIVERSITY DR.

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2018	15800	S	E	6800	W	9000	9.00	56.30	6.00
2017	15600	F	E	6700	W	8900	9.00	57.10	6.20
2016	15200	C	E	6500	W	8700	9.00	56.10	2.90
2015	10500	V		0		0	9.00	56.20	3.40
2014	10500	R					9.00	56.80	7.40
2013	10500	T		0		0	9.00	56.20	7.60
2012	10500	S		0		0	9.00	57.00	5.90
2011	10500	F		0		0	9.00	59.10	6.30
2010	10300	C	E	4800	W	5500	9.60	57.92	9.30
2009	11700	F	E	5700	W	6000	9.71	58.42	5.30
2008	11700	C	E	5700	W	6000	9.67	56.67	6.50
2007	14000	C	E	6300	W	7700	10.19	60.63	4.80
2006	14100	C	E	6800	W	7300	9.61	59.08	2.90
2005	13000	C	E	6200	W	6800	10.00	58.10	0.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9403 - INVERRARY BLVD, W OF UNIVERSITY DRIVE

YEAR	AADT		DIRECTION 1		DIRECTION 2		*K FACTOR	D FACTOR	T FACTOR
2018	8400	T	E	4800	W	3600	9.00	56.30	6.00
2017	8200	S	E	4700	W	3500	9.00	57.10	6.20
2016	8000	F	E	4600	W	3400	9.00	56.10	2.90
2015	7800	C	E	4500	W	3300	9.00	56.20	3.40
2014	3500	T					9.00	56.80	7.40
2013	3400	S		0		0	9.00	56.20	7.60
2012	3400	F		0		0	9.00	57.00	5.90
2011	3400	C	E	0	W	0	9.00	59.10	6.30
2010	6200	F	E	0	W	0	9.60	57.92	9.30
2009	6000	C	E	3100	W	2900	9.71	58.42	5.30
2008	6300	C	E	3100	W	3200	9.67	56.67	6.50
2007	6700	C	E	3500	W	3200	10.19	60.63	4.80
2006	7200	C	E	3700	W	3500	9.61	59.08	2.90
2005	7200	C	E	3700	W	3500	10.00	58.10	0.00

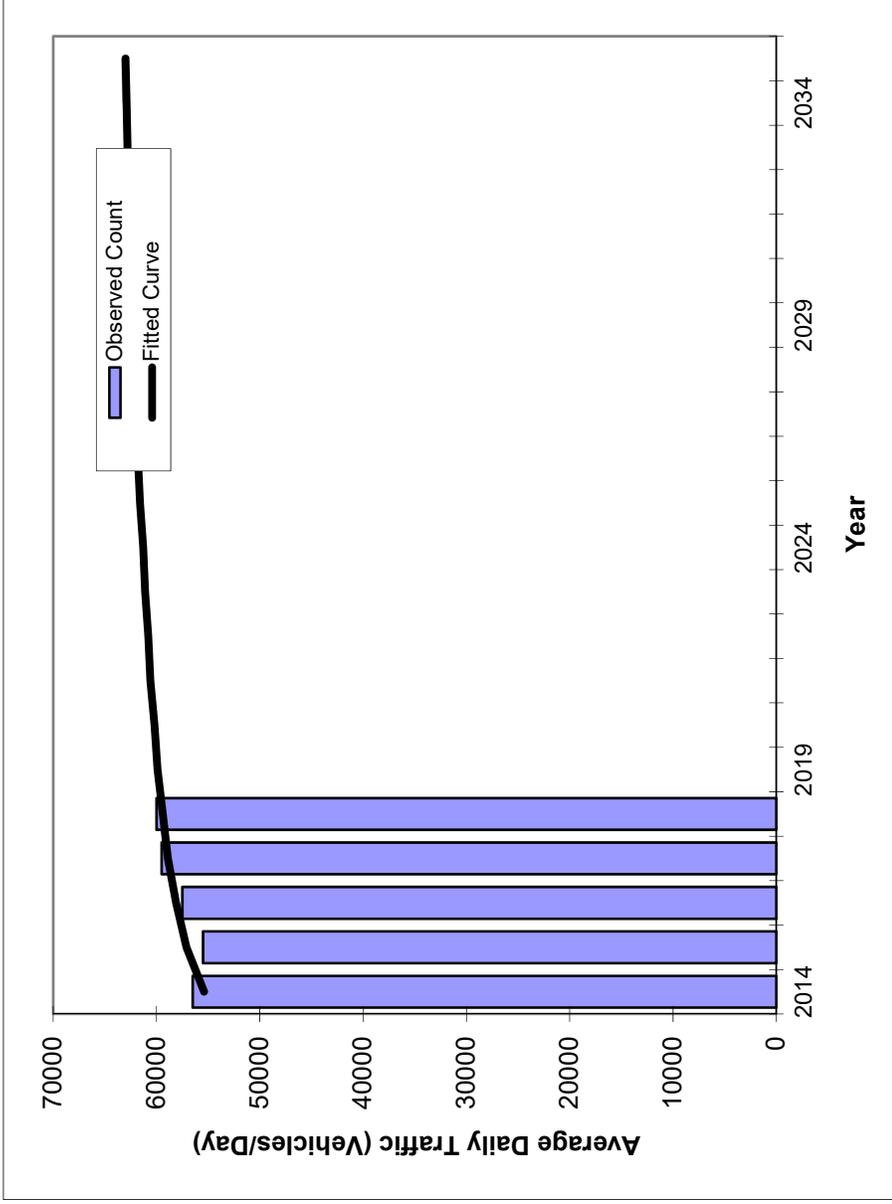
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V03.a

UNIVERSITY DRIVE --

FIN#	0
Location	1

County:	Broward (86)
Station #:	0051
Highway:	UNIVERSITY DRIVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	56500	55400
2015	55500	57100
2016	57500	58100
2017	59500	58900
2018	60000	59400
2029 Opening Year Trend		
2029	N/A	62300
2030 Mid-Year Trend		
2030	N/A	62400
2033 Design Year Trend		
2033	N/A	62800
TRANPLAN Forecasts/Trends		

Trend R-squared:	66.04%
Compounded Annual Historic Growth Rate:	1.76%
Compounded Growth Rate (2018 to Design Year):	0.37%
Printed:	31-Aug-19
Decaying Exponential Growth Option	

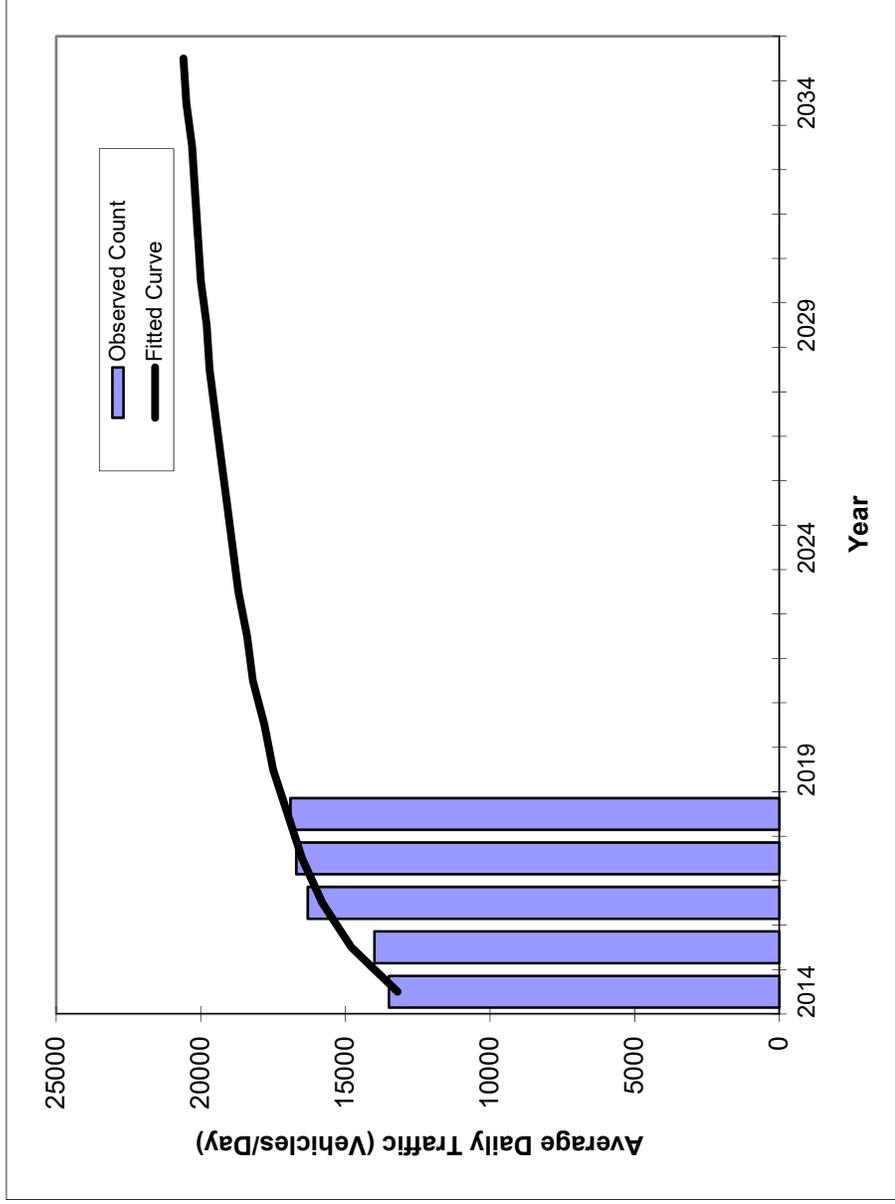
*Axle-Adjusted

Traffic Trends - V03.a

NW 44 ST --

FIN#	0
Location	1

County:	Broward (86)
Station #:	7544
Highway:	NW 44 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	13500	13200
2015	14000	14800
2016	16300	15800
2017	16700	16500
2018	16900	17000
2029 Opening Year Trend		
2029	N/A	19800
2030 Mid-Year Trend		
2030	N/A	20000
2033 Design Year Trend		
2033	N/A	20300
TRANPLAN Forecasts/Trends		

Trend R-squared:	89.26%
Compounded Annual Historic Growth Rate:	6.53%
Compounded Growth Rate (2018 to Design Year):	1.19%
Printed:	31-Aug-19
Decaying Exponential Growth Option	

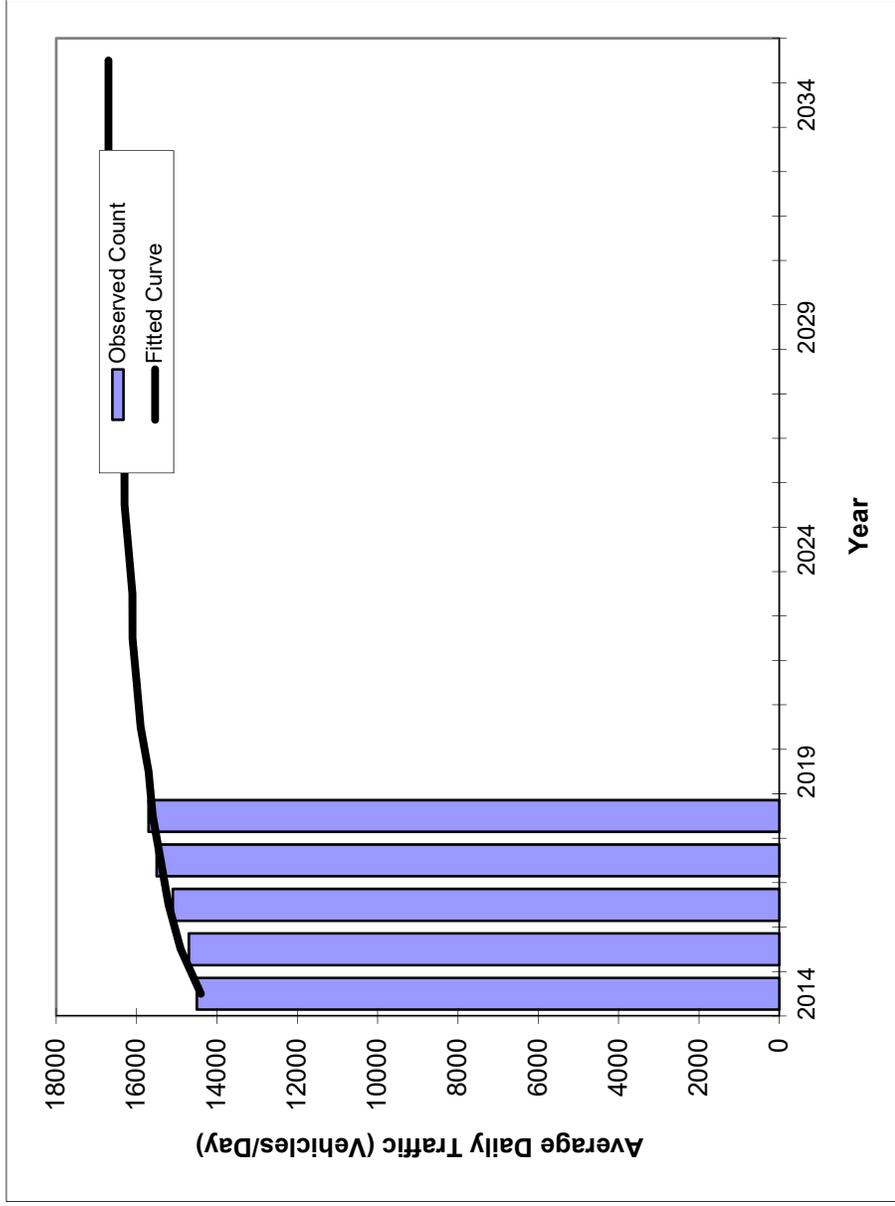
*Axle-Adjusted

Traffic Trends - V03.a

NW 44 ST --

FIN#	1234
Location	1

County:	Broward (86)
Station #:	7545
Highway:	NW 44 ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2014	14500	14400
2015	14700	14900
2016	15100	15200
2017	15500	15400
2018	15700	15600
2029 Opening Year Trend		
2029	N/A	16500
2030 Mid-Year Trend		
2030	N/A	16500
2033 Design Year Trend		
2033	N/A	16700
TRANPLAN Forecasts/Trends		

Trend R-squared:	91.95%
Compounded Annual Historic Growth Rate:	2.02%
Compounded Growth Rate (2018 to Design Year):	0.46%
Printed:	31-Aug-19
Decaying Exponential Growth Option	

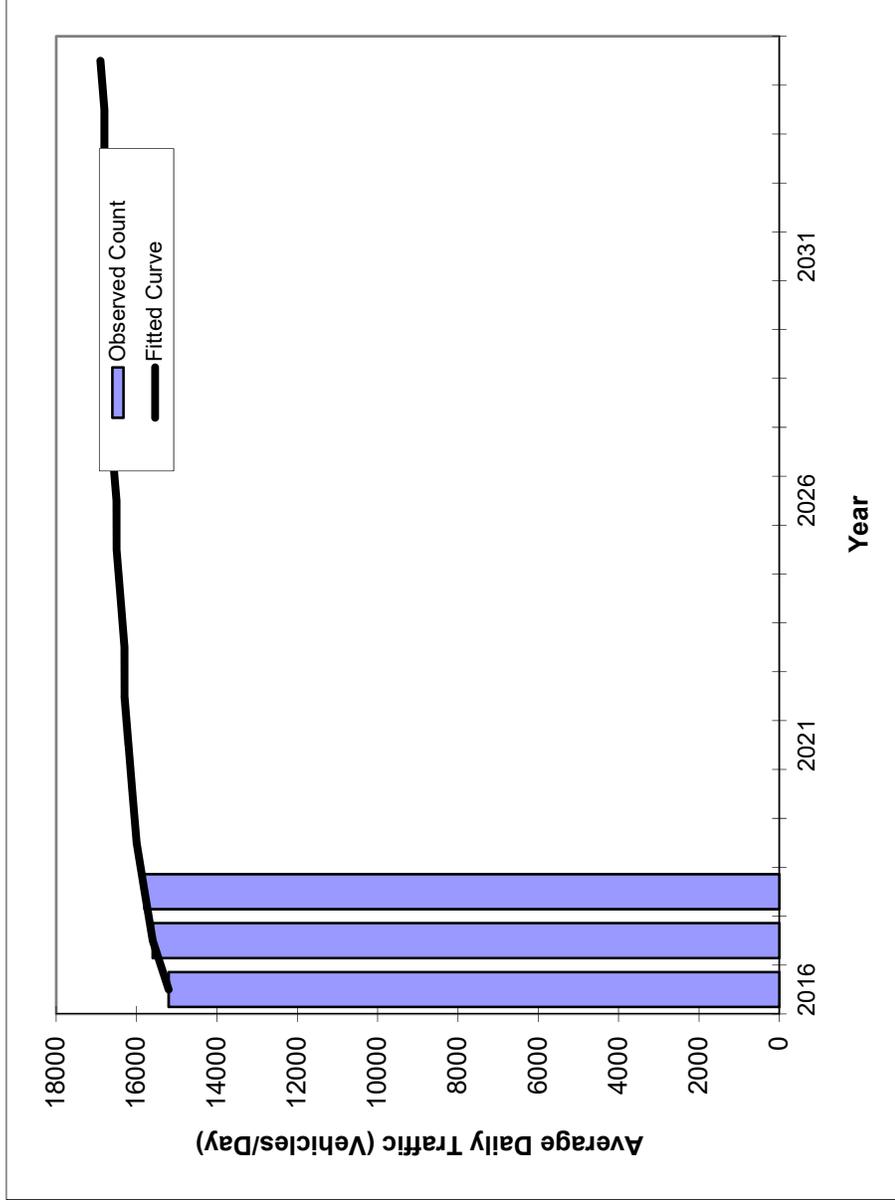
*Axle-Adjusted

Traffic Trends - V03.a

INVERRARY BLVD --

FIN#	0
Location	1

County:	Broward (86)
Station #:	9140
Highway:	INVERRARY BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2016	15200	15200
2017	15600	15600
2018	15800	15800

2029 Opening Year Trend	
2029	N/A 16700
2030 Mid-Year Trend	
2030	N/A 16700
2033 Design Year Trend	
2033	N/A 16800
TRANPLAN Forecasts/Trends	

Trend R-squared:	99.84%
Compounded Annual Historic Growth Rate:	1.95%
Compounded Growth Rate (2018 to Design Year):	0.41%
Printed:	31-Aug-19
Decaying Exponential Growth Option	

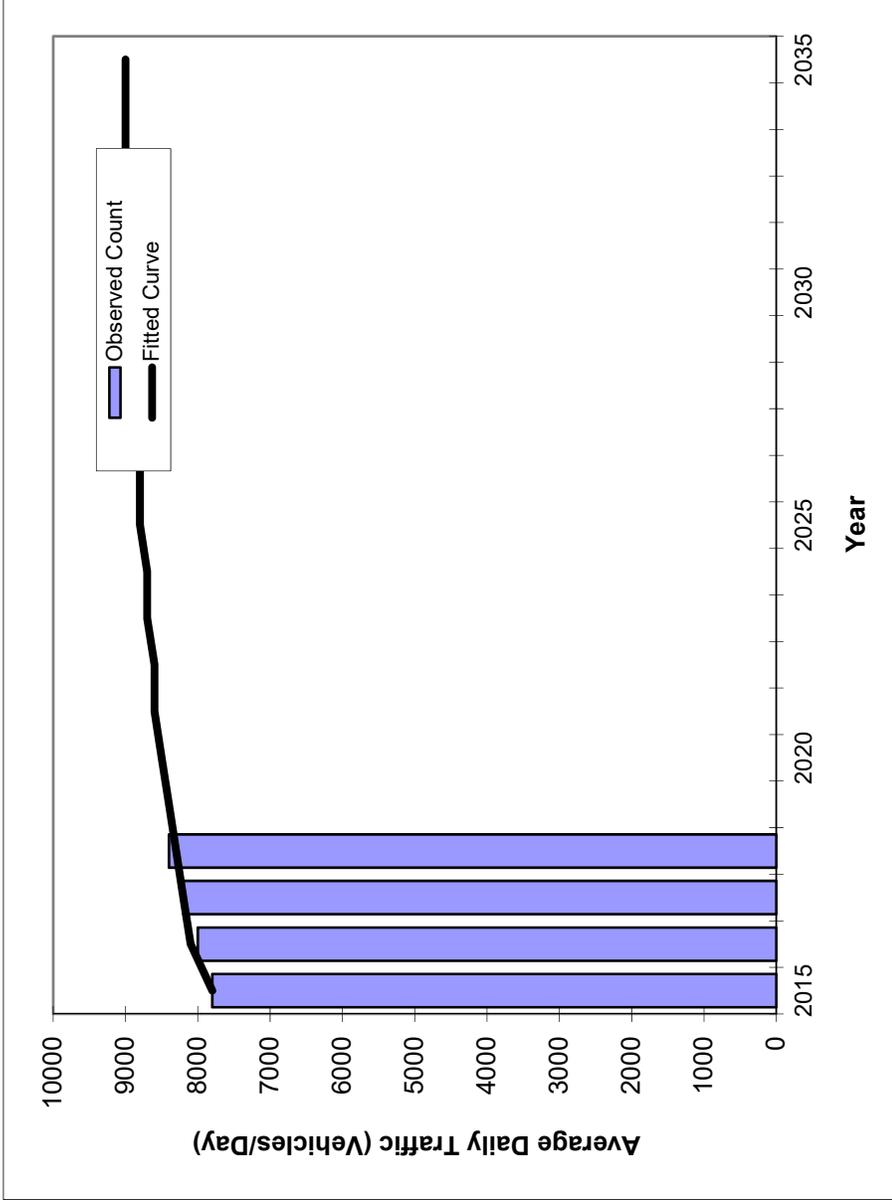
*Axle-Adjusted

Traffic Trends - V03.a

INVERRARY BLVD --

FIN#	0
Location	1

County: Broward (86)
 Station #: 9403
 Highway: INVERRARY BLVD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	7800	7800
2016	8000	8100
2017	8200	8200
2018	8400	8300
2029 Opening Year Trend		
2029	N/A	8900
2030 Mid-Year Trend		
2030	N/A	8900
2033 Design Year Trend		
2033	N/A	9000
TRANPLAN Forecasts/Trends		

Trend R-squared: 96.08%
 Compounded Annual Historic Growth Rate: 2.09%
 Compounded Growth Rate (2018 to Design Year): 0.54%
 Printed: 31-Aug-19

Decaying Exponential Growth Option

*Axle-Adjusted

Sunfire High School - Growth Rate

FDOT Count Station	Location	Calculated Historic Growth Rate	Notes
0051	Univeristy Drive - S of Commercial	1.76%	Note: 5 Years of Data
7544	NW 44 Street - E of University	6.53%	Note: 5 Years of Data
7545	NW 44 Street - W of University	2.02%	Note: 5 Years of Data
9140	Inverrary Blvd - E of University	1.95%	Note: 3 Years of Data Used Instead of 5
9403	Inverrary Blvd - W of University	2.09%	Note: 4 Years of Data Used Instead of 5
Average Growth Rate =	2.87%		

Appendix D

Turning Movement Count Data

Signal Timing

Synchro Analyses

**North University Drive - Inverrary Boulevard/NW 50 Street
Signalized
AM Peak Hour - Turning Movement Volumes**

Description	NW 50 Street Eastbound			Inverrary Boulevard Westbound			North University Drive Northbound			North University Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (08/27/19)	112	167	112	177	126	335	43	1,561	100	240	1,775	41
Peak Season Factor (1.04)	116	174	116	184	131	348	45	1,623	104	250	1,846	43
Annual Growth Rate	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%
2020 Growth Traffic	120	178	120	189	135	358	46	1,670	107	257	1,899	44
2020 Background Traffic	120	178	120	189	135	358	46	1,670	107	257	1,899	44
Sunfire High School	0	0	3	5	0	0	2	10	3	0	21	0
2022 Total Traffic	120	178	123	194	135	358	48	1,680	110	257	1,920	44

**North University Drive - Inverrary Boulevard/NW 50 Street
Signalized
PM Peak Hour - Turning Movement Volumes**

Description	NW 50 Street Eastbound			Inverrary Boulevard Westbound			North University Drive Northbound			North University Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (08/27/19)	88	84	63	174	109	252	99	1,674	174	305	1,526	55
Peak Season Factor (1.04)	92	87	66	181	113	262	103	1,741	181	317	1,587	57
Annual Growth Rate	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%
2020 Growth Traffic	95	90	68	186	117	270	106	1,791	186	326	1,633	59
2020 Background Traffic	95	90	68	186	117	270	106	1,791	186	326	1,633	59
Sunfire High School	0	0	1	1	0	0	1	4	2	0	4	0
2022 Total Traffic	95	90	69	187	117	270	107	1,795	188	326	1,637	59

North University Drive - NW 44 Street
Signalized
AM Peak Hour - Turning Movement Volumes

Description	NW 44 Street Eastbound			NW 44 Street Westbound			North University Drive Northbound			North University Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (08/27/19)	252	378	212	198	507	182	151	1,311	113	146	1,694	114
Peak Season Factor (1.04)	262	393	220	206	527	189	157	1,363	118	152	1,762	119
Annual Growth Rate	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%
2020 Growth Traffic	270	404	227	212	542	196	162	1,403	122	156	1,812	122
2020 Background Traffic	270	404	227	212	542	196	162	1,403	122	156	1,812	122
Sunfire High School	5	0	0	0	0	6	0	20	0	2	10	3
2022 Total Traffic	275	404	227	212	542	202	162	1,423	122	158	1,822	125

North University Drive - NW 44 Street
Signalized
PM Peak Hour - Turning Movement Volumes

Description	NW 44 Street Eastbound			NW 44 Street Westbound			North University Drive Northbound			North University Drive Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (08/27/19)	235	384	148	183	311	131	175	1,600	224	200	1,245	151
Peak Season Factor (1.04)	244	399	154	190	323	136	182	1,664	233	208	1,295	157
Annual Growth Rate	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%	2.87%
2020 Growth Traffic	251	411	158	196	333	140	187	1,712	240	214	1,332	162
2020 Background Traffic	251	411	158	196	333	140	187	1,712	240	214	1,332	162
Sunfire High School	1	0	0	0	0	1	0	4	0	1	4	1
2022 Total Traffic	252	411	158	196	333	141	187	1,716	240	215	1,336	163

Station : 1233 - University Dr & Inverrary Blvd/NW 50 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		33		34		33		31								
Min Green	5	15	4	7	5	15	4	7								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	18	55	12	30	18	55	12	30								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2.5	2.5	2	2	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON															
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON		ON		ON		ON								
Sim Gap Enable	ON	ON	ON	ON	ON	ON	ON	ON	ON							
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt		ON				
Flash in Dwell						
Link to Preempt						
Delay		25				
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	40	8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	7	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						

Preempt LP

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

Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

Station : 1080 - University Dr & NW 44 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		23		32		25		29								
Min Green	5	15	4	6	5	15	4	6	3		3		3		3	
Gap Ext	2	3	1.5	2	2	3	1.5	2								
Max1	18	50	12	20	18	50	12	20								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2.5	2.5	2	2	2.5	2.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON															
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON				ON				ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON							
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

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

Preempt LP

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

Dwell Cyc Ped8						
Exit 1	3	1	2	4	2	4
Exit 2	7	5	6	8	6	8
Exit 3						
Exit 4						

Prepared By

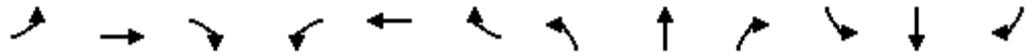
Date Implemented

Reviewed By

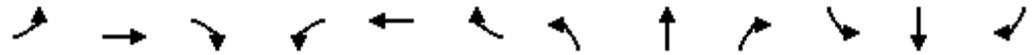
Traffic Engineer



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗↗↗	↘	↖↖	↗↗↗	↘
Traffic Volume (vph)	116	174	116	184	131	348	45	1623	104	250	1846	43
Future Volume (vph)	116	174	116	184	131	348	45	1623	104	250	1846	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5070	0
Flt Permitted	0.602			0.325			0.950			0.950		
Satd. Flow (perm)	1121	1863	1583	605	1863	1583	1770	5085	1583	3433	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			123			235			116			3
Link Speed (mph)		30			30			45				45
Link Distance (ft)		698			917			795				730
Travel Time (s)		15.9			20.8			12.0				11.1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	123	185	123	196	139	370	48	1727	111	266	1964	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	123	185	123	196	139	370	48	1727	111	266	2010	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	34.2	21.7	21.7	39.6	24.4	24.4	8.4	79.9	79.9	16.2	90.1	
Actuated g/C Ratio	0.21	0.14	0.14	0.25	0.15	0.15	0.05	0.50	0.50	0.10	0.56	
v/c Ratio	0.42	0.73	0.38	0.75	0.49	0.84	0.52	0.68	0.13	0.77	0.70	
Control Delay	48.5	82.3	11.9	65.3	66.9	40.6	92.7	33.3	4.0	84.0	29.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.5	82.3	11.9	65.3	66.9	40.6	92.7	33.3	4.0	84.0	29.6	
LOS	D	F	B	E	E	D	F	C	A	F	C	
Approach Delay		52.6			52.7			33.1			35.9	
Approach LOS		D			D			C			D	
90th %ile Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	12.0	71.0	71.0	13.0	72.0	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Coord	Coord	Max	Coord	
70th %ile Green (s)	14.6	25.1	25.1	16.5	27.0	27.0	9.8	72.3	72.3	19.1	81.6	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	12.6	20.3	20.3	16.8	24.5	24.5	8.3	77.9	77.9	18.0	87.6	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	10.8	17.4	17.4	15.1	21.7	21.7	6.7	83.8	83.8	16.7	93.8	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	8.2	13.2	13.2	11.1	16.1	16.1	0.0	94.6	94.6	14.1	115.7	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Skip	Coord	Coord	Gap	Coord	
Stops (vph)	92	164	15	152	117	135	42	1215	8	223	1364	
Fuel Used(gal)	2	5	1	5	3	6	2	35	1	8	37	
CO Emissions (g/hr)	160	333	70	322	235	427	112	2412	50	576	2606	
NOx Emissions (g/hr)	31	65	14	63	46	83	22	469	10	112	507	
VOC Emissions (g/hr)	37	77	16	75	55	99	26	559	12	133	604	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	51	0	0	59	
Queue Length 50th (ft)	101	191	0	169	135	146	50	506	0	140	561	
Queue Length 95th (ft)	145	257	58	223	198	265	96	612	35	#239	761	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	334	378	419	273	378	508	143	2539	848	347	2857	

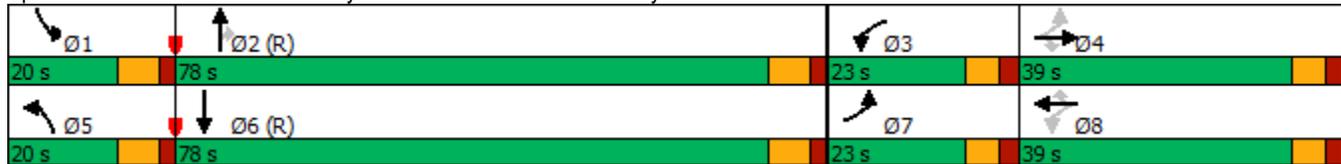


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.49	0.29	0.72	0.37	0.73	0.34	0.68	0.13	0.77	0.70	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
Intersection Signal Delay: 38.5 **Intersection LOS: D**
 Intersection Capacity Utilization 82.6% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	87	66	181	113	262	103	1741	181	317	1587	57
Future Volume (vph)	92	87	66	181	113	262	103	1741	181	317	1587	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5060	0
Flt Permitted	0.680			0.453			0.950			0.950		
Satd. Flow (perm)	1267	1863	1583	844	1863	1583	1770	5085	1583	3433	5060	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			252			193			4
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		15.9			20.8			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	98	93	70	193	120	279	110	1852	193	337	1688	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	93	70	193	120	279	110	1852	193	337	1749	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	24.1	12.8	12.8	33.3	17.5	17.5	14.4	78.8	78.8	25.4	89.9	
Actuated g/C Ratio	0.15	0.08	0.08	0.21	0.11	0.11	0.09	0.49	0.49	0.16	0.56	
v/c Ratio	0.43	0.62	0.30	0.72	0.59	0.70	0.70	0.74	0.22	0.62	0.61	
Control Delay	56.5	88.4	3.5	70.2	79.7	20.7	92.3	35.1	3.6	68.8	25.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	56.5	88.4	3.5	70.2	79.7	20.7	92.3	35.1	3.6	68.8	25.9	
LOS	E	F	A	E	E	C	F	D	A	E	C	
Approach Delay		53.7			48.8			35.2			32.8	
Approach LOS		D			D			D			C	
90th %ile Green (s)	15.7	19.7	19.7	16.5	20.5	20.5	19.5	72.4	72.4	24.4	77.3	
90th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
70th %ile Green (s)	13.1	14.5	14.5	16.5	17.9	17.9	16.8	78.5	78.5	23.5	85.2	
70th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	11.2	12.4	12.4	17.9	19.1	19.1	14.5	79.0	79.0	23.7	88.2	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	9.4	10.3	10.3	16.1	17.0	17.0	12.2	81.5	81.5	25.1	94.4	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	6.9	7.3	7.3	12.5	12.9	12.9	8.8	82.7	82.7	30.5	104.4	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	79	81	0	164	105	45	99	1360	13	292	1083	
Fuel Used(gal)	2	2	0	5	3	3	4	38	1	10	30	
CO Emissions (g/hr)	140	174	28	335	225	226	259	2681	86	669	2092	
NOx Emissions (g/hr)	27	34	6	65	44	44	50	522	17	130	407	
VOC Emissions (g/hr)	32	40	7	78	52	52	60	621	20	155	485	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	55	0	0	52	
Queue Length 50th (ft)	84	96	0	176	120	26	114	556	0	174	446	
Queue Length 95th (ft)	134	153	3	247	190	127	179	667	47	229	576	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	284	378	416	273	378	522	169	2504	877	545	2845	

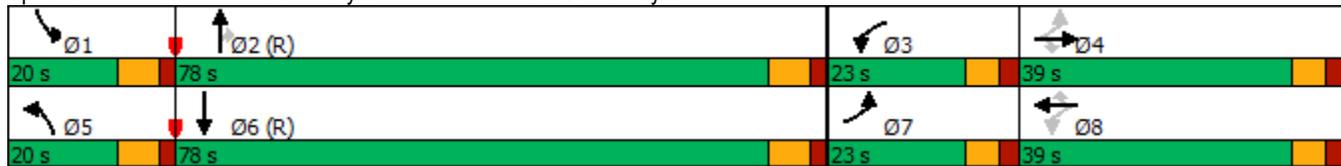


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.17	0.71	0.32	0.53	0.65	0.74	0.22	0.62	0.61	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	36.8
Intersection LOS:	D
Intersection Capacity Utilization	76.5%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	262	393	220	206	527	189	157	1363	118	152	1762	119
Future Volume (vph)	262	393	220	206	527	189	157	1363	118	152	1762	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5040	0
Flt Permitted	0.134			0.454			0.950			0.950		
Satd. Flow (perm)	250	3539	1583	846	3539	1583	3433	5085	1583	3433	5040	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			152			203			160			7
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	282	423	237	222	567	203	169	1466	127	163	1895	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	282	423	237	222	567	203	169	1466	127	163	2023	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020



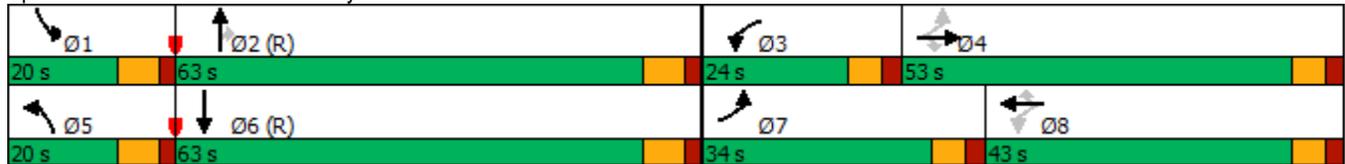
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	60.5	38.1	38.1	47.0	30.5	30.5	11.7	66.9	66.9	11.5	66.7	
Actuated g/C Ratio	0.38	0.24	0.24	0.29	0.19	0.19	0.07	0.42	0.42	0.07	0.42	
v/c Ratio	0.87	0.50	0.48	0.65	0.84	0.44	0.68	0.69	0.17	0.67	0.96	
Control Delay	67.4	54.1	20.7	44.3	74.2	9.1	86.0	41.7	2.4	85.5	57.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	67.4	54.1	20.7	44.3	74.2	9.1	86.0	41.7	2.4	85.5	57.1	
LOS	E	D	C	D	E	A	F	D	A	F	E	
Approach Delay		49.6			54.2			43.1			59.3	
Approach LOS		D			D			D			E	
90th %ile Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	27.5	43.4	43.4	17.5	33.4	33.4	13.7	58.7	58.7	13.4	58.4	
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	25.4	38.7	38.7	17.5	30.8	30.8	12.2	64.8	64.8	12.0	64.6	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	22.3	33.8	33.8	16.7	28.2	28.2	10.8	72.0	72.0	10.5	71.7	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	17.9	28.0	28.0	13.4	23.5	23.5	8.6	83.2	83.2	8.4	83.0	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	198	331	68	161	499	20	150	1105	5	146	1554	
Fuel Used(gal)	6	9	3	4	15	2	5	32	1	5	50	
CO Emissions (g/hr)	448	615	178	310	1062	122	379	2261	51	362	3503	
NOx Emissions (g/hr)	87	120	35	60	207	24	74	440	10	70	682	
VOC Emissions (g/hr)	104	142	41	72	246	28	88	524	12	84	812	
Dilemma Vehicles (#)	0	9	0	0	13	0	0	43	0	0	54	
Queue Length 50th (ft)	223	202	73	161	304	0	90	467	0	87	765	
Queue Length 95th (ft)	#320	242	150	213	360	69	131	576	24	128	#996	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	356	1028	567	354	807	517	281	2127	755	280	2106	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.41	0.42	0.63	0.70	0.39	0.60	0.69	0.17	0.58	0.96	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
Intersection Signal Delay: 52.0 **Intersection LOS: D**
 Intersection Capacity Utilization 92.8% ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: N University Drive & NW 44 Street



Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	244	399	154	190	323	136	182	1664	233	208	1295	157
Future Volume (vph)	244	399	154	190	323	136	182	1664	233	208	1295	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5004	0
Flt Permitted	0.224			0.351			0.950			0.950		
Satd. Flow (perm)	417	3539	1583	654	3539	1583	3433	5085	1583	3433	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			164			160			15
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	262	429	166	204	347	146	196	1789	251	224	1392	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	262	429	166	204	347	146	196	1789	251	224	1561	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

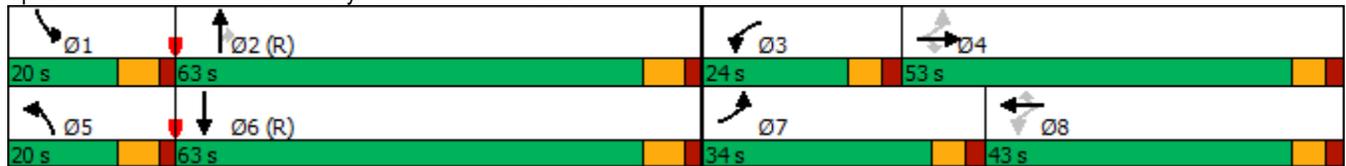


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	48.4	26.7	26.7	36.7	20.3	20.3	13.5	74.8	74.8	15.1	76.4	
Actuated g/C Ratio	0.30	0.17	0.17	0.23	0.13	0.13	0.08	0.47	0.47	0.09	0.48	
v/c Ratio	0.82	0.73	0.46	0.77	0.77	0.43	0.68	0.75	0.30	0.69	0.65	
Control Delay	64.3	69.9	21.6	62.9	79.5	9.2	82.9	39.1	11.9	81.4	34.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	64.3	69.9	21.6	62.9	79.5	9.2	82.9	39.1	11.9	81.4	34.6	
LOS	E	E	C	E	E	A	F	D	B	F	C	
Approach Delay		58.8			59.9			39.9			40.5	
Approach LOS		E			E			D			D	
90th %ile Green (s)	27.5	36.1	36.1	17.5	26.1	26.1	17.3	60.5	60.5	18.9	62.1	
90th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
70th %ile Green (s)	26.4	31.1	31.1	17.5	22.2	22.2	15.1	67.5	67.5	16.9	69.3	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	23.4	26.0	26.0	17.5	20.1	20.1	13.5	74.3	74.3	15.2	76.0	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	20.5	21.9	21.9	16.6	18.0	18.0	11.9	81.0	81.0	13.5	82.6	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	16.5	18.6	18.6	12.9	15.0	15.0	9.6	90.5	90.5	11.0	91.9	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	193	369	44	163	307	11	174	1321	57	198	1083	
Fuel Used(gal)	6	10	2	5	10	1	6	38	2	7	31	
CO Emissions (g/hr)	411	732	125	344	676	87	432	2674	173	482	2138	
NOx Emissions (g/hr)	80	142	24	67	132	17	84	520	34	94	416	
VOC Emissions (g/hr)	95	170	29	80	157	20	100	620	40	112	496	
Dilemma Vehicles (#)	0	9	0	0	7	0	0	51	0	0	45	
Queue Length 50th (ft)	222	228	43	167	188	0	104	560	53	119	445	
Queue Length 95th (ft)	283	270	111	221	236	48	146	726	139	162	586	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	361	1028	544	276	807	487	308	2376	824	332	2396	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.42	0.31	0.74	0.43	0.30	0.64	0.75	0.30	0.67	0.65	

Intersection Summary	
Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	135
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	45.5
Intersection LOS:	D
Intersection Capacity Utilization	83.0%
ICU Level of Service	E
Analysis Period (min)	15

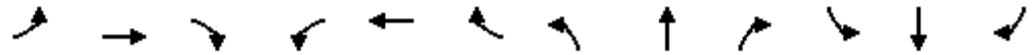
Splits and Phases: 1: N University Drive & NW 44 Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	120	178	120	189	135	358	46	1670	107	257	1899	44
Future Volume (vph)	120	178	120	189	135	358	46	1670	107	257	1899	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5070	0
Flt Permitted	0.583			0.326			0.950			0.950		
Satd. Flow (perm)	1086	1863	1583	607	1863	1583	1770	5085	1583	3433	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			128			231			116			3
Link Speed (mph)		30			30			45				45
Link Distance (ft)		698			917			795				730
Travel Time (s)		15.9			20.8			12.0				11.1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	128	189	128	201	144	381	49	1777	114	273	2020	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	189	128	201	144	381	49	1777	114	273	2067	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	35.1	22.3	22.3	40.2	24.8	24.8	8.4	78.8	78.8	16.6	89.3	
Actuated g/C Ratio	0.22	0.14	0.14	0.25	0.16	0.16	0.05	0.49	0.49	0.10	0.56	
v/c Ratio	0.44	0.73	0.39	0.76	0.50	0.87	0.53	0.71	0.14	0.77	0.73	
Control Delay	48.3	81.1	11.6	65.5	66.8	44.9	93.0	34.9	4.3	83.6	30.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.3	81.1	11.6	65.5	66.8	44.9	93.0	34.9	4.3	83.6	30.8	
LOS	D	F	B	E	E	D	F	C	A	F	C	
Approach Delay		51.7			54.9			34.5			37.0	
Approach LOS		D			D			C			D	
90th %ile Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	12.2	71.0	71.0	13.0	71.8	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Coord	Coord	Max	Coord	
70th %ile Green (s)	15.0	27.3	27.3	16.5	28.8	28.8	9.9	71.0	71.0	18.2	79.3	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Max	Coord	
50th %ile Green (s)	13.0	20.6	20.6	16.5	24.1	24.1	8.3	77.4	77.4	18.5	87.6	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	11.1	17.7	17.7	15.9	22.5	22.5	6.8	81.8	81.8	17.6	92.6	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	8.4	13.4	13.4	11.3	16.3	16.3	0.0	92.6	92.6	15.7	115.3	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Skip	Coord	Coord	Gap	Coord	
Stops (vph)	95	167	16	158	120	153	44	1285	9	228	1424	
Fuel Used(gal)	2	5	1	5	3	7	2	36	1	8	39	
CO Emissions (g/hr)	165	338	72	332	242	467	116	2548	53	589	2734	
NOx Emissions (g/hr)	32	66	14	65	47	91	23	496	10	115	532	
VOC Emissions (g/hr)	38	78	17	77	56	108	27	591	12	136	634	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	52	0	0	60	
Queue Length 50th (ft)	106	195	0	174	141	166	51	532	0	143	588	
Queue Length 95th (ft)	149	262	58	229	204	288	98	638	37	#248	798	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	333	378	423	275	378	505	143	2502	838	355	2831	

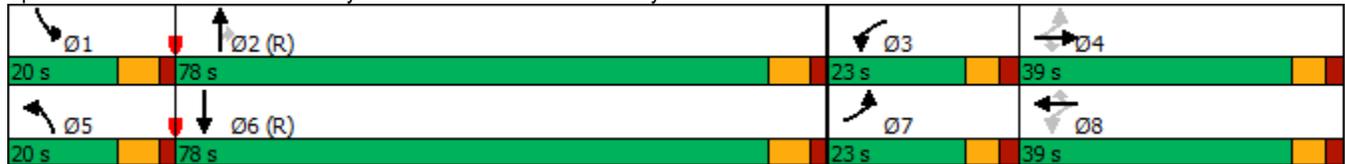


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.50	0.30	0.73	0.38	0.75	0.34	0.71	0.14	0.77	0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
Intersection Signal Delay: 39.7 **Intersection LOS: D**
 Intersection Capacity Utilization 84.2% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

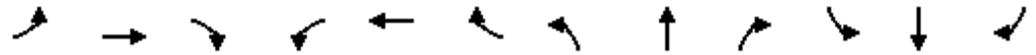
Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	90	69	187	117	270	107	1795	188	326	1637	59
Future Volume (vph)	95	90	69	187	117	270	107	1795	188	326	1637	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5060	0
Flt Permitted	0.677			0.459			0.950			0.950		
Satd. Flow (perm)	1261	1863	1583	855	1863	1583	1770	5085	1583	3433	5060	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			249			200			4
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		15.9			20.8			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	101	96	73	199	124	287	114	1910	200	347	1741	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	96	73	199	124	287	114	1910	200	347	1804	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	25.0	13.5	13.5	33.5	17.8	17.8	14.9	77.5	77.5	26.2	88.8	
Actuated g/C Ratio	0.16	0.08	0.08	0.21	0.11	0.11	0.09	0.48	0.48	0.16	0.56	
v/c Ratio	0.43	0.61	0.30	0.74	0.60	0.72	0.69	0.78	0.23	0.62	0.64	
Control Delay	55.8	86.0	4.2	70.9	79.5	22.8	90.9	37.2	3.6	68.4	27.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.8	86.0	4.2	70.9	79.5	22.8	90.9	37.2	3.6	68.4	27.3	
LOS	E	F	A	E	E	C	F	D	A	E	C	
Approach Delay		52.6			50.0			37.0			34.0	
Approach LOS		D			D			D			C	
90th %ile Green (s)	16.0	22.0	22.0	16.5	22.5	22.5	19.9	71.0	71.0	23.5	74.6	
90th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Max	Coord	
70th %ile Green (s)	13.3	14.7	14.7	16.5	17.9	17.9	17.4	77.8	77.8	24.0	84.4	
70th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	11.5	12.7	12.7	16.5	17.7	17.7	15.2	79.4	79.4	24.4	88.6	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	9.6	10.6	10.6	16.6	17.6	17.6	12.8	79.5	79.5	26.3	93.0	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	7.0	7.5	7.5	12.9	13.4	13.4	9.4	79.8	79.8	32.8	103.2	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	79	85	1	170	109	51	103	1451	14	301	1156	
Fuel Used(gal)	2	3	0	5	3	3	4	41	1	10	32	
CO Emissions (g/hr)	142	177	31	348	233	242	267	2860	90	687	2227	
NOx Emissions (g/hr)	28	34	6	68	45	47	52	556	17	134	433	
VOC Emissions (g/hr)	33	41	7	81	54	56	62	663	21	159	516	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	56	0	0	53	
Queue Length 50th (ft)	88	99	0	184	126	37	117	580	0	178	465	
Queue Length 95th (ft)	134	155	6	250	193	140	183	711	48	237	624	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	288	378	416	274	378	519	173	2463	869	562	2808	

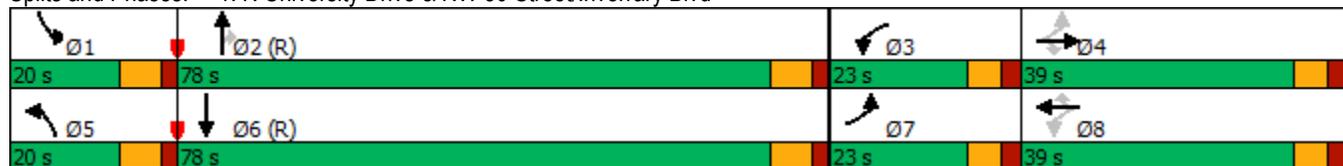


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.18	0.73	0.33	0.55	0.66	0.78	0.23	0.62	0.64	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	38.1
Intersection LOS:	D
Intersection Capacity Utilization	78.1%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



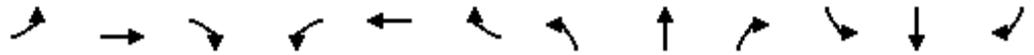
Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	404	227	212	542	196	162	1403	122	156	1812	112
Future Volume (vph)	270	404	227	212	542	196	162	1403	122	156	1812	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5040	0
Flt Permitted	0.129			0.451			0.950			0.950		
Satd. Flow (perm)	240	3539	1583	840	3539	1583	3433	5085	1583	3433	5040	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			200			160			7
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	290	434	244	228	583	211	174	1509	131	168	1948	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	290	434	244	228	583	211	174	1509	131	168	2068	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020



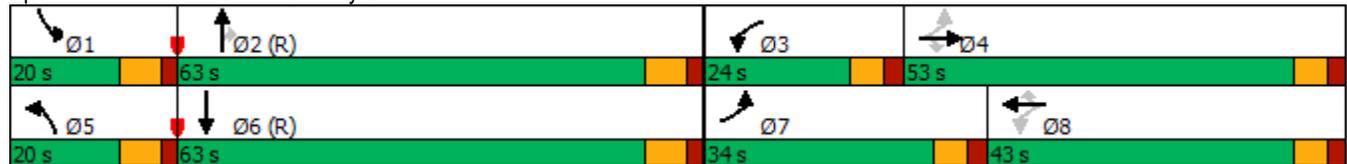
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	61.8	39.1	39.1	47.8	31.2	31.2	11.8	65.6	65.6	11.6	65.4	
Actuated g/C Ratio	0.39	0.24	0.24	0.30	0.20	0.20	0.07	0.41	0.41	0.07	0.41	
v/c Ratio	0.89	0.50	0.49	0.66	0.84	0.45	0.69	0.72	0.18	0.67	1.00	
Control Delay	69.8	53.3	21.0	44.2	73.8	10.7	86.3	43.6	2.7	85.9	66.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	69.8	53.3	21.0	44.2	73.8	10.7	86.3	43.6	2.7	85.9	66.3	
LOS	E	D	C	D	E	B	F	D	A	F	E	
Approach Delay		50.1			54.2			44.8			67.7	
Approach LOS		D			D			D			E	
90th %ile Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	27.5	44.9	44.9	17.5	34.9	34.9	14.0	56.9	56.9	13.7	56.6	
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	26.4	40.4	40.4	17.5	31.5	31.5	12.5	62.9	62.9	12.2	62.6	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	23.0	35.0	35.0	16.9	28.9	28.9	10.9	70.4	70.4	10.7	70.2	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	18.4	28.9	28.9	13.7	24.2	24.2	8.8	81.8	81.8	8.6	81.6	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	204	337	73	166	513	26	155	1168	5	150	1572	
Fuel Used(gal)	7	9	3	5	16	2	6	34	1	5	55	
CO Emissions (g/hr)	471	626	186	319	1090	134	392	2392	53	373	3817	
NOx Emissions (g/hr)	92	122	36	62	212	26	76	465	10	73	743	
VOC Emissions (g/hr)	109	145	43	74	253	31	91	554	12	86	885	
Dilemma Vehicles (#)	0	9	0	0	13	0	0	44	0	0	54	
Queue Length 50th (ft)	232	205	77	163	312	9	92	497	0	89	~856	
Queue Length 95th (ft)	#355	248	158	219	370	82	135	598	27	131	#1031	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	356	1028	568	357	807	515	282	2084	743	281	2064	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.42	0.43	0.64	0.72	0.41	0.62	0.72	0.18	0.60	1.00	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	55.7
Intersection LOS:	E
Intersection Capacity Utilization	94.6%
ICU Level of Service	F
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: N University Drive & NW 44 Street



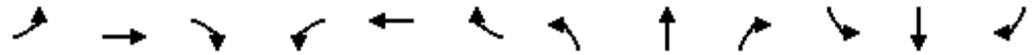
Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	251	411	158	196	333	140	187	1712	240	214	1332	162
Future Volume (vph)	251	411	158	196	333	140	187	1712	240	214	1332	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5004	0
Flt Permitted	0.217			0.342			0.950			0.950		
Satd. Flow (perm)	404	3539	1583	637	3539	1583	3433	5085	1583	3433	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			164			160			15
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	270	442	170	211	358	151	201	1841	258	230	1432	174
Shared Lane Traffic (%)												
Lane Group Flow (vph)	270	442	170	211	358	151	201	1841	258	230	1606	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020



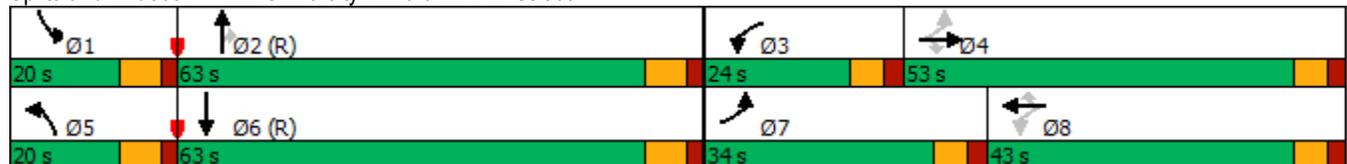
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	49.4	27.5	27.5	37.4	20.8	20.8	13.8	73.5	73.5	15.4	75.2	
Actuated g/C Ratio	0.31	0.17	0.17	0.23	0.13	0.13	0.09	0.46	0.46	0.10	0.47	
v/c Ratio	0.84	0.73	0.46	0.79	0.78	0.43	0.68	0.79	0.32	0.69	0.68	
Control Delay	65.1	69.4	22.1	64.4	79.2	10.1	82.6	41.0	12.7	81.1	36.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.1	69.4	22.1	64.4	79.2	10.1	82.6	41.0	12.7	81.1	36.3	
LOS	E	E	C	E	E	B	F	D	B	F	D	
Approach Delay		59.0			60.4			41.5			41.9	
Approach LOS		E			E			D			D	
90th %ile Green (s)	27.5	36.7	36.7	17.5	26.7	26.7	17.6	59.6	59.6	19.2	61.2	
90th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
70th %ile Green (s)	27.1	32.4	32.4	17.5	22.8	22.8	15.4	65.8	65.8	17.3	67.7	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	24.0	27.1	27.1	17.5	20.6	20.6	13.8	72.8	72.8	15.6	74.6	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	20.9	22.3	22.3	17.1	18.5	18.5	12.2	79.8	79.8	13.8	81.4	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	16.8	18.8	18.8	13.4	15.4	15.4	9.9	89.5	89.5	11.3	90.9	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	197	380	46	168	316	13	180	1377	62	204	1147	
Fuel Used(gal)	6	11	2	5	10	1	6	40	3	7	32	
CO Emissions (g/hr)	424	750	129	359	695	92	444	2814	184	495	2263	
NOx Emissions (g/hr)	83	146	25	70	135	18	86	548	36	96	440	
VOC Emissions (g/hr)	98	174	30	83	161	21	103	652	43	115	525	
Dilemma Vehicles (#)	0	9	0	0	7	0	0	52	0	0	47	
Queue Length 50th (ft)	228	234	46	171	194	0	107	595	59	122	472	
Queue Length 95th (ft)	291	276	116	227	243	53	149	#802	147	165	616	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	362	1028	544	276	807	487	312	2336	813	338	2358	

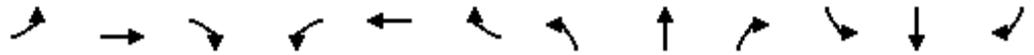
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.43	0.31	0.76	0.44	0.31	0.64	0.79	0.32	0.68	0.68	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	135
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.84
Intersection Signal Delay:	46.7
Intersection LOS:	D
Intersection Capacity Utilization	84.8%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: N University Drive & NW 44 Street

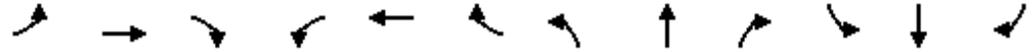




Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (vph)	120	178	123	194	135	358	48	1680	110	257	1920	44
Future Volume (vph)	120	178	123	194	135	358	48	1680	110	257	1920	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.997	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5070	0
Flt Permitted	0.589			0.323			0.950			0.950		
Satd. Flow (perm)	1097	1863	1583	602	1863	1583	1770	5085	1583	3433	5070	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			231			117			3
Link Speed (mph)		30			30			45				45
Link Distance (ft)		698			917			795				730
Travel Time (s)		15.9			20.8			12.0				11.1
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Adj. Flow (vph)	128	189	131	206	144	381	51	1787	117	273	2043	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	128	189	131	206	144	381	51	1787	117	273	2090	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	35.1	22.3	22.3	40.5	25.0	25.0	8.6	78.6	78.6	16.6	89.0	
Actuated g/C Ratio	0.22	0.14	0.14	0.25	0.16	0.16	0.05	0.49	0.49	0.10	0.56	
v/c Ratio	0.44	0.73	0.39	0.78	0.50	0.86	0.54	0.72	0.14	0.77	0.74	
Control Delay	48.2	81.1	11.7	66.9	66.6	44.6	93.3	35.1	4.4	83.6	31.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	48.2	81.1	11.7	66.9	66.6	44.6	93.3	35.1	4.4	83.6	31.3	
LOS	D	F	B	E	E	D	F	D	A	F	C	
Approach Delay		51.4			55.2			34.8			37.3	
Approach LOS		D			E			C			D	
90th %ile Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	12.4	71.0	71.0	13.0	71.6	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Gap	Coord	Coord	Max	Coord	
70th %ile Green (s)	15.0	27.3	27.3	16.5	28.8	28.8	10.1	71.0	71.0	18.2	79.1	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Max	Coord	
50th %ile Green (s)	13.0	20.6	20.6	16.5	24.1	24.1	8.5	77.4	77.4	18.5	87.4	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	11.1	17.7	17.7	16.4	23.0	23.0	6.9	81.3	81.3	17.6	92.0	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	8.4	13.4	13.4	11.5	16.5	16.5	0.0	92.4	92.4	15.7	115.1	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Skip	Coord	Coord	Gap	Coord	
Stops (vph)	95	167	16	162	120	153	46	1299	10	228	1448	
Fuel Used(gal)	2	5	1	5	3	7	2	37	1	8	40	
CO Emissions (g/hr)	165	338	73	344	242	465	121	2575	55	589	2785	
NOx Emissions (g/hr)	32	66	14	67	47	90	24	501	11	115	542	
VOC Emissions (g/hr)	38	78	17	80	56	108	28	597	13	136	645	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	53	0	0	61	
Queue Length 50th (ft)	106	195	0	179	141	166	53	536	0	143	601	
Queue Length 95th (ft)	149	262	59	234	204	288	100	643	38	#248	814	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	335	378	425	275	378	505	143	2498	837	355	2822	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.50	0.31	0.75	0.38	0.75	0.36	0.72	0.14	0.77	0.74	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.86
Intersection Signal Delay:	40.0
Intersection LOS:	D
Intersection Capacity Utilization	84.9%
ICU Level of Service	E
Analysis Period (min)	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

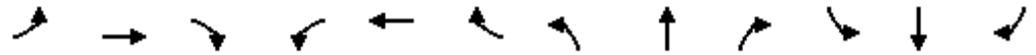
Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	90	69	187	117	270	107	1795	188	326	1637	59
Future Volume (vph)	95	90	69	187	117	270	107	1795	188	326	1637	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	100		200	200		200	300		440	350		0
Storage Lanes	1		1	1		1	1		1	2		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	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.995	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	5085	1583	3433	5060	0
Flt Permitted	0.677			0.459			0.950			0.950		
Satd. Flow (perm)	1261	1863	1583	855	1863	1583	1770	5085	1583	3433	5060	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			249			200			4
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		15.9			20.8			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	101	96	73	199	124	287	114	1910	200	347	1741	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	101	96	73	199	124	287	114	1910	200	347	1804	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	7.0	7.0	4.0	7.0	7.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	47.5	47.5	16.5	44.5	44.5	13.0	71.0	71.0	13.0	47.0	
Total Split (s)	23.0	39.0	39.0	23.0	39.0	39.0	20.0	78.0	78.0	20.0	78.0	
Total Split (%)	14.4%	24.4%	24.4%	14.4%	24.4%	24.4%	12.5%	48.8%	48.8%	12.5%	48.8%	
Maximum Green (s)	16.5	32.5	32.5	16.5	32.5	32.5	13.0	71.0	71.0	13.0	71.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	3.0	3.0	1.5	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		34.0	34.0		31.0	31.0		33.0	33.0		33.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	25.0	13.5	13.5	33.5	17.8	17.8	14.9	77.5	77.5	26.2	88.8	
Actuated g/C Ratio	0.16	0.08	0.08	0.21	0.11	0.11	0.09	0.48	0.48	0.16	0.56	
v/c Ratio	0.43	0.61	0.30	0.74	0.60	0.72	0.69	0.78	0.23	0.62	0.64	
Control Delay	55.8	86.0	4.2	70.9	79.5	22.8	90.9	37.2	3.6	68.4	27.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	55.8	86.0	4.2	70.9	79.5	22.8	90.9	37.2	3.6	68.4	27.3	
LOS	E	F	A	E	E	C	F	D	A	E	C	
Approach Delay		52.6			50.0			37.0			34.0	
Approach LOS		D			D			D			C	
90th %ile Green (s)	16.0	22.0	22.0	16.5	22.5	22.5	19.9	71.0	71.0	23.5	74.6	
90th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Max	Coord	
70th %ile Green (s)	13.3	14.7	14.7	16.5	17.9	17.9	17.4	77.8	77.8	24.0	84.4	
70th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	11.5	12.7	12.7	16.5	17.7	17.7	15.2	79.4	79.4	24.4	88.6	
50th %ile Term Code	Gap	Gap	Gap	Max	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	9.6	10.6	10.6	16.6	17.6	17.6	12.8	79.5	79.5	26.3	93.0	
30th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	7.0	7.5	7.5	12.9	13.4	13.4	9.4	79.8	79.8	32.8	103.2	
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	79	85	1	170	109	51	103	1451	14	301	1156	
Fuel Used(gal)	2	3	0	5	3	3	4	41	1	10	32	
CO Emissions (g/hr)	142	177	31	348	233	242	267	2860	90	687	2227	
NOx Emissions (g/hr)	28	34	6	68	45	47	52	556	17	134	433	
VOC Emissions (g/hr)	33	41	7	81	54	56	62	663	21	159	516	
Dilemma Vehicles (#)	0	0	0	0	0	0	0	56	0	0	53	
Queue Length 50th (ft)	88	99	0	184	126	37	117	580	0	178	465	
Queue Length 95th (ft)	134	155	6	250	193	140	183	711	48	237	624	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	100		200	200		200	300		440	350		
Base Capacity (vph)	288	378	416	274	378	519	173	2463	869	562	2808	

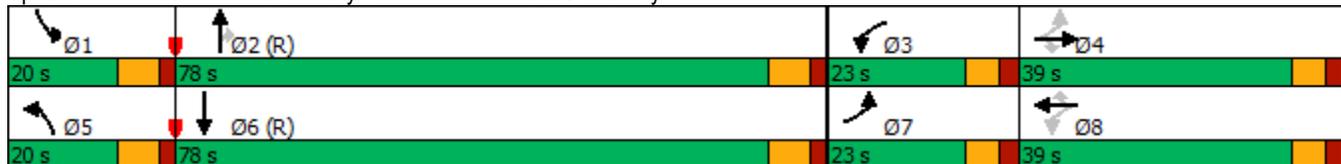


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.25	0.18	0.73	0.33	0.55	0.66	0.78	0.23	0.62	0.64	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	115 (72%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	150
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	38.1
Intersection LOS:	D
Intersection Capacity Utilization	78.1%
ICU Level of Service	D
Analysis Period (min)	15

Splits and Phases: 1: N University Drive & NW 50 Street/Inverrary Blvd



Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	404	227	212	542	202	162	1423	122	158	1822	125
Future Volume (vph)	275	404	227	212	542	202	162	1423	122	158	1822	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5034	0
Flt Permitted	0.129			0.458			0.950			0.950		
Satd. Flow (perm)	240	3539	1583	853	3539	1583	3433	5085	1583	3433	5034	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153			198			160			7
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	296	434	244	228	583	217	174	1530	131	170	1959	134
Shared Lane Traffic (%)												
Lane Group Flow (vph)	296	434	244	228	583	217	174	1530	131	170	2093	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020



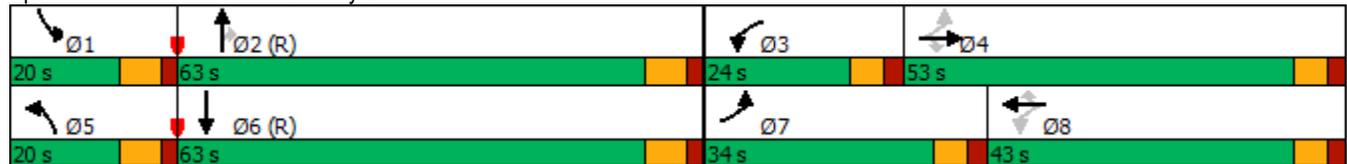
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	62.5	39.6	39.6	47.8	31.2	31.2	11.8	65.1	65.1	11.7	65.0	
Actuated g/C Ratio	0.39	0.25	0.25	0.30	0.20	0.20	0.07	0.41	0.41	0.07	0.41	
v/c Ratio	0.89	0.50	0.48	0.65	0.84	0.46	0.69	0.74	0.18	0.68	1.02	
Control Delay	70.3	52.9	20.8	43.7	73.8	12.0	86.3	44.4	2.7	86.2	71.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	70.3	52.9	20.8	43.7	73.8	12.0	86.3	44.4	2.7	86.2	71.2	
LOS	E	D	C	D	E	B	F	D	A	F	E	
Approach Delay		50.2			54.1			45.4			72.3	
Approach LOS		D			D			D			E	
90th %ile Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
90th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Max	Coord	Coord	Max	Coord	
70th %ile Green (s)	27.5	44.9	44.9	17.5	34.9	34.9	14.0	56.9	56.9	13.7	56.6	
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	27.2	41.2	41.2	17.5	31.5	31.5	12.5	62.0	62.0	12.3	61.8	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	23.7	35.8	35.8	16.8	28.9	28.9	10.9	69.6	69.6	10.8	69.5	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	19.0	29.6	29.6	13.6	24.2	24.2	8.8	81.2	81.2	8.6	81.0	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	208	337	73	166	513	29	155	1195	5	151	1586	
Fuel Used(gal)	7	9	3	5	16	2	6	35	1	5	57	
CO Emissions (g/hr)	481	624	186	317	1090	143	392	2451	53	377	3994	
NOx Emissions (g/hr)	94	121	36	62	212	28	76	477	10	73	777	
VOC Emissions (g/hr)	112	145	43	74	253	33	91	568	12	87	926	
Dilemma Vehicles (#)	0	9	0	0	13	0	0	44	0	0	54	
Queue Length 50th (ft)	237	204	77	161	312	16	92	512	0	90	~887	
Queue Length 95th (ft)	#368	248	158	219	370	92	135	609	27	132	#1052	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	356	1028	568	359	807	513	282	2070	739	281	2048	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.42	0.43	0.64	0.72	0.42	0.62	0.74	0.18	0.60	1.02	

Intersection Summary

Area Type:	Other
Cycle Length:	160
Actuated Cycle Length:	160
Offset:	23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle:	145
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	57.6
Intersection LOS:	E
Intersection Capacity Utilization	95.3%
ICU Level of Service	F
Analysis Period (min)	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: N University Drive & NW 44 Street



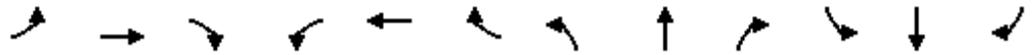
Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	411	158	196	333	141	187	1716	240	215	1336	163
Future Volume (vph)	252	411	158	196	333	141	187	1716	240	215	1336	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	200		88	255		300	425		260	270		0
Storage Lanes	1		1	1		1	2		1	2		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.91	1.00	0.97	0.91	0.91
Ped Bike Factor												
Frt			0.850			0.850			0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	3433	5085	1583	3433	5004	0
Flt Permitted	0.217			0.342			0.950			0.950		
Satd. Flow (perm)	404	3539	1583	637	3539	1583	3433	5085	1583	3433	5004	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119			164			160			15
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		698			917			795			730	
Travel Time (s)		13.6			17.9			12.0			11.1	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	271	442	170	211	358	152	201	1845	258	231	1437	175
Shared Lane Traffic (%)												
Lane Group Flow (vph)	271	442	170	211	358	152	201	1845	258	231	1612	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
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	1	2	1	1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8			2			
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												

Lanes, Volumes, Timings
1: N University Drive & NW 44 Street

Project No. 10979.00
01/02/2020



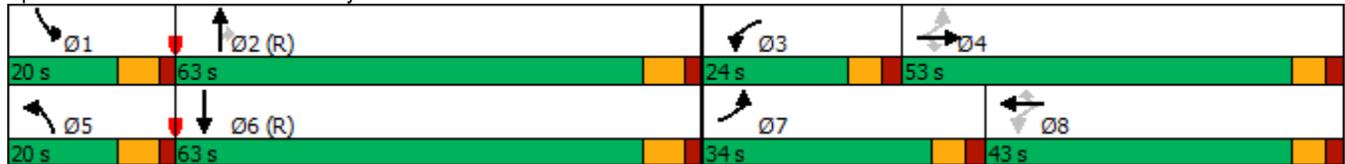
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0	
Minimum Split (s)	16.5	45.5	45.5	16.5	42.5	42.5	13.0	56.0	56.0	13.0	39.0	
Total Split (s)	34.0	53.0	53.0	24.0	43.0	43.0	20.0	63.0	63.0	20.0	63.0	
Total Split (%)	21.3%	33.1%	33.1%	15.0%	26.9%	26.9%	12.5%	39.4%	39.4%	12.5%	39.4%	
Maximum Green (s)	27.5	46.5	46.5	17.5	36.5	36.5	13.0	56.0	56.0	13.0	56.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	
All-Red Time (s)	2.5	2.5	2.5	2.5	2.5	2.5	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.0	2.0	1.5	2.0	2.0	2.0	3.0	3.0	2.0	3.0	
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		32.0	32.0		29.0	29.0		23.0	23.0		25.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	49.5	27.5	27.5	37.4	20.8	20.8	13.8	73.4	73.4	15.5	75.1	
Actuated g/C Ratio	0.31	0.17	0.17	0.23	0.13	0.13	0.09	0.46	0.46	0.10	0.47	
v/c Ratio	0.84	0.73	0.46	0.79	0.78	0.44	0.68	0.79	0.32	0.70	0.68	
Control Delay	65.1	69.2	22.1	64.3	79.2	10.3	82.6	41.2	12.8	81.1	36.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	65.1	69.2	22.1	64.3	79.2	10.3	82.6	41.2	12.8	81.1	36.4	
LOS	E	E	C	E	E	B	F	D	B	F	D	
Approach Delay		58.9			60.3			41.6			42.0	
Approach LOS		E			E			D			D	
90th %ile Green (s)	27.5	36.7	36.7	17.5	26.7	26.7	17.6	59.6	59.6	19.2	61.2	
90th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
70th %ile Green (s)	27.2	32.5	32.5	17.5	22.8	22.8	15.4	65.7	65.7	17.3	67.6	
70th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
50th %ile Green (s)	24.1	27.2	27.2	17.5	20.6	20.6	13.8	72.7	72.7	15.6	74.5	
50th %ile Term Code	Gap	Hold	Hold	Max	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
30th %ile Green (s)	21.0	22.4	22.4	17.1	18.5	18.5	12.2	79.6	79.6	13.9	81.3	
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
10th %ile Green (s)	16.9	18.9	18.9	13.4	15.4	15.4	9.9	89.3	89.3	11.4	90.8	
10th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Gap	Coord	Coord	Gap	Coord	
Stops (vph)	199	379	46	168	316	13	180	1383	62	205	1153	
Fuel Used(gal)	6	11	2	5	10	1	6	40	3	7	33	
CO Emissions (g/hr)	427	749	129	358	695	93	444	2827	184	498	2276	
NOx Emissions (g/hr)	83	146	25	70	135	18	86	550	36	97	443	
VOC Emissions (g/hr)	99	174	30	83	161	21	103	655	43	115	527	
Dilemma Vehicles (#)	0	9	0	0	7	0	0	52	0	0	47	
Queue Length 50th (ft)	228	234	46	171	194	0	107	599	59	122	476	
Queue Length 95th (ft)	292	276	116	227	243	54	149	#805	147	167	619	
Internal Link Dist (ft)		618			837			715			650	
Turn Bay Length (ft)	200		88	255		300	425		260	270		
Base Capacity (vph)	362	1028	544	276	807	487	312	2332	812	338	2356	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.43	0.31	0.76	0.44	0.31	0.64	0.79	0.32	0.68	0.68	

Intersection Summary

Area Type: Other
 Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 23 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 135
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
Intersection Signal Delay: 46.7 **Intersection LOS: D**
 Intersection Capacity Utilization 85.0% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 1: N University Drive & NW 44 Street



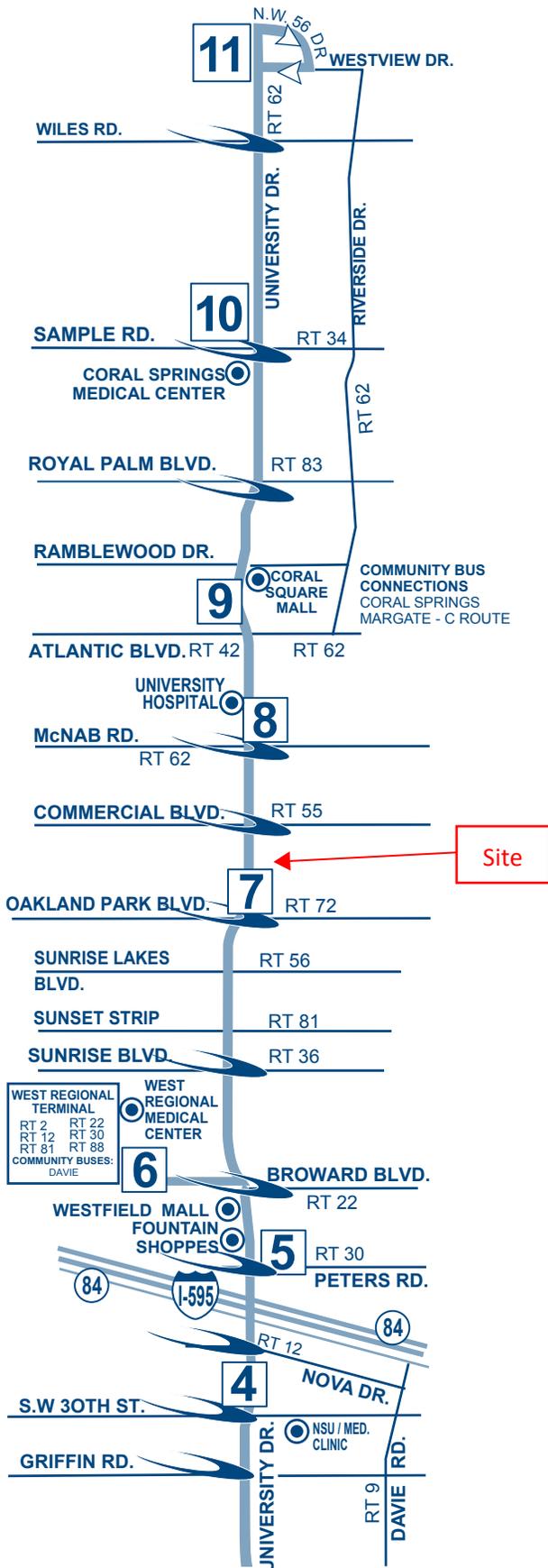
Appendix E

Broward County Transit

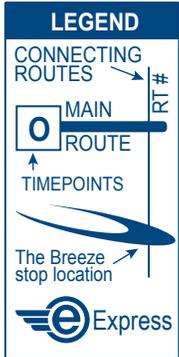
Route 2

ROUTE 2

NW 207 Street to
Westview Drive
via University Drive



- ### POINTS OF INTEREST
- Memorial Hospital Pembroke Pines
 - Nova Southeastern University Medical Clinic
 - Westfield Mall
 - Fountain Shoppes
 - West Regional Medical Center
 - University Hospital Medical Center
 - Coral Square Mall
 - Coral Springs Medical Center



Continues north on map at left

